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American National Standards

Call for comment on proposals listed

This section solicits public comments on proposed draft new American National Standards, including the national adoption of ISO and IEC standards as American National Standards, and on proposals to revise, reaffirm or withdraw approval of existing American National Standards. A draft standard is listed in this section under the ANSI-accredited standards developer (ASD) that sponsors it and from whom a copy may be obtained. Comments in connection with a draft American National Standard must be submitted in writing to the ASD no later than the last day of the comment period specified herein. Such comments shall be specific to the section(s) of the standard under review and include sufficient detail so as to enable the reader to understand the commenter's position, concerns and suggested alternative language, if appropriate. Please note that the ANSI Executive Standards Council (ExSC) has determined that an ASD has the right to require that interested parties submit public review comments electronically, in accordance with the developer's procedures.

Ordering Instructions for "Call-for-Comment" Listings

1. **Order from the organization indicated for the specific proposal.**
2. **Use the full identification in your order, including the BSR prefix; for example, Electric Fuses BSR/SAE J554.**
3. **Include remittance with all orders.**
4. **BSR proposals will not be available after the deadline of call for comment.**

Comments should be addressed to the organization indicated, with a copy to the Board of Standards Review, American National Standards Institute, 25 West 43rd Street, New York, NY 10036. Fax: 212-840-2298; e-mail: psa@ansi.org

* Standard for consumer products

Comment Deadline: April 21, 2013

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 34ag to Standard 34-2010, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds new zeotropic refrigerant R-417C to Table 2 and Table D2.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <https://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 34ah to Standard 34-2010, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds new zeotropic refrigerant R-445A to Table 2 and Table D2.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <https://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 34ai to Standard 34-2010, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds new zeotropic refrigerant R-419B to Table 2 and Table D2.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <https://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 34aj to Standard 34-2010, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds new zeotropic refrigerant R-422E to Table 2 and Table D2.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <https://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 34ak to Standard 34-2010, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds "specific volume at the critical point" calculation requirements for blends to Section 9.5.2.5.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <https://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 62.1b to Standard 62.1-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2010)

A change proposal submitted to ASHRAE pointed out to the SSPC that the requirements for the quality of water used in humidifiers and water-spray systems could potentially be misinterpreted. In response, changes to the wording of Sections 5.12 and 5.12.1 are being proposed that are intended to clarify the requirements. Water that is used must meet or exceed potable water quality standards, and no chemicals may be added other than those specified. In addition, use of certain chemicals is limited to systems using automated dosing equipment.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 62.1k to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2010)

This proposed addendum modifies the standard to allow the use of heat wheel energy recovery in some laboratory exhaust hood systems. Two criteria are used to determine when the exhaust can be classified as Class 3 air which can have heat wheel energy recovery applied. The first is if the exhaust is coming from a "Biological safety cabinet, Class 1." The second is air from hoods or biological safety cabinets which meet the requirements of ANSI Z9.5, Section 5.4.7.2.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 62.1m to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2010)

This proposed addendum resulted from a change proposal that recommended adding the National Standards for Total System Balance issued by the Associated Air Balance Council (AABC) as an equivalent method of balancing ventilation systems in Section 7.2.2. Public review comments argued that it was inappropriate to include a list of equivalent standards and that it was difficult for enforcement personnel to determine if other standards were "equivalent." The SSPC decided to restrict the list to ASHRAE 111, and revise the language to 'national standard' to make it clear that standards by SMACNA, AABC and others were acceptable.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum 62.1o to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2010)

This proposed addendum resulted from two very similar change proposals addressing reuse of air from toilet exhausts after it is cleaned. The original proposals would have redefined "air, exhaust" and allowed reuse of cleaned air that would otherwise be exhausted. The SSPC identified a number of difficulties with the original language, but agreed that limiting recirculated exhaust air to toilet exhaust only was workable.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/ASHE Addendum 170w to Standard 170-2008, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE Standard 170-2008)

This proposed addendum clarifies the Table 7-1 minimum requirements for gastrointestinal endoscopy procedure rooms. The design relative humidity for this short term stay space has been lowered similar to that which occurred for Addendum d (surgeries) and Addendum v (recovery room). It provides clarification concerning design relative humidity requirements for spaces which function to perform gastrointestinal endoscopy procedures and reduces the lower design humidity limit from 30% to 20% RH. It provides clarification concerning the pressure relationship to adjacent area requirements for spaces in which gastrointestinal endoscopy procedures are performed.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum aa to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This revised version of Addendum aa addresses the issue more broadly by mandating direct digital control (DDC) for certain applications in both new buildings and retrofits where it can be considered cost effective. It also defines the minimum capability of mandated DDC systems.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum bo to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposed addendum adds requirement for the use of gas condensing service water heaters in newly constructed buildings. The modifications in the ISC draft are in response to comments received during the first public review to improve the clarify of the requirements.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum bs to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This ISC reduces the occupancy threshold for demand controlled ventilation from greater than 40 people per 1000 ft2 to equal to or greater than 25 people per 1000 ft2 with exemptions for certain occupancies. This change will expand the occupancies where demand controlled ventilation is required.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum co to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum corrects the calculation of hotel- and motel-type guestroom spaces based on an error in applying the room geometry of the space type, which then changes the associated whole building LPDs for hotels and motels. The calculation results produced a nearly identical value for both building types and were therefore combined into one category and value. Similarly, this addendum corrects the calculation of manufacturing space types causing a change in the manufacturing whole building LPD.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum cr to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum modifies the designation for the types of facilities that are eligible for the higher LPDs based on the use of the space for those needing additional lighting for age and other related eye issues as well as design to the appropriate IES reference. The new designation is intended to cover only the appropriate facilities.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum ct to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum corrects a mistake that was made when HVAC systems for heated only storage areas was added to Appendix G. These are single-zone systems and as such should be assigned to a single thermal zone instead of being grouped with the multiple-zone systems.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum cw to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum uses the new SS-EN ISO 25745-1:2012 standard to add a movement energy efficiency requirement for elevators. The requirement of 1.8 mW*hr/(kg*m) is equivalent to class C in the VDI standard, which is an efficiency level with which we believe all major traction elevator vendors can comply.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum cy to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum revises the requirements for the use of exhaust air energy recovery as defined in 6.5.6.1. In 2012, addendum BT to the 2010 standard was developed to expand the range for the use of exhaust air energy recovery down to 10% rates ventilation rate. In addition, the requirements were adjusted based on the latest performance and economics analysis and energy recovery was removed for climate zones 3B, 3C, 4B, 4C, and 5B for >70% outside air.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum cz to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

Section 303 of the Energy Independence and Security Act of 2007 (EISA 2007) increased the federal minimum efficiency standards for residential-sized ("NAECA covered") boilers. This section increased the minimum AFUE for gas and oil-fired boilers, along with establishing design requirements for certain types of new boilers that are manufactured or imported for use in the United States. All of the efficiency and design requirements took effect for equipment built on or after September 1, 2012. The revisions to the table and the new footnotes will ensure that ASHRAE 90.1-2013 is consistent with federal law.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum da to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum provides two compliance paths for high speed doors within the Mandatory Air Leakage requirements. It also clarifies which test glazed overhead doors are to follow.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum db to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposal is being presented to address an error which is in Standard 90.1 Addenda 'bb', contained within Table 5.5-3, under the category "Floors, Steel Joist" and in the cells assigned to the "residential" occupancy.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dc to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposal is intended to correct a possible flaw in previous proposed addenda BC and BY in that there could be some confusion as to what to do when one room within a suite becomes empty. This proposal is meant to make it obvious that each room is handled individually.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dd to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This revision clarifies the exception to re-roofing and roof re-covering.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum de to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposed addendum revises the design point for waterside economizers when utilized in computer room applications based on Computer Room stakeholder feedback.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum df to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

These minimum performance requirements for packaged Computer Room Air Conditioners covered by this Standard are shown in Table 6.8.1k. The table in the current standard is based on ASHRAE Standard 127-2007. ASHRAE has updated Standard 127 to a new Standard 127-2012. AHRI and member companies have agreed to test their equipment under the new standard. This addendum replaces the current 6.8.1k table with a new table based on Standard 127-2012. The test configurations were increased and the performance values updated accordingly.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dg to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum changes the reference to the ANSI/CRRC Standard from the 2010 version to the 2012 version.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum di to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

The purpose of this addendum is to prohibit the use of fossil fuels and electricity for humidification above 30% RH and dehumidification to 60% RH, except in special circumstances. Where control is required within the 30 -60% region, a deadband is required. Where even tighter control is mandated, the system is exempted.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dj to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum offers an increase in electrical/mechanical rooms in cases where the current proposed allowance of 0.42 W/sqft (addendum 'by') is not considered sufficient to provide needed vertical and horizontal illuminance given the varied configuration of electrical/mechanical rooms. The additional allowance would have to have separate control and could not be traded off to other spaces in the building

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dk to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum eliminates the exemption for wattage used in spaces where lighting is specifically designed for those with age related or other medical condition related eye issues where special lighting or light levels might be needed. Newly developed addenda 'bh' and 'cr' now provide specific LPD values to address these issues and accommodate the needed lighting for spaces such as these and the exception is no longer applicable. The 5-Watt-per-face limit for exit signs is now a federal product requirements and therefore no longer needed in the Standard.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dl to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum corrects the calculation of hotel- and motel-type guestroom spaces based on an error in applying the room geometry of the space type and combines them into a single value since the calculated value are determined to be the same for code purposes.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum dn to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposed addendum revises the requirements for the use of hot gas bypass as defined in section 6.5.9 and table 6.5.9. Based on this, there no need to have such large capacity allowances for hot gas bypass and the values should be reduced, which is the purpose of this addendum. In addition, the addendum also eliminates the use of hot gas bypass on DX constant volume systems where modern-day controls can effectively cycle compressors to maintain capacity without the use of inefficient hot gas bypass.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum do to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This proposal is updating referenced standards in various provisions covering mechanical systems in 90.1-2010.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASME (American Society of Mechanical Engineers)**Revision**

BSR/ASME B16.40-201x, Manually Operated Thermoplastic Gas Shutoffs and Valves in Gas Distribution Systems (revision of ANSI/ASME B16.40-2008)

This Standard covers manually operated thermoplastic valves in nominal valve sizes 1/2 through 12. These valves are intended for use below ground in thermoplastic fuel gas distribution mains and service lines. The maximum operating pressure (MOP) at which such distribution piping systems may be operated is in accordance with the Code of Federal Regulations (CFR) Title 49, Part 192, Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards, for temperature ranges of -20°F to 140°F (-29°C to 60°C).

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Frankel Huang, (212) 591-2000, HuangF@asme.org

NSF (NSF International)**Revision**

BSR/NSF 40-2012 (i26r3), Residential Wastewater Treatment Systems (revision of ANSI/NSF 40-2012 (i26))

The purpose of this ballot is to update the language in section 8.4.1 for consistency among wastewater standards. The change in section 9 addresses a comment on the ballot 40i20 regarding when adjustments to alkalinity are made, they are required to be reported.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

NSF (NSF International)**Revision**

BSR/NSF 245-201x (i7), Wastewater treatment systems - nitrogen reduction (revision of ANSI/NSF 245-2010)

Issue 7 - This is a boilerplate ballot for wastewater treatment systems standards.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

NSF (NSF International)**Revision**

BSR/NSF 350-201x (i4r3), Wastewater treatment systems - Onsite residential and commercial water reuse treatment systems (revision of ANSI/NSF 350-2012)

Issue 4 revision 3: This is boilerplate for the wastewater treatment systems standards.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

NSF (NSF International)**Revision**

BSR/NSF 350-1-201x (i4r3), Wastewater treatment systems - Onsite residential and commercial graywater treatment systems for subsurface discharge (revision of ANSI/NSF 350-1-2011)

Issue 4 revision 3: This is boilerplate for the wastewater treatment systems standards.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Mindy Costello, (734) 827-6819, mcostello@nsf.org

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 153-201x, Standard for Safety for Portable Electric Luminaires (revision of ANSI/UL 153-2012a)

The following changes in requirements to UL 153, are being proposed: (1) Revision to supply cord splices for clamp-on units.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Heather Sakellariou, (847) 664-2346, Heather.Sakellariou@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 181-201X, Standard for Safety for Factory-Made Air Ducts & Air Connectors (revision of ANSI/UL 181-2008)

This re-circulation proposal provides revisions to the UL 181 proposals dated 6-1-12.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Nicolette Allen, (919) 549-0973, Nicolette.Allen@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 365-201x, Standard for Safety for Police Station Connected Burglar Alarm Units and Systems (revision of ANSI/UL 365-2010)

(1) Revision of minimum wire size requirements for field wiring terminals and modification of the requirements for field wiring leads. (2) Revisions to attack and tamper-resistant alarm sounding device requirements.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Mitchell Gold, (847) 664-2850, Mitchell.Gold@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 486E-201x, Standard for Safety for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors (revision of ANSI/UL 486E-2010)

The following topics are being proposed: (1) Test Conductor Material - Aluminum and (2) Test Conductor Insulation - Aluminum.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Marcia Kawate, (408) 754-6743, Marcia.M.Kawate@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 1917-201x, Standard for Solid-State Fan Speed Controls (revision of ANSI/UL 1917-2012)

(1) Addition of an Abnormal Switching Test.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Susan Malohn, (847) 664-1725, Susan.P.Malohn@ul.com

UL (Underwriters Laboratories, Inc.)**Revision**

BSR/UL 1978-201X, Standard for Safety for Grease Ducts (revision of ANSI/UL 1978-2005 (R2009))

UL proposes revisions to UL 1978 for additional requirements for grease duct slopes.

[Click here to view these changes in full](#)

Send comments (with copy to psa@ansi.org) to: Nicolette Allen, (919) 549-0973, Nicolette.Allen@ul.com

Comment Deadline: May 6, 2013**ABYC (American Boat and Yacht Council)****New Standard**

BSR/ABYC C-2-201x, Carbon Canisters (new standard)

This standard is a guide for the design, manufacture, testing, and application of carbon canisters as a device to reduce evaporative hydrocarbon emissions caused by the diurnal cycle in a gasoline marine fuel system.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

Send comments (with copy to psa@ansi.org) to: Same

ABYC (American Boat and Yacht Council)**New Standard**

BSR/ABYC C-1 2011, Primer Bulbs (new standard)

This standard is a guide for the design, choice of materials for, construction, installation, and replacement of primer bulbs installed in gasoline fuel systems.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

Send comments (with copy to psa@ansi.org) to: Same

ABYC (American Boat and Yacht Council)**New Standard**

BSR/ABYC H-2-201x, Ventilation of Boats Using Gasoline (new standard)

This standard is a guide for the design, construction, and installation of both powered and natural ventilation systems for engine and fuel tank compartments of boats for the purpose of expelling or diluting potentially explosive gasoline vapor from a boat's interior.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

Send comments (with copy to psa@ansi.org) to: Same

ABYC (American Boat and Yacht Council)**Revision**

BSR/ABYC H-32-201x, Ventilation of Boats Using Diesel Fuel (revision of ANSI/ABYC H-32-2008)

This standard is a guide for the design, construction, and installation of ventilation systems for boats using diesel fuel for the purpose of removal of fixed gaseous fire-extinguishing system discharge, and/or combustion air, and/or any incidental additional uses.

Single copy price: 25.00 (ABYC members); \$50.00 (nonmembers)

Obtain an electronic copy from: www.abycinc.org

Order from: Helen Koepper, (410) 990-4460, hkoepper@abycinc.org

Send comments (with copy to psa@ansi.org) to: Same

ADA (American Dental Association)**Reaffirmation**

BSR/ADA Standard No. 1-2003 (R201x), Alloy for Dental Amalgam (reaffirmation of ANSI/ADA 1-1977 (R1993))

This standard is for alloys, composed mainly of silver, tin and/or copper, used in the preparation of dental amalgam. Only capsulated alloy is covered under this standard. When a capsule containing mercury and alloy is shaken, the mercury and alloy react to form the metal-matrix composite called dental amalgam. Dental amalgam is designed for use in dentistry as a restorative material for decayed, fractured, or eroded teeth.

Single copy price: \$39.00

Obtain an electronic copy from: standards@ada.org

Order from: Kathy Medic, (312) 440-2533, medick@ada.org

Send comments (with copy to psa@ansi.org) to: Same

AMCA (Air Movement and Control Association)**Reaffirmation**

BSR/AMCA 320-201x, Laboratory Method of Sound Testing of Fans Using Sound Intensity (reaffirmation of ANSI/AMCA 320-2008)

This standard is intended to apply to fans of all types and sizes. This standard is limited to the determination of airborne sound emission for the specified setups. Vibration is not measured, and the sensitivity of airborne sound emission to vibration effects is not determined.

Single copy price: \$5.00

Obtain an electronic copy from: jpakan@amca.org

Order from: John Pakan, (847) 704-6295, jpakan@amca.org

Send comments (with copy to psa@ansi.org) to: Same

AMCA (Air Movement and Control Association)**Revision**

BSR/AMCA 300-201x, Reverberant Room Method for Sound Testing of Fans (revision of ANSI/AMCA 300-2008)

This standard applies to fans of all types and sizes. This standard is limited to the determination of airborne sound emission for the specified setups. Vibration is not measured, nor is the sensitivity of airborne sound emission to vibration effects determined.

Single copy price: \$5.00

Obtain an electronic copy from: jpakan@amca.org

Order from: John Pakan, (847) 704-6295, jpakan@amca.org

Send comments (with copy to psa@ansi.org) to: Same

ASA (ASC S12) (Acoustical Society of America)**Reaffirmation**

BSR/ASA S12.9-Part 2-1992 (R201x), Quantities and Procedures for Description and Measurement of Environmental Sound - Part 2: Measurement of Long-Term, Wide-Area Sound (reaffirmation of ANSI/ASA S12.9-Part 2-1992 (R2008))

This standard describes recommended procedures for measurement of long-term, time-average environmental sound outdoors at one or more locations in a community for environmental assessment or planning for compatible land uses and for other purposes such as noise prediction validation and regulation. Its purpose is to provide for a commonality for measurement of outdoor environmental sound as it may affect people in and around dwellings.

Single copy price: \$100.00

Obtain an electronic copy from: asastds@aip.org

Order from: Susan Blaeser, (631) 390-0215, sblaeser@aip.org; asastds@aip.org

Send comments (with copy to psa@ansi.org) to: Same

ASA (ASC S3) (Acoustical Society of America)**Revision**

BSR/ASA S3.46-201x, Methods of Measurement of Real-Ear Performance characteristics of Hearing Aids (revision and redesignation of ANSI S3.46 -1997 (R2007))

This Standard provides definitions for terms used in the measurement of real-ear performance characteristics of hearing aids, provides procedural and reporting guidelines, and identifies essential characteristics to be reported by the manufacturer of equipment used for this purpose. Acceptable tolerances for the control and measurement of sound pressure levels are indicated. Where possible, sources of error have been identified and suggestions provided for their management.

Single copy price: \$100.00

Obtain an electronic copy from: asastds@aip.org

Order from: Susan Blaeser, (631) 390-0215, sblaeser@aip.org; asastds@aip.org

Send comments (with copy to psa@ansi.org) to: Same

ASABE (American Society of Agricultural and Biological Engineers)**Revision**

BSR/ASABE S613-2.1 MONYEAR-201x, Tractors and self-propelled machinery for agriculture - Air quality systems for cabs - Part 2: Cab and HVAC design (revision and redesignation of ANSI/ASABE S613-2.1-201x)

This part of the S613 standard series is concerned with the generally accepted design principles that define a robust cab and HVAC system used in contaminated environments as part of an Occupational Health and Safety Management System (OHSMS). This document is intended to be a guide for engineers who are responsible for designs used in agricultural applications. Information provided by this part of the standard series should help engineers provide cab and HVAC system designs that can be used as an engineering control within a program of risk management.

Single copy price: \$55.00

Obtain an electronic copy from: vangilder@asabe.org

Order from: Carla VanGilder, (269) 932-7015, vangilder@asabe.org

Send comments (with copy to psa@ansi.org) to: Same

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)**Addenda**

BSR/ASHRAE Addendum 62.1p to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1 -2010)

At present, all occupancy types are required to provide no less than the area component of the minimum ventilation rate during periods when the space is "expected to be occupied." A previous interpretation clarified that this prohibited the use of occupancy sensors to reduce the ventilation rate to zero during these times. This proposed addendum would allow the ventilation to be reduced to zero through the use of occupancy sensors for spaces of selected occupancy types. These occupancy types are identified by a new Note H to Table 6-1. The occupancy types where this is allowed are those with an Area Outdoor Air Rate of 0.06 cfm/ft².

Single copy price: \$35.00

Obtain an electronic copy from: Free download at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: standards.section@ashrae.org

Send comments (with copy to psa@ansi.org) to: Online Comment Database at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)**Addenda**

BSR/ASHRAE Addendum ai to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

This addendum creates a BACnet-visible mechanism for viewing/configuring a device's network settings so that there is a way for BACnet client devices to easily and consistently access and manipulate this information.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: standards.section@ashrae.org

Send comments (with copy to psa@ansi.org) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)**Addenda**

BSR/ASHRAE Addendum al to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

This addendum specifies a set of best practices that are recommended for the design of successful gateways to/from the BACnet protocol, updates the router configuration BIBBs to ensure that configuration tools can perform all of the expected functions, and adds a new device profile for those devices that do not match any existing device profiles.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: standards.section@ashrae.org

Send comments (with copy to psa@ansi.org) to: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE Addendum as to ANSI/ASHRAE Standard 135-2012, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

Currently, the BACnet standard does not provide a method for conveying and recording the source of a command. The changes shown in this addendum allow devices to indicate and record the source device or process, and optionally, a comment. In addition, COV reporting is modified to allow a client to request that value changes be accompanied by command source information.

Single copy price: \$35.00

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ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum ac to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

The proposal provides for two compliance paths with regard to utilizing air spaces in conjunction with reflective surfaces. The proposal also cleans up some errors in the 2nd PRD, and replaces duplicated tables for Climate Zones 4 and 5, with the corrected tables for Climate Zones 7 and 8.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

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ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum bm to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

This addendum makes the baseline building in Appendix G equivalent to 90.1-2004. The ISC draft addresses concerns and corrections raised by commentators during the first public review.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.ashrae.org/standards-research--technology/public-review-drafts>

Order from: Free download at <http://www.ashrae.org/standards-research--technology/public-review-drafts>

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ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)

Addenda

BSR/ASHRAE/IES Addendum CL to Standard 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2010)

Based on a comment received during the first public review, the ISC modifies the IEER requirements for the air-cooled air conditioners $\geq 65,000$ Btu/hr and $< 135,000$ Btu/hr to increase the IEER from 12.8 to 12.9 for electric-resistance heating units and 12.6 to 12.7 for gas-fired units. The ISC will also revise the air-cooled heat pumps $\geq 65,000$ Btu/hr and $< 135,000$ Btu/hr for electric-resistance heating units from 12.0 to 12.2 and from 11.8 to 12.0 for gas-fired units.

Single copy price: \$35.00

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ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B16.50-201x, Wrought Copper and Copper Alloy Braze-Joint Pressure Fittings (revision of ANSI/ASME B16.50-2001 (R2008))

This Standard establishes requirements for wrought copper and wrought copper alloy braze-joint seamless fittings designed for use with seamless copper tube conforming to ASTM Standard Specification, B88 (Water and General Plumbing Systems), B280 (Air Conditioning and Refrigeration Service), and B819 (Medical Gas Systems).

This Standard covers joints assembled with brazing materials conforming to ANSI/AWS A5.8.

This Standard is allied to ASME standards B16.18 and B16.22. It provides requirements for fitting-ends suitable for brazing. This Standard covers:

- (a) pressure-temperature ratings;
- (b) abbreviations for end connections;
- (c) size and method of designating openings of fittings;
- (d) marking;
- (e) material;
- (f) dimensions and tolerances; and
- (g) testing.

Single copy price: Free

Obtain an electronic copy from: <http://cstools.asme.org/publicreview>

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to psa@ansi.org) to: Carlton Ramcharran, (212) 591-7955, ramcharranc@asme.org

ASSE (American Society of Sanitary Engineering)**Revision**

BSR/ASSE Series 7000-201x, Professional Qualifications Standard for Residential Potable Water Fire Protection System Installers & Inspectors for One and Two Family Dwellings (revision of ANSI/ASSE Series 7000-2009)

This standard applies to an individual who provides layout, detail, and calculations for residential potable-water fire-protection systems for one- and two-family dwellings and who installs such systems, and to an individual who inspects residential potable-water fire-protection systems for one- and two-family dwellings.

Single copy price: \$60.00

Obtain an electronic copy from: marianne@asse-plumbing.org

Order from: Marianne Waickman, (440) 835-3040, marianne@asse-plumbing.org

Send comments (with copy to psa@ansi.org) to: Same

AWS (American Welding Society)**Addenda**

BSR/AWS D15.1/D15.1M-2012-AMD1-201x, Railroad Welding Specification for Cars and Locomotives (addenda to ANSI/AWS D15.1/D15.1M-2012)

This specification establishes minimum standards for the manufacture and maintenance of railroad equipment. Clauses 4 through 17 cover the general requirements for welding in the railroad industry. Clauses 18 through 24 cover specific requirements for the welding of base metals thinner than 1/8 in [3 mm].

Single copy price: \$129.00

Obtain an electronic copy from: roneill@aws.org

Order from: Rosalinda O'Neill, (305) 443-9353, roneill@aws.org; adavis@aws.org

Send comments (with copy to psa@ansi.org) to: Andrew Davis, (305) 443-9353, Ext. 466, adavis@aws.org; roneill@aws.org

IICRC (the Institute of Inspection, Cleaning and Restoration Certification)**Revision**

BSR/IICRC S500-201x, Standard and Reference Guide for Professional Water Damage Restoration (revision of ANSI/IICRC S500-2006)

This Standard provides a specific set of practical standards for water damage restoration. It does not attempt to teach comprehensive water damage restoration procedures; rather, it provides the foundation for basic principles of proper restoration practices. It does not attempt to include exhaustive performance characteristics or standards for the manufacture or installation of structural components, materials, and contents (personal property).

Single copy price: Free

Obtain an electronic copy from: mili@iicrc.org

Order from: Mili Washington, (360) 313-7088, mili@iicrc.org

Send comments (with copy to psa@ansi.org) to: Same

ISA (ISA)**Reaffirmation**

BSR/ISA 60079-7 (12.16.01)-2008 (R201x), Explosive Atmospheres - Part 7: Equipment protection by increased safety "e" (reaffirmation of ANSI/ISA 60079-7 (12.16.01)-2008)

This standard specifies the requirements for the design, construction, testing and marking of electrical apparatus with type of protection increased safety "e" intended for use in Class I, Zone 1 hazardous (classified) locations. This standard applies to electrical apparatus where the rated voltage does not exceed 11 kV r.m.s. a.c. or d.c. Additional measures are applied to ensure that the apparatus does not produce arcs, sparks, or excessive temperatures in normal operation or under specified abnormal conditions.

Single copy price: \$300.00

Obtain an electronic copy from: ebrazda@isa.org

Order from: Eliana Brazda, (919) 990-9228, ebrazda@isa.org

Send comments (with copy to psa@ansi.org) to: Same

ITI (INCITS) (InterNational Committee for Information Technology Standards)**New National Adoption**

INCITS/ISO/IEC 19794-1:2011, Information technology - Biometric data interchange formats - Part 1: Framework (identical national adoption of ISO/IEC 19794-1:2011)

ISO/IEC 19794-1:2011 describes the general aspects and requirements for defining biometric data interchange formats. The notation and transfer formats provide platform independence and separation of transfer syntax from content definition. ISO/IEC 19794-1:2011 defines what is commonly applied for biometric data formats, i.e., the standardization of the common content, meaning, and representation of biometric data formats of biometric types considered in the specific parts of ISO/IEC 19794.

Single copy price: \$142.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)**New National Adoption**

INCITS/ISO/IEC 19794-2:2011, Information technology - Biometric data interchange formats - Part 2: Finger minutiae data (identical national adoption of ISO/IEC 19794-2:2011)

ISO/IEC 19794-2:2011 specifies a concept and data formats for representation of fingerprints using the fundamental notion of minutiae. It is generic, in that it may be applied and used in a wide range of application areas where automated fingerprint recognition is involved. It contains definitions of relevant terms, a description of how minutiae are to be determined, data formats for containing the data for both general use and for use with cards, and conformance information. Guidelines and values for matching and decision parameters are provided.

Single copy price: \$235.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

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ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-4:2011, Information technology - Biometric data interchange formats - Part 4: Finger image data (identical national adoption of ISO/IEC 19794-4:2011)

ISO/IEC 19794-4:2011 specifies a data record interchange format for storing, recording, and transmitting the information from one or more finger or palm image areas within an ISO/IEC 19785-1 data structure. This can be used for the exchange and comparison of finger image data. It defines the content, format, and units of measurement for the exchange of finger image data that may be used in the verification or identification process of a subject. The information consists of a variety of mandatory and optional items, including scanning parameters, compressed or uncompressed images and vendor-specific information.

Single copy price: \$235.00

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ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-5:2011, Information technology - Biometric data interchange formats - Part 5: Face image data (identical national adoption of ISO/IEC 19794-5:2011)

ISO/IEC 19794-5:2011 specifies a record format for storing, recording, and transmitting information from one or more facial images or a short video stream of facial images, specifies scene constraints of the facial images, specifies photographic properties of the facial images, specifies digital image attributes of the facial images, and provides best practices for the photography of faces.

Single copy price: \$250.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

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ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-6:2011, Information technology - Biometric data interchange formats - Part 6: Iris image data (identical national adoption of ISO/IEC 19794-6:2011)

ISO/IEC 19794-6:2011 specifies iris image interchange formats for biometric enrollment, verification and identification systems. The image information might be stored as an array of intensity values optionally compressed with ISO/IEC 15948 or ISO/IEC 15444, or an array of intensity values optionally compressed with ISO/IEC 15948 or ISO/IEC 15444 that might be cropped around the iris, with the iris at the centre, and which might incorporate region-of-interest masking of non-iris regions.

Single copy price: \$120.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-9:2011, Information technology - Biometric data interchange formats - Part 9: Vascular image data (identical national adoption of ISO/IEC 19794-9:2011)

ISO/IEC 19794-9:2011 specifies an image interchange format for biometric person-identification or -verification technologies that utilize human vascular biometric images and can be used for the exchange and comparison of vascular image data.

Single copy price: \$120.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-4:2005/Cor 1:2011, Information technology - Biometric data interchange formats - Part 4: Finger image data - Technical Corrigendum 1 (identical national adoption of ISO/IEC 19794-4:2005/Cor 1:2011)

This is the first Technical Corrigendum to ISO/IEC 19794-4:2005 that specifies a data record interchange format for storing, recording, and transmitting the information from one or more finger or palm image areas within an ISO/IEC 19785-1 CBEFF data structure. This can be used for the exchange and comparison of finger image data. It defines the content, format, and units of measurement for the exchange of finger image data that may be used in the verification or identification process of a subject.

Single copy price: Free

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 19794-8:2006/Cor 1:2011, Information technology - Biometric data interchange formats - Part 8: Finger pattern skeletal data - Technical Corrigendum 1 (identical national adoption of ISO/IEC 19794-8:2006/Cor 1:2011)

This is the first Technical Corrigendum to ISO/IEC 19794-8:2006 that specifies the interchange format for the exchange of pattern-based skeletal fingerprint recognition data. The data format is generic, in that it may be applied and used in a wide range of application areas where automated fingerprint recognition is involved.

Single copy price: Free

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 29109-5:2012, Information technology - Conformance testing methodology for biometric data interchange formats defined in ISO/IEC 19794 - Part 5: Face image data (identical national adoption of ISO/IEC 29109-5:2012)

ISO/IEC 29109-5:2012 supports applications using face images formatted according to ISO/IEC 19794-5:2005. It defines conformance test assertions that allow a receiving system to check the encoding requirements of ISO/IEC 19794-5:2005 are met and are internally consistent. Formally, ISO/IEC 29109-5:2012 establishes requirements for a conformance test suite that assesses conformity of ISO/IEC 19794-5:2005 records from conformant products. It is intended primarily for use by testing organizations, but may be applied by developers and users of test method specifications and test method implementations.

Single copy price: \$135.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Barbara Bennett, (202) 626-5743, bbennett@itic.org; rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Reaffirmation

BSR INCITS 419-2008 (R201x), Information technology - Fibre Channel Backbone - (FC-BB-4) (reaffirmation of ANSI INCITS 419-2008)

This standard consists of distinct Fibre Channel mappings resulting in the following models:

- FC-BB_IP (FC over TCP/IP backbone network);
- Transparent FC-BB consisting of:
 - FC-BB_GFPT (FC over SONET/SDH/OTN/PDH backbone network using GFPT adaptation);
 - FC-BB_PW (FC over MPLS network using PW adaptation).

