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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: October 14, 2012

AMD (Association of Millwork Distributors)

New Standard

BSR/AMD 100-201x, Structural Performance Ratings of Side-Hinged Exterior Door Systems and Procedures for Component Substitution (new standard)

The purpose of this standard is to provide a structural design pressure rating for a Side-Hinged Exterior Door System (SHEDS) using the ASTM E330 test method. Once a rating is obtained, the standard defines methods for qualifying door system components for substitution, such as door frames, hinges, locking systems, door slabs, doorglass assemblies, sidelights, transoms, mullions, astragals, and thresholds. Slab stiffness testing is used and outlined in this standard as a tool for component substitution.

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

Send comments (with copy to psa@ansi.org) to: Jessica Ferris, (727) 372-3665, jferris@amdweb.com

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

Addenda

BSR/ASHRAE Addendum 34ac-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum adds new zeotropic refrigerant R-444A 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 <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 34ad-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum deletes the use of the potential formation of CF₄ in Section 6.1.3.5(a) for Heat of Combustion calculations, as this is not possible when working at stoichiometric concentrations in air. SO₃ is deleted from the sample calculation table in Appendix F. The units in Appendix F example calculations and table are changed from kcal/mol to kJ/mol or kJ/kg, to be consistent with the definition of Heat of Combustion in this 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 Addendum 34ae-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum changes the flammability safety classification from Class 2 to Class 1 for R30 in Table 1, as published data show that at 60 deg. C R30 is nonflammable at 1 atm. pressure.

[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 34af-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2010)

This addendum changes the RCL values for R402A, R415A, R415B, R418A, and R419A in Table 2 of Standard 34-2010, due to prior errors in the flammability properties for these refrigerants.

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

This proposed addendum adds 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 standard is widely recognized for HVAC&R system balancing.

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

This proposed addendum increases the filter requirements from MERV 6 to MERV 8. This will reduce the potential for particulate deposition on cooling coils that could lead to biological or other contamination on the coils. In addition, it brings the requirement inline with ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green Buildings.

[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 62.2v-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2010)

The SSPC has had comments from users of the Standard, especially Addendum n, that they did not understand which height was to be used when calculating the Normalized Leakage. This proposed change would clarify the intent of the Standard on how to calculate the building height.

[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 62.2w-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2010)

As currently written, the standard provides prescriptive combustion safety requirements making assumptions about house airtightness. This proposed addendum provides additional performance-based combustion safety testing options that allow for the range of house characteristics to be accounted for regarding combustion safety. Additionally, this proposed addendum alters the language to make it clear that appliance installation must be to code, but that existing appliances do not have to be brought up to current code in order to comply with 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 Addendum 170k-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum clarifies the requirement that "all" room air be exhausted directly to the outdoors and provides limitations as to the reuse of exhaust air for energy recovery.

[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 170n-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum clarifies the requirements for the calculation of outside air quantities for air handling systems and provides designers with two alternative calculation pathways thus providing more flexibility. As this Standard provides guidance on the type of supply air outlets that shall be used in healthcare environments the committee has determined that the minimum outdoor air change rates indicated in Table 7-1 represent the Zone Outdoor Airflow, as may be needed for use in calculations defined by this addendum.

[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 170v-201x, Ventilation of Health Care Facilities (addenda to ANSI/ASHRAE/ASHE Standard 170-2008)

This proposed addendum provides clarification concerning design relative humidity requirements for spaces whose function is recovery and reduces the lower design humidity limit from 30% to 20% RH to match that of those spaces noted in Addendum d to Standard 170-2008 currently published and posted for free on the ASHRAE website. Addendum d noted that based on recent research, a reduction in the lower limit of the design humidity range for eight spaces designed for short-term patient stays was warranted.

[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/USGBC/IES Addendum 189.1h-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

Addendum h clarifies the requirements for a continuous air barrier in section 7 of the standard as well as the requirements for airtightness commissioning in section 10.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1i-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

Addendum i modifies the climate zones that the heat island section on roofs (5.3.2.3).

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1j-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

This addendum clarifies shading provided by vegetation for the site hardscape and walls for heat island mitigation (5.3.2.1 and 5.3.2.2).

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1k-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

This proposal updates Section 7.4.3.7, which was written to reference the language in ASHRAE/ANSI/IES Standard 90.1-2007.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1l-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

This proposal recommends the inclusion into ASHRAE Standard 189.1 of a new Table C-17 which contains the minimum efficiencies of transformers for buildings that are following path B of Section 7.4.3.1(b), i.e., those buildings that have a lower amount of on-site renewable generation and have required minimum efficiencies greater than the minimum federal efficiencies.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1m-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

This addendum adds lighting quality requirements to Standard 189.1, recognizing that following good lighting practices is part of creating a high-performance building where occupants will be productive, comfortable, safe, and healthy.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1o-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

This addendum adds a new mandatory provision to Section 9, The Building's Impact on the Atmosphere, Materials, and Resources, establishing maximum mercury content levels for certain types of electric lamps.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1q-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

To ensure and clarify that systems that require commissioning also include commissioning of the associated control systems.