Single copy price: \$30.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Reaffirmation

BSR INCITS 437-2008 (R201x), Information technology - Fibre Channel SATA Tunneling Protocol (FC-SATA) (reaffirmation of ANSI INCITS 437-2008)

This standard specifies a Fibre Channel mapping layer (i.e., an FC-4) to enable the use of Fibre Channel topologies to attach Serial ATA devices to ATA host systems. The Serial ATA interface is defined in the ATA/ ATAPI-7 set of standards (ANSI INCITS 397-2005).

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ITI (INCITS) (InterNational Committee for Information Technology Standards)

Reaffirmation

BSR INCITS 438-2008 (R201x), Information technology - Server Management Command Line Protocol (SM CLP) Specification (reaffirmation of ANSI INCITS 438-2008)

This document lays out the general framework for the Server Management Command Line Protocol (SM CLP). This specification is intended to guide developers of implementations of the SM CLP and optionally be used as a reference by system administrators and other users of SM CLP implementations.

Single copy price: \$30.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Reaffirmation

BSR INCITS 443-2008 (R201x), Information technology - Fibre Channel Storage Network PING (SNPing) (reaffirmation of ANSI INCITS 443-2008)

This standard defines a Command Line Interface (CLI) for a storage networking management utility program that is equivalent to the IP Networking Ping function. The CLI may be directly useful to storage management personnel or it may be accessed via other applications (e.g., an SMI-S Client).

Single copy price: \$30.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Reaffirmation

BSR INCITS 449-2008 (R201x), Information technology - Fabric Application Interface Standard - 2 (FAIS-2) (reaffirmation of ANSI INCITS 449-2008)

This standard describes a set of functions and data structures in the C language abstracting the details of the FAIS_Platform from the implementation of a storage management application. This standard defines an API only in the C language. Functionally equivalent APIs may be implemented in other languages but these are beyond the scope of this standard. All functions provided to operate with function specifications defined in this standard shall use C-style calling conventions. This constraint does not limit the internal implementation of components of a FAIS_Provider.

Single copy price: \$30.00

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Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Stabilized Maintenance

BSR INCITS 210-2008 (S201x), Information technology - High-Performance Parallel Interface - Framing Protocol (HIPPI-FP) (stabilized maintenance of ANSI INCITS 210-2008)

This American National Standard provides data framing for a high-performance point-to-point interface between data-processing equipment. This standard does not protect against certain errors that might be introduced by intermediate devices interconnecting multiple HIPPI-PHs.

Single copy price: \$30.00

Obtain an electronic copy from: <http://www.incits.org> or <http://webstore.ansi.org>

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Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Stabilized Maintenance

BSR INCITS 303-1998 (S201x), Fibre Channel Physical and Signaling Interface-3 (FC-PH-3) (stabilized maintenance of ANSI INCITS 303-1998 (R2008))

FC-PH-3 describes the enhancement to ANSI X3.230, FC-PH and to the ANSI X3.297, FCPH- 2 and is an addendum to the FC-PH and FC-PH-2 documents.

Single copy price: \$30.00

Obtain an electronic copy from: IHS Global; <http://www.incits.org> or <http://webstore.ansi.org> (<http://www.global.ihs.com>)

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ITI (INCITS) (InterNational Committee for Information Technology Standards)

Stabilized Maintenance

BSR INCITS 323-1998 (S201x), Information technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer (HIPPI-6400-PH) (stabilized maintenance of ANSI INCITS 323-1998 (R2008))

This American National Standard specifies a physical-level, point-to-point, full-duplex, link interface for reliable, flow-controlled, transmission of user data at 6400 Mbit/s, per direction, across distances of up to 1 km. A parallel copper cable interface for distances of up to 40 m is specified. Connections to a separate longer-distance optical interface are provided. Small fixed-size micropackets provide an efficient, low-latency, structure for small transfers, and a component for large transfers.

Single copy price: \$30.00

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Order from: Global Engineering Documents, (800) 854-7179, www.global.ihs.com

Send comments (with copy to psa@ansi.org) to: Rachel Porter, 202-626-5741, rporter@itic.org

MAMA (Medical Alert Monitoring Association)

New Standard

BSR/MAMA 001-201x, Personal Emergency Response Systems (PERS) Medical Alert Monitoring (new standard)

Establish criteria to ensure services provided to clients are reliable and of a consistent high quality in all areas: set-up, response and appropriate signal and call processing.

Single copy price: Free

Obtain an electronic copy from: standards@medicalalertassociation.com

Order from: David Schwartz, (866) 388-8618, standards@medicalalertassociation.com

Send comments (with copy to psa@ansi.org) to: Same

SIA (Security Industry Association)**Revision**

BSR/SIA DC-09-201x, SIA Digital Communication Standard - Internet Protocol Event Reporting (revision of ANSI/SIA DC-09-2007)

This standard details the protocol and related details to report events from premises equipment to a central station using Internet protocol (IP) to carry the event content. It is important to distinguish that, while this reporting method uses the SIA Receiver-to-Computer Interface Protocol as a foundation, it is intended for event transport from protected premises to a central station - possibly using the public Internet. This standard is intended for use by manufacturers of control panels and central station receivers to ensure equipment compatibility, as well as all affected parties. Compliance with this standard is voluntary.

Single copy price: \$60.00

Order from: Joseph Gittens, 301-804-4709, jgittens@siaonline.org

Send comments (with copy to psa@ansi.org) to: Brittany Golder, (301) 804-4727, bgolder@siaonline.org

TIA (Telecommunications Industry Association)**New National Adoption**

BSR/TIA 455-204-A-201x, FOTP-204 - Measurement of Bandwidth on Multimode Fiber (identical national adoption of IEC 60793-1-41)

Revision to support OM4/adapt IEC test method.

Single copy price: \$93.00

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA), standards@tiaonline.org

Send comments (with copy to psa@ansi.org) to: Same

TIA (Telecommunications Industry Association)**New Standard**

BSR/TIA 4957.000-201x, Overview and Architecture (new standard)

This adds an overview and architecture chapter to the existing standard, ANSI/TIA PN4957.

Single copy price: \$71.00

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA), standards@tiaonline.org

Send comments (with copy to psa@ansi.org) to: Same

UL (Underwriters Laboratories, Inc.)**New Standard**

BSR/UL 1989-201x, Standby Batteries (new standard)

The Standard for Standby Batteries, UL 1989 is being proposed for approval as an American National Standard. The requirements cover instrument batteries, enclosed batteries, emergency lighting, and power batteries and uninterruptible power supply batteries.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: www.comm-2000.com

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Send comments (with copy to psa@ansi.org) to: Megan VanHeirselee, (847) 664-2881, Megan.M.VanHeirselee@ul.com

UL (Underwriters Laboratories, Inc.)**Reaffirmation**

BSR/UL 5A-2008 (R201x), Standard for Safety for Nonmetallic Surface Raceways and Fittings (reaffirmation of ANSI/UL 5A-2008)

Reaffirmation of current ANS, which covers products intended to enclose circuits operating at potentials not exceeding 600 V between conductors and for use as surface wiring systems in accordance with the National Electrical Code (NEC) and Canadian Electrical Code (CEC), Part I.

Single copy price: Contact comm2000 for pricing and delivery options

Obtain an electronic copy from: <http://www.comm-2000.com>

Order from: comm2000

Send comments (with copy to psa@ansi.org) to: Paul Lloret, (408) 754-6618, Paul.E.Lloret@ul.com

Comment Deadline: May 21, 2013**ASME (American Society of Mechanical Engineers)****Withdrawal**

ANSI/ASME B18.25.1M-1996 (R2008), Square and Rectangular Keys and Keyways (withdrawal of ANSI/ASME B18.25.1M-1996 (R2008))

This Standard covers requirements for square and rectangular parallel keys and keyways intended for both alignment of shafts and hubs, and transmitting torque between shafts and hubs.

Single copy price: \$35.00

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to psa@ansi.org) to: Calvin Gomez, (212) 591-7021, gomezcc@asme.org

ASME (American Society of Mechanical Engineers)**Withdrawal**

ANSI/ASME B18.25.2M-1996 (R2008), Woodruff Keys and Keyways (withdrawal of ANSI/ASME B18.25.2M-1996 (R2008))

This Standard covers requirements for metric Woodruff keys and keyways intended for both alignment of shafts and hubs, and transmitting torque between shafts and hubs.

Single copy price: \$35.00

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to psa@ansi.org) to: Calvin Gomez, (212) 591-7021, gomezcc@asme.org

ASME (American Society of Mechanical Engineers)**Withdrawal**

ANSI/ASME B18.25.3M-1998 (R2008), Square and Rectangle Keys and Keyways: Width Tolerances and Deviations Greater Than Basic Size (withdrawal of ANSI/ASME B18.25.3M-1998 (R2008))

This Standard covers requirements for square and rectangular parallel keys and keyways intended for both alignment of shafts and hubs, and transmitting torque between shafts and hubs.

Single copy price: \$35.00

Order from: Mayra Santiago, ASME; ANSIBOX@asme.org

Send comments (with copy to psa@ansi.org) to: Calvin Gomez, (212) 591-7021, gomezcc@asme.org

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Immediately following the end of a 30-day announcement period in Standards Action, the Technical Report will be registered by ANSI. Please submit any comments regarding this registration to the organization indicated, with a copy to the PSA Center, American National Standards Institute, 25 West 43rd Street, New York, NY 10036 or E-Mail to psa@ansi.org.

HL7 (Health Level Seven)

HL7 V3DAM BRIDG R1-2012, HL7 Version 3 Domain Analysis Model: Biomedical Research Integrated Domain (BRIDG), Release 1 (TECHNICAL REPORT) (technical report)

The BRIDG Model is a Domain Analysis Model (DAM) for biomedical research. It is an open shared view of the dynamic and static semantics of a common domain-of-interest, focused on the domain of protocol-driven research and its associated regulatory artifacts. The BRIDG model was initiated through the Clinical Data Interchange Standards Consortium (CDISC) to ensure that the standards developed in the clinical research domain would be harmonized with each other and that they would appropriately harmonize with the HL7 Reference Information Model (RIM) to support a link between medical research and healthcare. Shortly after its initiation by CDISC, the US National Cancer Institute (NCI), Health Level 7's (HL7) Regulated Clinical Research Information Management Technical Committee (RCRIM) Work Group and the US Food and Drug Administration (FDA) joined the effort to build this model. In early 2010, the BRIDG model became a standard through the CDISC Standards Development Process. The BRIDG model is currently at Release 3.0.1, which is being balloted through the ISO Joint Initiative Council (JIC) process.

Single copy price: Free to members and non-members

Order from: Karen Van Hentenryck, (734) 677-7777 Ext 104, Karenvan@HL7.org

Send comments (with copy to psa@ansi.org) to: same

HL7 (Health Level Seven)

HL7 V3DAM OO DIETORD R1-2012, HL7 Version 3 Domain Analysis Model: Diet and Nutrition Orders, Release 1 (TECHNICAL REPORT) (technical report)

The Nutrition DAM provides the analysis model to support the exchange of information between nutrition care providers, food service operations responsible for feeding patients, and residents in all levels of care and other healthcare providers.

Single copy price: Free to members and non-members

Order from: Karen Van Hentenryck, (734) 677-7777 Ext 104, Karenvan@HL7.org

Send comments (with copy to psa@ansi.org) to: same

30 Day Notice of Withdrawal: ANS 5 to 10 years past approval date

In accordance with clause 4.7.1 Periodic Maintenance of American National Standards of the ANSI Essential Requirements, the following American National Standards have not been reaffirmed or revised within the five-year period following approval as an ANS. Thus, they shall be withdrawn at the close of this 30-day public review notice in Standards Action.

ANSI/AWS B2.1-1/8-010-2002, Gas Tungsten Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1 to M-8 or P-8), 10 through 18 Gage, in the as-Welded Condition, with or without Backing

ANSI/AWS B2.1-1/8-231-2002, Welding Procedure Specification (WPS) for Gas Tungsten Arc Welding, with Consumable Insert Root, Followed by Shielded Metal Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1/P-1/S-1, Groups 1 and 2 Welded to M-8/P-8/S-8, Group 1) 1/8 through 1-1/2 inch thick, IN309, ER309, and E309-15, 16, or, 17, As-Welded Condition, Primarily Pipe Applications

Corrections

Incorrect Listing

BSR/ASA S12.2-2008 (R201x)

BSR/ASA S12.2-2008 (R201x) was mistakenly listed in the March 15, 2013 issue of Standards Action. This standard is not currently open for comment.

Incorrect Designation

BSR/ASA S12.8-2008 (R201x)

BSR/ASA S12.8-2008 (R201x) was listed with a typographical error in the year referenced in the designation. This should have been listed as BSR/ASA S12.8-1998 (R201x).

Comment Deadline: May 6, 2013

NFPA (National Fire Protection Association)

The National Fire Protection Association announced the availability of NFPA First Draft Report for concurrent review and comment by NFPA and ANSI in the Volume 44, Number 12 issue of Standards Action.

The disposition of all comments received will be published in the Second Draft Report (formally Report on Comments), also located on the document's information page under the next edition tab. The document's specific URL, www.nfpa.org/doc#next (for example www.nfpa.org/101next), can easily access the document's information page. All comments on the 2013 Fall Revision Cycle First Draft Report must be received by May 3, 2013.

The First Draft Report for documents in the 2014 Annual Revision Cycle was released on February 22, 2013, and contains the disposition of public input received for those proposed documents. Anyone wishing to review the First Draft Report for the 2014 Annual Revision Cycle may do so on each document's information page under the next edition tab. The document's specific URL, for example www.nfpa.org/doc#next (www.nfpa.org/101next), can easily access the document's information page.

For more information on the rules and for up-to-date information on schedules and deadlines for processing NFPA Documents, check the NFPA website (<http://www.nfpa.org>) or contact NFPA's Codes and Standards Administration. Those who sent comments to NFPA (Contact Codes and Standards Administration, NFPA, One Batterymarch Park, Quincy, MA 02269-7471) on the related standards are invited to copy ANSI's Board of Standards Review. Single copy price: FREE

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Send comments (with copy to psa@ansi.org) to: Amy Beasley Cronin, (617) 770-3000, ccronin@NFPA.org

New Standard

BSR/NFPA 4-201x, Standard for Integrated Fire Protection and Life Safety System Testing (new standard)

The standard shall provide the minimum requirements for testing of integrated fire protection and life safety systems where such testing is required by governing laws, codes, regulations, or standards. This standard shall not provide requirements for testing of individual systems.

Revision

BSR/NFPA 1-201x, Fire Code (revision of ANSI/NFPA 1-2011)

This standard shall specify the minimum design, performance, testing, and certification requirements for respirators to provide protection from inhalation hazards for personnel conducting wildland fire-fighting operations. This standard shall specify only respirator requirements for use in non-IDLH (immediately dangerous to life and health) wildland environments during wildland fire-fighting operations. This standard shall specify requirements for any accessories or enhancements built into, attached to, or sold with the certified wildland fire-fighting respirator by the respirator manufacturer for later attachment and which shall be tested with the wildland fire-fighting respirator and with those accessories and enhancements installed or attached, as specified in 4.3. 11 and 4.3. This standard shall not specify requirements for any wildland fire-fighting protective clothing and protective equipment other than that identified in through . This standard shall not specify requirements for respirators for any other fire-fighting operations other than those identified in and , any technical rescue operation, any hazardous materials emergencies, or any CBRN incident operations. Certification of respirators for wildland fire-fighting operations to the requirements of this standard shall not preclude certification to additional appropriate standards where the respirator meets all the applicable requirements of each standard. This standard shall not be construed as addressing all of the safety concerns associated with the use of compliant respirators. It shall be the responsibility of the persons and organizations that use compliant respirators to establish safety and health practices and to determine the applicability of regulatory limitations prior to use. This standard shall not be construed as addressing all of the safety concerns, if any, associated with the use of this standard by testing facilities. It shall be the responsibility of the persons and organizations that use this standard to conduct testing of respirators to establish safety and health practices and to determine the applicability of regulatory limitations prior to using this standard for any designing, manufacturing, and testing. Nothing herein shall restrict any jurisdiction or manufacturer from exceeding these minimum requirements.

BSR/NFPA 3-201x, Recommended Practice for Commissioning and Integrated Testing of Fire Protection and Life Safety Systems (revision of ANSI/NFPA 3-2012)

This recommended practice provides the recommended procedures, methods, and documentation for commissioning and integrated testing of active and passive fire protection and life safety systems and their interconnections with other building systems.

BSR/NFPA 30-201x, Flammable and Combustible Liquids Code (revision of ANSI/NFPA 30-2011)

This code shall apply to the storage, handling, and use of flammable and combustible liquids, including waste liquids, as herein defined and classified. A. This code is recommended for use as the basis for legal regulations. Its provisions are intended to reduce the hazard to a degree consistent with reasonable public safety, without undue interference with public convenience and necessity, of operations that require the use of flammable and combustible liquids. Compliance with this code does not eliminate all hazards in the use of flammable and combustible liquids. (See the Flammable and Combustible Liquids Code Handbook for additional explanatory information.) This code shall not apply to the following: (1) Any liquid that has a melting point of 100°F (37.8°C) or greater A. (1) Liquids that are solid at 100°F (37.8°C) or above, but are handled, used, or stored at temperatures above their flash points, should be reviewed against pertinent sections of this code. (2) Any liquid that does not meet the criteria for fluidity given in the definition of liquid in Chapter 3 and in the provisions of Chapter 4 A. (2) The information in A. (1) also applies here. (3) Any cryogenic fluid or liquefied gas, as defined in Chapter 3 (4) Any liquid that does not have a flash point, but which is capable of burning under certain conditions A. (4) Certain mixtures of flammable or combustible liquids and halogenated hydrocarbons either do not exhibit a flash point using the standard closed-cup test methods or will exhibit elevated flash points. However, if the halogenated hydrocarbon is the more volatile component, preferential evaporation of this component can result in a liquid that does have a flash point or has a flash point that is lower than the original mixture. In order to evaluate the fire hazard of such mixtures, flash point tests should be conducted after fractional evaporation of 10, 20, 40, 60, or even 90 percent of the original sample or other fractions representative of the conditions of use. For systems such as open process tanks or spills in open air, an open-cup test method might be more appropriate for estimating the fire hazard. (5) Any aerosol product A. (5) See NFPA 30B, Code for the Manufacture and Storage of Aerosol Products. (6) Any mist, spray, or foam (7) Transportation of flammable and combustible liquids as governed by the U.S. Department of Transportation A. (7) Requirements for transportation of flammable and combustible liquids can be found in NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids, and in the U.S. Department of Transportation's Hazardous Materials Regulations, Title 49, Code of Federal Regulations, Parts 100–199. (8) Storage, handling, and use of fuel oil tanks and containers connected with oil-burning equipment A. (8) See NFPA 31, Standard for the Installation of Oil-Burning Equipment. (9) Use and installation of alcohol-based hand rub (ABHR) dispensers A. (9) Requirements for the use and installation of alcohol-based hand rubs are covered in NFPA 1, Fire Code, and NFPA 101, Life Safety Code.

BSR/NFPA 30A-201x, Code for Motor Fuel Dispensing Facilities and Repair Garages (revision of ANSI/NFPA 30A-2011)

This code is recommended for use as the basis for legal regulations. Its provisions are intended to reduce the hazards of motor fuels to a degree consistent with reasonable public safety, without undue interference with public convenience and necessity. Thus, compliance with this code does not eliminate all hazards in the use of these fuels. See the Flammable and Combustible Liquids Code Handbook for additional explanatory information. This code shall apply to motor fuel dispensing facilities; marine/motor fuel dispensing facilities; and motor fuel dispensing facilities located inside buildings, at fleet vehicle motor fuel facilities, and at farms and isolated construction sites. This code shall also apply to motor vehicle repair garages. This code shall not apply to those motor fuel dispensing facilities where only liquefied petroleum gas (LP-Gas), liquefied natural gas (LNG), or compressed natural gas (CNG) is dispensed as motor fuel. A. See NFPA 52, Vehicular Gaseous Fuel Systems Code, and NFPA 58, Liquefied Petroleum Gas Code, for requirements for facilities where only these fuels are dispensed.

BSR/NFPA 30B-201x, Code for the Manufacture and Storage of Aerosol Products (revision of ANSI/NFPA 30B-2011)

This code shall apply to the manufacture, storage, and display of aerosol products as herein defined. This code shall not apply to the storage and display of containers whose contents are comprised entirely of LP-Gas products. This code shall not apply to post-consumer processing of aerosol containers. This code shall not apply to containers that do not meet the definition of Aerosol Container (see 3.3.2). . 1 Metal containers that contain a product that meets the definitions in 3.3. 1 and 3.3.3, but are larger than 1000 ml (33.8 fl oz) shall not be classified as aerosol products, and this code shall not apply to the manufacture, storage, and display of such containers.

BSR/NFPA 54-201x, National Fuel Gas Code (revision of ANSI/NFPA 54-2012)

This code is a safety code that shall apply to the installation of fuel gas piping systems, appliances, equipment, and related accessories as shown in . 1(A) through . 1(D). (A) Coverage of piping systems shall extend from the point of delivery to the appliance connections. For other than undiluted liquefied petroleum gas (LP-Gas) systems, the point of delivery shall be the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where no meter is provided. For undiluted LP-Gas systems, the point of delivery shall be considered to be the outlet of the final pressure regulator, exclusive of line gas regulators where no meter is installed. Where a meter is installed, the point of delivery shall be the outlet of the meter. (B) The maximum operating pressure shall be 125 psi (862 kPa). A.. 1(A) The final pressure regulator in an undiluted liquefied petroleum gas (LP-Gas) system can include any one of the following: (1) The second stage regulator or integral two-stage regulator (2) A2 psi (14 kPa) service regulator or integral 2 psi (14 kPa) service regulator (3) A single-stage regulator, where single-stage systems are permitted by NFPA 58, Liquefied Petroleum Gas Code. Exception No. 1: Piping systems for gas–air mixtures within the flammable range are limited to a maximum pressure of 10 psi (69 kPa). Exception No. 2: LP-Gas piping systems are limited to 20 psi (140 kPa), except as provided in 5.5. 1(6). (C) Requirements for piping systems shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation, and maintenance. (D) Requirements for appliances, equipment, and related accessories shall include installation, combustion, and ventilation air and venting. 2 This code shall not apply to the following items (reference standards for some of which appear in Annex L): (1) Portable LP-Gas appliances and equipment of all types that are not connected to a fixed fuel piping system (2) Installation of appliances such as brooders, dehydrators, dryers, and irrigation equipment used for agricultural purposes (3) Raw material (feedstock) applications except for piping to special atmosphere generators (4) Oxygen–fuel gas cutting and welding systems (5) Industrial gas applications using such gases as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen, and nitrogen (6) Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms, and natural gas processing plants (7) Large integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by chemical reactions or used in chemical reactions (8) LP-Gas installations at utility gas plants (9) Liquefied natural gas (LNG) installations (10) Fuel gas piping in electric utility power plants (11) Proprietary items of equipment, apparatus, or instruments such as gas generating sets, compressors, and calorimeters (12) LP-Gas equipment for vaporization, gas mixing, and gas manufacturing (13) LP-Gas piping for buildings under construction or renovations that is not to become part of the permanent building piping system—that is, temporary fixed piping for building heat (14) Installation of LP-Gas systems for railroad switch heating (15) Installation of LP-Gas and compressed natural gas (CNG) systems on vehicles (16) Gas piping, meters, gas pressure regulators, and other appurtenances used by the serving gas supplier in distribution of gas, other than undiluted LP-Gas (17) Building design and construction, except as specified herein (18) Fuel gas systems on recreational vehicles manufactured in accordance with NFPA 1192, Standard on Recreational Vehicles (19) Fuel gas systems using hydrogen as a fuel (20) Construction of appliances Other Standards. In applying this code, reference shall also be made to the manufacturers' instructions and the serving gas supplier regulations.

BSR/NFPA 59-201x, Utility LP-Gas Plant Code (revision of ANSI/NFPA 59-2011)

This code shall apply to the design, construction, location, installation, operation, and maintenance of refrigerated and nonrefrigerated utility gas plants. Coverage of liquefied petroleum gas systems at utility gas plants shall extend to the point where LP-Gas or a mixture of LP-Gas and air is introduced into the utility distribution system. A. Those portions of LP-Gas systems downstream of the point where LP-Gas or a mixture of LP-Gas and air is introduced into the utility distribution system are covered in the United States by the U.S. Department of Transportation, 49 CFR 192, "Pipeline Safety Law." (See Figure A..) When operations that involve the liquid transfer of LP-Gas from the utility gas plant storage into cylinders or portable tanks (as defined by NFPA 58, Liquefied Petroleum Gas Code) are carried out in the utility gas plant, these operations shall conform to NFPA 58, Liquefied Petroleum Gas Code. Installations that have an aggregate water capacity of 4000 gal (15.14 m³) or less shall conform to NFPA 58, Liquefied Petroleum Gas Code.

BSR/NFPA 70E-201x, Standard for Electrical Safety in the Workplace® (revision of ANSI/NFPA 70E-2012)

This standard addresses electrical safety-related work practices for employee workplaces that are necessary for the practical safeguarding of employees relative to the hazards associated with electrical energy during activities such as the installation, inspection, operation, maintenance, and demolition of electric conductors, electric equipment, signaling and communications conductors and equipment, and raceways. This standard also includes safe work practices for employees performing other work activities that can expose them to electrical hazards as well as safe work practices for the following: (1) Installation of conductors and equipment that connect to the supply of electricity (2) Installations used by the electric utility, such as office buildings, warehouses, garages, machine shops, and recreational buildings that are not an integral part of a generating plant, substation, or control center (B) Not Covered. This standard does not cover safety-related work practices for the following: (1) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles (2) Installations underground in mines and self-propelled mobile surface mining machinery and its attendant electrical trailing cable (3) Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communications purposes (4) Installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations (5) Installations under the exclusive control of an electric utility where such installations: a. Consist of service drops or service laterals, and associated metering, or b. Are located in legally established easements or rights-of-way designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations, or c. Are on property owned or leased by the electric utility for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy, or d. Are located by other written agreements either designated by or recognized by public service commissions, utility commission, or other regulatory agencies having jurisdiction for such installations. These written agreements shall be limited to installations for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy where legally established easements or rights-of-way cannot be obtained. These installations shall be limited to federal lands, Native American reservations through the U.S. Department of the Interior Bureau of Indian Affairs, military bases, lands controlled by port authorities and state agencies and departments, and lands owned by railroads.

BSR/NFPA 79-201x, Electrical Standard for Industrial Machinery (revision of ANSI/NFPA 79-2012)

In this standard, the term electrical includes both electrical and electronic equipment. Requirements that apply only to electronic equipment are so identified. The general terms machine and machinery as used throughout this standard mean industrial machinery. See Annex C for examples of industrial machines covered by this standard. The publications referenced throughout Annex A are listed in Annex J with their appropriate dates of issue. The provisions of this standard shall apply to the electrical/electronic equipment, apparatus, or systems of industrial machines operating from a nominal voltage of 600 volts or less, and commencing at the point of connection of the supply to the electrical equipment of the machine. This standard does not include the additional requirements for machines intended for use in hazardous (classified) locations. A. For additional requirements for machines intended to be used in hazardous (classified) areas, see NFPA 70, Article 500.

BSR/NFPA 86-201x, Standard for Ovens and Furnaces (revision of ANSI/NFPA 86-2011)

This standard shall apply to Class A, Class B, Class C, and Class D ovens, dryers, and furnaces; thermal oxidizers; and any other heated enclosure used for processing of materials and related equipment. The terms ovens, dryers, and furnaces are used interchangeably and shall also apply to other heated enclosures used for processing of materials. Within the scope of this standard, a Class A, Class B, or Class C oven is any heated enclosure operating at approximately atmospheric pressure and used for commercial and industrial processing of materials. A Class A oven shall be permitted to utilize a low-oxygen atmosphere. This standard shall apply to bakery ovens and Class A ovens, in all respects, and where reference is made to ANSI Z50.1, Bakery Equipment Safety Requirements, those requirements shall apply to bakery oven construction and safety. This standard shall apply to atmosphere generators and atmosphere supply systems serving Class C furnaces and to furnaces with integral quench tanks or molten salt baths. This standard shall apply to Class D ovens and furnaces operating above ambient temperatures to over 5000°F (2760°C) and at pressures normally below atmospheric to 10^{−8} torr (1.33 × 10^{−6} Pa).

BSR/NFPA 87-201x, Recommended Practice for Fluid Heaters (revision of ANSI/NFPA 87-2011)

This recommended practice covers Type F, Type G, and Type H fluid heaters and related equipment. Within the scope of this recommended practice, a fluid heater is considered to be any thermal fluid heater or process fluid heater with the following features: (1) Fluid is flowing under pressure. (2) Fluid is indirectly heated. (3) Release of energy from combustion of a liquid or gaseous fuel or an electrical source occurs within the unit. This recommended practice does not apply to the following: (1) Boilers (which are covered by NFPA 85, Boiler and Combustion Systems Hazards Code, or ANSI/ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers) (2) Class A, B, C, or D ovens and furnaces (which are covered by NFPA 86, Standard for Ovens and Furnaces) (3) Fired heaters in petroleum refineries and petrochemical facilities that are designed and installed in accordance with API 560, Fired Heaters for General Refinery Services; API RP 556, Instrumentation and Control Systems for Fired Heaters and Steam Generators; and API RP 2001, Fire Protection in Refineries (4) Fired heaters commonly called reformer furnaces or cracking furnaces in the petrochemical and chemical industries (5) Units that heat air for occupiable space or comfort (6) LP-Gas vaporizers designed and installed in accordance with NFPA 58, Liquefied Petroleum Gas Code (7) Coal or other solid fuel-firing systems The following types of heaters are covered by this recommended practice: (1) Class F heaters, which have fluid inside the tubes with a relatively constant flow rate (2) Class G heaters, which have fluid inside the tubes with a modulated flow rate and firing rate (3) Class H heaters, which have a heat source (combustion or electricity) inside the tubes.

BSR/NFPA 88A-201x, Standard for Parking Structures (revision of ANSI/NFPA 88A-2011)

This standard shall cover the construction and protection of, as well as the control of hazards in, open and enclosed parking structures. This standard shall not apply to one- and two-family dwellings.

BSR/NFPA 90A-201x, Standard for the Installation of Air-Conditioning and Ventilating Systems (revision of ANSI/NFPA 90A-2012)

This standard shall cover construction, installation, operation, and maintenance of systems for air conditioning and ventilating, including filters, ducts, and related equipment, to protect life and property from fire, smoke, and gases resulting from fire or from conditions having manifestations similar to fire. A. 1. 1 An air duct system has the potential to convey smoke, hot gases, and flame from area to area and to supply air to aid combustion in the fire area. For these reasons, fire protection of an air duct system is essential to safety to life and the protection of property. However, an air duct system's fire integrity also enables it to be used as part of a building's fire protection system. Guidance for the design of smoke-control systems is provided in NFPA 92, Standard for Smoke Control Systems. Pertinent information on maintenance is provided in Annex B. Maintenance of fire dampers, ceiling dampers, smoke dampers, and combination fire/smoke dampers requirements can be found in NFPA 80, Standard for Fire Doors and Other Opening Protectives, and NFPA 105, Standard for Smoke Door Assemblies and Other Opening Protectives.

BSR/NFPA 90B-201x, Standard for the Installation of Warm Air Heating and Air-Conditioning Systems (revision of ANSI/NFPA 90B-2011)

This standard shall cover construction, installation, operation, and maintenance of systems for warm air heating and air conditioning, including filters, ducts, and related equipment to protect life and property from fire, smoke, and gases resulting from fire. A. 1. 1 For other types of systems, see NFPA 90A. For installation of blower and exhaust systems, see NFPA 91. For removal of smoke and grease-laden vapors from commercial cooking equipment, see NFPA 96.

BSR/NFPA 99B-201x, Standard for Hypobaric Facilities (revision of ANSI/NFPA 99B-2010)

This standard shall apply to all hypobaric facilities in which humans will be occupants or are intended to be occupants of the hypobaric chamber. This standard shall not apply to hypobaric facilities used for animal experimentation if the size of the hypobaric chamber does not allow for human occupancy.

BSR/NFPA 99-201x, Health Care Facilities Code (revision of ANSI/NFPA 99-2012)

The scope of this code is to establish minimum criteria as follows in through 3. Fundamentals. Chapter 4 establishes criteria for levels of health care services or systems based on risk to the patients, staff, or visitors in health care facilities. Gas and Vacuum Systems.. 1 Chapter 5 covers the performance, maintenance, installation, and testing of the following:(1) Nonflammable medical gas systems with operating pressures below a gauge pressure of 2068 kPa (300 psi)(2) Vacuum systems in health care facilities(3) Waste anesthetic gas disposal (WAGD) systems, also referred to as scavenging(4) Manufactured assemblies that are intended for connection to the medical gas, vacuum, or WAGD systems (also referred to as scavenging).2 Requirements for portable compressed gas systems are covered in Chapter 1.4 Electrical Systems.. 1 Chapter 6 covers the performance, maintenance, and testing of electrical systems (both normal and essential) in health care facilities..2 The following areas are not addressed in this code, but are addressed in other NFPA documents:(1) Specific requirements for wiring and installation of equipment are covered in NFPA 70, National Electrical Code.(2) Requirements for illumination and identification of means of egress in health care facilities are covered in NFPA 101, Life Safety Code.(3) Requirements for installation, testing, and maintenance of fire protection signaling systems are covered in NFPA 72, National Fire Alarm and Signaling Code.(4) Requirements for installation of fire pumps are covered in NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection, except that the alternate source of power are permitted to be the essential electrical system.(5) Requirements for installation of stationary engines and gas turbines are covered in NFPA 37, Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines. Information Technology and Communications Systems. Chapter 7 covers the performance, maintenance, and testing of information technology and communications systems in health care facilities. Plumbing. Chapter 8 covers the performance, maintenance, and testing of plumbing systems in health care facilities. HVAC Systems. Chapter 9 covers the performance, maintenance, and testing of heating, cooling, and ventilating in health care facilities. Electrical Equipment. Chapter 10 covers the performance, maintenance, and testing of electrical equipment in health care facilities. Gas Equipment. Chapter 11 covers the performance, maintenance, and testing of gas equipment in health care facilities.0 Emergency Management. Chapter 12 establishes criteria for emergency management in the development of a program for effective disaster preparedness, response, mitigation, and recovery in health care facilities. A.0 Because no single model of an emergency management plan is feasible for every health care facility, this chapter is intended to provide criteria for the preparation and implementation of an individual plan. The principles involved are universally applicable; the implementation needs to be tailored to the specific facility. 1 Security Management. Chapter 13 covers the performance, maintenance, and testing of security equipment and systems in health care facilities.2 Hyperbaric Facilities. Chapter 14 covers the recognition of, and protection against, hazards of an electrical, explosive, or implosive nature, as well as fire hazards associated with hyperbaric chambers and associated facilities that are used, or intended to be used, for medical applications and experimental procedures at gauge pressures from 0 kPa to 690 kPa (0 psi to 100 psi). A.2 During the past 20 years, there has been a widespread interest in the use of oxygen at elevated environmental pressure to increase the partial pressure of oxygen in a patient's tissues in order to treat certain medical conditions or to prepare a patient for surgery. These techniques are also employed widely for the treatment of decompression sickness (e.g., bends, caisson worker's disease) and carbon monoxide poisoning. Recently, however, the level of knowledge and expertise has increased so dramatically that the codes are in need of updating. By the end of 1988, there were 218 hyperbaric facilities in operation in the United States and Canada. These facilities supported hyperbaric medical treatments for 62,548 patients between 1971 and 1987. As these facilities provide therapy for disorders indicated for treatment, these numbers will continue to increase. As the number of facilities increases, the number of patients treated will also increase. Such treatment involves placement of the patient, with or without attendants, in a hyperbaric chamber or pressure vessel, the pressure of which is raised above ambient pressure. In the course of the treatment, the patient breathes up to 100 percent oxygen. In addition to being used for patient care, these chambers also are being employed for research purposes using experimental animals and, in some instances, humans. The partial pressure of oxygen present in a gaseous mixture is the determinate factor in the amount of available oxygen. This pressure will rise if the volume percentage of oxygen present increases, if the total pressure of a given gas mixture containing oxygen increases, or if both these factors increase. Because the sole purpose of the hyperbaric technique of treatment is to raise the total pressure within the treatment chamber, an increased partial pressure of oxygen always is available during treatment, unless positive means are taken to limit the oxygen content. In addition, the patient is often given an oxygen-enriched atmosphere to breathe. The need for human diligence in the establishment, operation, and maintenance of hyperbaric facilities is continual. The chief administrator of the facility possessing the hyperbaric chamber is responsible to adopt and enforce appropriate regulations for hyperbaric facilities. In formulating and administering the program, full use should be made of technical personnel highly qualified in hyperbaric chamber operations and safety. It is essential that personnel having responsibility for the hyperbaric facility establish and enforce appropriate programs to fulfill the provisions of Chapter 14. Potential hazards can be controlled only when continually recognized and understood by all pertinent personnel. The purpose of Chapter 14 is to set forth minimum safeguards for the protection of patients or others subject to, and personnel who administer, hyperbaric therapy and experimental procedures. Its purpose is also to offer some guidance for rescue personnel who are not ordinarily involved in hyperbaric chamber operation, but who could become so involved in an emergency. Requirements cited in 2 are minimum requirements. Discretion on the part of chamber operators and others might dictate the establishment of more stringent regulations.3 Features of Fire Protection. Chapter 15 covers the performance, maintenance, and testing of fire protection equipment in health care facilities.

BSR/NFPA 101-201x, Life Safety Code® (revision of ANSI/NFPA 101-2012)

The following is a suggested procedure for determining the Code requirements for a building or structure: (1) Determine the occupancy classification by referring to the occupancy definitions in Chapter 6 and the occupancy Chapters 12 through 42. (See 6. 1. 14 for buildings with more than one use.) (2) Determine if the building or structure is new or existing. (See the definitions in Chapter 3.) (3) Determine the occupant load. (See 7.3. 1.) (4) Determine the hazard of contents. (See Section 6.2.) (5) Refer to the applicable occupancy chapter of the Code, Chapters 12 through 42. [See Chapters 1 through 4 and Chapters 6 through 11, as needed, for general information (such as definitions) or as directed by the occupancy chapter.] (6) Determine the occupancy subclassification or special use condition, if any, by referring to Chapters 16 and 17, daycare occupancies; Chapters 18 and 19, health care occupancies; Chapters 22 and 23, detention and correctional occupancies; Chapters 28 and 29, hotels and dormitories; Chapters 32 and 33, residential board and care occupancies; Chapters 36 and 37, mercantile occupancies; and Chapter 40, industrial occupancies, which contain subclassifications or special use definitions. (7) Proceed through the applicable occupancy chapter to verify compliance with each referenced section, subsection, paragraph, subparagraph, and referenced codes, standards, and other documents. (8) Where two or more requirements apply, refer to the occupancy chapter, which generally takes precedence over the base Chapters 1 through 4 and Chapters 6 through 11. (9) Where two or more occupancy chapters apply, such as in a mixed occupancy (see 6. 1. 14), apply the most restrictive requirements. Title. NFPA 101, Life Safety Code, shall be known as the Life Safety Code®, is cited as such, and shall be referred to herein as “this Code” or “the Code.” Danger to Life from Fire. The Code addresses those construction, protection, and occupancy features necessary to minimize danger to life from the effects of fire, including smoke, heat, and toxic gases created during a fire. Egress Facilities. The Code establishes minimum criteria for the design of egress facilities so as to allow prompt escape of occupants from buildings or, where desirable, into safe areas within buildings. Other Fire-Related Considerations. The Code addresses other considerations that are essential to life safety in recognition of the fact that life safety is more than a matter of egress. The Code also addresses protective features and systems, building services, operating features, maintenance activities, and other provisions in recognition of the fact that achieving an acceptable degree of life safety depends on additional safeguards to provide adequate egress time or protection for people exposed to fire. Considerations Not Related to Fire. The Code also addresses other considerations that, while important in fire conditions, provide an ongoing benefit in other conditions of use, including non-fire emergencies. A. Life safety in buildings includes more than safety from fire. Although fire safety has been the long-standing focus of NFPA 101, its widely known title, Life Safety Code, and its technical requirements respond to a wider range of concerns, including, for example, crowd safety. Areas Not Addressed. The Code does not address the following: (1) General fire prevention or building construction features that are normally a function of fire prevention codes and building codes A. (1) This Code is intended to be adopted and used as part of a comprehensive program of building regulations that include building, mechanical, plumbing, electrical, fuel gas, fire prevention, and land use regulations. (2) Prevention of injury incurred by an individual due to that individual's failure to use reasonable care (3) Preservation of property from loss by fire

BSR/NFPA 220-201x, Standard on Types of Building Construction (revision of ANSI/NFPA 220-2011)

This standard defines types of building construction based on the combustibility and the fire resistance rating of a building's structural elements. Fire walls, nonbearing exterior walls, nonbearing interior partitions, fire barrier walls, shaft enclosures, and openings in walls, partitions, floors, and roofs are not related to the types of building construction and are regulated by other standards and codes, where appropriate. A. 1. 1 It is necessary for the user to consider the influence of location, occupancy, exterior exposure, possibility of mechanical and physical damage to fire-resistant material, and other features that could impose additional requirements for safeguarding life and property, as commonly covered in building codes. For information on the construction of fire walls and fire barrier walls, see NFPA 221, Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls. For the installation of opening protection, see NFPA 80, Standard for Fire Doors and Other Opening Protectives and NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilating Systems.

BSR/NFPA 221-201x, Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls (revision of ANSI/NFPA 221-2011)

This standard specifies requirements for the design and construction of high challenge fire walls, fire walls, and fire barrier walls including protection of openings and penetrations.

BSR/NFPA 302-201x, Fire Protection Standard for Pleasure and Commercial Motor Craft (revision of ANSI/NFPA 302-2010)

This standard shall establish minimum requirements for the prevention of fire and explosion, for mitigation of carbon monoxide hazards, and for life safety in case of fire, on boats specified in Section 1.3. This standard shall establish minimum requirements for the following: (1) Elimination of ignition sources (2) Ventilation of accommodation spaces, fuel tank compartments (if separate from machinery spaces), and machinery spaces (3) Use of combustible materials (4) Fire-extinguishing equipment and fire exits (5) Control of fire-extinguishing agents in machinery spaces (6) Mitigation of carbon monoxide hazards from all sources.

BSR/NFPA 318-201x, Standard for the Protection of Semiconductor Fabrication Facilities (revision of ANSI/NFPA 318-2011)

This standard applies to semiconductor fabrication facilities and comparable fabrication processes, including research and development areas in which hazardous chemicals are used, stored, and handled and containing what is herein defined as a cleanroom or clean zone, or both.

BSR/NFPA 484-201x, Standard for Combustible Metals (revision of ANSI/NFPA 484-2012)

This standard shall apply to the production, processing, finishing, handling, recycling, storage, and use of all metals and alloys that are in a form that is capable of combustion or explosion. A. 1. 1 Under proper conditions, most metals in the elemental form will react with oxygen to form an oxide. These reactions are exothermic. The conditions of the exposure are affected by the temperature of the metal (whether it is in large pieces or in the form of small particles), the ratio of its surface area to its total weight, the extent or presence of an oxide coating, the temperature of the surrounding atmosphere, the oxygen content of the atmosphere, the moisture content of the atmosphere, and the presence of flammable vapors. The procedures in Chapter 4 shall be used to determine whether a metal is in a noncombustible form. Combustible Metal Powder or Dust.. 1 This standard also shall apply to operations where metal or metal alloys are subjected to processing or finishing operations that produce combustible powder or dust..2 Operations where metal or metal alloys are subjected to processing or finishing operations that produce combustible powder or dust shall include, but shall not be limited to, machining, sawing, grinding, buffing, and polishing. Metals, metal alloy parts, and those materials, including scrap, that exhibit combustion characteristics of alkali metals, aluminum, magnesium, tantalum, titanium, or zirconium shall be subject to the requirements of the metal whose combustion characteristics they most closely match. A. Products or materials that have the characteristics of a combustible metal should have a material safety data sheet (MSDS) that describes those burning characteristics. The manufacturer or technical personnel with knowledge of the hazards associated with the metal should be consulted to characterize the hazards of the metal. (See Table A.(a). and Table A.(b)) Metals, metal alloy parts, and those materials, including scrap, that do not exhibit combustion characteristics of alkali metals, aluminum, magnesium, niobium, tantalum, titanium, or zirconium are subject to the requirements of Chapter 14. This standard shall not apply to the transportation of metals in any form on public highways and waterways or by air or rail. A. Regulations for the domestic shipment of dangerous goods (lithium and lithium alloy materials are so classified) are issued by the Department of Transportation (DOT), 49 CFR 100–199, which has specific responsibility for promulgating the regulations. These regulations are updated and published yearly by DOT. International shipments are regulated by the United Nations, International Air Transport Association, International Maritime Organization, and other national agencies. This standard shall not apply to the primary production of aluminum, magnesium, and lithium. This standard shall apply to laboratories that handle, use, or store more than 0.23 kg (1/2 lb) of alkali metals or 0.907 kg (2 lb) aggregate of other combustible metals, excluding alkali metals. All alkali metals and metals that are in a form that is water reactive shall be subject to this standard. If the quantity of a combustible metal listed in Table is exceeded in an occupancy, the requirements of this document shall apply. A. A combustible metal is a metal that meets the criteria for combustibility as defined in Chapter 4. The quantities listed in Table are for the entire occupancy, not for individual fire control areas.

BSR/NFPA 703-201x, Standard for Fire Retardant - Treated Wood and Fire-Retardant Coatings for Building Materials (revision of ANSI/NFPA 703-2012)

This standard provides criteria for defining and identifying fire retardant–treated wood and fire retardant–coated building materials. A. 1. 1 Fire resistance ratings measured on an hourly basis are not covered in this standard. To establish such ratings, tests should be made in accordance with NFPA 251.

BSR/NFPA 720-201x, Standard for the Installation of Carbon Monoxide(CO) Detection and Warning Equipment (revision of ANSI/NFPA 720-2012)

This document does not attempt to cover all equipment, methods, and requirements that might be necessary or advantageous for the protection of lives from carbon monoxide exposure. The effects of exposure to carbon monoxide vary significantly among different people. Infants, pregnant women, and people with physical conditions that limit their bodies' ability to use oxygen can be affected by low concentrations of carbon monoxide. These conditions include, but are not limited to, emphysema, asthma, and heart disease, all of which are usually indicated by a shortness of breath upon mild exercise. People in need of warning about low levels of carbon monoxide should explore the use of specially calibrated units or other alternatives. This standard is primarily concerned with life safety, not with protection of property. This standard covers the selection, design, application, installation, location, performance, inspection, testing, and maintenance of carbon monoxide detection and warning equipment in buildings and structures. A. See NFPA 1192, Standard on Recreational Vehicles, for equipment for use in recreational vehicles. This standard contains requirements for the selection, installation, operation, and maintenance of equipment that detects concentrations of carbon monoxide that could pose a life safety risk to most occupants in buildings and structures.

BSR/NFPA 790-201x, Standard for Competency of Third-Party Field Evaluation Bodies (revision of ANSI/NFPA 790-2011)

Establishing Competence.. 1 The provisions of this standard shall address requirements for the qualification and competency of a body performing field evaluations on electrical products and assemblies with electrical components.

BSR/NFPA 791-201x, Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation (revision of ANSI/NFPA 791-2011)

This document covers recommended procedures for evaluating unlabeled electrical equipment for compliance with nationally recognized standards and any requirements of the authority having jurisdiction (AHJ). This document does not cover procedures for evaluations relating to product certification systems that result in listed and labeled products.

BSR/NFPA 1720-201x, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments (revision of ANSI/NFPA 1720-2010)

This standard contains minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by volunteer and combination fire departments. The requirements address functions and outcomes of fire department emergency service delivery, response capabilities, and resources. This standard also contains minimum requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning. This standard addresses the strategic and system issues involving the organization, operation, and deployment of a fire department and does not address tactical operations at a specific emergency incident. This standard does not address fire prevention, community education, fire investigations, support services, personnel management, and budgeting.

BSR/NFPA 2113-201x, Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire (revision of ANSI/NFPA 2113-2011)

This standard shall specify the minimum selection, care, use, and maintenance requirements for flame-resistant garments for use by industrial personnel in areas at risk from flash fires or short-duration flame exposure that are compliant with NFPA 2112, Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire. A. The use of garments providing protection against flash fires should be incorporated into a proper safety program that also utilizes appropriate administrative and engineering controls in addition to proper, safe work procedures. Flame-resistant garments are available from a variety of manufacturers, in a range of items (coveralls, pants, shirts, vests, parkas, rainwear, disposable garments, aprons, etc.). Flame-resistant garments are made out of a variety of either inherently flame-resistant fabrics or fabrics that have been treated with a flame retardant. NFPA 2112-compliant clothing is intended to reduce the probability and extent of burn injury during exposure or escape. This standard shall not apply to protective clothing for wildland fire fighting, technical rescue, structural fire fighting, proximity fire fighting, or any other fire-fighting operations, or hazardous materials emergencies. A. Organizations responsible for fire-fighting applications should use protective clothing and equipment specifically designed for those activities. Applicable standards include the following: (1) NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (2) NFPA 1977, Standard on Protective Clothing and Equipment for Wildland Fire Fighting Organizations responsible for hazardous materials emergencies should use protective clothing and equipment specifically designed for those activities. Applicable standards include the following: (1) NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies (2) NFPA 1992, Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies Organizations responsible for emergency medical operations should use protective clothing and equipment specifically designed for those activities. The applicable standard is NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations. This standard shall not apply to protection from electrical flashes, radiological agents, biological agents, or hazardous materials.

BSR/NFPA 5000-201x, Building Construction and Safety Code® (revision of ANSI/NFPA 5000-2012)

The Code does not address features that solely affect economic loss to private property. General. The Code addresses those construction, protection, and occupancy features necessary to minimize danger to life and property. Code Title. The provisions of this document shall constitute and be known as NFPA 5000, Building Construction and Safety Code, hereinafter referred to as "this Code" or "the Code."

Comment Deadline: May 6, 2013

NFPA (National Fire Protection Association)

The National Fire Protection Association announced the availability of its semi-annual NFPA Report on Comments (ROC 2013 ARC) for concurrent review and comment by NFPA and ANSI in the Volume 44, Number 12 issue of Standards Action.

The disposition of all comments received will now be published in the semi-annual NFPA Report on Comments (ROC 2013 ARC).

Report on Comments for 2013 Annual Revision Cycle has been released and contains the disposition of comments received for those proposed documents listed below. As a result of the comments, changes may have been made to some of the Reports, and these changes are included in the Report on Comments. Anyone wishing to review the ROC 2013 ARC may do so at <http://www.nfpa.org/ROPROC>.

These documents are for the NFPA 2013 Annual Revision Cycle. The Report on Comments is compilation of the documented action on comments received by the technical committees or code-making panels for the 2013 Annual Revision Cycle. The proposed NFPA documents addressed in the Report on Proposals (ROP) and in the follow-up Report on Comments (ROC) will only be presented for action at the NFPA June 2013 Association Technical Meeting to be held June 12-13, 2013 in Chicago, IL when proper Amending Motions have been submitted to the NFPA by the deadline of April 5, 2013 or May 5, 2013 for specifically the National Electrical Code. Documents that receive no motions will not be presented at the meeting and instead will be forwarded directly to the Standards Council for action on issuance. For more information on the rules and for up-to-date information on schedules and deadlines for processing NFPA Documents, check the NFPA website (<http://www.nfpa.org>) or contact NFPA's Codes and Standards Administration. Those who sent comments to NFPA (Contact Codes and Standards Administration, NFPA, One Batterymarch Park, Quincy, MA 02269-7471) on the related standards are invited to copy ANSI's Board of Standards Review.

Single copy price: FREE

Order from: 2013 AM ROC NFPA, Customer Service, 11 Tracy Drive, Avon, MA 02322

Obtain an electronic copy from: www.NFPA.org

Send comments (with copy to psa@ansi.org) to: Amy Beasley Cronin, (617) 770-3000, ccronin@NFPA.org

New Standard

BSR/NFPA 56PS-201x, Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems (new standard)

This standard shall apply to fire and explosion prevention during cleaning and purging activities for new and existing flammable gas piping found in electric generating plants and in industrial, institutional, and commercial applications.. 1 Coverage of piping systems shall extend from the point of delivery to the gas-consuming equipment isolation valve.. 1.1 For other than undiluted liquefied petroleum gas (LP-Gas) systems, the point of delivery is the outlet of the customer meter or at the connection to a customer's piping, whichever is farther downstream, or if there is no meter at the connection to customer piping.. 1.2 For undiluted LP-Gas, the point of delivery is the outlet of the final pressure regulator, exclusive of line gas regulators, in the system.. 1.3 For facilities that produce flammable gas for consumption on site, the point of delivery is the discharge isolation valve for the gas-producing equipment.

Nonapplication of Standard. This standard shall not apply to the following items:(1)Piping systems covered by NFPA 2(2)Piping systems covered by NFPA 54(3)Piping systems covered by NFPA 58(4)LP-Gas (including refrigerated storage) at utility gas plants (see NFPA 59)(5)LNG facilities covered by NFPA 59A (6) LP-Gas used with oxygen for cutting, welding, or other hot work(7)Vehicle fuel dispensers(8) Commissioning and maintenance of appliances or equipment(9) Vent lines from pressure relief valves(10) Systems regulated by U.S. Department of Transportation (DOT) 49 CFR 191 and 1921.2 Purpose.

This standard provides minimum safety requirements for the cleaning and purging of flammable gas piping systems, including cleaning new or existing piping systems, purging piping systems into service, and purging piping systems out of service. 1.2. 1 For the purposes of this document, a piping system shall be understood to mean a complete piping system, including valves, regulators, and other appurtenances, and any segment thereof that can be isolated from the system. 1.3 Retroactivity. The provisions of this standard reflect a consensus of what is necessary to provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued. 1.3. 1 Unless otherwise specified, the provisions of this standard shall apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. 1.3.2 The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction and only where it is clearly evident that a reasonable degree of safety is provided. 1.4 Equivalency. The provisions of this code are not intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard. 1.4. 1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency. 1.4.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Revision

BSR/NFPA 25-201x, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems (revision of ANSI/NFPA 25-2011)

This document establishes the minimum requirements for the periodic inspection, testing, and maintenance of water-based fire protection systems, including land-based and marine applications.

BSR/NFPA 51B-201x, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work (revision of ANSI/NFPA 51B-2009)

This standard shall cover provisions to prevent loss of life and property from fire or explosion as a result of hot work. Installation and operation of arc cutting and welding equipment and operation of gas cutting and welding equipment shall be in accordance with ANSI Z49. 1, Safety in Welding, Cutting, and Allied Processes.

BSR/NFPA 58-2011x, Liquefied Petroleum Gas Code (revision of ANSI/NFPA 58-2011)

This code applies to the storage, handling, transportation, and use of LP-Gas. A. 1. 1 General Properties of LP-Gas. Liquefied petroleum gases (LP-Gases), as defined in this code (see 3.3.36), are gases at normal room temperature and atmospheric pressure. They liquefy under moderate pressure and readily vaporize upon release of the pressure. It is this property that permits the transportation and storage of LP-Gases in concentrated liquid form, although they normally are used in vapor form. For additional information on other properties of LP-Gases, see Annex B. Federal Regulations. Regulations of the U. S. Department of Transportation (DOT) are referenced throughout this code. Prior to April 1, 1967, these regulations were promulgated by the Interstate Commerce Commission (ICC). The Federal Hazardous Substances Act (15 U.S.C. 1261) requires cautionary labeling of refillable cylinders of liquefied petroleum gases distributed for consumer use. They are typically 40 lb (13 kg) and less and are used with outdoor cooking appliances, portable lamps, camp stoves, and heaters. The Federal Hazardous Substances Act is administered by the U.S. Consumer Product Safety Commission under regulations codified at 16 CFR 1500, Commercial Practices, Chapter 11, "Consumer Product Safety Commission."

BSR/NFPA 70-2011x, National Electrical Code® (revision of ANSI/NFPA 70-2011)

This Code covers the installation of electrical conductors, equipment, and raceways; signaling and communications conductors, equipment, and raceways; and optical fiber cables and raceways for the following: (1) Public and private premises, including buildings, structures, mobile homes, recreational vehicles, and floating buildings (2) Yards, lots, parking lots, carnivals, and industrial substations (3) Installations of conductors and equipment that connect to the supply of electricity (4) Installations used by the electric utility, such as office buildings, warehouses, garages, machine shops, and recreational buildings, that are not an integral part of a generating plant, substation, or control center. (B) Not Covered. This Code does not cover the following: (1) Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles. Informational Note: Although the scope of this Code indicates that the Code does not cover installations in ships, portions of this Code are incorporated by reference into Title 46, Code of Federal Regulations, Parts 110–113. (2) Installations underground in mines and self-propelled mobile surface mining machinery and its attendant electrical trailing cable (3) Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communications purposes (4) Installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations (5) Installations under the exclusive control of an electric utility where such installationsa. Consist of service drops or service laterals, and associated metering, orb. Are on property owned or leased by the electric utility for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy, orc. Are located in legally established easements or rights-of-way, ord. Are located by other written agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations. These written agreements shall be limited to installations for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy where legally established easements or rights-of-way cannot be obtained. These installations shall be limited to federal lands, native American reservations through the U.S. Department of the Interior Bureau of Indian Affairs, military bases, lands controlled by port authorities and state agencies and departments, and lands owned by railroads. (C) Special Permission. The authority having jurisdiction for enforcing this Code may grant exception for the installation of conductors and equipment that are not under the exclusive control of the electric utilities and are used to connect the electric utility supply system to the service conductors of the premises served, provided such installations are outside a building or structure, or terminate inside nearest the point of entrance of the service conductors.

BSR/NFPA 77-2011x, Recommended Practice on Static Electricity (revision of ANSI/NFPA 77-2007)

This recommended practice applies to the identification, assessment, and control of static electricity for purposes of preventing fires and explosions. This recommended practice does not apply directly to shock hazards from static electricity. However, application of the principles set forth in this recommended practice can reduce such shock hazards to personnel. This recommended practice does not apply to the prevention and control of static electricity in hospital operating rooms or in areas where flammable anesthetics are administered or handled. This recommended practice does not apply to lightning. This recommended practice does not apply to stray electrical currents or to induced currents from radio frequency (RF) energy. This recommended practice does not apply to fueling of motor vehicles, marine craft, or aircraft. This recommended practice does not apply to cleanrooms. This recommended practice does not apply to control of static electricity and static electricity hazards involved with electronic components, which have their own requirements.

BSR/NFPA 96-2011x, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations (revision of ANSI/NFPA 96-2011)

This code shall apply to the design, installation, operation, and maintenance of compressed natural gas (CNG) and liquefied natural gas (LNG) engine fuel systems on vehicles of all types and for fueling vehicle (dispensing) systems and associated storage, including the following: (1) Original equipment manufacturers (OEMs) (2) Final-stage vehicle integrator/manufacture (FSVIM) (3) Vehicle fueling (dispensing) systems This code shall apply to the design, installation, operation, and maintenance of liquefied natural gas (LNG) engine fuel systems on vehicles of all types, to their associated fueling (dispensing) facilities, and to LNG to CNG facilities with LNG storage in ASME containers of 70,000 gal (265 m³) or less. Vehicles and fuel supply containers complying with federal motor vehicle safety standards (FMVSSs) covering the installation of CNG fuel systems on vehicles and certified by the respective manufacturer as meeting these standards shall not be required to comply with Sections 4.4, 4.8, 4.9, and 4.10 and Chapter 6 (except Sections 6.9, 6.11, 6.12, 6.13, and 6.14). This code shall apply to the design, installation, operation, and maintenance of compressed hydrogen (GH₂) and liquefied compressed hydrogen (LH₂). This code shall include marine, highway, rail, off-road, and industrial vehicles. Vehicles that are required to comply with applicable federal motor vehicle safety standards covering the installation of LNG fuel systems on vehicles and that are certified by the manufacturer as meeting these standards shall not be required to comply with Chapter 11, except 11.12.8. This code shall apply to testing, service, and maintenance of GH₂ engine fuel systems. Vehicles that meet FMVSS requirements for hydrogen fueled vehicles shall not be subject to this document

BSR/NFPA 130-2011x, Standard for Fixed Guideway Transit and Passenger Rail Systems (revision of ANSI/NFPA 130-2010)

This guide applies to the design, installation, and operation of piping systems containing flammable gases, where there is a potential for ignition

BSR/NFPA 306-2011x, Standard for the Control of Gas Hazards on Vessels (revision of ANSI/NFPA 306-2009)

This standard applies to the design, location, installation, maintenance, and use of devices and systems that vent the combustion gases and pressures resulting from a deflagration within an enclosure so that structural and mechanical damage is minimized.

BSR/NFPA 403-201x, Standard for Aircraft Rescue and Fire-Fighting Services at Airports (revision of ANSI/NFPA 403-2009)

This recommended practice applies to preventive maintenance for electrical, electronic, and communication systems and equipment and is not intended to duplicate or supersede instructions that manufacturers normally provide. Systems and equipment covered are typical of those installed in industrial plants, institutional and commercial buildings, and large multifamily residential complexes. Consumer appliances and equipment intended primarily for use in the home are not included

BSR/NFPA 412-201x, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment (revision of ANSI/NFPA 412-2009)

This standard shall address fire protection, property protection, and life safety in motion picture and television industry soundstages, approved production facilities, and production locations. Practices, processes, materials, and facilities that are addressed by other NFPA standards shall be governed by those standards unless modified herein

BSR/NFPA 502-201x, Standard for Road Tunnels, Bridges, and Other Limited Access Highways (revision of ANSI/NFPA 502-2011)

This edition of NFPA 211 contains provisions for chimneys, fireplaces, venting systems, and solid fuel-burning appliances, including their installation. The standard applies to residential as well as commercial and industrial installations

BSR/NFPA 610-201x, Guide for Emergency and Safety Operations at Motorsports Venues (revision of ANSI/NFPA 610-2009)

This model standard shall cover the installation of manufactured homes wherever sited in the United States and its territories. The manufacturer's installation instructions shall apply under either of the following conditions: (1) To items not covered by this standard (2) Where the manufacturer's approved installation instructions provide a specific method of performing a specific operation or assembly A. 1. 1 Utilization of this standard by the homeowner and installation crew and use of a registered professional engineer in those unusual circumstances as required by this standard will help ensure the homeowner of a well-built, safe, and affordable home. This standard contains instructions, including specifications and procedures, for installation of utility connections of a manufactured home. It has been written in an objective manner so that it can be understood by those who are trained in the installation of manufactured homes and who are properly licensed. It discusses the installation of the home from preparation of the site through final inspection. It includes many tables and figures giving important data for proper installation

BSR/NFPA 780-201x, Standard for the Installation of Lightning Protection Systems (revision of ANSI/NFPA 780-2011)

This standard shall apply to structures in the course of construction, alteration, or demolition, including those in underground locations. A. 1. 1 General requirements applying to construction and demolition are contained in Chapter 1 and Chapters 3 through 7; specific requirements for construction and alteration activities are found in Chapter 8; those requirements specific to roofing operations are covered in Chapter 9; those requirements specific to demolition activities are covered in Chapter 10; and specific requirements for activities in underground locations are contained in Chapter 11

BSR/NFPA 1002-201x, Standard for Fire Apparatus Driver/Operator Professional Qualifications (revision of ANSI/NFPA 1002-2009)

The tests described in this document apply to upholstered furniture components that are tested in a standard, defined composite. These tests shall apply to cover fabrics, interior fabrics, welt cords, decking materials, barrier materials, and filling/padding materials including, but not limited to, battings of natural or man-made fibers, foamed or cellular filling materials, resilient pads of natural or man-made fibers, and loose particulate filling materials such as shredded polyurethane foam or feathers and down

BSR/NFPA 1021-201x, Standard for Fire Officer Professional Qualifications (revision of ANSI/NFPA 1021-2009)

This test shall apply to upholstered furniture mock-ups. Mock-up testing is used in assessing the relative resistance to continuing combustion of individual materials used in furniture, such as cover fabrics, filling materials, and welt tape, in realistic combinations and in an ideal geometric arrangement of the seat cushions, back, and arms of furniture items

BSR/NFPA 1026-201x, Standard for Incident Management Personnel Professional Qualifications (revision of ANSI/NFPA 1026-2009)

This shall be a fire-test-response standard. This test method shall provide a means of measuring smoke obscuration resulting from subjecting essentially flat materials, products, or assemblies (including surface finishes) not exceeding 25 mm in thickness, to specified levels of thermal irradiance from a conical heater, in a single closed chamber, in the absence or presence of a pilot flame, and when placed in a horizontal orientation. The principal fire-test-response characteristic obtained from this test method shall be the specific optical density of smoke from the specimens tested, which is obtained as a function of time, for a period of 10 minutes. Other fire-test-response characteristics shall also be permitted to be determined. An optional fire-test-response characteristic measurable with this test method shall be the mass optical density, which is the specific optical density of smoke divided by the mass lost by the specimens during the test. This test method shall be based on ISO 5659-2, Determination of Specific Optical Density by a Single-Chamber Test, and shall provide equivalent results to ISO 5659-2. The fire-test-response characteristics obtained from this test shall be specific to the specimen tested, in the form and thickness tested, and shall not be inherent properties of the material, product, or assembly. This test method shall not provide information on the fire performance of the test specimens under fire conditions other than those conditions specified in this test method. This standard shall measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but shall not by itself incorporate all factors required for fire hazard or fire risk assessment of the materials, products, or assemblies under actual fire conditions. 0 Fire testing of products and materials is inherently hazardous, and safeguards for personnel and property shall be employed in conducting these tests. 1 This standard shall not purport to address all of the safety problems, if any, associated with its use. 2 It shall be the responsibility of the user of this standard to establish the necessary safety and health practices and determine the applicability of regulatory limitations prior to use. A. For limitations of this test method, see 1.3.3. A.0 This test method is known to involve hazardous materials, operations, and equipment as described in 5.2.2, 5.2.3, and 9.7.2.