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

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

BSR/ASHRAE/USGBC/IES Addendum 189.1s-201x, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011)

Addendum s clarifies the requirements for outdoor airflow monitoring in Section 8, along with operational requirements for such monitoring in Section 10. The attached document is "as modified during committee discussions."

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

Send comments (with copy to psa@ansi.org) to: Bert Etheredge, 404-636-8400, betheredge@ashrae.org

NSF (NSF International)**New Standard**

BSR/NSF 363-201x (i3), Good Manufacturing Practices (GMP) for Pharmaceutical Excipients (new standard)

Issue 3: The purpose of this ballot is to create an American National Standard (ANS) to define Good Manufacturing Practices (GMPs) for excipient manufacture for use in pharmaceutical products.

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

Send comments (with copy to psa@ansi.org) to: Joan Hoffman, (734) 769-5159, jhoffman@nsf.org

NSF (NSF International)**Revision**

BSR/NSF 173-201x (i46), Dietary Supplements (revision of ANSI/NSF 173-2012)

Issue 46: The purpose of this ballot is to update ANSI/NSF 173 with a requirement for testing Diethylene Glycol (DEG) in Glycerin ingredients.

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

Send comments (with copy to psa@ansi.org) to: Joan Hoffman, (734) 769-5159, jhoffman@nsf.org

NSF (NSF International)**Revision**

BSR/NSF 305-201x (i14), Personal Care Products Containing Organic Ingredients (revision of ANSI/NSF 305-2011)

Issue 14: The purpose of this ballot is to provide additional clarification in 6.3 Mined Minerals, water and salt with regards to Aloe and processed Mined Minerals.

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

Send comments (with copy to psa@ansi.org) to: Joan Hoffman, (734) 769-5159, jhoffman@nsf.org

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

BSR/UL 1206-201x, Standard for Electric Commercial Clothes-Washing Equipment (revision of ANSI/UL 1206-2003 (R2012))

Covers:

(1) Installation clearances and cycle selection.

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

Send comments (with copy to psa@ansi.org) to: Amy Walker, (847) 664-2023, Amy.K.Walker@ul.com

Comment Deadline: October 29, 2012**AHRI (Air-Conditioning, Heating, and Refrigeration Institute)****Revision**

BSR/AHRI Standard 110-201x, Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages (revision of ANSI/AHRI Standard 110-2004)

This standard applies to 50-Hz and 60-Hz electrical voltage ratings and operating limits as applied to air-conditioning, heating and refrigerating equipment; heat pumps; and electric furnaces, as well as components.

Single copy price: Free

Order from: Daniel Abbate, (703) 524-8800, dabbate@ahrinet.org

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

AHRI (Air-Conditioning, Heating, and Refrigeration Institute)**Revision**

BSR/AHRI Standard 1140-201x, Sound Quality Evaluation Procedures for Air-Conditioning and Refrigeration Equipment (revision of ANSI/AHRI Standard 1140-2006)

This standard applies to factory-made, residential, and commercial air-conditioning as well as transport refrigeration equipment.

Single copy price: Free

Order from: Daniel Abbate, (703) 524-8800, dabbate@ahrinet.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 55g-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010)

This proposed addendum clarifies the normative requirements for determining clothing insulation for representative occupants and moves these normative requirements to the body of the Standard. It adds a new informative appendix containing similar material that was in the previous Normative Appendix B.

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: Send request to 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 55h-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2010)

This proposed addendum clarifies the normative requirements for determining clothing insulation for representative occupants and moves these normative requirements to the body of the Standard. It adds a new informative appendix containing similar material that was in the previous Normative Appendix B.

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

This proposed addendum adds requirements to the IAQ Procedure for determining minimum ventilation rates which require consideration of the combined effects of multiple contaminants of concern on individual organ systems. This "additive" effect is already implicit in the Ventilation Rate Procedure. This is intended to improve the IAQ Procedure by requiring consideration of these additive effects that are well established in the literature for many organ systems. The change requires identifying those contaminants of concern that act on individual organs and identifying those contaminants as a "contaminant mixture of concern."

Single copy price: \$35.00

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

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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 62.2u-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2010)

This proposed addendum simplifies compliance with the intermittent ventilation requirements of Section 4.5 if the duty cycle is three hours or less. Under the current wording, designers of intermittent systems had to calculate a ventilation effectiveness factor even if operating the system 90% of the time with a duty cycle of one hour. This proposed addendum returns to the three-hour maximum duty cycle that was in the 2004 and 2007 editions of 62.2 before the ventilation effectiveness factor must be reduced below 1.0. This will simplify compliance for 80% of the users of 62.2. It also addresses the use of two or more fans to provide the required ventilation rate.

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: Send request to 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.)