BSR/NFPA 1031-201x, Standard for Professional Qualifications for Fire Inspector and Plan Examiner (revision of ANSI/NFPA 1031-2009)

This standard describes a method for determining the heat release and the smoke generation of pipe insulation assemblies mounted on steel pipes in a full-scale pipe chase.

BSR/NFPA 1033-201x, Standard for Professional Qualifications for Fire Investigator (revision of ANSI/NFPA 1033-2009)

This standard describes a fire test method for determining the fire test response characteristics of individual fuel packages when exposed to various ignition sources. This fire test method is applicable to individual fuel packages. This fire test method is not intended to evaluate fire resistance. This standard contains detailed descriptions of three types of individual fuel packages to be investigated, as follows: (1) Single decorative object This test method shall not apply to seating furniture, mattresses, stacking chairs, interior finish, textile wall coverings, or mattress sets.

BSR/NFPA 1123-201x, Code for Fireworks Display (revision of ANSI/NFPA 1123-2010)

This code shall apply to the manufacture, transportation, storage, sale, and use of explosive materials. This code shall not apply to the transportation of explosive materials where under the jurisdiction of the U.S. Department of Transportation (DOT). It shall apply, however, to state and municipal supervision of compliance with "Hazardous Materials Regulations," U.S. Department of Transportation, Title 49, Code of Federal Regulations, Parts 100-199. This code shall not apply to the transportation and use of military explosives by federal or state military agencies, nor shall it apply to the transportation and use of explosive materials by federal, state, or municipal agencies while engaged in normal or emergency performance of duties. This code shall not apply to the manufacture of explosive materials under the jurisdiction of the U.S. Department of Defense. This code also shall not apply to the distribution of explosive materials to or storage of explosive materials by military agencies of the United States, nor shall it apply to arsenals, navy yards, depots, or other establishments owned by or operated by or on behalf of the United States. This code shall not apply to pyrotechnics such as flares, fuses, and railway torpedoes. It also shall not apply to fireworks and pyrotechnic special effects as defined in NFPA 1123, Code for Fireworks Display; NFPA 1124, Code for the Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles; and NFPA 1126, Standard for the Use of Pyrotechnics before a Proximate Audience. This code shall not apply to model and high power rocketry as defined in NFPA 1122, Code for Model Rocketry; NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors; and NFPA 1127, Code for High Power Rocketry. This code shall not apply to the use of explosive materials in medicines and medicinal agents in the forms prescribed by the United States Pharmacopeia or the National Formulary

BSR/NFPA 1143-201x, Standard for Wildland Fire Management (revision of ANSI/NFPA 1143-2009)

This standard applies to purging and pressurizing for the following: (1) Electrical equipment located in areas classified as hazardous by Article 500 or Article 505 of NFPA 70 (2) Electrical equipment containing sources of flammable vapors or gases and located in either classified or unclassified areas (3) Control rooms or buildings located in areas classified as hazardous by Article 500 or Article 505 of NFPA 70 (4) Analyzer rooms containing sources of flammable vapors or gases and located in areas classified as hazardous by Article 500 or Article 505 of NFPA 70 This standard does not apply to electrical equipment located in: (1) Areas classified as Class I, Zone 0 (2) Areas classified as Class III (3) Areas where flammable liquids may be splashed or spilled on the electrical equipment.

Call for Members (ANS Consensus Bodies)

Directly and materially affected parties who are interested in participating as a member of an ANS consensus body for the standards listed below are requested to contact the sponsoring standards developer directly and in a timely manner.

ASA (ASC S3) (Acoustical Society of America)

Office: 35 Pinelawn Road, Suite 114E
Melville, NY 11747

Contact: Susan Blaeser

Phone: (631) 390-0215

Fax: (631) 390-0217

E-mail: sblaeser@aip.org; asastds@aip.org

BSR/ASA S3.22-201x, Specification of Hearing Aid Characteristics
(revision of ANSI/ASA S3.22-2009a)

AWPA (ASC O5) (American Wood Protection Association)

Office: P.O. Box 361784
Birmingham, AL 35236-1784

Contact: Colin McCown

Phone: (205) 733-4077

Fax: (205) 733-4075

E-mail: mccown@awpa.com

BSR O5.1-201x, Wood Poles - Specifications and Dimensions (revision of ANSI O5.1-2002)

BSR O5.3-201x, Solid Sawn Wood Crossarms & Braces - Specifications and Dimensions (revision of ANSI O5.3-2008)

IAPMO (International Association of Plumbing & Mechanical Officials)

Office: 4755 East Philadelphia Street
Ontario, CA 91761

Contact: Lynne Simnick

Phone: (909) 472-4110

Fax: (909) 472-4246

E-mail: lynne.simnick@iapmo.org; abraham.murra@iapmort.org

BSR/IAPMO USPSHTC 1-201x, Uniform Swimming Pool, Spa & Hot Tub Code (revision of ANSI/IAPMO USPSHTC 1-2012)

BSR/IAPMO USEC 1-201x, Uniform Solar Energy and Hydronics Code (revision of ANSI/IAPMO USEC 1-2012)

ITI (INCITS) (InterNational Committee for Information Technology Standards)

Office: 1101 K Street NW, Suite 610
Washington, DC 20005

Contact: Rachel Porter

Phone: 202-626-5741

Fax: 202-638-4922

E-mail: rporter@itic.org

BSR INCITS 210-2008 (S201x), Information technology - High-Performance Parallel Interface - Framing Protocol (HIPPI-FP) (stabilized maintenance of ANSI INCITS 210-2008)

BSR INCITS 303-1998 (S201x), Fibre Channel Physical and Signaling Interface-3 (FC-PH-3) (stabilized maintenance of ANSI INCITS 303-1998 (R2008))

BSR INCITS 323-1998 (S201x), Information technology - High-Performance Parallel Interface - 6400 Mbit/s Physical Layer (HIPPI-6400-PH) (stabilized maintenance of ANSI INCITS 323-1998 (R2008))

BSR INCITS 419-2008 (R201x), Information technology - Fibre Channel Backbone - (FC-BB-4) (reaffirmation of ANSI INCITS 419-2008)

BSR INCITS 437-2008 (R201x), Information technology - Fibre Channel SATA Tunneling Protocol (FC-SATA) (reaffirmation of ANSI INCITS 437-2008)

BSR INCITS 438-2008 (R201x), Information technology - Server Management Command Line Protocol (SM CLP) Specification (reaffirmation of ANSI INCITS 438-2008)

BSR INCITS 443-2008 (R201x), Information technology - Fibre Channel Storage Network PING (SNPing) (reaffirmation of ANSI INCITS 443-2008)

BSR INCITS 449-2008 (R201x), Information technology - Fabric Application Interface Standard - 2 (FAIS-2) (reaffirmation of ANSI INCITS 449-2008)

INCITS/ISO/IEC 19794-1:2011, Information technology - Biometric data interchange formats - Part 1: Framework (identical national adoption of ISO/IEC 19794-1:2011)

INCITS/ISO/IEC 19794-2:2011, Information technology - Biometric data interchange formats - Part 2: Finger minutiae data (identical national adoption of ISO/IEC 19794-2:2011)

INCITS/ISO/IEC 19794-4:2011, Information technology - Biometric data interchange formats - Part 4: Finger image data (identical national adoption of ISO/IEC 19794-4:2011)

INCITS/ISO/IEC 19794-5:2011, Information technology - Biometric data interchange formats - Part 5: Face image data (identical national adoption of ISO/IEC 19794-5:2011)

INCITS/ISO/IEC 19794-6:2011, Information technology - Biometric data interchange formats - Part 6: Iris image data (identical national adoption of ISO/IEC 19794-6:2011)

INCITS/ISO/IEC 19794-9:2011, Information technology - Biometric data interchange formats - Part 9: Vascular image data (identical national adoption of ISO/IEC 19794-9:2011)

INCITS/ISO/IEC 19794-4:2005/Cor 1:2011, Information technology - Biometric data interchange formats - Part 4: Finger image data - Technical Corrigendum 1 (identical national adoption of ISO/IEC 19794-4:2005/Cor 1:2011)

INCITS/ISO/IEC 19794-8:2006/Cor 1:2011, Information technology - Biometric data interchange formats - Part 8: Finger pattern skeletal data - Technical Corrigendum 1 (identical national adoption of ISO/IEC 19794-8:2006/Cor 1:2011)

INCITS/ISO/IEC 29109-5:2012, Information technology - Conformance testing methodology for biometric data interchange formats defined in ISO/IEC 19794 - Part 5: Face image data (identical national adoption of ISO/IEC 29109-5:2012)

MAMA (Medical Alert Monitoring Association)

Office: 2 Stahuber Avenue
Union, NJ 07083

Contact: David Schwartz

Phone: (866) 388-8618

E-mail: standards@medicalalertassociation.com

BSR/MAMA 001-201x, Personal Emergency Response Systems (PERS) Medical Alert Monitoring (new standard)

SIA (Security Industry Association)

Office: 8405 Colesville Road, Suite 500
Silver Spring, MD 20910

Contact: Joseph Gittens

Phone: 301-804-4709

Fax: 301-804-4701

E-mail: jgittens@siaonline.org

BSR/SIA DC-09-201x, SIA Digital Communication Standard - Internet Protocol Event Reporting (revision of ANSI/SIA DC-09-2007)

TechAmerica

Office: 601 Pennsylvania Ave. NW Suite 600, North Building
Suite 1100
Washington, DC 20004

Contact: Anne Mwai

Phone: (703) 284-5355

Fax: (703) 525-2279

E-mail: standards@techamerica.org

BSR/TA STD-0019-201x, Level of Repair Analysis (new standard)

TIA (Telecommunications Industry Association)

Office: 1320 North Courthouse Road
Suite 200
Arlington, VA 22201

Contact: Jeff Hannah

Phone: (703) 907-7582

E-mail: Hannah@tiaonline.org; standards@tiaonline.org

BSR/TIA 4957.000-201x, Overview and Architecture (new standard)

Final Actions on American National Standards

The standards actions listed below have been approved by the ANSI Board of Standards Review (BSR) or by an ANSI-Audited Designator, as applicable.

AAMI (Association for the Advancement of Medical Instrumentation)

New Standard

ANSI/AAMI NS4-2013, Transcutaneous electrical stimulators (new standard): 3/20/2013

AGA (ASC Z380) (American Gas Association)

Addenda

ANSI/GPTC Z380.1-2012, Addendum No. 3-2013, Guide for Gas Transmission and Distribution Piping Systems (addenda to ANSI/GPTC Z380.1-2012): 3/20/2013

ANS (American Nuclear Society)

New Standard

* ANSI/ANS 10.7-2013, Non-Real Time, High Integrity Software for the Nuclear Industry (new standard): 3/18/2013

AWS (American Welding Society)

Revision

ANSI/AWS A5.34/A5.34M-2013, Specification for Nickel-Alloy Electrodes for Flux Cored Arc Welding (revision of ANSI/AWS A5.34/A5.34M-2007): 3/19/2013

CSA (CSA Group)

Revision

ANSI Z21.15b-2013, Standard for Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves (same as CSA 9.1b) (revision of ANSI Z21.15-2009, BSR Z21.15a-201x): 3/19/2013

EOS/ESD (ESD Association, Inc.)

New Standard

ANSI/ESD SP3.4-2012, ESD Association Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Periodic Verification of Air Ionizer Performance Using a Small Test Fixture (new standard): 3/19/2013

Revision

ANSI/ESD SP3.3-2012, ESD Association Standard Practice for the Protection of Electrostatic Discharge Susceptible Items - Periodic Verification of Air Ionizers (revision of ANSI/ESD SP3.3-2006): 3/19/2013

HL7 (Health Level Seven)

New Standard

ANSI/HL7 RLUS, R1-2013, HL7 Version 3 Standard: Retrieve, Locate, and Update Service (RLUS) Release 1 (new standard): 3/20/2013

ANSI/HL7 V3 IZ, R1-2013, HL7 Version 3 Standard: Immunization Messaging, Release 1 (new standard): 3/19/2013

ITI (INCITS) (InterNational Committee for Information Technology Standards)

New National Adoption

INCITS/ISO/IEC 14651:2011/Amd 1:2013, Information technology - International string ordering and comparison - Method for comparing character strings and description of the common template tailorable ordering - Amendment 1 (identical national adoption of ISO/IEC 14651:2011/Amd 1:2012): 3/19/2013

New Standard

ANSI INCITS 499-2013, Information technology - Next Generation Access Control - Functional Architecture (NGAC-FA) (new standard): 3/19/2013

ANSI INCITS 505-2013, Information technology - SAS Protocol Layer - 2 (SPL-2) (new standard): 3/19/2013

Withdrawal

INCITS/ISO/IEC 10646-2003/AM1-2005, Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Amendment 1: Glagolitic, Coptic, Georgian and other characters (withdrawal of INCITS/ISO/IEC 10646-2003/AM1-2005): 3/19/2013

INCITS/ISO/IEC 10646-2003/AM2-2006, Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Amendment 2: N'Ko, Phoenician, Cuneiform, Phags-pa scripts and other characters (withdrawal of INCITS/ISO/IEC 10646-2003/AM2-2006+): 3/19/2013

NEMA (ASC C8) (National Electrical Manufacturers Association)

New Standard

ANSI/ICEA S-104-696-2013, Standard for Indoor-Outdoor Optical Fiber Cable (new standard): 3/19/2013

Revision

ANSI/ICEA S-94-649-2013, Standard for Concentric Neutral Cables Rated 5 Through 46 kV (revision of ANSI/ICEA S-94-649-2005): 3/19/2013

ANSI/ICEA S-97-682-2013, Standard for Utility Shielded Power Cables Rated 5 Through 46 kV (revision of ANSI ICEA S-97-682-2007): 3/19/2013

NSF (NSF International)

Revision

* ANSI/NSF 173-2013 (i48), Dietary Supplements (revision of ANSI/NSF 173-2012): 3/18/2013

UL (Underwriters Laboratories, Inc.)

Reaffirmation

ANSI/UL 242-2004 (R2013), Standard for Safety for Nonmetallic Containers for Waste Paper (reaffirmation of ANSI/UL 242-2004 (R2008)): 3/19/2013

ANSI/UL 1054-2008 (R2013), Special-Use Switches (reaffirmation of ANSI/UL 1054-2008): 3/18/2013

Revision

- * ANSI/UL 153-2013, Standard for Safety for Portable Electric Luminaires (revision of ANSI/UL 153-2011): 3/15/2013
- * ANSI/UL 153-2013a, Standard for Safety for Portable Electric Luminaires (revision of ANSI/UL 153-2011): 3/15/2013
- ANSI/UL 508-2013, Standard for Safety for Industrial Control Equipment (revision of ANSI/UL 508-2008): 3/15/2013
- * ANSI/UL 749-2013, Standard for Safety for Household Dishwashers (revision of ANSI/UL 749-2007): 3/20/2013
- ANSI/UL 1309-2013, Standard for Safety for Marine Shipboard Cable (revision of ANSI/UL 1309-2011): 3/18/2013

Project Initiation Notification System (PINS)

ANSI Procedures require notification of ANSI by ANSI-accredited standards developers (ASD) of the initiation and scope of activities expected to result in new or revised American National Standards (ANS). Early notification of activity intended to reaffirm or withdraw an ANS and in some instances a PINS related to a national adoption is optional. The mechanism by which such notification is given is referred to as the PINS process. For additional information, see clause 2.4 of the ANSI Essential Requirements: Due Process Requirements for American National Standards.

Following is a list of proposed actions and new ANS that have been received recently from ASDs. Please also review the section in Standards Action entitled "American National Standards Maintained Under Continuous Maintenance" for additional or comparable information with regard to standards maintained under the continuous maintenance option. To view information about additional standards for which a PINS has been submitted and to search approved ANS, please visit www.NSSN.org, which is a database of standards information. Note that this database is not exhaustive.

Directly and materially affected interests wishing to receive more information or to submit comments are requested to contact the standards developer directly within 30 days of the publication of this announcement.

ASA (ASC S3) (Acoustical Society of America)

Office: 35 Pinelawn Road, Suite 114E
Melville, NY 11747

Contact: Susan Blaeser

Fax: (631) 390-0217

E-mail: sblaeser@aip.org; asastds@aip.org

* BSR/ASA S3.22-201x, Specification of Hearing Aid Characteristics (revision of ANSI/ASA S3.22-2009a)

Stakeholders: Hearing aid manufacturers, hearing aid dispensers, FDA.

Project Need: The standard needs to be technically updated throughout to respond to improvements and changes in the technology.

Describes air-conduction hearing-aid measurement methods that are particularly suitable for specification and tolerance purposes. Various test methods are described. Specific configurations are given for measuring the input SPL to a hearing aid. Allowable tolerances in relation to values specified by the manufacturer are given for certain parameters. Appendices describe an equivalent substitution methods, characteristics of battery simulators, and additional tests to characterize the electroacoustic performance of hearing aids more completely.

AWPA (ASC O5) (American Wood Protection Association)

Office: P.O. Box 361784
Birmingham, AL 35236-1784

Contact: Colin McCown

Fax: (205) 733-4075

E-mail: mccown@awpa.com

BSR O5.1-201x, Wood Poles - Specifications and Dimensions (revision of ANSI O5.1-2002)

Stakeholders: Electric/communications utilities and wood pole manufacturers.

Project Need: General technical review and update of existing ANS.

This standard provides minimum specifications for the quality and dimensions of wood poles that are to be used as single-pole utility structures. The poles described in this standard are considered as simple cantilever members subject to transverse loads only. Fiber strength values, provided as a basis for determining pole class sizes, apply only to poles that meet or exceed the minimum quality specifications.

BSR O5.3-201x, Solid Sawn Wood Crossarms & Braces -

Specifications and Dimensions (revision of ANSI O5.3-2008)

Stakeholders: Electric/communications utilities and wood crossarm manufacturers.

Project Need: General technical review and update of existing ANS.

This standard consists of specifications covering solid sawn-wood crossarms and braces manufactured from coastal Douglas-fir and from dense Southern pine. The specifications are intended to cover communications crossarms, power crossarms, heavy-duty crossarms, and heavy-duty braces. Crossarms are intended primarily for use as beams. Heavy-duty crossarms may also be used as struts or columns in braced H-frames. Braces are used for tension, compression-bracing, or both.

AWS (American Welding Society)

Office: 8669 Doral Blvd.
Suite 130
Doral, FL 33166

Contact: Rosalinda O'Neill

Fax: (305) 443-5951

E-mail: roneill@aws.org; adavis@aws.org

BSR/AWS B2.1-1/8-010-201x, Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding of Carbon Steel to Austenitic Stainless Steel (M-1, P-1, or S-1 to M-8, P-8, or S-8), 18 through 10 Gauge, in the As-Welded Condition, with or without Backing (new standard)

Stakeholders: Manufacturers, welders, CWIs, engineers.

Project Need: This Standard WPS is to be used only as permitted by the applicable fabrication document(s) [such as code, specification, or contract document(s)].

This standard contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 18 through 10 gauge, using manual gas tungsten arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for fillet welds and groove welds.

BSR/AWS B2.1-1/8-231:201X, Standard Welding Procedure Specification (SWPS) for Gas Tungsten Arc Welding with Consumable Insert Root followed by Shielded Metal Arc Welding of Carbon Steel (M-1/P-1/S-1, Groups 1 or 2) to Austenitic Stainless Steel (M-8/P-8/S-8, Group 1), 1/8 through 1-1/2 inch Thick, IN309, ER309, and E309-15, -16, or -17, or IN309, ER309(L), and ER309(L) -15, -16, or -17, As-Welded Condition, Primarily Pipe Applications (new standard)

Stakeholders: Manufacturers, welders, CWIs, engineers.

Project Need: This Standard WPS is to be used only as permitted by the applicable fabrication document(s) [such as code, specification, or contract document(s)].

This standard contains the essential welding variables for welding carbon steel to austenitic stainless steel in the thickness range of 1/8 through 1-1/2 inch, using manual gas tungsten arc welding, with consumable insert root, followed by shielded metal arc welding. It cites the base metals and operating conditions necessary to make the weldment, the filler metal specifications, and the allowable joint designs for groove welds. This SWPS was developed primarily for pipe applications.

AWWA (American Water Works Association)

Office: 6666 W. Quincy Ave.
Denver, CO 80235

Contact: Paul Olson

Fax: (303) 795-7603

E-mail: polson@awwa.org; vdavid@awwa.org

BSR/AWWA C800-201x, Underground Service Line Valves and Fittings (revision of ANSI/AWWA C800-2012)

Stakeholders: Drinking water treatment and supply industry. Water utilities, consulting engineers, water treatment equipment manufacturers, etc.

Project Need: The purpose of this standard is to provide the minimum requirements for underground service line valves and fittings, including materials, design, inspection, and delivery.

This standard covers valves, fittings, service saddles, and meter setters for use in service line from the main through the meter valve or meter-setting appurtenance. Valves, fittings, and meter setters described in this standard include 1/2 in. (12.5 mm) through 2 in. (50.8 mm).

IAPMO (International Association of Plumbing & Mechanical Officials)

Office: 4755 East Philadelphia Street
Ontario, CA 91761

Contact: Lynne Simnick

Fax: (909) 472-4246

E-mail: lynne.simnick@iapmo.org; abraham.murra@iapmort.org

* BSR/IAPMO USPSHTC 1-201x, Uniform Swimming Pool, Spa & Hot Tub Code (revision of ANSI/IAPMO USPSHTC 1-2012)

Stakeholders: Manufacturers, users of the code, installers and maintainers, labor, research/standards/testing laboratories, enforcing authorities, consumers and special experts.

Project Need: Designation of the Uniform Swimming Pool, Spa & Hot Tub Code as an American National Standard has provided the built industry with Uniform Swimming Pool, Spa and Hot Tub standards resulting in a reduction in training costs, product development costs, and in price reduction for consumers. This American National Standard provides consumers with safe swimming pool, spa and hot tub units while allowing latitude for innovation and new technologies. This project is intended to keep the code current.

The provisions of this code shall apply to the erection, installation, alteration, addition, repair, relocation, replacement, addition to, use or maintenance of swimming pool, spa or hot tub systems.

* BSR/IAPMO USEC 1-201x, Uniform Solar Energy and Hydronics Code (revision of ANSI/IAPMO USEC 1-2012)

Stakeholders: Manufacturers, users, installers and maintainers, labor, research/standards/testing laboratories, enforcing authorities, consumers, and special experts.

Project Need: The Uniform Solar Energy and Hydronics Code will provide the built industry with uniform solar standards resulting in a reduction in training costs, product development costs, and in price reduction for consumers. Additionally, this code will address sustainable energy sources and hydronics practices, and will serve to coalesce and integrate the hydronics industry. This American National Standard will provide consumers with safe solar and hydronics systems while allowing latitude for innovation and new technologies.

Applies to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of solar energy, geothermal and hydronic systems including but not limited to equipment and appliances intended for space heating or cooling; water heating; swimming pool heating or process heating; and snow and ice melt systems.

ICC (International Code Council)

Office: 4051 West Flossmoor Road
Country Club Hills, IL 60478-5795

Contact: Edward Wirtschoreck

Fax: (708) 799-0320

E-mail: ewirtschoreck@iccsafe.org

BSR/ICC 1000-201x, Standard for Commissioning (new standard)

Stakeholders: Building officials, code officials, building inspectors and plans examiners, commissioning agencies, building owners, architects, designers, and engineers and standard development organizations.

Project Need: This standard development effort is to provide a complete set of requirements that will address the current best practices relating to the overall commissioning process. This includes requirements for the commissioning process and acceptance criteria, for adoption by local jurisdictions to facilitate implementation and enforcement of commissioning provisions established in codes.

This standard establishes minimum requirements for the process of commissioning building systems and criteria for code officials (AHJ), owners, and agencies. This standard establishes a process that is applicable to residential and non-residential buildings in the public or private sectors.

LEO (Leonardo Academy, Inc.)

Office: 2912 Marketplace Drive, Suite 103
Madison, WI 53719

Contact: Michael Arny

Fax: (608) 255-7202

E-mail: michaelarny@leonardoacademy.org

BSR/LEO 9000-201x, Sustainability Master Plans (new standard)

Stakeholders: Government: local, state and federal; Planning Organizations: Local, state, multi-state regions; landowners, developers, farmers, environmentalists, builders, businesses.

Project Need: The recent storm damage along the eastern seaboard highlights the need for developing sustainability master plans that can guide and measure achievement of restoration in a sustainable way. In other areas, where disasters have not occurred, sustainability master plans are also needed that define where we are going, steps for getting there and metrics for measuring our progress.

This standard will address how to develop a Sustainability Master Plan for an area. It will be scalable so that it can be applied to wide range of areas. It will be applicable to large areas like multi-state regions or states as well as smaller areas like corporate, government and university campuses. It will address all three aspect of sustainability: environmental, social and economic for the region/area and define the current level of sustainability, the target level of sustainability, the steps and time tables for getting the target and metrics for measuring progress.

NEMA (ASC C8) (National Electrical Manufacturers Association)

Office: 1300 North 17th Street, Suite 1752
Rosslyn, VA 22209

Contact: Ryan Franks

Fax: 703-841-3371

E-mail: ryan.franks@nema.org

BSR/ICEA S-112-718-201x, Standard for Optical Fiber Cable for Placement in Sewer Environments (revision of ANSI/ICEA S-112-718-2008)

Stakeholders: Utilities, consultants, and engineers in the wire and cable industry.

Project Need: Revision to bring the document in line with current practice.

Optical fiber cable suitable for placement in sewers; baseline Standard. Performance-based requirements.

TechAmerica

Office: 601 Pennsylvania Ave. NW Suite 600, North Building
Suite 1100
Washington, DC 20004

Contact: Anne Mwai

Fax: (703) 525-2279

E-mail: standards@techamerica.org

BSR/TA STD-0019-201x, Level of Repair Analysis (new standard)

Stakeholders: Prime contractors; subcontractors; Government users of logistics and/or maintenance data.

Project Need: Estimating life-cycle support costs has become problematic due to a lack of a standard analytical methodology in both government and industry. This standard provides a standardized approach for implementing and conducting the Level of Repair Analysis (LORA) activities contained in TA-STD-0017, Product Support Analysis, to determine the most effective maintenance and support structure for a system through iterative evaluations of both economic and noneconomic considerations.

This document provides general requirements and descriptions of activities which, when performed in a logical and iterative nature, comprise the LORA process. These requirements are structured for maximum flexibility in their application.

American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provide two options for the maintenance of American National Standards (ANS): periodic maintenance (see clause 4.7.1) and continuous maintenance (see clause 4.7.2). Continuous maintenance is defined as follows:

The standard shall be maintained by an accredited standards developer. A documented program for periodic publication of revisions shall be established by the standards developer. Processing of these revisions shall be in accordance with these procedures. The published standard shall include a clear statement of the intent to consider requests for change and information on the submittal of such requests. Procedures shall be established for timely, documented consensus action on each request for change and no portion of the standard shall be excluded from the revision process. In the event that no revisions are issued for a period of four years, action to reaffirm or withdraw the standard shall be taken in accordance with the procedures contained in the ANSI Essential Requirements.

The Executive Standards Council (ExSC) has determined that for standards maintained under the Continuous Maintenance option, separate PINS announcements are not required. The following ANSI Accredited Standards Developers have formally registered standards under the Continuous Maintenance option.

- AAMI (Association for the Advancement of Medical Instrumentation)
- AAMVA (American Association of Motor Vehicle Administrators)
- AGA (American Gas Association)
- AGRSS, Inc. (Automotive Glass Replacement Safety Standards Committee, Inc.)
- ASC X9 (Accredited Standards Committee X9, Incorporated)
- ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.)
- ASME (American Society of Mechanical Engineers)
- ASTM (ASTM International)
- GEIA (Greenguard Environmental Institute)
- HL7 (Health Level Seven)
- MHI (ASC MH10) (Material Handling Industry)
- NAHBRC (NAHB Research Center, Inc.)
- NBBPVI (National Board of Boiler and Pressure Vessel Inspectors)
- NCPDP (National Council for Prescription Drug Programs)
- NISO (National Information Standards Organization)
- NSF (NSF International)
- TIA (Telecommunications Industry Association)
- UL (Underwriters Laboratories, Inc.)

To obtain additional information with regard to these standards, such as contact information at the ANSI accredited standards developer, please visit ANSI Online at www.ansi.org, select Internet Resources, click on "Standards Information," and see "American National Standards Maintained Under Continuous Maintenance". This information is also available directly at www.ansi.org/publicreview.

Alternatively, you may contact the Procedures & Standards Administration Department (PSA) at psa@ansi.org or via fax at 212-840-2298. If you request that information be provided via E-mail, please include your E-mail address; if you request that information be provided via fax, please include your fax number. Thank you.

ANSI-Accredited Standards Developers Contact Information

The addresses listed in this section are to be used in conjunction with standards listed in PINS, Call for Comment and Final Actions. This section is a list of developers who have submitted standards for this issue of *Standards Action* – it is not intended to be a list of all ANSI-Accredited Standards Developers. Please send all address corrections to Standards Action Editor at standact@ansi.org.

AAMI

Association for the Advancement of
Medical Instrumentation

4301 N Fairfax Drive
Suite 301
Arlington, VA 22203-1633
Phone: (703) 253-8274
Fax: (703) 276-0793
Web: www.aami.org

ABYC

American Boat and Yacht Council

613 Third Street
Suite 10
Annapolis, MD 21403
Phone: (410) 990-4460
Fax: (410) 990-4466
Web: www.abycinc.org

ADA (Organization)

American Dental Association

211 E. Chicago Ave
Chicago, IL 60611
Phone: (312) 440-2533
Fax: (312) 440-2529
Web: www.ada.org

AGA (ASC Z380)

American Gas Association

400 N. Capitol Street, N.W.
Washington, DC 20001
Phone: (202) 824-7312
Fax: (202) 824-9122
Web: www.aga.org

AMCA

AMCA International, Inc.

30 West University Drive
Arlington Heights, IL 60004-1893
Phone: (847) 704-6295
Fax: (847) 253-0088
Web: www.amca.org

ANS

American Nuclear Society

555 North Kensington Avenue
La Grange Park, IL 60526-5592
Phone: (708) 579-8269
Fax: (708) 579-8248
Web: www.ans.org

ASA (ASC S12)

Acoustical Society of America

35 Pinelawn Road, Suite 114E
Melville, NY 11747
Phone: (631) 390-0215
Fax: (631) 390-0217
Web: acousticalsociety.org

ASABE

American Society of Agricultural and
Biological Engineers

2950 Niles Road
St Joseph, MI 49085
Phone: (269) 932-7015
Fax: (269) 429-3852
Web: www.asabe.org

ASHRAE

American Society of Heating,
Refrigerating and Air-Conditioning
Engineers, Inc.

1791 Tullie Circle, NE
Atlanta, GA 30329
Phone: (404) 636-8400
Fax: (404) 321-5478
Web: www.ashrae.org

ASME

American Society of Mechanical
Engineers

Two Park Avenue
New York, NY 10016
Phone: (212) 591-8521
Fax: (212) 591-8501
Web: www.asme.org

ASSE (Organization)

American Society of Sanitary
Engineering

901 Canterbury Road, Suite A
Westlake, OH 44145-1480
Phone: (440) 835-3040
Fax: (440) 835-3488
Web: www.asse-plumbing.org

AWPA (ASC O5)

American Wood Protection
Association

P.O. Box 361784
Birmingham, AL 35236-1784
Phone: (205) 733-4077
Fax: (205) 733-4075
Web: www.awpa.com/

AWS

American Welding Society

8669 Doral Blvd.
Suite 130
Doral, FL 33166
Phone: (305) 443-9353
Fax: (305) 443-5951
Web: www.aws.org

AWWA

American Water Works Association

6666 W. Quincy Ave.
Denver, CO 80235
Phone: (303) 347-6178
Fax: (303) 795-7603
Web: www.awwa.org

CSA

CSA Group

8501 East Pleasant Valley Rd.
Cleveland, OH 44131
Phone: (216) 524-4990
Fax: (216) 520-8979
Web: www.csa-america.org

EOS/ESD

ESD Association

7900 Turin Rd., Bldg. 3
Rome, NY 13440
Phone: (315) 339-6937
Fax: (315) 339-6793
Web: www.esda.org

HL7

Health Level Seven

3300 Washtenaw Avenue
Suite 227
Ann Arbor, MI 48104
Phone: (734) 677-7777 Ext 104
Fax: (734) 677-6622
Web: www.hl7.org

IAPMO

International Association of Plumbing
and Mechanical Officials

4755 East Philadelphia Street
Ontario, CA 91761
Phone: (909) 472-4110
Fax: (909) 472-4246
Web: www.iapmo.org

ICC

International Code Council

4051 West Flossmoor Road
Country Club Hills, IL 60478-5795
Phone: (708) 799-2300
Fax: (708) 799-0320
Web: www.iccsafe.org

IIIRC

the Institute of Inspection, Cleaning
and Restoration Certification

2715 E. Mill Plain Boulevard
The Clean Trust Headquarters
Vancouver, WA 98661
Phone: (360) 313-7088
Fax: (360) 693-4858
Web: www.thecleantrust.org

ISA (Organization)

ISA-The Instrumentation, Systems,
and Automation Society

67 Alexander Drive
Research Triangle Park, NC 27709
Phone: (919) 990-9228
Fax: (919) 549-8288
Web: www.isa.org

ITI (INCITS)

InterNational Committee for
Information Technology Standards

1101 K Street NW, Suite 610
Washington, DC 20005
Phone: (202) 626-5743
Fax: (202) 638-4922
Web: www.incits.org

LEO

Leonardo Academy, Inc.

2912 Marketplace Drive, Suite 103
Madison, WI 53719
Phone: (608) 280-0255
Fax: (608) 255-7202
Web: www.leonardoacademy.org

MAMA

Medical Alert Monitoring Association

2 Stahuber Avenue
Union, NJ 07083
Phone: (866) 388-8618
Web: www.medicalalertmonitoringassociation.com/

NEMA (ASC C8)

National Electrical Manufacturers
Association

1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Phone: (703) 841-3271
Fax: 703-841-3371
Web: www.nema.org

NFPA

National Fire Protection Association

One Batterymarch Park
Quincy, MA 02169-7471
Phone: (617) 770-3000
Fax: (617) 770-3500
Web: www.nfpa.org

NSF

NSF International

789 N. Dixboro Road
Ann Arbor, MI 48105
Fax: (734) 827-6831
Web: www.nsf.org

SIA

Security Industry Association

8405 Colesville Road, Suite 500
Silver Spring, MD 20910
Phone: 301-804-4709
Fax: 301-804-4701
Web: www.siaonline.org

TechAmerica

TechAmerica

601 Pennsylvania Ave. NW Suite 600,
North Building
Suite 1100
Washington, DC 20004
Phone: (703) 284-5355
Fax: (703) 525-2279
Web: www.techamerica.org

TIA

Telecommunications Industry
Association

1320 North Courthouse Road
Suite 200
Arlington, VA 22201
Phone: (703) 907-7497
Fax: (703) 907-7727
Web: www.tiaonline.org

UL

Underwriters Laboratories, Inc.

12 Laboratory Dr.
RTP, NC 27709
Phone: (919) 549-0973
Fax: (919) 549-0973
Web: www.ul.com/

Announcement of Proposed Procedural Revisions

Comment Deadline: April 22, 2013

Comments with regard to these proposed revisions should be submitted to psa@ansi.org or via fax to the Recording Secretary of the ANSI Executive Standards Council (ExSC) at 212-840-2298.

Public comments received in connection with these proposed revisions will be made available to the public in the ANSI Online public library (<http://publicaa.ansi.org/sites/apdl/default.aspx>) one week after the close of the comment deadline. The ANSI Executive Standards Council (ExSC) will consider all public comments received by the comment deadline at its next regularly scheduled meeting. Shortly thereafter, all commenters will be provided with a written disposition of their respective comments.

Questions should be directed to psa@ansi.org.

ExSC 035_2013

Proposed Procedural Revision**4.2.1.3.3 Discontinuance of a standards project of the ANSI Essential Requirements**
(www.ansi.org/essentialrequirements)

The proposed procedural revision below is intended to clarify the requirements related to the discontinuance of a standards project that has been announced in *ANSI Standards Action* but that will not proceed based on a decision made by the ANSI-Accredited Standards Developer (ASD) without a vote of the relevant American National Standards (ANS) consensus body.

4.2.1.3.3 Discontinuance of a standards project

An accredited standards developer may decide to abandon the processing of a proposed new or revised American National Standard or portion thereof at its own discretion and without a vote of the relevant consensus body. ~~if it has followed its accredited procedures. A written justification for such an action shall be made available upon receipt of any written request received by the accredited standards developer within 60 days of the date of the final action.~~

~~Appeals of such actions shall be made to the Executive Standards Council based on procedural noncompliance.~~

Accredited standards developers must notify ANSI immediately of such actions which will be announced in Standards Action.



Newly Published ISO Standards

Listed here are new and revised standards recently approved and promulgated by ISO - the International Organization for Standardization. Most are available at the ANSI Electronic Standards Store (ESS) at www.ansi.org. All paper copies are available from Standards resellers (<http://webstore.ansi.org/faq.aspx#resellers>).

BUILDING CONSTRUCTION (TC 59)

ISO 16354:2013, Guidelines for knowledge libraries and object libraries, \$218.00

CLEANING EQUIPMENT FOR AIR AND OTHER GASES (TC 142)

ISO 29462:2013, Field testing of general ventilation filtration devices and systems for in situ removal efficiency by particle size and resistance to airflow, \$172.00

DENTISTRY (TC 106)

ISO 1797-3:2013, Dentistry - Shanks for rotary instruments - Part 3: Shanks made of ceramics, \$70.00

EARTH-MOVING MACHINERY (TC 127)

ISO 7133:2013, Earth-moving machinery - Scrapers - Terminology and commercial specifications, \$120.00

FINE CERAMICS (TC 206)

ISO 14574:2013, Fine ceramics (advanced ceramics, advanced technical ceramics) - Mechanical properties of ceramic composites at high temperature - Determination of tensile properties, \$112.00

FIRE SAFETY (TC 92)

ISO 14934-2:2013, Fire tests - Calibration and use of heat flux meters - Part 2: Primary calibration methods, \$181.00

FLUID POWER SYSTEMS (TC 131)

ISO 14540:2013, Hydraulic fluid power - Dimensions and requirements for screw-to-connect quick-action couplings for use at a pressure of 72 MPa (720 bar), \$60.00

ISO 14541:2013, Hydraulic fluid power - Dimensions and requirements for screw-to-connect quick-action couplings for general purpose, \$60.00

INTERNAL COMBUSTION ENGINES (TC 70)

ISO 8528-5:2013, Reciprocating internal combustion engine driven alternating current generating sets - Part 5: Generating sets, \$164.00

NICKEL AND NICKEL ALLOYS (TC 155)

ISO 11433/Amd1:2013, Nickel alloys - Determination of titanium content - Diantipyrilmethane molecular absorption spectrometric method - Amendment 1: Alternative procedure for the preparation of the titanium standard solution, \$20.00

OTHER

IEC 31010:2009, Risk management - Risk assessment techniques, \$285.00

PAINTS AND VARNISHES (TC 35)

ISO 11890-2:2013, Paints and varnishes - Determination of volatile organic compound (VOC) content - Part 2: Gas-chromatographic method, \$112.00

PERSONAL SAFETY - PROTECTIVE CLOTHING AND EQUIPMENT (TC 94)

ISO 20471:2013, High visibility clothing - Test methods and requirements, \$126.00

PLASTICS (TC 61)

ISO 11357-5:2013, Plastics - Differential scanning calorimetry (DSC) - Part 5: Determination of characteristic reaction-curve temperatures and times, enthalpy of reaction and degree of conversion, \$80.00

POWDER METALLURGY (TC 119)

ISO 4492:2013, Metallic powders, excluding powders for hardmetals - Determination of dimensional changes associated with compacting and sintering, \$70.00

ROAD VEHICLES (TC 22)

ISO 12345:2013, Diesel engines - Cleanliness assessment of fuel injection equipment, \$164.00

ISO 14229-1:2013, Road vehicles - Unified diagnostic services (UDS) - Part 1: Specification and requirements, \$285.00

ISO 14230-2:2013, Road vehicles - Diagnostic communication over K-Line (DoK-Line) - Part 2: Data link layer, \$192.00

ISO 14451-1:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 1: Terminology, \$98.00

ISO 14451-2:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 2: Test methods, \$135.00

ISO 14451-3:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 3: Labelling, \$60.00

ISO 14451-4:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 4: Requirements and categorization for micro gas generators, \$53.00

ISO 14451-5:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 5: Requirements and categorization for airbag gas generators, \$60.00

ISO 14451-6:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 6: Requirements and categorization for airbag modules, \$60.00

ISO 14451-7:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 7: Requirements and categorization for seatbelt pretensioners, \$53.00

ISO 14451-8:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 8: Requirements and categorization for igniters, \$53.00

ISO 14451-9:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 9: Requirements and categorization for actuators, \$53.00

ISO 14451-10:2013, Pyrotechnic articles - Pyrotechnic articles for vehicles - Part 10: Requirements and categorization for semi-finished products, \$46.00

RUBBER AND RUBBER PRODUCTS (TC 45)

ISO 3384-1/Amd1:2013, Rubber, vulcanized or thermoplastic - Determination of stress relaxation in compression - Part 1: Testing at constant temperature - Amendment 1: Revised calibration schedule, \$20.00

SPORTS AND RECREATIONAL EQUIPMENT (TC 83)

ISO 5902:2013, Alpine skis - Determination of elastic properties, \$80.00

STEEL (TC 17)

ISO 14404-1:2013, Calculation method of carbon dioxide emission intensity from iron and steel production - Part 1: Steel plant with blast furnace, \$135.00

ISO 14404-2:2013, Calculation method of carbon dioxide emission intensity from iron and steel production - Part 2: Steel plant with electric arc furnace (EAF), \$120.00

STERILIZATION OF HEALTH CARE PRODUCTS (TC 198)

ISO 13408-6/Amd1:2013, Aseptic processing of health care products - Part 6: Isolator systems - Amendment 1, \$20.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO 26683-1:2013, Intelligent transport systems - Freight land conveyance content identification and communication - Part 1: Context, architecture and referenced standards, \$235.00

WELDING AND ALLIED PROCESSES (TC 44)

ISO 15609-6:2013, Specification and qualification of welding procedures for metallic materials - Welding procedure specification - Part 6: Laser-arc hybrid welding, \$80.00

ISO Technical Reports

FLUID POWER SYSTEMS (TC 131)

ISO/TR 17209:2013, Hydraulic fluid power - Two-, three- and four-port screw-in cartridge valves - Cavities with ISO 725 (UN and UNF) threads, \$90.00

OPTICS AND OPTICAL INSTRUMENTS (TC 172)

ISO/TR 16743:2013, Optics and photonics - Wavefront sensors for characterising optical systems and optical components, \$142.00

PACKAGING (TC 122)

ISO/TR 16218:2013, Packaging and the environment - Processes for chemical recovery, \$90.00

ISO Technical Specifications

FIRE SAFETY (TC 92)

ISO/TS 13447:2013, Fire safety engineering - Guidance for use of fire zone models, \$120.00

HEALTH INFORMATICS (TC 215)

ISO/TS 13582:2013, Health informatics - Sharing of OID registry information, \$142.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 19794-9/Amd1:2013, Information technology - Biometric data interchange formats - Part 9: Vascular image data - Amendment 1: Conformance testing methodology, \$20.00

ISO/IEC 19794-14:2013, Information technology - Biometric data interchange formats - Part 14: DNA data, \$164.00

Registration of Organization Names in the United States

The Procedures for Registration of Organization Names in the United States of America (document ISSB 989) require that alphanumeric organization names be subject to a 90-day Public Review period prior to registration. For further information, please contact the Registration Coordinator at (212) 642-4946.

The following is a list of alphanumeric organization names that have been submitted to ANSI for registration. Alphanumeric names appearing for the first time are printed in bold type. Names with confidential contact information, as requested by the organization, list only public review dates.

PUBLIC REVIEW

Digital Transmission License Administrator

Public Review: March 18, 2013 to June 12, 2013

NOTE: Challenged alphanumeric names are underlined. The Procedures for Registration provide for a challenge process, which follows in brief. For complete details, see Section 6.4 of the Procedures.

A challenge is initiated when a letter from an interested entity is received by the Registration Coordinator. The letter shall identify the alphanumeric organization name being challenged and state the rationale supporting the challenge. A challenge fee shall accompany the letter. After receipt of the challenge, the alphanumeric organization name shall be marked as challenged in the Public Review list. The Registration Coordinator shall take no further action to register the challenged name until the challenge is resolved among the disputing parties.

Proposed Foreign Government Regulations

Call for Comment

U.S. manufacturers, exporters, regulatory agencies and standards developing organizations may be interested in proposed foreign technical regulations issued by Member countries of the World Trade Organization (WTO). In accordance with the WTO Agreement on Technical Barriers to Trade (TBT Agreement), Members are required to report proposed technical regulations that may significantly affect trade to the WTO Secretariat in Geneva, Switzerland. In turn, the Secretariat disseminates the information to all WTO Members. The purpose of this requirement is to provide global trading partners with an opportunity to review and comment on the regulations before they become final.

The National Center for Standards and Certification Information (NCSCI) at the National Institute of Standards and Technology

(NIST), distributes these proposed foreign technical regulations to U.S. stakeholders via an online service, Notify U.S. Notify U.S. is an e-mail and Web service that allows interested U.S. parties to register, obtain notifications, and read full texts of regulations from countries and for industry sectors of interest to them. To register for Notify U.S., please go to Internet URL: <http://www.nist.gov/notifyus/> and click on "Subscribe".

NCSCI is the WTO TBT Inquiry Point for the U.S. and receives all notifications and full texts of regulations to disseminate to U.S. Industry. For further information, please contact: NCSCI, NIST, 100 Bureau Drive, Gaithersburg, MD 20899-2160; Telephone: (301) 975-4040; Fax: (301) 926-1559; E-mail: ncsci@nist.gov or notifyus@nist.gov.

Information Concerning

American National Standards

INCITS Executive Board

ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum for information technology developers, producers and users for the creation and maintenance of formal de jure IT standards. INCITS' mission is to promote the effective use of Information and Communication Technology through standardization in a way that balances the interests of all stakeholders and increases the global competitiveness of the member organizations.

The INCITS Executive Board serves as the consensus body with its oversight of programs of its 40+ Technical Committees. Additionally, the INCITS Executive Board exercises international leadership in its role as the US Technical Advisory Group (TAG) to ISO/IEC JTC 1, Information Technology.

The INCITS Executive Board seeks to broaden its membership base and is recruiting new participants in the following membership categories:

- special interest (user, academic, consortia)
- non-business (government and major/minor SDOs)

Membership in the INCITS Executive Board is open to all directly and materially affected parties in accordance with INCITS membership rules. To find out more about participating on the INCITS Executive Board, please contact Jennifer Garner at 202-626-5737 or jgarner@itic.org. Visit www.INCITS.org for more information regarding INCITS activities.

Calls for Members

Society of Cable Telecommunications

ANSI Accredited Standards Developer

SCTE, an ANSI-accredited SDO, is the primary organization for the creation and maintenance of standards for the cable telecommunications industry. SCTE's standards mission is to develop standards that meet the needs of cable system operators, content providers, network and customer premises equipment manufacturers, and all others who have an interest in the industry through a fair, balanced and transparent process.

SCTE is currently seeking to broaden the membership base of its ANS consensus bodies and is interested in new members in all membership categories to participate in new work in fiber-optic networks, advanced advertising, 3D television, and other important topics. Of particular interest is membership from the content (program and advertising) provider and user communities.

Membership in the SCTE Standards Program is open to all directly and materially affected parties as defined in SCTE's membership rules and operating procedures. More information is available at www.scte.org or by e-mail from standards@scte.org.

ANSI Accredited Standards Developers

Approval of Accreditation

Concrete Reinforcing Steel Institute (CRSI)

ANSI's Executive Standards Council has approved the Concrete Reinforcing Steel Institute (CRSI), an ANSI Organizational Member, as an ANSI Accredited Standards Developer (ASD) under its proposed operating procedures for documenting consensus on American National Standards, effective March 20, 2013. For additional information, please contact: Mr. Neal Anderson, PE, SE, FACI, FPCI, Vice-President of Engineering, Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schaumburg, IL 60173; phone: 847.517.1200; e-mail: nanderson@crsi.org.

Approvals of Reaccreditations

ASC AGRSS – Automotive Glass Replacement Safety Standards

ANSI's Executive Standards Council has approved the reaccreditation of Accredited Standards Committee AGRSS, Automotive Glass Replacement Safety Standards under its recently revised operating procedures for documenting consensus on ASC AGRSS-sponsored American National Standards, effective March 20, 2013. For additional information, please contact the Secretariat of ASC AGRSS: Ms. Debra Levy, President, Key Management, Auto Glass Safety Council, 385 Garrisonville Road, Suite 116, Stafford, VA 22554; phone: 540.602.3252; fax: 540.720.5687; e-mail: deb@glass.com.

ASC OP – Optics and Electro-Optical Instruments

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of Accredited Standards Committee OP, Optics and Electro-Optical Instruments has been approved under its recently revised operating procedures for documenting consensus on ASC OP-sponsored American National Standards, effective March 15, 2013. For additional information, please contact the Secretariat of ASC OP: Mr. Dave Aikens, Interim Executive Director and Secretary, ASC OP, Optics and Electro-Optics Standards Council, 35 Gilbert Hill Road, Chester, CT 06412; phone: 860.878.0722; e-mail: daikens@optstd.org.

ASC X12 – Electronic Data Interchange

ANSI's Executive Standards Council has approved the reaccreditation of Accredited Standards Committee X12, Electronic Data Interchange under its recently revised operating procedures for documenting consensus on ASC X12-sponsored American National Standards, effective March 19, 2013. For additional information, please contact the Secretariat of ASC X12: Ms. Yvonne Meding, Director, X12 Operations, Data Interchange Standards Association, 7600 Leesburg Pike, Suite 430, Falls Church, VA 22043; phone: 703.970.2051; e-mail: yymeding@disa.org.

Medical Alert Monitoring Association (MAMA)

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of the Medical Alert Monitoring Association (MAMA), an ANSI Organizational Member, has been approved under its recently revised operating procedures for documenting consensus on MAMA-sponsored American National Standards, effective March 19, 2013. For additional information, please contact: Mr. David Schwartz, Project Manager, Medical Alert Monitoring Association, 2 Stahuber Avenue, Union, NJ 07083; phone: 866.388.8618; e-mail: David.Schwartz@LifeStation.com.

Reaccreditation

SSPC – The Society for Protective Coatings

Comment Deadline: April 22, 2013

SSPC – The Society for Protective Coatings, an ANSI organizational member, has submitted revisions to its currently accredited operating procedures on file for documenting consensus on SSPC-sponsored American National Standards, under which it was last reaccredited in August 2009. As the revisions appear to be substantive in nature, the reaccreditation process is initiated.

To obtain a copy of the revised procedures or to offer comments, please contact: Ms. Aimee Beggs, Standards Development Specialist, SSPC – The Society for Protective Coatings, 40 24th Street, Pittsburgh, PA 15222-4656; phone: 412.281.2331, ext. 2223; e-mail: beggs@sspc.org. You may view/download a copy of the revisions during the public review period at the following URL: <http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fPublic%20Review%20and%20Comments%2fANS%20Accreditation%20Actions&View=%7b21C60355%2dAB17%2d4CD7%2dA090%2dBABEEC5D7C60%7d>. Please submit any public comments on the revised procedures to SSPC by April 22, 2013, with a copy to the ExSC Recording Secretary in ANSI's New York Office (e-mail: jthomps@ansi.org).

International Organization for Standardization (ISO)

Calls for US/TAG and US/TAG Administrator

ISO/PC 276 – Biotechnology

The ISO Technical Management Board has created a new ISO Technical Committee on Biotechnology (ISO/TC 276). The secretariat has been assigned to DIN (Germany). The new technical committee has the following scope:

Standardization of the following aspects:

- Terms and definitions.
- Analytical methods in the realm of "-omics" technologies, i.e., Proteomics, Metabolomics, Genomics; based on the conceptual framework proposed at the ISO Biotechnology Workshop in October 2011.
- Computing tools, bioinformatics for international comparability and integrability of data.
- Bioresources, Biobanking.
- Bioreactors.
- Metrology aspects of biotechnology (e.g. enzymology).

ISO/TC Biotechnology will work closely with related committees in order to identify demands, standardization gaps, and organize collaborations avoiding duplications and overlapping standardization activities, see proposed list of liaisons.

The committee will not pursue clinical laboratory testing and in vitro diagnostic test systems (as covered by the scope of ISO/TC 212 Clinical laboratory testing and in vitro diagnostic test systems).

The committee will not pursue standardization of forensic science, research, as well as applications for the agricultural, food, and medical industries.

Organizations interested in serving as the US/TAG administrator or participating on the US/TAG should contact ANSI's ISO Team at isot@ansi.org.

ISO/PC 277 – Sustainable Purchasing

The ISO Technical Management Board has created a new ISO Project Committee on Sustainable Purchasing (ISO/PC 277). The secretariat has been assigned to AFNOR (France) and ABNT (Brazil) as part of a twinning arrangement. The new project committee has the following scope:

Standardization in the field of sustainable purchasing.

Organizations interested in serving as the US/TAG administrator or participating on the US/TAG should contact ANSI's ISO Team at isot@ansi.org.

ISO/PC 278 – Anti-Bribery Management System – Requirements

The ISO Technical Management Board has created a new ISO Project Committee on Anti-bribery management system – Requirements (ISO/PC 278). The secretariat has been assigned to BSI (United Kingdom). The new project committee has the following scope:

Standardization in the field of anti-bribery management system – Requirements

Organizations interested in serving as the US/TAG administrator or participating on the US/TAG should contact ANSI's ISO Team at isot@ansi.org.

New Work Item Proposals

Audit Data Services

Comment Deadline: April 26, 2013

SAC (China) has submitted to ISO the attached proposal for a new field of technical activity on Audit Data Services with the following scope statement:

Standardization in the field of Audit data services (ADS), including audit data service terms, audit data acquisition, processing of the audit data, audit data management, the utilization of audit data.

Please note that the proposal seems to indicate that the primary focus would be financial auditing.

Anyone wishing to review the new work item proposal can request a copy of the proposal by contacting ANSI's ISO Team via e-mail: isot@ansi.org with submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, April 26, 2013.

Cell-Combined Medical Products

Comment Deadline: April 19, 2013

KATS (Republic of Korea) has submitted to ISO the attached proposal for a new field of technical activity on Cell-combined medical products with the following scope statement:

Standardization of guidelines for the cell-combined medical products (CCMPs) which consist of therapeutic cells and biomaterials designed to be delivered into the body to restore, replace defects and/or regenerate physiological functions is necessary.

The standards and guidelines include the terminology, specification, procedures in producing therapeutic cell expansion, cell-biomaterial hybridization, in vitro and in vivo experiments, and clinical trials for the cell-combined medical products (CCMPs).

These standards exclude 1) minimally manipulated cells/tissues/organ medical products (CTOMPs) intended for transplantation; 2) gene therapy; 3) blood transfusion; 4) extracorporeal devices containing living cells.

Anyone wishing to review the new work item proposal can request a copy of the proposal by contacting ANSI's ISO Team via e-mail: isot@ansi.org with submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, April 19, 2013.

Meeting Notices

ASC Z9 – Industrial Ventilation

The American Society of Safety Engineers (ASSE) serves as the secretariat of the ANSI Accredited Z9 Committee (ANSI/ASSE Z9 ASC) for Industrial Ventilation. The next meeting of the Z9 ASC will be held in Las Vegas on June 24, 2013 from noon to 4:00 p.m. If you should have interest in attending the meeting, please contact Tim Fisher with ASSE.

ASC Z88 – Respiratory Protection

The American Society of Safety Engineers (ASSE) serves as the secretariat of the ANSI Accredited Z88 Committee (ANSI/ASSE Z88 ASC) for Respiratory Protection. The next meeting of the Z88 ASC will be held in Montreal on May 20, 2013 (Monday) from 10:30 a.m. to noon. If you should have interest in attending the meeting, please contact Tim Fisher with ASSE.

Information Concerning

ANSI Accredited Standards Developers

Application for Accreditation

ASSE International Chapter of IAPMO, LLC (ASSE International)

Comment Deadline: April 22, 2013

The **ASSE International Chapter of IAPMO, LLC (ASSE International)** has submitted an application for accreditation as an ANSI Accredited Standards Developer (ASD) and proposed operating procedures for documenting consensus on ASSE International-sponsored *American National Standards*. ASSE International's proposed scope of standards activity is as follows:

As ANSI is aware, the American Society of Sanitary Engineering has been accredited as a Standards Developer for many years. The organization was recently dissolved and was reconstituted under The IAPMO Group as ASSE International. ASSE International is successor in interest to the American Society of Sanitary Engineering, and in and to the Standards currently deemed American National Standards. The American Society of Sanitary Engineering's Procedures for the Development of Standards previously accredited by ANSI were used as the basis for ASSE International's Procedures for the Development of Standards. Other than a revision to the Interpretations Policy and the revisions to include the change in ownership, as well as the change to the organization's name, there are no other changes to the document.

ASSE International protects health and safety through correct plumbing and piping practices and standards. ASSE International works with all segments of the plumbing and piping industry to develop our standards. ASSE International develops both product performance standards and professional qualifications standards.

The scope of the Product Standards Committee is the development of product standards which incorporate test procedures for assemblies, devices, fixtures, appliances and materials pertaining to plumbing and piping systems which are in the interest of protecting the public health. These product standards include requirements for safety, health and performance. They may also include requirements such as construction, maintenance and operation of equipment and materials for plumbing and piping systems.

The scope of the Professional Qualifications Standards Committee is the development of professional qualifications standards which incorporate educational, training and industry experience requirements pertaining to the installation, inspection or design of plumbing, piping, sprinkler fitting or HVACR systems which are in the interest of protecting the public health.

To obtain a copy of ASSE International's proposed operating procedures or to offer comments, please contact: Ms. Sara Marxen, Compliance Coordinator, ASSE International, 901 Canterbury Road, Suite A, Westlake, OH 44145; phone: 440.835.3040; e-mail: sara@asse-plumbing.org. Please submit your comments to ASSE International by **April 22, 2013**, with a copy to the Recording Secretary, ExSC in ANSI's New York Office (E-mail: Jthompso@ANSI.org).

As the proposed procedures are available electronically, the public review period is **30 days**. You may view or download a copy of ASSE International's proposed operating procedures from *ANSI Online during the public review period* at the following URL:

<http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fPublic%20Review%20and%20Comment%2fANS%20Accreditation%20Actions&View=%7b21C60355%2dAB17%2d4CD7%2dA090%2dBABEEC5D7C60%7d>.

Information Concerning

International Organization for Standardization (ISO)

Call for International (ISO) Secretariat

ISO/TC 146/SC 5 Meteorology

Currently, the U.S. holds a leadership position as secretariat of ISO/TC 146/SC 5 (Meteorology). ANSI has delegated the responsibility for the administration of the secretariat for ISO/TC 146/SC 5 to ASTM International. ASTM International has advised ANSI of its intent to relinquish its role as delegated secretariat for this committee.

ISO/TC 146/SC 5 operates under the following scope:

Standardization of tools for air quality characterisation of emissions, workspace air, ambient air, indoor air, in particular measurement methods for air pollutants (particles, gases, odours, micro-organisms) and for meteorological parameters, measurement planning, procedures for Quality Assurance/Quality Control (QA/QC) and methods for the evaluation of results including the determination of uncertainty.

Excluded :

- the establishment of limit values for air pollutants;*
- the air quality in clean rooms;*
- radioactive substances.*

ANSI is seeking organizations in the U.S. that may be interested in assuming the role of delegated secretariat for ISO/TC 146/SC 5. Alternatively, ANSI may be assigned the responsibility for administering an ISO secretariat. Any request that ANSI accept direct administration of an ISO secretariat shall demonstrate that:

1. The affected interests have made a financial commitment for not less than three years covering all defined costs incurred by ANSI associated with holding the secretariat;
2. the affected technical sector, organizations or companies desiring that the U.S. hold the secretariat request that ANSI perform this function;
3. the relevant US TAG has been consulted with regard to ANSI's potential role as secretariat; and
4. ANSI is able to fulfill the requirements of a secretariat.

If no U.S. organization steps forward to assume the ISO/TC 146/SC 5 secretariat, or if there is insufficient support for ANSI to assume direct administration of this activity, then ANSI will inform the ISO Central Secretariat that the U.S. will relinquish its leadership of the committee. This will allow ISO to solicit offers from other countries interested in assuming the secretariat role.

Information concerning the United States retaining the role of international secretariat may be obtained by contacting ANSI at isot@ansi.org.

Information Concerning

International Organization for Standardization (ISO)

New Work Item

Occupational Health and Safety Management Systems – Requirements

Comment Deadline: April 26, 2013

BSI (United Kingdom) has submitted to ISO the attached new work item proposal on Occupational Health and Safety Management Systems – Requirements, with the following scope statement:

This International Standard specifies requirements for an occupational health and safety (OH&S) management system, to enable an organization to control its OH&S risks and improve its OH&S performance. It does not state specific OH&S performance criteria, nor does it give detailed specifications for the design of a management system.

This International Standard is applicable to any organization that wishes to:

- a) establish an OH&S management system to eliminate or minimize risks to personnel and other interested parties who could be exposed to OH&S hazards associated with its activities;
- b) implement, maintain and continually improve an OH&S management system;
- c) assure itself of its conformity with its stated OH&S policy;
- d) demonstrate conformity with this International Standard.

All the requirements in this International Standard are intended to be incorporated into any OH&S management system. The extent of the application will depend on such factors as the OH&S policy of the organization, the nature of its activities and the risks and complexity of its operations.

This International Standard is intended to address occupational health and safety management systems, and is not intended to address other health and safety areas such as employee wellbeing/wellness programs, product safety, property damage or environmental impacts.

Anyone wishing to review the new work item proposal can request a copy of the proposal by contacting ANSI's ISO Team via email: isot@ansi.org with submission of comments to Steve Cornish (scornish@ansi.org) by close of business on Friday, April 26, 2013.



**BSR/ASHRAE Addendum ag
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ag to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

BSR/ASHRAE Addendum ag to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds new zeotropic refrigerant R-417C to Table 2 and Table D2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ag to 34-2010

Add the following underlined data to Table 2 and Table D2 in the columns indicated.

TABLE 2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 417C
 Composition (Mass %) = R-125/134a/600 (19.5/78.8/1.7)
 Composition tolerances = (±1.0 / ±1.0 / +0.1,-0.5)
 OEL = 1,000
 Safety Group = A1
 RCL = 21,000 ppm v/v; 87 g/m³; 5.4 lb/Mcf
 Highly Toxic or Toxic Under Code Classification = Neither

TABLE D2 Data for Refrigerant Blends

Refrigerant Number = 417C
 Composition (Mass %) = R-125/134a/600 (19.5/78.8/1.7)
 Average Molecular Mass = 103.7
 Bubble Point (°C) = -32.7
 Bubble Point (°F) = -26.9
 Dew Point (°C) = -29.2
 Dew Point (°F) = -20.6



**BSR/ASHRAE Addendum ah
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ah to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

BSR/ASHRAE Addendum ah to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds new zeotropic refrigerant R-445A to Table 2 and Table D2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ah to 34-2010

Add the following underlined data to Table 2 and Table D2 in the columns indicated.

TABLE 2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 445A
 Composition (Mass %) = R-744/134a/1234ze(E) (6.0/9.0/85.0)
 Composition tolerances = (±1.0 / ±1.0 / ±2.0)
 OEL = 930
 Safety Group = A2L
 RCL = 16,000 ppm v/v; 67 g/m³; 4.2 lb/Mcf
 Highly Toxic or Toxic Under Code Classification = Neither

TABLE D2 Data for Refrigerant Blends

Refrigerant Number = 445A
 Composition (Mass %) = R-744/134a/1234ze(E) (6.0/9.0/85.0)
 Average Molecular Mass = 103.1
 Bubble Point (°C) = -50.3
 Bubble Point (°F) = -58.5
 Dew Point (°C) = -23.5
 Dew Point (°F) = -10.3



**BSR/ASHRAE Addendum ai
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ai to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum ai to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds new zeotropic refrigerant R-419B to Table 2 and Table D2.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ai to 34-2010

Add the following underlined data to Table 2 and Table D2 in the columns indicated.

TABLE 2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 419B
 Composition (Mass %) = R-125/134a/E170 (48.5/48.0/3.5)
 Composition tolerances = (±1.0 / ±1.0 / ±0.5)
 OEL = 1,000
 Safety Group = A2
 RCL = 17,000 ppm v/v; 74 g/m³; 4.6 lb/Mcf
 Highly Toxic or Toxic Under Code Classification = Neither

TABLE D2 Data for Refrigerant Blends

Refrigerant Number = 419B
 Composition (Mass %) = R-125/134a/E170 (48.5/48.0/3.5)
 Average Molecular Mass = 105.2
 Bubble Point (°C) = -37.4
 Bubble Point (°F) = -35.3
 Dew Point (°C) = -31.5
 Dew Point (°F) = -24.7



**BSR/ASHRAE Addendum aj
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum aj to Standard 34-2010, Designation and Safety Classification of Refrigerants

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BSR/ASHRAE Addendum aj to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds new zeotropic refrigerant R-422E to Table 2 and Table D2.

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Addendum aj to 34-2010

Add the following underlined data to Table 2 and Table D2 in the columns indicated.

TABLE 2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 422E
 Composition (Mass %) = R-125/134a/600a (58.0/39.3/2.7)
 Composition tolerances = (±1.0 / +1.7, -1.3 / +0.3, -0.2)
 OEL = 1,000
 Safety Group = A1
 RCL = 57,000 ppm v/v; 260 g/m³; 16 lb/Mcf
 Highly Toxic or Toxic Under Code Classification = Neither

TABLE D2 Data for Refrigerant Blends

Refrigerant Number = 422E
 Composition (Mass %) = R-125/134a/600a (58.0/39.3/2.7)
 Average Molecular Mass = 109.3
 Bubble Point (°C) = -41.8
 Bubble Point (°F) = -43.2
 Dew Point (°C) = -36.4
 Dew Point (°F) = -33.5



**BSR/ASHRAE Addendum ak
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ak to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum ak to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds “specific volume at the critical point” calculation requirements for blends to Section 9.5.2.5.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ak to 34-2010

Modify Section 9.5.2.5 as follows:

9.5.2.5 Critical Point for Blends. For refrigerant blends, the critical temperature ~~and~~, pressure, and specific volume shall be calculated as the weighted average by mole fractions of the critical temperatures ~~and~~, pressures, and specific volumes, respectively, of the blend components in the as-formulated composition.



**BSR/ASHRAE Addendum b
to ANSI/ASHRAE Standard 62.1-2010**

Public Review Draft

Proposed Addendum b to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality

**Third Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum b to ANSI/ASHRAE Standard 62.1-2010, *Ventilation and Acceptable Indoor Air Quality*
Third Public Review Draft

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FOREWORD

A change proposal submitted to ASHRAE pointed out to the SSPC that the requirements for the quality of water used in humidifiers and water-spray systems could potentially be misinterpreted. In response, changes to the wording of Sections 5.12 and 5.12.1 are being proposed that are intended to clarify the requirements. Water that is used must meet or exceed potable water quality standards, and no chemicals may be added other than those specified. In addition, use of certain chemicals is limited to systems using automated dosing equipment to. Requirements for maintenance of the automated dosing equipment are added to Section 8. These requirements exist to reduce the risk of water treatment chemicals creating poor IAQ.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum b to 62.1-2010

Revise Sections 5.12 and 5.12.1 as follows:

5.12 Humidifiers and Water-Spray Systems. Steam and direct evaporation humidifiers, air washers, direct-evaporative coolers, and other water-spray systems shall be designed in accordance with this section.

5.12.1 Water Quality. Water ~~purity shall originate directly from a~~ meet or exceed potable water standards source ~~or from a source with equal or better water quality at the point where it enters the ventilation system, space, or the water vapor generator.~~ Water vapor generated shall contain no chemical additives, other than those chemicals in a potable water system.

Exceptions:

- 1) Water-spray systems that utilize chemical additives which meet NSF/ANSI Standard 60-2012, *Drinking Water Treatment Chemicals – Health Effects*.
- 2) Boiler water additives that meet the requirements of 21CFR173.310 (2012), *Secondary Direct Food Additives Permitted In Food For Human Consumption*, and include automated dosing devices.

Revise Sections 8.4.1.3 as follows:

8.4.1.3 Humidifiers. Humidifiers shall be cleaned and maintained to limit fouling and microbial growth. Any automatic chemical dosing equipment shall be calibrated and maintained in accordance with the O&M Manual to maintain additive concentrations to comply with Section 5.12.1. These systems shall be inspected at a minimum of once every three months of operation and/or treated ~~as specified in~~ in accordance with the O&M Manual.

Add NSF/ANSI Standard 60-2012 and 21CFR173.310 (2012) to Section 9 References.



**BSR/ASHRAE Addendum k
to ANSI/ASHRAE Standard 62.1-2010**

Public Review Draft

Proposed Addendum k to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality

**Second Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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FOREWORD

This proposed addendum modifies the standard to allow the use of heat wheel energy recovery in some laboratory exhaust hood systems. Two criteria are used to determine when the exhaust can be classified as Class 3 air which can have heat wheel energy recovery applied. The first is if the exhaust is coming from a “Biological safety cabinet, Class 1.” The second is air from hoods or biological safety cabinets which meet the requirements of ANSI Z9.5, Section 5.4.7.2. This section refers to Section 5.4.7.1, where Criteria A appears to be the relevant portion of the section. The text of Sections 5.4.7.1 and 5.4.7.2 is:

5.4.7.1 General Room Exhaust

Air exhausted from the general laboratory space (as distinguished from laboratory chemical hoods) shall not be recirculated to other areas unless one of the following sets of criteria is met:

1) Criteria A

- *The concentration of air contaminants generated by maximum credible accident will be lower than short-term exposure limits required by 2.1.1;*
- *There are no extremely dangerous or life-threatening materials used in the laboratory; and*
- *The system serving the laboratory chemical hoods is provided with installed redundancy, emergency power, and other reliability features as necessary, or*

2) Criteria B

- *Provision of 100% outside air, whenever continuous monitoring indicates an alarm condition;*
- *Recirculated air is treated to reduce contaminant concentrations to those specified in 2.1.1; and*
- *Recirculated air is monitored continuously for contaminant concentrations or provided with a secondary backup air-cleaning device that also serves as a monitor (via a HEPA filter in series with a less efficient filter, for particulate contamination only). Refer to section 9.3.1.*

5.4.7.2 Hood Exhaust

Exhaust air from laboratory hoods shall not be recirculated to other areas.

Hood exhaust air meeting the same criteria as noted in Section 5.4.7.1 shall only be recirculated to the same work area where the hood operators have control of the hood work practices and can monitor the status of air cleaning.

BSR/ASHRAE Addendum k to ANSI/ASHRAE Standard 62.1-2010, *Ventilation and Acceptable Indoor Air Quality*
Second Public Review Draft

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Addendum k to 62.1-2010

Revise Table 5-2 as follows:

TABLE 5-2 Airstreams or Sources

Description	Air Class
Diazo printing equipment discharge	4
Commercial kitchen grease hoods	4
Commercial kitchen hoods other than grease	3
<u>Biological safety cabinet Class 1^{xxx}</u>	<u>3</u>
<u>Laboratory hoods or biological safety cabinets compliant with Clause 5.4.7.2 of ANSI/IIHA Z9.5⁶</u>	<u>3</u>
<u>All other Laboratory hoods and biological safety cabinets</u>	4
Residential kitchen vented hoods	3
Hydraulic elevator machine room	2

Add reference to Section 9:

^{xxx} CDC. 2009. "Biosafety in Microbiological and Biomedical Laboratories," 5th edition. HHS Publication No. (CDC) 21-1112.



**BSR/ASHRAE Addendum m
to ANSI/ASHRAE Standard 62.1-2010**

Public Review Draft

Proposed Addendum m to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality

**Second Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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FOREWORD

This proposed addendum resulted from a change proposal which recommended adding the National Standards for Total System Balance issued by the Associated Air Balance Council (AABC) as an equivalent method of balancing ventilation systems in Section 7.2.2 of Standard 62.1. This would be in addition to ASHRAE Standard 111 and the SMACNA standard. Public review comments argued that it was inappropriate to include a list of equivalent standards and that it was difficult for enforcement personnel to determine if other standards were “equivalent.” The SSPC decided to restrict the list to ASHRAE 111, and revise the language to “national standard” to make it clear that standards by SMACNA, AABC and others were acceptable without requiring evaluation of their different requirements.

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Addendum m to 62.1-2010

Modify Section 7.2.2 as shown below:

7.2.2 Air Balancing. Ventilation systems shall be balanced in accordance with ASHRAE Standard 111,¹⁶ ~~SMACNA’s HVAC Systems—Testing, Adjusting and Balancing,²²~~ or equivalent at least to the extent necessary to ~~or other applicable national standard for measuring and balancing airflow so as to verify conformance with the~~ total outdoor airflow ~~and space supply airflow~~ requirements of this standard.

Delete Reference 22 from Section 9.

9. REFERENCES

²²~~HVAC Systems—Testing, Adjusting and Balancing, 3rd Edition, 2002. Sheet Metal and Air Conditioning Contractors’ National Association, Inc. (SMACNA), Chantilly, VA.~~



**BSR/ASHRAE Addendum o
to ANSI/ASHRAE Standard 62.1-2010**

Public Review Draft

Proposed Addendum o to Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality

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Occupancy Category	Exhaust Rate, cfm/unit	Exhaust Rate, cfm/ft ²	Notes	Exhaust Rate, L/s-unit	Exhaust Rate, L/s-m ²	Air Class
Toilets – private	25/50	-	E ₂ H	12.5/25	-	2
Toilets – public	50/70	-	D ₂ H	25/35	-	2

H Exhaust air which has been cleaned to meet Class 1 criteria from Section 5.16.1 shall be permitted to be recirculated.



**BSR/ASHRAE/ASHE Addendum w
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

Proposed Addendum w to Standard 170-2008, Ventilation of Health Care Facilities

**First Public Review (March 2013)
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FOREWORD

This proposed addendum clarifies the Table 7-1 minimum requirements for gastrointestinal endoscopy procedure rooms. The design relative humidity for this short term stay space has been lowered similar to that which occurred for Addendum d (surgeries) and Addendum v (recovery room). This proposed addendum provides clarification concerning design relative humidity requirements for spaces which function to perform gastrointestinal endoscopy procedures and reduces the lower design humidity limit from 30% to 20% RH. This proposed addendum provides clarification concerning the pressure relationship to adjacent area requirements for spaces in which gastrointestinal endoscopy procedures are performed. The pressurization requirement has been revised to “No Requirement” such that gastrointestinal endoscopy procedures may occur within positive pressure rooms, negative pressure rooms, or rooms with no controlled pressure.

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Addendum w to 170-2008

Revise Table 7-1 and its notes as shown below. Table 7-1 and the notes were modified by Addenda b to Standard 170-2008 currently published for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. The remainder of Table 7-1 is unchanged.

Table 7-1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)		Minimum		All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by means of Room Units (a)	Design Relative Humidity (k), (%)	Design Temperature (l), (°F/°C)
	Positive	N/R	Outdoor	Total				
DIAGNOSTIC AND TREATMENT								
Gastrointestinal endoscopy procedure room (x)	Positive	N/R	2	6	N/R	No	20 30 -60	68-73/20-23

x. *If the planned space is designated in the organization's operational plan to be utilized for both bronchoscopy & gastrointestinal endoscopy, the design parameters for “bronchoscopy, sputum collection, and pentamidine administration”, shall be used.*



**BSR/ASHRAE/IES Addendum aa
to ANSI/ASHRAE/IES Standard 90.1-2010**

Public Review Draft

**Proposed Addendum aa to Standard
90.1-2010, *Energy Standard for
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Residential Buildings***

**Second Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)**

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FOREWORD

Currently, Section 6 has various requirements for control logic that apply only to systems that have direct digital controls (DDC). See for example: 6.4.3.9 Exception b, 6.5.3.2.3, 6.5.3.3, and 6.5.4.1. But there are no subsections that mandate that DDC be installed. In the first public review of Addendum aa, DDC was mandated in many of the above-referenced subsections with qualifications such as the quantity of zones. But public review comments pointed out that in some cases this would inadvertently mandate that DDC be retrofitted on existing systems and zones, often at great expense. For example, to convert pneumatic VAV zones to DDC is very expensive and not always cost effective.

This revised version of Addendum aa addresses the issue more broadly by mandating DDC for certain applications in both new buildings and retrofits where, in the SSPC's opinion, it will be cost effective. It also defines the minimum capability of mandated DDC systems. This is needed because almost any modern microprocessor based controller qualifies as DDC by the current definition. But to fully benefit from DDC, capabilities such as transferring information among controllers, collecting and displaying trends, etc. are required.

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Addendum aa to 90.1-2010

Insert the following Acronym in Section 3.3(IP and SI Units)

DDC Direct Digital Control

Insert Section 6.4.3.11 and re-number subsequent sections accordingly (IP and SI Units)

6.4.3.11 Direct Digital Control Requirements. Direct Digital Control shall be required as follows.

6.4.3.11.1 DDC Applications. DDC shall be provided in the applications and qualifications listed in Table 6.4.3.11.1.

Exception. DDC is not required for systems using the Simplified Approach to compliance in accordance with Section 6.3.1.

6.4.3.11.2 DDC Controls. Where DDC is required by Section 6.4.3.11.1, the DDC system shall be capable of all of the following as required to provide the control logic required in Section 6.5:

- a. Monitor zone and system demand for fan pressure, pump pressure, heating, and cooling;
- b. Transferring zone and system demand information from zones to air distribution system controllers and from air distribution systems to heating and cooling plants controllers;

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- c. Automatically detect those zones and systems that may be excessively driving the reset logic and generate an alarm or other indication to the system operator; and
- d. Readily allow operator removal of zone(s) from the reset algorithm

6.4.3.11.3 DDC Display. Where DDC is required by Section 6.4.3.11.1 for new buildings, the DDC system shall be capable of trending and graphically displaying input and output points.

Table 6.4.3.11.1 DDC Applications and Qualifications

<u>Building Status</u>	<u>Application</u>	<u>Qualifications</u>
<u>New Building</u>	<u>Air handling system and all zones served by the system</u>	<u>Individual systems supplying more than three zones and with fan system bhp of 10 hp (7.45 Kw) and larger</u>
<u>New Building</u>	<u>Chilled water plant and all coils and terminal units served by the system</u>	<u>Individual plants supplying more than three zones and with design cooling capacity of 300,000 Btu/h (87.9 Kw) and larger</u>
<u>New Building</u>	<u>Hot water plant and all coils and terminal units served by the system</u>	<u>Individual plants supplying more than three zones and with design heating capacity of 300,000 Btu/h (87.9 Kw) and larger</u>
<u>Alteration or Addition</u>	<u>Zone terminal unit such as VAV box</u>	<u>Where existing zones served by the same air handling, chilled water, or hot water system have DDC</u>
<u>Alteration or Addition</u>	<u>Air handling system or fan-coil</u>	<u>Where existing air handling system(s) and fan-coil(s) served by the same chilled or hot water plant have DDC</u>
<u>Alteration or Addition</u>	<u>New air handling system and all new zones served by the system</u>	<u>Individual systems with fan system bhp of 10 hp(7.45 Kw) and larger and supplying more than three zones and more than 75% of zones are new.</u>
<u>Alteration or Addition</u>	<u>New or upgraded chilled water plant</u>	<u>Where all chillers are new and plant design cooling capacity is 300,000 Btu/h (87.9 Kw) and larger</u>
<u>Alteration or Addition</u>	<u>New or upgraded hot water plant</u>	<u>Where all boilers are new and plant design heating capacity is 300,000 Btu/h (87.9 Kw) and larger</u>



**BSR/ASHRAE/IES Addendum BO
to ANSI/ASHRAE/IES Standard 90.1-2010**

Public Review Draft
Proposed Addendum BO to Standard
90.1-2010, *Energy Standard for*
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FOREWORD

This proposed addendum adds requirement for the use of gas condensing service water heaters in newly constructed buildings. Additionally, the proposed addendum makes several changes to Table 7.8 to reflect current Federal energy regulations for electric water heaters, to utilize the new ASHRAE 146 heat pump pool heater standard and to increase the minimum efficiency for certain oil storage water heaters from 78 to 80 percent.

The modifications in the ISC draft are in response to comments received during the first public review to improve the clarity of the requirements.

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Addendum BO to 90.1-2010

Revise the standard as follows (I-P and SI units)

7.5.3 Buildings with High Capacity Service Water Heating Systems. New buildings with gas service hot water systems with a total installed gas water heating input capacity of 1,000,000 Btu/h or greater, shall have ~~commercial gas service water heating equipment appliance(s)~~ with a minimum Thermal Efficiency (E_t) of 90%. ~~Where multiple units of commercial gas water heating equipment appliances are allowed used to meet this requirement, if the water heating input provided by equipment appliances with Thermal Efficiency (E_t) above and below 90% must provide a minimum an input capacity-weighted average thermal efficiency of at least 90%.~~

Exceptions:

1. Where 25% of the annual service water heating requirement is provided by site-solar or site-recovered energy.
2. Water heaters installed in individual dwelling units.
3. Individual gas water heaters with input capacity not greater than 100,000 Btu/h (29kW).

The requirements of 7.5.3 are effective on (two years after the ASHRAE BOD vote to approve publication of the 90.1 standard containing this exception.)

Modify Footnote “a” of TABLE 7.8 Performance Requirements for Water Heating Equipment

BSR/ASHRAE/IES Addendum BO to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

Second Public Review Draft (Independent Substantive Change)

^aEnergy factor (EF) and thermal *efficiency* (E_t) are minimum requirements, while standby loss (SL) is maximum Btu/h based on a 70°F temperature difference between stored water and ambient requirements. In the EF equation, V is the rated volume in gallons. In the SL equation, V is the rated volume in gallons, V_m is the measured volume in gallons and Q is the nameplate input rate in Btu/h.



**BSR/ASHRAE/IES Addendum bs
to ANSI/ASHRAE/IES Standard 90.1-2010**

Public Review Draft
Proposed Addendum bs to Standard
90.1-2010, *Energy Standard for*
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FOREWORD

Reduce occupancy threshold for demand controlled ventilation from greater than 40 people per 1000 ft² to equal to or greater than 25 people per 1000 ft² with exemptions for certain occupancies. This change will expand the occupancies where demand controlled ventilation is required. Occupancies that would be included that are not included now (based on Standard 62.1 default densities) would be Classrooms; Music/dance class; Conference lobbies; Office Reception; Museum; Mall commons; Gym; and health club. Daycare; computer labs; and break rooms. Exempt occupancies would be: Correctional cells; Daycare sickrooms; Science labs; Barber; beauty & nail salons; and bowling alley seating.

The expansion to more spaces is justified based on reduction in costs for demand controlled ventilation controls and increases in ventilation energy costs. These lower density thresholds have been adopted in many state energy codes, including Washington, Oregon, and California. There is also a LEED credit available for IAQ monitoring met by the most typical demand controlled ventilation method.

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Addendum bs to 90.1-2010

Revise the Standard as follows (I-P units)

6.4.3.9 Ventilation Controls for High-Occupancy Areas. Demand control ventilation (DCV) is required for spaces larger than 500 ft² and with a design occupancy for ventilation of greater than or equal to 25 people per 1000 ft² of floor area and served by systems with one or more of the following:

- a. an air-side economizer,
- b. *automatic* modulating control of ~~the~~ outdoor air dampers, or
- c. a design outdoor airflow greater than 3000 cfm.

Exceptions:

- a. Systems with the exhaust air energy recovery complying with Section 6.5.6.1.

BSR/ASHRAE/IES Addendum bs to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

Second Public Review Draft (Independent Substantive Change Public Review)

- b. Multiple-zone systems without DDC of individual zones communicating with a central control panel.
- c. Systems with a design outdoor airflow less than 750 cfm (375 L/s).
- d. Spaces where more than 75% of the supply space design outside airflow is required for makeup air that is exhausted from the space or rate minus any makeup or outgoing transfer air that is required for makeup air that is exhausted from other space(s).
~~requirement is less than 1200 cfm.~~
- e. Spaces with one of the following occupancies categories as defined in ASHRAE Standard 62.1: Correctional cells; Daycare sickrooms; Science labs; Barber; beauty & nail salons; and bowling alley seating.

Revise the Standard as follows (SI units)



**BSR/ASHRAE/IES Addendum CO
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FOREWORD

This addendum corrects the calculation of hotel and motel type guestroom spaces based on an error in applying the room geometry of the space type which then changes the associated whole building LPDs for Hotel and Motel. The calculation results produced a nearly identical value for both building types and were therefore combined into one category and value. Similarly, this addendum corrects the calculation of manufacturing space types causing a change in the manufacturing whole building LPD.

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Addendum CO to 90.1-2010

Revise Table 9.5.1 as follows (IP Units)

**TABLE 9.5.1 Lighting Power Densities
Using the Building Area Method**

Building Area Type^a	LPD (W/ft²)
.....	
<u>Hotel/Motel</u>	0.58 <u>0.87</u>
.....	
Manufacturing facility	1.46 <u>1.17</u>
Motel	0.56
.....	

Revise Table 9.5.1 as follows (SI Units)

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Second Public Review Draft (Independent Substantive Change)

TABLE 9.5.1 Lighting Power Densities
Using the Building Area Method

Building Area Type^a	LPD (W/m²)
.....	
<i>Hotel/Motel</i>	3.01 <u>4.52</u>
.....	
<i>Manufacturing facility</i>	6.02 <u>12.59</u>
<i>Motel</i>	2.99
.....	



**BSR/ASHRAE/IES Addendum CR
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FOREWORD

This addendum modifies the designation for the types of facilities that are eligible for the higher LPDs based on the use of the space for those needing additional lighting for age and other related eye issues as well as design to the appropriate IES reference. The new designation is intended to cover only the appropriate facilities.

Note: *In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and strikethrough (for deletions) unless the instructions specifically mention some other means of indicating the changes. Only these changes are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed substantive changes.*

Addendum CR to 90.1-2010

Revise the text of the Standard as follows (IP and SI Units)

TABLE 9.6.1 Lighting Power Density Allowances Using the Space-by-Space Method		
Common Space Types ¹	LPD watts/sq.ft	RCR Threshold
Corridor ²		
... in a hospital	0.99	Width < 8'
Dining Area		
... in a Facility for the Visually Impaired Assisted Living Facility (and not used primarily by the staff residents) ³	2.65	4
Sales Area ⁴	1.44	6
Storage Room		
... that is ≥ 50 sqft	0.63	6
... that is < 50 sqft	1.24	6
1 - In cases where both a common space type and a building area specific space type are listed, the building area specific space type shall apply 2 - In corridors, the extra LPD allowance is permitted when the width of the corridor is less than 8' and is not based on the RCR 3 - 'A 'Facility for the Visually Impaired' is a facility that can be documented as being designed to comply with the light levels in ANSI/IES RP-28 and is licensed or will be licensed by local/state authorities for either senior long-term care, adult daycare, senior support and/or people with special visual needs. An 'Assisted Living Facility' is a facility that is licensed by local/state authorities for either senior care or people with special visual needs and designed to comply with the requirements of ANSI/IES RP 28. An 'Assisted Living Facility' is a residential facility, for people with special needs or disabilities, that provides help with everyday tasks such as bathing, dressing, and taking medication. 4 - For accent lighting, see Section 9.6.2(b)		
Building Type Specific Space Types	LPD watts/sq.ft	RCR Threshold
Facility for the Visually Impaired Assisted Living Facility ³		
... in a recreation room/common living room (and not used primarily by staff residents)	2.41	6

BSR/ASHRAE/IES Addendum CR to ANSI/ASHRAE/IESNA Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

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**BSR/ASHRAE/IES Addendum ct
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FOREWORD

This addendum corrects a mistake that was made when HVAC systems for heated only storage areas was added to Appendix G. These are single zone systems and as such should be assigned to a single thermal zone instead of being grouped with the multiple zone systems.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ct to 90.1-2010

Modify Appendix G as follows (IP and SI Units)

G3.1.1 Baseline HVAC System Type and Description.

HVAC systems in the *baseline building design* shall be based on usage, number of floors, conditioned floor area, and heating source as specified in Table G3.1.1A and shall conform with the system descriptions in Table G3.1.1B. For systems 1, 2, 3, ~~and 4~~, 9 and 10 each thermal block shall be modeled with its own HVAC system. For systems 5, 6, 7, ~~and 8, 9, and 10~~ each floor shall be modeled with a separate HVAC system. Floors with identical thermal blocks can be grouped for modeling purposes.



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to ANSI/ASHRAE/IES Standard 90.1-2010**

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FOREWORD

*Elevator, escalator, and moving walk energy efficiency standards are developing rapidly. This addendum uses the new SS-EN ISO 25745-1:2012 standard to add a movement energy efficiency requirement for elevators. The requirement of 1.8 mW*hr/(kg*m) is equivalent to class C in the VDI standard, which is an efficiency level with which we believe all major traction elevator vendors can comply. When part 2 of the standard is published, this requirement can become more robust and include standby ratings for various categories of elevators and movement efficiencies for escalators and moving walks. This addendum also paves the way for performing economic analysis to determine whether lower energy consumption requirements are justified*

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Addendum cw to 90.1-2010

Revise the Standard as follows

Add the following definitions to Section 3.2

3.2 Definitions

freight elevator: an elevator used primarily for carrying freight and on which only the operator and the persons necessary for unloading and loading the freight are permitted to ride.

Travel Energy Rating. The normalized energy use of an elevator calculated in accordance with SS-EN ISO 25745-1:2012.

Add the following acronyms to Section 3.3

TER Travel Energy Rating

10.4.3 Elevators. Elevator systems shall comply with the requirements of this section:

10.4.3.1 Lighting. For the luminaires in each elevator cab, not including signals and displays, the sum of the lumens divided by the sum of the Watts (as described in Section 9.1.4) shall be no less than 35 lumens per Watt.

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10.4.3.2 Ventilation Power Limitation. Cab ventilation fans for elevators without air-conditioning shall not consume over 0.33 W/cfm at maximum speed.

10.4.3.3 Standby Mode. When stopped and unoccupied with doors closed for over 15 minutes, cab interior lighting and ventilation shall be de-energized until required for operation.

10.4.3.4 Travel Energy Rating. *Travel Energy Ratings (TER)* for elevators shall not exceed $0.25 \text{ mW} \cdot \text{hr} / (\text{ft} \cdot \text{pound})$ ($1.8 \text{ mW} \cdot \text{hr} / (\text{kg} \cdot \text{m})$) when calculated as follows:

$$\text{TER} = 1000 \cdot \text{Erc} / (\text{Src} \cdot \text{Rated duty}^2)$$

Where:

Erc = Main Energy Running plus Ancillary Energy Running; measured in accordance with SS-EN ISO 25745-1:2012 (Watt*hours).

Src = one way travel distance of the elevator from its lowest to highest stop; which shall be the travel distance used during the measurement of Main Energy Running in accordance with SS-EN ISO 25745-1:2012 (ft or m)

Rated duty = rated load (pounds or kg)

Exceptions:

1. Buildings with design occupancy of fewer than 20 persons per passenger elevator.
2. Elevators with no more than two stops on adjacent floors.
3. Freight elevators.

10.4.4 Escalators and Moving Walks. Escalators and moving walks shall automatically slow to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.

12. NORMATIVE REFERENCES

International Organization for Standardization

Case postale 56 • CH-1211

Geneva 20

Switzerland

SS-EN ISO 25745-1:2012

Energy Performance of lifts, escalators and moving walks –
Part 1: Energy measurement and verification (ISO 25745-1:2012)



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FOREWORD

This addendum revises the requirements for the use of exhaust air energy recovery as defined in 6.5.6.1

In 2012 addendum BT to the 2010 standard was developed to expand the range for the use of exhaust air energy recovery down to 10% rates ventilation rate. In addition the requirements were adjusted based on the latest performance and economics analysis and energy recovery was removed for climate zones 3B, 3C, 4B, 4C, and 5B for >70% outside air. The justification for the elimination was based on the least restrictive application which was for buildings with ventilation operated less than full time.

Additional studies have been completed for buildings with continuous ventilation operation (assumed to be $\geq 8,000$ hrs) and a second table has been developed to cover buildings with the higher ventilation operation which expands the requirements for the use of energy recovery.

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Addendum cy to 90.1-2010

Revise the Standard as follows (IP and SI Units)

6.5.6 Energy Recovery

6.5.6.1 Exhaust Air Energy Recovery. Each fan system shall have an energy recovery system when the system's supply air flow rate exceeds the value listed in Table 6.5.6.1a and 6.5.6.1b based on the climate zone and percentage of outdoor air flow rate at design conditions. Table 6.5.6.1a shall be used for all ventilation systems that operate less than 8000 hours per year and table 6.5.6.1b shall be used for all ventilation systems that operate 8000 or more hours per year.

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Revise the requirements for the use of energy recovery as shown in table 6.5.6.1 (IP units)

Table 6.5.6.1a Energy Recovery Requirement (ventilation systems operating <8000 hr/yr)

Zone	% Outdoor Air at Full Design Airflow Rate							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Airflow Rate (cfm)							
3B, 3C, 4B, 4C, 5B	NR	NR	NR	NR	NR	NR	NR	NR
1B, 2B, 5C	NR	NR	NR	NR	≥26000	≥12000	≥5000	≥4000
6B	≥28000	≥26500	≥11000	≥5500	≥4500	≥3500	≥2500	≥1500
1A, 2A, 3A, 4A, 5A, 6A	≥26000	≥16000	≥5500	≥4500	≥3500	≥2000	≥1000	≥0
7,8	≥4500	≥4000	≥2500	≥1000	≥0	≥0	≥0	≥0

NR – Not required

Table 6.5.6.1b Energy Recovery Requirement (ventilation systems operating ≥8000 hrs/yr)

Zone	% Outdoor Air at Full Design Airflow Rate							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Airflow Rate (cfm)							
3C	NR	NR	NR	NR	NR	NR	NR	NR
1B, 2B, 3B, 4C, 5C	NR	≥19500	≥9000	≥5000	≥4000	≥3000	≥1500	≥0
1A, 2A, 3A, 4B, 5B	≥2500	≥2000	≥1000	≥500	≥0	≥0	≥0	≥0
4A, 5A, 6A, 6B, 7, 8	≥0	≥0	≥0	≥0	≥0	≥0	≥0	≥0

NR – Not required

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Revise the requirements for the use of energy recovery as shown in table 6.5.6.1 (SI units)

Table 6.5.6.1a Energy Recovery Requirement (ventilation systems operating <8000 hr/yr)

Zone	% Outdoor Air at Full Design Airflow Rate							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Airflow Rate (L/s)							
3B, 3C, 4B, 4C, 5B	NR	NR	NR	NR	NR	NR	NR	NR
1B, 2B, 5C	NR	NR	NR	NR	≥12271	≥5663	≥2360	≥1888
6B	≥13215	≥12507	≥5191	≥2596	≥2124	≥1652	≥1180	≥708
1A, 2A, 3A, 4A, 5A, 6A	≥12271	≥7551	≥2596	≥2124	≥1652	≥944	≥472	≥0
7,8	≥2124	≥1888	≥1180	≥472	≥0	≥0	≥0	≥0

NR – Not required

Table 6.5.6.1b Energy Recovery Requirement (ventilation systems operating ≥8000 hrs/yr)

Zone	% Outdoor Air at Full Design Airflow Rate							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Airflow Rate (L/sec)							
3C	NR	NR	NR	NR	NR	NR	NR	NR
1B, 2B, 3B, 4C, 5C	NR	≥9203	≥4248	≥2360	≥1888	≥1416	≥708	≥0
1A, 2A, 3A, 4B, 5B	≥1180	≥944	≥472	≥236	≥0	≥0	≥0	≥0
4A, 5A, 6A, 6B, 7, 8	≥0	≥0	≥0	≥0	≥0	≥0	≥0	≥0

NR – Not required



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FOREWORD

Section 303 of the Energy Independence and Security Act of 2007 (EISA 2007) increased the federal minimum efficiency standards for residential-sized (“NAECA covered”) boilers. This section increased the minimum AFUE for gas and oil-fired boilers, along with establishing design requirements for certain types of new boilers that are manufactured or imported for use in the United States. All of the efficiency and design requirements took effect for equipment built on or after September 1, 2012.

The revisions to the table and the new footnotes will ensure that ASHRAE 90.1-2013 is consistent with federal law.

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Addendum cz to 90.1-2010

Revise the Standard as follows (IP and SI Units)

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TABLE 6.8.1F Gas- and Oil-Fired Boilers, Minimum Efficiency Requirements

Equipment Type ^a	Subcategory or Rating Condition	Size Category (Input)	Minimum Efficiency ^{b,e}	Minimum Efficiency ^{b,c} as of 3/2/2010 (Date 3 yrs after ASHRAE Board Approval)	Efficiency as of 3/2/2020 (Date 13 yrs after ASHRAE Board Approval)	Test Procedure
Boilers, hot water	Gas-fired	< 300,000 Btu/h ^{f,g}	80% AFUE	80 82% AFUE	80 82% AFUE	10 CFR Part 430
		≥ 300,000 Btu/h and ≤ 2,500,000 Btu/h ^d	75% E_t	80% E _t	80% E _t	10 CFR Part 431
		> 2,500,000 Btu/h ^a	80% E_e	82% E _c	82% E _c	
	Oil-fired ^e	< 300,000 Btu/h ^f	80% AFUE	80 84% AFUE	80 84% AFUE	10 CFR Part 430
		≥ 300,000 Btu/h and ≤ 2,500,000 Btu/h ^d	78% E_t	82% E _t	82% E _t	10 CFR Part 431
		> 2,500,000 Btu/h ^a	83% E_e	84% E _c	84% E _c	
Boilers, steam	Gas-fired	< 300,000 Btu/h ^f	75% AFUE	75 80% AFUE	75 80% AFUE	10 CFR Part 430
	Gas-fired— all, except natural draft	≥ 300,000 Btu/h and < 2,500,000 Btu/h ^d	75% E_t	79% E _t	79% E _t	10 CFR Part 431
		> 2,500,000 Btu/h ^a	80% E_e	79% E _t	79% E _t	
	Gas-fired— natural draft	≥ 300,000 Btu/h and < 2,500,000 Btu/h ^d	75% E_t	77% E _t	79% E _t	
		> 2,500,000 Btu/h ^a	80% E_e	77% E _t	79% E _t	
	Oil-fired ^e	< 300,000 Btu/h	80% AFUE	80 82% AFUE	80 82% AFUE	10 CFR Part 430
		≥ 300,000 Btu/h and ≤ 2,500,000 Btu/h ^d	78% E_t	81% E _t	81% E _t	10 CFR Part 431
		> 2,500,000 Btu/h ^a	83% E_e	81% E _t	81% E _t	

a These requirements apply to *boilers* with rated input of 8,000,000 Btu/h or less that are not *packaged boilers* and to all *packaged boilers*. Minimum efficiency requirements for *boilers* cover all capacities of *packaged boilers*.

b E_c = combustion efficiency (100% less flue losses). See reference document for detailed information.

c E_t = thermal efficiency. See reference document for detailed information.

d Maximum capacity – minimum and maximum ratings as provided for and allowed by the unit's controls.

e Includes oil-fired (residual).

f Boilers shall not be equipped with a constant burning pilot light.

g A boiler not equipped with a tankless domestic water heating coil shall be equipped with an automatic means for adjusting the temperature of the water such that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of the water supplied.



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FOREWORD

This addendum provides two compliance paths for high speed doors within the Mandatory Air Leakage requirements. It also clarifies which test glazed overhead doors are to follow.

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Addendum da to 90.1-2010

Revise the Standard as follows (IP and SI Units)

Revise Section 5.4.3.2 as follows:

5.4.3.2 Fenestration and Doors. Air leakage for *fenestration* and *doors* shall be determined in accordance with AAMA/WDMA/CSA 101/I.S.2/A440, NFRC 400, or ASTM E283 as specified below. Air leakage shall be determined by a laboratory accredited by a nationally recognized accreditation organization, such as the National Fenestration Rating Council, and shall be *labeled* and certified by the *manufacturer*. Air leakage shall not exceed:

- a. 1.0 cfm/ft² (18.3 m³/h x m²) for glazed swinging entrance doors and revolving doors, tested at a pressure of at least 1.57 pounds per square foot (psf) (75 Pa) in accordance with AAMA/WDMA/CSA 101/I.S.2/A440, NFRC 400, or ASTM E283.
- b. 0.06 cfm/ft² (1.1 m³/h x m²) for curtainwall and storefront glazing, tested at a pressure of at least 1.57 pounds per square foot (psf) (75 Pa) or higher in accordance with NFRC 400 or ASTM E283.
- c. 0.3 cfm/ft² for unit *skylights* having condensation weepage openings, when tested at a pressure of at least 1.57 pounds per square foot (psf) in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 or NFRC 200, or 0.5 cfm/ft² when tested at a pressure of at least 6.24 pounds per square foot (psf) in accordance with AAMA/WDMA/CSA 101/I.S.2/A440.
- d. 1.3 cfm/ft² (23.8 m³/h x m²) for nonswinging doors intended for vehicular access and material transportation, with a minimum opening rate of 32 inches per second, tested at a pressure of at least 1.57

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pounds per square foot (psf) (75 Pa) or higher in accordance with ANSI/DASMA 105, NFRC 400, or ASTM E283.

‡ e. 0.4 cfm/ft² (7.32 m³/h x m²) for other nonswinging opaque doors, and upward acting nonswinging glazed doors tested at a pressure of at least 1.57 pounds per square foot (psf) (75 Pa) or higher in accordance with ANSI/DASMA 105, NFRC 400, or ASTM E283.

e f. 0.2 cfm/ft² (3.66 m³/h x m²) for all other products when tested at a pressure of at least 1.57 pounds per square foot (psf) (75 Pa) in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 or NFRC 400, or 0.3 cfm/ft² (5.5 m³/h x m²) when tested at a pressure of at least 6.24 pounds per square foot (psf) (300 Pa) in accordance with AAMA/WDMA/CSA 101/I.S/A440.

Exceptions to 5.4.3.2:

a. Field-fabricated fenestration and doors.

b. *Metal coiling doors* in *semiheated spaces* in climate zones 1 through 6.

c. Products in buildings that comply with a whole building air leakage rate of 0.4 cfm/ft² under a pressure differential of 0.3 in w.g. (1.57 psf)(2 L/s x m² at 75Pa) when tested in accordance with ASTM E 779.



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BSR/ASHRAE/IES Addendum db to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

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FOREWORD

This proposal is being presented to address an error which is in Standard 90.1 Addenda “bb”, contained within Table 5.5-3, under the category “Floors, Steel Joist” and in the cells assigned to the “residential” occupancy.

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Addendum db to 90.1-2010

Revise the Standard as follows (IP Units)

TABLE 5.5-3 Building Envelope Requirements for Climate Zone 3 (A, B, C) (IP)

Opaque Elements		Residential	
		Assembly Maximum	Insulation Min. R-Value
Floors	Steel Joist	U – 0.032 <u>U – 0.038</u>	R – 38 <u>R – 30</u>

Revise the Standard as follows (SI Units)

TABLE 5.5-3 Building Envelope Requirements for Climate Zone 3 (A, B, C) (SI)

Opaque Elements		Residential	
		Assembly Maximum	Insulation Min. R-Value
Floors	Steel Joist	U – 0.183 <u>U – 0.214</u>	R – 6.7 <u>R – 5.3</u>



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FOREWORD

This proposal is intended to correct a possible flaw in previous proposed addenda BC and BY in that there could be some confusion as to what to do when one room within a suite becomes empty. Does the living room becoming empty turn off the lights in the bedroom? Does the fact that the bedroom is still occupied mean that the lights in the living room don't turn off? This proposal is meant to make it obvious that each room is handled individually.

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Addendum dc to 90.1-2010

Modify section 9.4.1.6 c as follows (IP and SI Units)

c. Guest Room Lighting —

- (i) The lighting in guestrooms ~~Guestrooms~~ in hotels, motels, boarding houses or similar buildings shall be automatically controlled such that the lighting and switched receptacles in each enclosed space will shut off within 20 minutes after all occupants have left that space. ~~have one or more control device(s) at the entry door that collectively control all permanently installed luminaires and switched receptacles, except those in the bathroom(s). Suites shall have control(s) meeting these requirements at the entry to each room or at the primary entry to the suite.~~ Exception to 9.4.1.6(c)(i): Enclosed spaces where the lighting and switched receptacles are controlled by captive key systems and bathrooms are exempt.
- (ii) Bathrooms shall have a separate control device installed to automatically turn off the bathroom lighting, ~~except for night lighting not exceeding 5 watts, within 60 30 minutes after all occupants have left the bathroom of the occupant leaving the space.~~ Exception to 9.4.1.6(c)(ii): Night lighting of up to 5 watts per bathroom is exempt.



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FOREWORD

This revision clarifies the exception to re-roofing and roof re-covering.

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Addendum dd to 90.1-2010

Revise the standard as follows (IP and SI Units)

Add the following definitions to Section 3.2

roof covering: the topmost component of the roof assembly intended for weather resistance, fire classification or appearance.

roof re-covering: the process of installing an additional *roof covering* over an existing *roof covering* without removing the existing *roof covering*.

Revise exceptions to 5.1.3:

e. Roof re-covering.

f. Removal and replacement of a *roof covering* ~~membrane~~ where ~~either the roof sheathing or roof insulation is not exposed or, if there is existing roof insulation-,~~ integral to or below the roof deck.

(Re-label exceptions f and g)



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FOREWORD

This proposed addendum revises the design point for waterside economizers when utilized in computer room applications based on Computer Room stakeholder feedback.

Unlike their commercial counterparts, buildings designed primarily to house computer rooms have relatively constant cooling loads throughout the year. Computer rooms typically do not have windows, so with ASHRAE required insulation, these building envelope loads run 1.2 to 1.5 W/sf. ASHRAE recommends a ventilation rate of about 0.08 cfm/sf for computer room facilities, which correlates to an additional 1.2 W/sf on a nominal 92°F db / 76°F wb design day. As such, ventilation and envelope loads are generally an insignificant portion of the overall cooling load compared to contributions of 50 to 250 W/sf or more from the IT equipment. Note that the cooling tower load is reduced during winter economizer operation due to the elimination of compressor heat from the chiller (approximately 20% of the summer heat rejection load). This remains a much higher load level as compared to the typical comfort cooling application which usually experiences a much greater drop-off in load during the winter months.

Due to the psychrometric properties of air, cooling towers selected for computer room waterside economizer applications are usually oversized for the standard summer design duty, which tends to increase tower size, electrical service, and structural mounting costs. This added cost is typically justified by the energy savings of the economizer. The larger cooling tower will also produce further savings in the warmer months by producing colder condenser water and / or the ability to run at a reduced fan speed, saving cooling tower or dry cooler fan energy. For example, a cooling tower selected for an economizer duty of 51°F/43°F/35°F wet bulb can produce 80°F condenser water versus the typical 85°F condenser water temperature at a 78°F summer design wet bulb (10°F range) at full fan horsepower. This will result in chiller energy savings of approximately 10% or more. Conversely, this same cooling tower can produce 85°F condenser water with only 18% of the design tower fan energy.

Similarly, dry coolers used for computer room economizer duty are also oversized due to the high year-round heat load and the need to use aqueous glycol solutions as the heat transfer fluid in many climates. The colder the climate, the higher the percentage of glycol that must be used to prevent coil freezing. Furthermore, thermal performance decreases with increasing percentages of glycol.

Economizer use is not the norm in the computer room industry at this time and feedback from industry stakeholders, including TC09.09, indicates that many designers are concerned with the impact of the economizer requirements that were first introduced in the 2010 edition on system reliability. One major stakeholder concern is that many computer room facilities are only partially loaded for their first few years of operation, which can lead to control issues, especially with the transition between operating modes.

To minimize the impact of these economizer requirements on the industry and allow time for designers to adapt to these energy saving methods, it is proposed that waterside economizers primarily serving computer rooms be designed for the dry bulbs and wet bulbs listed for each climate zone in Table 6.5.1.2.1. These design temperatures were selected to minimize the oversizing of the heat transfer devices yet still attain significant system energy savings. As the industry adapts to these new economization requirements, it is expected that the design temperatures will be increased in future editions of the standard.

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Addendum de to 90.1-2010

Modify the standard as follows (IP Units)

Modify the exception to Section 6.5.1.2.1 as follows:

6.5.1.2.1 Design Capacity. *Water economizer systems shall be capable of cooling supply air by indirect evaporation and providing up to 100% of the expected system cooling load at outdoor air temperatures of 50°F dry bulb/45°F wet bulb and below.*

Exceptions:

- a. *Systems primarily serving computer rooms in which 100% of the expected system cooling load at the 40°F dry bulb/ and the 35°F wet bulb listed in Table 6.5.1.2.1 is met with evaporative water economizers.*
- b. *Systems primarily serving computer rooms ~~with dry cooler water economizers which satisfy in~~ which 100% of the expected system cooling load at ~~35°F~~ the dry bulb listed in Table 6.5.1.2.1 is met with dry cooler water economizers.*
- c. *Systems where dehumidification requirements cannot be met using outdoor air temperatures of 50°F dry bulb/45°F wet bulb and where 100% of the expected system cooling load at 45°F dry bulb/40°F wet bulb is met with evaporative water economizers.*

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Table 6.5.1.2.1 Water Economizer Sizing Dry-Bulb and Wet-Bulb Requirements for Computer Rooms

<u>Zone</u>	<u>Evaporative Water Economizer</u>		<u>Dry Cooler Water Economizer</u>
	<u>Dry-Bulb (°F)</u>	<u>Wet-Bulb (°F)</u>	<u>Dry-Bulb (°F)</u>
<u>1 A</u>	<u>NR</u>		<u>NR</u>
<u>1 B</u>	<u>NR</u>		<u>NR</u>
<u>2 A</u>	<u>40.0</u>	<u>35.0</u>	<u>30.0</u>
<u>2 B</u>	<u>35.0</u>	<u>30.0</u>	<u>30.0</u>
<u>3 A</u>	<u>40.0</u>	<u>35.0</u>	<u>25.0</u>
<u>3 B</u>	<u>30.0</u>	<u>25.0</u>	<u>25.0</u>
<u>3 C</u>	<u>30.0</u>	<u>25.0</u>	<u>30.0</u>
<u>4 A</u>	<u>40.0</u>	<u>35.0</u>	<u>25.0</u>
<u>4 B</u>	<u>30.0</u>	<u>25.0</u>	<u>25.0</u>
<u>4 C</u>	<u>30.0</u>	<u>25.0</u>	<u>25.0</u>
<u>5 A</u>	<u>40.0</u>	<u>35.0</u>	<u>20.0</u>
<u>5 B</u>	<u>30.0</u>	<u>25.0</u>	<u>20.0</u>
<u>5 C</u>	<u>30.0</u>	<u>25.0</u>	<u>25.0</u>
<u>6 A</u>	<u>35.0</u>	<u>30.0</u>	<u>20.0</u>
<u>6 B</u>	<u>30.0</u>	<u>25.0</u>	<u>20.0</u>
<u>7 -</u>	<u>30.0</u>	<u>25.0</u>	<u>20.0</u>
<u>8 -</u>	<u>30.0</u>	<u>25.0</u>	<u>20.0</u>



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FOREWORD

These minimum performance requirements for packaged Computer Room Air Conditioners covered by this Standard are shown in Table 6.8.1k. The table in the current standard is based on ASHRAE Standard 127-2007. ASHRAE has updated Standard 127 to a new Standard 127-2012. AHRI and member companies have agreed to test their equipment under the new standard. This addendum replaces the current 6.8.1k table with a new table based on Standard 127-2012. The test configurations were increased and the performance values updated accordingly.

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Addendum df to 90.1-2010

Modify the standard as follows (IP Units)

Delete the existing Table 6.8.1k and replaced with the following

Table 6.8.1K Air Conditioners and Condensing Units Serving Computers Rooms

			Net Sensible COP ^b				
			Return Air Classification				
			Class 1	Class 2	Class 3	Class 4	
Equipment Type	Net Sensible Cooling Capacity ^a	Configuration	75F/45%	85F/32%	95F/23%	105F/17%	Test Procedure
Air Cooled	<65,000 BTUH	Raised Floor	2.40	2.95	3.35	3.65	ANSI/ ASHRAE 127
		Ducted	2.20	2.75	3.10	3.40	
		Free Blow	2.45	3.00	3.40	3.70	
	≥65,000 and <240,000 BTUH	Raised Floor	2.30	2.85	3.20	3.50	
		Ducted	2.10	2.65	2.95	3.20	
		Free Blow	2.35	2.90	3.25	3.55	
	≥240,000	Raised Floor	2.10	2.50	2.70	3.00	
		Ducted	1.90	2.30	2.50	2.80	
		Free Blow	2.15	2.55	2.75	3.05	
Water Cooled	<65,000 BTUH	Raised Floor	2.85	3.55	4.00	4.50	ANSI/ ASHRAE 127
		Ducted	2.60	3.25	3.70	4.10	
		Free Blow	2.90	3.60	4.10	4.70	

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	<u>>=65,000 and <240,000 BTUH</u>	<u>Raised Floor</u>	<u>2.75</u>	<u>3.45</u>	<u>3.90</u>	<u>4.30</u>	
		<u>Ducted</u>	<u>2.50</u>	<u>3.20</u>	<u>3.65</u>	<u>4.00</u>	
		<u>Free Blow</u>	<u>2.80</u>	<u>3.35</u>	<u>3.90</u>	<u>4.35</u>	
	<u>>=240,000</u>	<u>Raised Floor</u>	<u>2.65</u>	<u>3.10</u>	<u>3.55</u>	<u>3.90</u>	
		<u>Ducted</u>	<u>2.40</u>	<u>2.90</u>	<u>3.30</u>	<u>3.65</u>	
		<u>Free Blow</u>	<u>2.70</u>	<u>3.15</u>	<u>3.60</u>	<u>4.00</u>	
<u>Water Cooled with fluid economizer</u>	<u><65,000 BTUH</u>	<u>Raised Floor</u>	<u>2.80</u>	<u>3.50</u>	<u>3.95</u>	<u>4.40</u>	<u>ANSI/ASHRAE 127</u>
		<u>Ducted</u>	<u>2.55</u>	<u>3.20</u>	<u>3.65</u>	<u>4.00</u>	
		<u>Free Blow</u>	<u>2.85</u>	<u>3.55</u>	<u>4.05</u>	<u>4.60</u>	
	<u>>=65,000 and <240,000 BTUH</u>	<u>Raised Floor</u>	<u>2.70</u>	<u>3.40</u>	<u>3.80</u>	<u>4.20</u>	
		<u>Ducted</u>	<u>2.45</u>	<u>3.15</u>	<u>3.60</u>	<u>3.90</u>	
		<u>Free Blow</u>	<u>2.75</u>	<u>3.30</u>	<u>3.85</u>	<u>4.30</u>	
	<u>>=240,000</u>	<u>Raised Floor</u>	<u>2.60</u>	<u>3.05</u>	<u>3.50</u>	<u>3.85</u>	
		<u>Ducted</u>	<u>2.35</u>	<u>2.85</u>	<u>3.25</u>	<u>3.55</u>	
		<u>Free Blow</u>	<u>2.65</u>	<u>3.10</u>	<u>3.55</u>	<u>3.95</u>	
<u>Glycol Cooled</u>	<u><65,000 BTUH</u>	<u>Raised Floor</u>	<u>2.50</u>	<u>3.00</u>	<u>3.35</u>	<u>3.80</u>	<u>ANSI/ASHRAE 127</u>
		<u>Ducted</u>	<u>2.39</u>	<u>2.70</u>	<u>3.05</u>	<u>3.40</u>	
		<u>Free Blow</u>	<u>2.55</u>	<u>3.05</u>	<u>3.45</u>	<u>3.95</u>	
	<u>>=65,000 and <240,000 BTUH</u>	<u>Raised Floor</u>	<u>2.15</u>	<u>2.70</u>	<u>3.05</u>	<u>3.35</u>	
		<u>Ducted</u>	<u>2.04</u>	<u>2.50</u>	<u>2.85</u>	<u>3.10</u>	
		<u>Free Blow</u>	<u>2.20</u>	<u>2.65</u>	<u>3.05</u>	<u>3.40</u>	
	<u>>=240,000</u>	<u>Raised Floor</u>	<u>2.10</u>	<u>2.45</u>	<u>2.85</u>	<u>3.10</u>	
		<u>Ducted</u>	<u>1.99</u>	<u>2.30</u>	<u>2.60</u>	<u>2.90</u>	
		<u>Free Blow</u>	<u>2.15</u>	<u>2.50</u>	<u>2.90</u>	<u>3.20</u>	
<u>Glycol Cooled with fluid economizer</u>	<u><65,000 BTUH</u>	<u>Raised Floor</u>	<u>2.45</u>	<u>2.95</u>	<u>3.30</u>	<u>3.70</u>	<u>ANSI/ASHRAE 127</u>
		<u>Ducted</u>	<u>2.34</u>	<u>2.65</u>	<u>3.00</u>	<u>3.30</u>	
		<u>Free Blow</u>	<u>2.50</u>	<u>3.00</u>	<u>3.40</u>	<u>3.85</u>	
	<u>>=65,000 and <240,000 BTUH</u>	<u>Raised Floor</u>	<u>2.10</u>	<u>2.65</u>	<u>3.00</u>	<u>3.25</u>	
		<u>Ducted</u>	<u>1.99</u>	<u>2.45</u>	<u>2.75</u>	<u>3.00</u>	
		<u>Free Blow</u>	<u>2.15</u>	<u>2.60</u>	<u>3.00</u>	<u>3.30</u>	
	<u>>=240,000</u>	<u>Raised Floor</u>	<u>2.05</u>	<u>2.40</u>	<u>2.80</u>	<u>3.05</u>	
		<u>Ducted</u>	<u>1.94</u>	<u>2.25</u>	<u>2.55</u>	<u>2.80</u>	
		<u>Free Blow</u>	<u>2.10</u>	<u>2.45</u>	<u>2.85</u>	<u>3.15</u>	

a Net Sensible Cooling Capacity: The Total gross cooling capacity less the latent cooling energy to the air movement system.

b Net Sensible Coefficient of performance (NSenSCOP) a ratio calculated by dividing the Net Sensible Cooling Capacity in watts by the total power input in watts (excluding re-heaters and humidifiers) at conditions defined in ASHRAE Standard 127. The net sensible cooling capacity is the gross sensible cooling capacity minus the energy dissipated into the cooling space by the fan system.

Update the following reference in Section 12

ANSI/ASHRAE Standard 127-2007~~12~~

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FOREWORD

This addendum changes the reference to the ANSI/CRRC Standard from the 2010 version to the 2012 version.

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Addendum dg to 90.1-2010

Modify Section 12 as follows (IP and SI units)

<i>Cool Roof Rating Council 1610 Harrison Street, Oakland, CA 94612</i>	
<i>ANSI/CRRC-1 Standard-2010<u>2012</u></i>	<i>Cool Roof Rating Council- ANSI/CRRC-1 Standard</i>



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FOREWORD

The purpose of this addendum is to prohibit the use of fossil fuels and electricity for humidification above 30% RH and dehumidification to 60% RH, except in special circumstances. Where control is required within the 30-60% region, a deadband is required. Where even tighter control is mandated, the system is exempted.

Where tight dehumidification control is needed at least 75% of the amount of energy used for reheat shall be compensated for by recovered or site solar energy. For systems that dehumidify and reheat, but are not required to maintain conditions that require this, the requirement is increased to 90%.

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Addendum di to 90.1-2010

Modify the Standard as follows (IP units)

6.4.3.7 Humidification and Dehumidification. Humidity control shall prevent the use of fossil fuel or electricity to produce relative humidity above 30% in the warmest zone served by the humidification system and to reduce relative humidity below 60% in the coldest zone served by the dehumidification system. Where a *zone* is served by a system or systems with both humidification and dehumidification capability, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) shall be provided capable of preventing simultaneous operation of humidification and dehumidification equipment

Exceptions:

- a. Zones served by desiccant systems, used with direct evaporative cooling in series
- b. Systems serving zones where specific humidity levels are required, such as museums and hospitals, and approved by the authority having jurisdiction or required by accreditation standards and humidity controls are configured to maintain a deadband of at least 10% relative humidity where no active humidification or dehumidification takes place.
- c. Systems serving zones where humidity levels are required to be maintained with precision of not more than +/-5% RH to comply with applicable codes or accreditation standards or as approved by the authority having jurisdiction.

6.5.2.3 Dehumidification. Where ~~humidistat~~humidity controls are provided, such controls shall prevent reheating, mixing of hot and cold airstreams, or other means of simultaneous heating and cooling of the same airstream.

Exceptions:

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- a. The system is configured to reduce ~~capable of reducing~~ supply air volume to 50% or less of the design airflow rate or to the minimum outdoor air ventilation rate specified in ASHRAE Standard 62.1 or other applicable federal, state, or local code or recognized standard, whichever is larger, before simultaneous heating and cooling takes place.
- b. The individual fan cooling unit has a design cooling capacity of 65,000 ~~80,000~~ Btu/h or less and is capable of unloading to 50% capacity before simultaneous heating and cooling takes place.
- c. The individual mechanical cooling unit has a design cooling capacity of 40,000 Btu/h or less. An individual mechanical cooling unit is a single system composed of a fan or fans and a cooling coil capable of providing mechanical cooling.
- d. Systems serving spaces where specific humidity levels are required to satisfy process needs, such as vivariums, museums, surgical suites, pharmacies, and buildings with refrigerating systems, such as supermarkets, refrigerated warehouses, and ice arenas and the building includes *site-recovered* or *site solar energy* source that provide energy equal to at least 75% of the annual energy for reheating or for providing warm air in mixing systems. ~~(This exception does not apply to *computer rooms*.)~~
- e. At least ~~75~~ 90% of the annual energy for reheating or for providing warm air in mixing systems is provided from a *site-recovered* (including condenser heat) or *site solar energy* source.
- f. Systems where the heat added to the airstream is the result of the use of a desiccant system and 75% of the heat added by the desiccant system is removed by a heat exchanger, either before or after the desiccant system with energy recovery.

Modify the Standard as follows (SI units)

6.4.3.7 Humidification and Dehumidification. Humidity control shall prevent the use of fossil fuel or electricity to produce relative humidity above 30% in the warmest zone served by the humidification system and to reduce relative humidity below 60% in the coldest zone served by the dehumidification system. Where a *zone* is served by a system or systems with both humidification and dehumidification capability, means (such as limit switches, mechanical stops, or, for DDC systems, software programming) shall be provided capable of preventing simultaneous operation of humidification and dehumidification equipment

Exceptions:

- a. Zones served by desiccant systems, used with direct evaporative cooling in series
- b. Systems serving zones where specific humidity levels are required, such as museums and hospitals, and approved by the *authority having jurisdiction* or required by accreditation standards and humidity controls are configured to maintain a deadband of at least 10% relative humidity where no active humidification or dehumidification takes place.
- c. Systems serving zones where humidity levels are required to be maintained with precision of not more than +/-5% RH to comply with applicable codes or accreditation standards or as approved by the *authority having jurisdiction*.

6.5.2.3 Dehumidification. Where ~~humidistat~~ humidity controls are provided, such controls shall prevent reheating, mixing of hot and cold airstreams, or other means of simultaneous heating and cooling of the same airstream.

Exceptions:

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- a. The system is configured to reduce ~~capable of reducing~~ supply air volume to 50% or less of the design airflow rate or to the minimum outdoor air ventilation rate specified in ASHRAE Standard 62.1 or other applicable federal, state, or local code or recognized standard, whichever is larger, before simultaneous heating and cooling takes place.
- b. The individual fan cooling unit has a design cooling capacity of 19 ~~23~~ kW or less and is capable of unloading to 50% capacity before simultaneous heating and cooling takes place.
- c. The individual mechanical cooling unit has a design cooling capacity of 40,000 Btu/h or less. An individual mechanical cooling unit is a single system composed of a fan or fans and a cooling coil capable of providing mechanical cooling.
- d. Systems serving spaces where specific humidity levels are required to satisfy process needs, such as vivariums, museums, surgical suites, pharmacies, and buildings with refrigerating systems, such as supermarkets, refrigerated warehouses, and ice arenas and the building includes *site-recovered* or *site solar energy* source that provide energy equal to at least 75% of the annual energy for reheating or for providing warm air in mixing systems. ~~(This exception does not apply to *computer rooms*.)~~
- e. At least ~~75~~ 90% of the annual energy for reheating or for providing warm air in mixing systems is provided from a *site-recovered* (including condenser heat) or *site solar energy* source.
- f. Systems where the heat added to the airstream is the result of the use of a desiccant system and 75% of the heat added by the desiccant system is removed by a heat exchanger, either before or after the desiccant system with energy recovery.



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FOREWORD

This addendum offers an increase in electrical/mechanical rooms in cases where the current proposed allowance of 0.42 W/sqft (addendum “by”) is not considered sufficient to provide needed vertical and horizontal illuminance given the varied configuration of electrical/mechanical rooms. The additional allowance would have to have separate control and could not be traded off to other spaces in the building.

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Addendum dj to 90.1-2010

Modify the Standard as follows (IP units)

Revise Table 9.6.1 as follows:

Common Space Types	LPD Watts/sq.ft.	RCR Threshold
.....		
Electrical/Mechanical Room ⁷	0.42	6
.....		

.....

7 - An additional 0.53 watts/sq.ft. shall be allowed, provided that the additional lighting is controlled separately from the base allowance of 0.42 watts/sq.ft. The additional 0.53 watts/sq.ft. allowance shall not be used for any other purpose.



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FOREWORD

this addendum eliminates the exemption for wattage used in spaces where lighting is specifically designed for those with age related or other medical condition related eye issues where special lighting or light levels might be needed. Newly developed addenda “bh” and “cr” now provide specific LPD values to address these issues and accommodate the needed lighting for spaces such as these and the exception is no longer applicable. The 5 Watt per face limit for exit signs is now a federal product requirements and therefore no longer needed in the Standard

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Addendum dk to 90.1-2010

Modify the Standard as follows (IP and SI units)

Modify 9.2.2.3 as follows and delete 9.4.2 (renumber following sections):

9.2.2.3 Interior Lighting Power. The *interior lighting power allowance* for a building or a separately metered or permitted portion of a *building* shall be determined by either the *Building Area Method* described in Section 9.5 or the *Spaceby-Space Method* described in Section 9.6. Trade-offs of *interior lighting power allowance* among portions of the *building* for which a different method of calculation has been used are not permitted. The *installed interior lighting power* identified in accordance with Section 9.1.3 shall not exceed the *interior lighting power allowance* developed in accordance with Section 9.5 or 9.6.

Exceptions: The following *lighting equipment* and applications shall not be considered when determining the *interior lighting power allowance* developed in accordance with Section 9.5 or 9.6, nor shall the wattage for such lighting be included in the *installed interior lighting power* identified in accordance with Section 9.1.3. However, any such lighting shall not be exempt unless it is an addition to general lighting and is controlled by an independent *control device*.

- a. Display or accent lighting that is an essential element for the function performed in galleries, museums, and monuments.
- b. Lighting that is integral to *equipment* or instrumentation and is installed by its *manufacturer*.
- c. Lighting specifically designed for use only during medical or dental procedures and lighting integral to medical *equipment*.
- d. Lighting integral to both open and glass-enclosed refrigerator and freezer cases.
- e. Lighting integral to food warming and food preparation *equipment*.
- f. Lighting for plant growth or maintenance.
- g. ~~Lighting in spaces specifically designed for use by occupants with special lighting needs including visual impairment and other medical and age-related issues.~~
- h. Lighting in *retail* display windows, provided the display area is enclosed by ceiling-height partitions.

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- i. Lighting in interior spaces that have been specifically designated as a registered interior *historic* landmark.
- j. Lighting that is an integral part of advertising or directional signage.
- k. Exit signs.
- l. Lighting that is for sale or lighting educational demonstration systems.
- m. Lighting for theatrical purposes, including performance, stage, and film and video production.
- n. Lighting for television broadcasting in sporting activity areas.
- o. Casino gaming areas.
- p. Furniture-mounted supplemental task lighting that is controlled by *automatic* shutoff and complies with Section 9.4.1.6(d).
- q. Mirror lighting in dressing rooms and accent lighting in religious pulpit and choir areas.
- r. Parking garage transition lighting: Lighting for covered vehicle entrances and exits from buildings and parking structures, that comply with section 9.4.1.3 a and c. Each transition zone shall not exceed a depth of 66 ft inside the structure and a width of 50 ft.

~~9.4.2 Exit Signs.~~ Internally illuminated exit signs shall not exceed 5 W per face.



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FOREWORD

This addendum corrects the calculation of hotel and motel type guestroom spaces based on an error in applying the room geometry of the space type and combines them into a single value since the calculated value are determined to be the same for code purposes.

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Addendum dl to 90.1-2010

Modify the Standard as follows (IP and SI units)

Modify the Guestroom space type LPD in table 9.6.1 (and associated LPD values in Appendix G, Table G.2.8 with 2004 based adjustments) as follows:

**TABLE 9.6.1 Lighting Power Densities Using the
Space-by-Space Method**

Common Space Types ^a	LPD, W/ft ²	RCR Threshold		
.....				
Hotel Guest Rooms	1.11	6	1.11	6
Highway Lodging Guest Rooms	0.75	6	0.75	6
Guest Room	0.91	6		



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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

BSR/ASHRAE/IES Addendum dn to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
First Public Review Draft

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This proposed addendum revises the requirements for the use of hot gas bypass as defined in section 6.5.9 and table 6.5.9

The current requirements for hot gas bypass are very high with 50% allowed for systems with a capacity less than or equal to 240,000 Btu/hr (20 tons) and 25% for units with a capacity greater than 240,000 Btu/hr

Addendum AQ added requirements for minimum stages of capacity with a minimum of 3 stages for 65,000 Btu/hr to 240,000 Btu/hr and a requirement of 35% as the minimum stage of capacity and for greater than 240,000 Btu/hr to have 4 stages and a minimum stage capacity of 25%

Based on this there no need to have such large capacity allowances for hot gas bypass and the values should be reduced which is the purpose of this addendum

For the 65,000 Btu/hr to 240,000 Btu/hr the addendum reduces the hot gas bypass capacity to 15% which is a little less than the minimum stage of 35%. For the greater than 240,000 Btu/hr the minimum stage of capacity is 25% so it is reasonable to reduce the hot gas bypass limit to 10%.

In addition the addendum also eliminates the use of hot gas bypass on DX constant volume systems where modern day controls can effectively cycle compressors to maintain capacity without the use of inefficient hot gas bypass.

Below 65,000 Btu/hr most units are constant volume except there are some new units which are being used for single zone VAV. These units have multiple stages of capacity similar to the 65,000 to 240,000 Btu/hr or have variable speed capacity so the requirement for 35% can be extended down to the smallest unit.

Note Addendum AQ makes additional modifications to the hot gas requirements. This addendum has been approved for publication. The first portion shows what is changing in just this addendum relative to the most recent version of the standard approved for publication. The second portion shows all changes to this section from 90.1-2010 if AQ and this addendum are published.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum dn to 90.1-2010

Modify the Standard as follows (IP and SI Units)

6.5.9 Hot Gas Bypass Limitation. Cooling systems shall not use hot gas bypass or other evaporator pressure control systems unless the system is designed with multiple steps of unloading or continuous capacity modulation. The capacity of the hot gas bypass shall be limited as indicated in Table 6.5.9 and as limited by 6.5.1.3 for VAV units and single zone VAV units. Hot gas bypass shall not be used on constant volume units.

Table 6.5.9 Hot Gas Bypass Limitation

Rated Capacity	Maximum Hot Gas Bypass (% of Total Capacity)
≤240,000 Btu/hr	50% <u>15%</u>
>240,000 Btu/hr	25% <u>10%</u>

This is how the section will look if this addendum and addendum AQ are published (IP and SI Units)

6.5.9 Hot Gas Bypass Limitation. Cooling systems shall not use hot gas bypass or other evaporator pressure control systems unless the system is designed with multiple steps of unloading or continuous capacity modulation. The capacity of the hot gas bypass shall be limited as indicated in Table 6.5.9 and as limited by 6.5.1.3 for VAV units and single zone VAV units. Hot gas bypass shall not be used on constant volume units.

~~Exception: Unitary packaged systems with cooling capacities not greater than 90,000 Btu/h.~~

Table 6.5.9 Hot Gas Bypass Limitation

Rated Capacity	Maximum Hot Gas Bypass (% of Total Capacity)
≤240,000 Btu/hr	50% <u>15%</u>
>240,000 Btu/hr	25% <u>10%</u>



**BSR/ASHRAE/IES Addendum do
to ANSI/ASHRAE/IES Standard 90.1-2010**

Public Review Draft
Proposed Addendum do to Standard
90.1-2010, *Energy Standard for*
Buildings Except Low-Rise
Residential Buildings

First Public Review (March 2013)
(Draft shows Proposed Changes to Current Standard)

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BSR/ASHRAE/IES Addendum do to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*
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FOREWORD

This proposal is updating referenced standards in various provisions covering mechanical systems in 90.1-2010.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striking through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum do to 90.1-2010

Modify the Standard as follows (IP and SI units)

12. NORMATIVE REFERENCES

Reference	Title
Air Conditioning, Heating and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201	
AHRI 550/590-2011 <u>with Addendum 1</u>	Water-Chilling Packages Using the Vapor Compression Cycle
AHRI 1160-2008 9	Performance Rating of Heat Pump Pool Heaters
Air Movement and Control Association International, 30 West University Drive, Arlington Heights, IL 60004-1806	
<u>ANSI/AMCA 500-D-07</u> 12	Laboratory Methods of Testing Dampers for Rating
American National Standards Institute, 11 West 42nd Street, New York, NY 10036	
ANSI Z21.10.3-2004 11	Gas Water Heater, Volume 3, Storage, with Input Ratings above 75,000 Btu/h, Circulating and Instantaneous Water Heaters
ANSI Z21.47-2006 12	Gas-Fired Central Furnaces (Except Direct Vent and Separated Combustion System Furnaces)
American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle, NE, Atlanta, GA 30329	
ANSI/ASHRAE/IESNA Standard 90.1-200 7 <u>10</u>	Energy Standard for Buildings Except Low-Rise Residential Buildings
ANSI/ASHRAE Standard 62.1-200 7 <u>10</u>	Ventilation for Acceptable Indoor Air Quality
ANSI/ASHRAE 146-2006	Method of Testing for Rating Pool Heaters

BSR/ASHRAE/IES Addendum do to ANSI/ASHRAE/IES Standard 90.1-2010, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

First Public Review Draft

**National Electrical Manufacturers
Association, 1300 N. 17th Street, Suite 1847,
Rosslyn, VA 22209**

ANSI/NEMA MG 1-2006~~11~~

Motors and Generators

**National Fire Protection Association,
1 Battery March Park, P.O. Box 9101, Quincy, MA 02269-9101**

NFPA 70 Article 708-2008~~11~~

Critical Operations Power Systems (COPS)

NFPA 96-94~~11~~

Ventilation Control and Fire Protection of Commercial
Cooking Operations

**Underwriters Laboratories, Inc.,
333 Pfingsten Rd., Northbrook, IL 60062**

UL 181B-2005~~6~~

Closure Systems for Use with Flexible Air Ducts and Air
Connectors

UL 731-06~~12~~

UL Standard for Safety—Oil-Fired Unit Heaters

ASME B16.40-2008
(Revision of ASME B16.40-2002)

Proposed Revision of:

2008

20XX

Manually Operated Thermoplastic Gas Shutoffs and Valves In Gas Distribution Systems

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Draft 3/08/13

Two

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**

Three Park Avenue • New York, NY 10016

ASME B16.40-2008-20XX

Table 1 Duration of Test

Nominal Valve Size	Minimum Time Duration, sec
2 and smaller	15
Over 2 to 6	30
Over 6	60

(c) Leak test fluid shall be air or other gas. During leakage testing, there shall be no visible leakage (breaking away or buildup of bubbles) as measured by the immersion or leak detection solution methods. If immersion is used, the depth from the water surface shall be no more than 12 in. (300 mm). Other means of leak detection may be used, provided they can be shown to be equivalent in leak detection sensitivity.

6.2 Production Testing

6.2.1 Shell Test. Each valve shall be tested at 4 psi \pm 2 psi (0.28 bar \pm 0.14 bar) and at a minimum of 1.5 times the design pressure. The test pressure shall be applied to all pressure-containing areas of the valve (including stem seals and valve ends). This may require that the valve be in the partially open position. The shell test shall be conducted at a temperature of 73°F \pm 15°F (23°C \pm 8°C). The test fixturing shall not restrain the valve against any mode of failure or leakage. The minimum duration of each of the two shell tests shall be as shown in Table 1.

6.2.2 Seat Test. Each valve shall be seat closure tested at 4 psi \pm 2 psi (0.28 bar \pm 0.14 bar) and at a minimum of 1.5 times the valve design pressure. These pressures shall be applied successively on each side of the valve seat(s) to check the valve-sealing performance in both directions. The seat test shall be conducted at a temperature of 73°F \pm 15°F (23°C \pm 8°C). The seat test's fixturing shall not restrain the valve against any mode of failure or leakage. The minimum duration of each portion of the test shall be as shown in Table 1.

6.3 Qualification Testing

6.3.1 Operational Test. It shall be demonstrated that each nominal size of each basic valve design is capable of successfully passing the seat leakage tests of para. 6.2.2, after having completed ten fully opened/closed cycles at 73°F \pm 15°F (23°C \pm 8°C). The valve shall be pressurized with air or other gas to the design pressure at one port with the other port open to atmosphere before opening on each cycle. At the start of each cycle, the operating torque shall be measured and not exceed those in Table 2 for -20°F (-29°C).

6.3.2 Temperature Resistance. It shall be demonstrated that each nominal size of each basic valve design is capable of being operated at temperatures of -20°F

\pm 5°F (-29°C \pm 3°C) and 140°F \pm 5°F (60°C \pm 3°C) without visible leakage to atmosphere and without affecting the internal seat-sealing performance of the valve. The method of test is as follows. A closed valve shall be cooled to a temperature of -20°F \pm 5°F (-29°C \pm 3°C) and held there for an 18-hr minimum. The valve shall then be pressurized with air or gas to a differential pressure across the seat equal to the valve design pressure.

The valve shall then be opened against the applied-differential pressure, using a torque less than or equal to that of Table 2 at the -20°F (-29°C) values and then closed (no differential pressure across the seat required). The valve shall then be tested to meet the requirements of para. 6.2 while at -20°F (-29°C), except nonfreezing leak-detection agents shall be used. The valve shall then be heated to a temperature of 140°F \pm 5°F (60°C \pm 3°C) and held there for an 18-hr minimum. The closed valve shall then be pressurized with air or other gas to a differential pressure across the seat equal to the valve's design pressure at 140°F (60°C). The valve shall then be opened against the applied-differential pressure using a torque less than or equal to that of Table 2 [140°F (60°C)] values and then closed (no differential pressure across the seat required). The valve shall then be tested to and meet the requirements of para. 6.2, while at 140°F (60°C).

6.3.3 Sustained-Pressure Test. Each basic valve design shall be subjected to the sustained-pressure tests described herein to evaluate the long-term pressure integrity of the valve shell and closure elements. All valves shall be in the open position for the Pressure-Boundary Test [see para. 6.3.3(a)] and in the closed position for the Closure Verification Test [see para. 6.3.3(b)].

For both PE and PA-11, Table 3 offers two choices of pressures and duration times for the sustained pressure test. The valve manufacturer may choose to test for 1,000 hr at the lower listed pressures, depending on valve DR, or for 170 hr at the higher listed pressures. Either choice is valid. The valve manufacturer is not required to perform both tests.

The valves shall not fail, as defined in ASTM D 1598, when subjected to the sustained pressure test.

(a) *Pressure-Boundary Tests.* Six samples of each basic valve design shall be connected at both ends to thermoplastic pipe of appropriate wall thickness of a length of at least five times its outside diameter or 20 in. (510 mm), whichever is less. These assemblies shall be subjected to a sustained-pressure test [test] as chosen from the sustained test pressures and minimum durations as listed in Table 3. The DRv for the valve shall be used in determining the test pressure. Failure of two of the six samples tested shall constitute failure in the test. Failure of one of the six samples tested is cause for a retest of six additional samples. Failure of one of the six samples in retest shall constitute failure in the test. Failure of a test sample shall be as defined in ASTM D 1598.

(b) *Valve Closure Test.* ~~One of each nominal valve size and type shall be tested in the closed position. One~~

One of each variation in design or material of the closure element and/or seat seals of each nominal valve size shall be tested in the closed position.

ASME B16.40-2008 **20XX****Table 2 Maximum Operating Torque Values**

Nominal Valve Size [Note (1)]	Maximum Operating Torque at 140°F (38°C)		Maximum Operating Torque at -20°F (-29°C)	
	lbf-in.	N-m	lbf-in.	N-m
1/2	130	15	390	45
3/4	160	18	480	54
1	300	34	600	68
1 1/4	400	45	800	90
1 1/2	500	56	1,000	112
2	600	68	1,200	136
3	900	102	1,350	153
4	1,200	136	1,800	204
5	1,350	153	2,025	229
6	1,500	169	2,250	253
8	2,600	293	3,900	440
10	4,000	451	6,000	677
12	6,000	677	9,000	1016

NOTE:

- (1) For valves having different sized inlets and outlets, the smaller size shall determine the maximum operating torque.

PE 2708, PE 4710

Table 3 Sustained Test Pressures and Minimum Durations

DR	PE 2406, PE 3408				PA-11			
	176°F (80°C), 1,000 hr		176°F (80°C), 170 hr		73°F (23°C), 1,000 hr		176°F (80°C), 170 hr	
	psig	bar	psig	bar	psig	bar	psig	bar
6	232	16.0	268	18.5	1,120	77.2	580	40.0
9.3	140	9.6	161	11.1	675	46.5	349	24.1
10	129	8.9	149	10.3	622	42.9	322	22.2
11	116	8.0	134	9.2	560	38.6	290	20.0
13.5	93	6.4	107	7.4	448	30.9	232	16.0
17	73	5.0	84	5.8	350	24.1	181	12.5
21	58	4.0	67	4.6	280	19.3	145	10.0
26	46	3.2	54	3.7	224	15.4	116	8.0

GENERAL NOTES:

- (a) PE 170 hr fiber stress, $S = 670$ psi (4.5 MPa)
 (b) PE 1,000 hr fiber stress, $S = 580$ psi (4.0 MPa)
 (c) PA-11 170 hr fiber stress, $S = 1,450$ psi (10.0 MPa)
 (d) PA-11 1,000 hr fiber stress, $S = 2,800$ psi (19.3 MPa)
 (e) $P, \text{psig} = 2 \times S / (\text{DR}-1)$
 (f) Table 3 has two options for each material, and the valve manufacturer may choose to perform long-term tests at the pressure-temperature conditions specified for 1,000 hr or alternative pressure-temperature conditions for 170 hr.

port shall be pressurized to 1.1 times the valve design pressure and the opposite port open to atmosphere. The pressure shall be maintained for a minimum of 170 hr at 176°F (80°C) or for 1,000 hr at 100°F (38°C). There shall be no evidence of leakage (breaking away of bubbles) past the closure element for the duration of the test.

At the conclusion of this test, the valve must be operable at both 0 psi (0 bar) and with a differential pressure equal to its design pressure. The valve must operate

with torque less than that shown in Table 2, 100°F (38°C) values, and there must be no leakage through a closure part.

6.3.4 Flow Capacity. The shape, size, and configuration of the valve when in the fully opened position shall be designed to provide flow- and head-loss coefficients specified in Table 4. A valve of each NVS and type shall be tested to verify the coefficient when installed in a

ASME B16.40-2008 **20XX**

MANDATORY APPENDIX I

VALVE DESIGN PRESSURE

The valve design pressure, p , for the various materials and DR equivalents is to be calculated as follows:

$$p = 2SF/(DRv - 1) \text{ [psi (bar)]}$$

where

- DRv = valve's dimensional ratio (DR) equivalent
- F = a service (design) derating factor (see example below)
- S = Hydrostatic Design Basis (HDB) at the maximum expected application use temperature, as listed by the PPI Hydrostatic Stress Board

and as published in PPI TR4. Methods of determining HDBs are described in ASTM D 2837.

2708

EXAMPLE: If the material is PE ~~2406~~, the expected maximum use temperature is 73°F (23°C), and the valve's DR equivalent is 11; from the PPI TR 4, the material's HDB, S , at 73°F (23°C) is 1,250 psi (8.6 MPa). (The design factor 0.32, F , used for this example is taken from 49 CFR, Part 192.121.) Then

$$p = 2 \times 1,250 \times 0.32 / (11 - 1) = 80 \text{ psig}$$

NOTE: 80 psig is equivalent to 5.5 bar.

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Section numbers are different in the various standards therefore, changes will be made to corresponding sections within each standard.

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8.4 Analytical descriptions

8.4.1 pH, TSS, BOD₅, and CBOD₅

The pH, TSS, and BOD₅ of the collected influent and the pH, TSS and CBOD₅ of the collected effluent composite samples shall be determined with the appropriate methods cited in *Standard Methods* for each listed parameter (note: Std. Methods requires pH and temperature to be sampled as grab samples). Grab samples shall be collected during the morning dosing period for gravity flow systems and during a time of discharge for systems that are pump discharged.

Reason: This addresses the issue paper 2011-5 as approved at 2011 JC meeting.

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9 Final report

A final report shall be prepared that presents the following:

- all data collected in accordance with the testing and evaluations specified within this Standard;
- calculation of the pounds BOD₅ loaded during the test and the pounds removed;
- any adjustments made to the alkalinity of the influent wastewater;
- copy of the current edition of the Owner's Manual; and
- process description and detailed dimensioned drawings of the tested system.

A supplemental report shall be prepared for any system(s) approved under the performance classification in 1.4, including process description(s) and dimensioned drawing(s).

Reason: This addresses a comment received on 40i20r1 regarding reporting of adjustments for alkalinity.

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BSR/UL 153, Standard for Safety for Portable Electric Luminaires

1. Revision to supply cord splices for clamp-on units

79.1.1 The power supply cord for an incandescent clamp-on unit shall be rated 105°C (221°F) and secured directly to the lampholder minimum.

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BSR/UL 181, Standard for Safety for Factory-Made Air Ducts & Air Connectors**11. Exemption of full instructions****PROPOSAL**

26.1 Installation instructions shall be provided with air ducts and air connectors. Instructions shall be illustrated and shall include directions and information for attaining intended installation of the product. Instructions for making joints shall be included on the air ducts and air connectors or with each package of materials. Instructions for the fabrication of air ducts and air connectors furnished in the form of boards shall be included with each package of board material. (See 25.3.)

Exception: When product or product packaging includes reference to a valid internet address that contains published standardized installation instructions that are available free for download and printing, these instructions are not required to be provided. ~~When product packaging refers to published standardized installation instructions that are available free from the public domain, these instructions are not required to be provided.~~

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BSR/UL 365, Standard for Safety for Police Station Connected Burglar Alarm Units and Systems

1. Revision of minimum wire size requirements for field wiring terminals and modification of the requirements for field wiring leads

12.2.1.2 A field wiring terminal shall comply with:

- a) 12.2.2.1 - 12.2.2.5;
- b) The field wiring requirements in the Standard for Electrical Quick-Connect Terminals, UL 310;
- c) The Standard for Wire Connectors and Soldering Lugs for Use With Copper Conductors, UL 486A-486B;
- d) The Standard for Equipment Wiring Terminals for Use With Aluminum and/or Copper Conductors, UL 486E; or
- e) The field wiring requirements (Code 2) in the Standard for Terminal Blocks, UL 1059, rated for field-wiring (FW) Code 2 applications and also suitable for the voltage, current, wire range, and wire type of the intended application.

The current-carrying parts shall be silver, copper, a copper alloy, or a similar nonferrous conductive material. Securing screws and the like may be plated steel. Equipment provided with quick-connect terminals intended for field termination of electrical conductors to the equipment and complying with the Standard for Electrical Quick-Connect Terminal, UL 310, shall be provided with strain relief, and the installation instructions shall include instructions for effecting the strain relief and include reference to the specific connectors to be used.

12.2.2.2 A wire binding screw intended for connection to the power supply (line voltage) source used at a wiring terminal shall not be smaller than No. 40 8 (4.8 4.2 mm diameter). The screw may be of plated steel. Plated screws are not prohibited.

Exception: A No. 8 6 (4.2 3.5 mm diameter) screw may be used for the connection of one No. 14 AWG (2.1 mm²) or smaller conductor and a No. 6 4 (3.5 2.8 mm diameter) screw may be used for the connection of a No. 16 19 AWG (1.3 0.65 mm²) or smaller conductor.

12.2.2.3 For connection of other than power supply (line voltage) circuits using No. 10 AWG (5.3 mm²) and smaller wires, a wire binding screw shall not be smaller than No. 8 (4.2 mm diameter).

Exception: A No. 6 (3.5 mm diameter) screw may be employed for the connection of one No. 14 AWG (2.1 mm²) or smaller conductor and a No. 4 (2.8 mm diameter) screw may be used for the connection of one No. 19 AWG (0.65 mm²) or smaller conductor.

12.2.2.5 ~~If~~ When two or more conductors are intended to be connected by wrapping under the same screw, a nonferrous intervening metal washer shall be employed for each additional conductor. A separator washer is not required if two conductors are separated and intended to be secured under a common clamping plate. ~~If~~ When the wires protrude above terminal barriers, the nonferrous separator shall include means, such as upturned tabs or sides, to retain the wire.

12.2.3 Qualified application

12.2.3.1 Any of the following terminal configurations may be employed for connection of field wiring when they comply with all of the requirements in 12.2.3.2.

- a) Telephone Type Terminals - Nonferrous terminal plates using a narrow V-shaped slot for securing of a conductor in a special post design. Requires special tool for wire connection.
- b) Solderless Wrapped Terminals - Solderless wrapped nonferrous terminals which require a special tool and terminal post design.
- c) Quick-Connect Terminals - Nonferrous quick-connect (push type) terminals consisting of male posts permanently secured to the device and provided with compatible female connectors for connection to field wiring. These ~~Requires~~ a special tool for crimping of field wires. Mating terminals shall be shipped with the product with instructions for their installation.
- d) Push-In Terminals - Nonferrous (screwless) push-in terminals of the type used on some switches and receptacles wherein solid conductors may be pushed into slots containing spring-type remaining contacts. The leads can be removed by means of a tool inserted to relieve the spring tension on the conductor. Push-in terminals are not acceptable for use with aluminum conductors. The marking adjacent to the terminal shall indicate that copper conductors only are to be used.
- e) Solder Terminals - Conventional nonferrous solder terminals.
- f) Other Terminals - Other terminal connections may be employed if found to be equivalent to (a) - (e) and limited to the same restrictions.

12.2.3.2 Any of the terminal configurations listed in 12.2.3.1 may be employed for connection of field wiring when there is compliance with all of the following:

- a) If a special tool is required for connection, its use shall be indicated on the installation wiring diagram and the name of its manufacturer and its model number or equivalent shall also be indicated, along with information as to where the tool may be obtained.

- b) The range of wire sizes shall be indicated on the installation wiring diagram. The minimum permissible wire size shall not be smaller than ~~No. 22~~ 26 AWG (~~0.32~~ 0.13 mm²).
- c) The wire size to be employed shall have the current-carrying capacity for the circuit application.
- d) The terminal configuration shall comply with the requirements in the Special Terminal Assemblies Tests, Section 51.

Exception: Terminals complying with the requirements in any of the standards specified in 12.2.1.2 (b) - (e) are not required to be subjected to the Special Terminal Assemblies Tests, Section 51.

12.3 Field wiring leads

12.3.1 ~~If leads are provided in lieu of wiring terminals, they~~ Leads provided for splice connections shall not be less than 6 inches (152 mm) long, and shall not be smaller than ~~No. 22~~ AWG (0.32 mm²).

Exception No. 1: A lead may be less than 6 inches long if it is evident that the use of a longer lead may result in damage to the lead insulation or product, or result in a risk of fire, electric shock, or injury to persons, or is not required for the intended operation of the product.

Exception No. 2: ~~Solid~~ Copper leads as small as ~~No. 26~~ AWG (0.13 mm²) may be used if:

- a) The current does not exceed 1 ampere for lengths up to 2 feet (61 cm) and the current does not exceed 0.4 ampere for lengths up to 10 feet (3.05 m),*
- b) There are two or more conductors and they are covered by a common jacket or the equivalent,*
- c) The assembled conductors comply with the requirement of 48.2.1 for strain relief, and*
- d) The installation instructions indicate that the lead shall not be spliced to a conductor larger than ~~No. 18~~ AWG (0.82 mm²).*

12.3.2 Leads intended for connection of a line voltage source shall not be smaller than ~~No. 18~~ AWG (0.82 mm²).

2. Revisions to attack and tamper resistant alarm sounding device requirements

1.2 As covered by these requirements, a police station connected alarm system consists of protective circuits and devices, connected through control apparatus to an enclosed tamper-protected a sounding device mounted on an outside or inside wall of the building in which the protected property is situated, and a constantly-manned police department (see 1.8 and 52.1). Intrusion into or disturbance of the units or wiring causes the sounding device to be actuated and a signal to be transmitted to the police department. The sounding device and signal to the police department continue to operate until it is stopped by using the proper control key, by exhaustion of the power supply, or by action of an automatic timing element that is preset for a definite operating period. These systems usually operate within the limits of Class 2 remote control and signal circuits as defined by Article 725 of the National Electrical Code, NFPA 70.

76 Attack Test

76.1 The requirements described in this section are optional for alarm sounding devices. When provided with attack resistance the alarm sounding device shall operate as described within this section. The tools used in the attack tests of 78.1 and 81.1 are to include hammers, chisels, adjustable wrenches, pry bars, punches, and screwdrivers. The hammers are not to exceed 3 pounds-mass (1.36 kg) in head weight, and no tool is to exceed 18 inches (45.7 mm) in length.

76.1.1 The tools used in the attack tests of 78.1.1 and 81.1 are to include hammers, chisels, adjustable wrenches, pry bars, punches, and screwdrivers. The hammers are not to exceed 3 pounds-mass (1.36 kg) in head weight, and no tool is to exceed 18 inches (45.7 mm) in length.

78 Tamper Protection

78.1 The requirements described in 78.1.1 and 78.2 are optional for alarm sounding devices. When provided with tamper protection the alarm sounding device shall operate as described within this section. The alarm housing shall be at least equal in mechanical strength and electrical protection to a 0.123 inch (3.12 mm) sheet steel enclosure with an electrically connected lining completely covering the interior of the housing. The housing shall resist for a period of 5 minutes all attempts to silence the alarm by use of the tools specified in 76.1. See Sections 110-122.

78.1.1 The alarm housing shall be at least equal in mechanical strength and electrical protection to a 0.123 inch (3.12 mm) sheet steel enclosure with an electrically connected lining completely covering the interior of the housing. The housing shall resist for a period of 5 minutes all attempts to silence the alarm by use of the tools specified in 76.1.1. See Sections 110 - 122.

BSR/UL 486E, Standard for Safety for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors

1. Test Conductor Material – Aluminum

Table 10 - Conductor materials

(Clause 9.1.5.1)

		AWG or kcmil (mm ²)	Test and control conductors shall be as follows:
	Solid	12 (3.31) and larger	Aluminum wire stock for use as an electrical conductor
	Stranded ^a	12 - 3 (3.31 - 26.7)	Concentric or compressed Class B, aluminum designation 1350H-19, 1350H-16, or 1350H-26, and having an iron content of 0.4 percent maximum <u>AA-1350 conductors, Class B or SIW, with compact, compressed or concentric stranding</u>
Aluminum		2 AWG - 1 000 (33.6 - 507)	i) Compact stranded Class B, aluminum designation 1350H-19, and having an iron content of 0.4 percent maximum, or
			ii) Compressed Class B, aluminum designation 1350H-19, 1350H-16, or 1350H-26, and having an iron content of 0.25 percent maximum <u>AA-1350 conductors, Class B or SIW, with compact, compressed or concentric stranding</u>
		Larger than 1 000 (507)	Concentric or compressed Class B, aluminum designation 1350H-19, 1350H-16, or 1350H-26, and having an iron content of 0.25 percent maximum <u>AA-1350 conductors, Class B or SIW, with compact, compressed or concentric stranding</u>
	Solid	30 - 16 (0.05 - 1.31)	Soft annealed, tinned or untinned
Copper		14 (2.08) and larger	Soft annealed and untinned
	Stranded	30 - 16 (0.05 - 1.31)	Soft annealed, tinned or untinned
		14 (2.08) and larger	Soft annealed, tinned or untinned. The stranding shall be concentric or compressed Class B or concentric Class C
^a Conductors of AA-8000 series alloy conductor material shall not be used for testing purposes.			

2. Test Conductor Insulation – Aluminum

Table 11 - Conductor insulation

(Clause 9.1.5.1)

		AWG or kcmil (mm²)	Type of insulation
	Solid	12 (3.31) and larger	THHN
			THW
Aluminum			USE
			XHHW
			<u>PE or XLPE thermoset insulation</u>
	Stranded	All sizes	USE
			<u>PE or XLPE thermoset insulation</u>
	Solid and stranded	30 - 24 (0.05 - 0.20)	Black thermoplastic at least 0.254 (0.010 in) thick
		22 - 16 (0.32 - 1.31)	Black thermoplastic at least 0.762 mm (0.030 in) thick
Copper		14 (2.08) and larger	THHN
			THW
			USE

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BSR/UL 1917, Standard for Safety for Solid-State Fan Speed Controls

1. Addition of an Abnormal Switching Test.

27 Breakdown of Components Test

27.1 General breakdown of components test

27.1.1 There shall be no emission of flame or molten metal nor ignition of cotton loosely placed over all openings of ventilated controls or totally around open controls when a single capacitor, diode, or other solid state component is individually short- or open-circuited. The 3-ampere fuse connected between the enclosure and ground shall not open.

Exception: The test is not required:

- a) *For components in circuits that comply with 17.4 and 17.5 (Class 2 circuits);*
- b) *For components in circuits that comply with 17.2.2;*
- c) *On power semiconductor devices if equivalent testing is accomplished during short circuit tests; and*
- d) *For components complying with requirements applicable to the component.*

27.1.2 The speed control is to be installed in accordance with the Temperature Test, Section 21; a 3-ampere nontime-delay fuse is to be connected between the enclosure and ground; the fault condition is to be implemented; the control is to be energized; and all control adjustments are to be adjusted through their ranges.

27.2 Abnormal switching test

27.2.1 Controls incorporating electronic circuitry to trigger the switching device during a more advantageous electrical condition, such as at zero crossing, shall be subjected to this abnormal switching test. This test is applicable when:

- a) Loads and circuits are non-safety.
- b) Switching components are used beyond their evaluated ratings. These evaluated ratings of switching devices are typically determined without electronic triggering techniques, such as zero cross switching.

27.2.2 Two test samples are to be prepared and connected as follows:

- a) The trigger circuit of the switching device is to be removed or modified to allow random switching.
- b) A ground arc indicating fuse is connected to accessible dead metal of the control. The ground arc detection fuse shall be rated not greater than 3A and not less than the working voltage.

c) The control shall be covered in a single layer of cheesecloth, except for the mounting surface, and then placed on a softwood surface that has been covered with white tissue paper. The cheesecloth shall be, bleached untreated cotton cloth running 14 - 15 square yards per pound (26 - 28m²/kg) and for any square inch a count of 32 threads in one direction and 28 in the other direction (for any square centimeter, 13 threads in one direction and 11 in the other direction).

d) The rated supply shall be connected through a branch circuit protection device sized according to installation requirements.

e) The control is connected to its rated electrical load.

27.2.3 The prepared test samples shall be operated in accordance with the endurance test requirements specifying the number of operating cycles and on/off periods using random switching. The test samples shall be operated until either the required number of endurance test cycles are achieved or until ultimate results are demonstrated for 1 h stabilized duration.

27.2.4 Immediately after each abnormal switching test, each control shall be subjected to the Dielectric Voltage-Withstand Test, Section 25.

27.2.5 The control shall either operate as intended in accordance with the endurance test requirements, or demonstrate an end-of-life fail safe condition with no evidence of an imminent electrical shock, fire or injury to persons. There shall be no:

a) Opening of the ground arc detection fuse.

b) Burning of the cheesecloth.

c) Opening of the branch circuit protection device.

d) Breakdown during the post-dielectric withstand testing.

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BSR/UL 1978, Standard for Safety for Grease Ducts

1. Additional requirements for grease duct slopes

PROPOSAL

23.3 The instructions shall be illustrated and shall include particular details concerning:

- a) The parts required and the step-by-step process for installing the grease duct, including methods of grease duct support and securing of support assemblies. Nails, lag bolts, or other fastening means needed to secure parts shall be specified;
- b) Limitations with respect to installation and use, such as maximum height, joining of two or more parts to constitute the intended assembly, and the required installation clearances;
- c) The methods and parts to be employed for maintaining ventilation and air circulation where required; ~~and~~
- d) The methods and parts employed for grease traps and drainage; and-
- e) The following statement (or equivalent wording) regarding duct slope: "Install at a slope not less than one-fourth unit vertical in 12 units horizontal toward the hood or toward a grease reservoir. Where horizontal ducts exceed 75 feet in length, the slope shall be not less than one unit vertical in 12 units horizontal."

Exception: For item (e) - When lesser slopes have been shown (through analysis, tests, or both) to provide equivalent or better flow characteristics, as compared to field-installed grease ducts with code prescribed minimum slopes, the following statements (or equivalent wording) regarding duct slope shall be provided: "Install at a slope not less than (lesser slope) unit vertical in 12 units horizontal toward the hood or toward a grease reservoir. Where horizontal ducts exceed 75 feet in length, the slope shall be not less than (lesser slope) unit vertical in 12 units horizontal. Obtain AHJ approval for this alternate method."