New Standard

BSR/ASHRAE Standard 147-201x, Reducing the Release of Halogenated Refrigerants from Air-Conditioning Equipment and Systems (new standard)

This is a revision of the current published ANSI/ASHRAE Standard 147-2002, which has been administratively withdrawn. In response to comments received on the third public review draft, the committee has made some substantive changes to the draft that resulted in this public review. This standard prescribes practices and procedures to reduce release into the atmosphere of halogenated refrigerants used in refrigerating and air-conditioning systems. ASHRAE Standard 147-2002R is the result of action initiated to include supermarket units. The standard was reworded to separate the requirements of the many different refrigeration system types.

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: Send request to 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>

ATIS (Alliance for Telecommunications Industry Solutions)

Reaffirmation

BSR ATIS 0600016-2008 (R201x), Remote End POTS Splitter Requirements (reaffirmation of ANSI ATIS 0600016-2008)

This standard presents static POTS splitter requirements for remote end splitters operating in the xDSL band between 32 kHz and 30 MHz. This standard is not intended to provide specific details on physical attributes, industry standard safety considerations, or configuration of remote end splitters. This document describes the electrical characteristic of remote end splitters that reduce the xDSL signal impact on voice band communication and provide isolation between voice band equipment and xDSL equipment.

Single copy price: \$100.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerriane Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Reaffirmation

BSR ATIS 0900105.05-2002 (R201x), Synchronous Optical Network (SONET): Tandem Connection Maintenance (reaffirmation of ANSI ATIS 0900105.05-2002 (R2008))

The purpose of this standard is to establish specifications for Tandem Connection Monitoring using the optical interface specified in ATIS 0900105. This standard defines the contents and use of the Tandem Connection Monitoring bytes within the SONET signal. Tandem Connection Monitoring provides enhanced maintenance capabilities for certain SONET applications.

Single copy price: \$130.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerriane Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Reaffirmation

BSR ATIS 0900105-2008 (R201x), Synchronous Optical Network (SONET) - Basic Description Including Multiplex Structure, Rates, and Formats (reaffirmation of ANSI ATIS 0900105-2008)

The purpose of this standard is to specify the multiplexing format and basic overhead definitions for the Synchronous Optical Network (SONET) signal. Other standards in the ATIS 0900105-2008 series build upon this base document by providing additional detailed information about other specific aspects of SONET.

Single copy price: \$300.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerriane Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Withdrawal

ANSI ATIS 0900105.07a-1997 (R2008), Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats Specification (withdrawal of ANSI ATIS 0900105.07a-1997 (R2008))

This supplement expands the range of sub STS-1 interfaces to included payloads that are multiples of the VT Group.

Single copy price: \$25.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerriane Conn, (202) 434-8841, kconn@atis.org

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

ATIS (Alliance for Telecommunications Industry Solutions)

Withdrawal

BSR ATIS 0900105.07-1996 (R2008), Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats Specification (withdrawal of ANSI ATIS 0900105.07-1996 (R2008))

The purpose of this standard is to establish the rates and formats specifications for SUB STS-1 SONET interfaces. Specifically, this standard defines the formats for the VT1.5 interface and virtual tributary group interface, including the definitions and content of the associated overhead channels.

Single copy price: \$130.00

Obtain an electronic copy from: kconn@atis.org

Order from: Kerriane Conn, (202) 434-8841, kconn@atis.org

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

ISA (ISA)

New Standard

BSR/ISA 96.03.01-201x, Guidelines for the Specification of Heavy Duty Pneumatically Powered Quarter Turn Valve Actuators (new standard)

This standard provides general requirements for the development of specifications for pneumatic scotch yoke actuators. This document applies to actuators with a maximum allowable operating pressure (MAOP) up to 250 psig with a compressed gas (i.e., instrument air).

Single copy price: \$50.00

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 15944-8:2012, Information technology - Business Operational View - Part 8: Identification of privacy protection requirements as external constraints on business transactions (identical national adoption of ISO/IEC 15944-8:2012)

ISO/IEC 15944-8:2012 has been developed to support modeling generic international requirements for identifying and providing privacy protection of personal information throughout any kind of information and communications technology (ICT) based business transaction where the individual has the role of a buyer. It provides users and designers with a methodology and tools addressing requirements imposed by jurisdictional domains.

Single copy price: \$285.00

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

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

New National Adoption

INCITS/ISO/IEC 24739-1-201x, Information technology - AT Attachment with Packet Interface - 7 - Part 1: Register Delivered Command Set, Logical Register Set (ATA/ATAPI-7 V1) (identical national adoption of ISO/IEC 24739-1:2009)

ISO/IEC 24739-1:2009(E) specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers, and suppliers of intelligent storage devices. It defines the register-delivered commands used by devices implementing the standard.

Single copy price: \$285.00

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

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

New National Adoption

INCITS/ISO/IEC 24739-2:2009, Information technology - AT Attachment with Packet Interface - 7 - Part 2: Parallel transport protocols and physical interconnect (ATA/ATAPI-7) (identical national adoption of ISO/IEC 24739-2:2009)

ISO/IEC 24739-2:2009(E) specifies the AT Attachment Interface between host systems and storage devices. It provides a common attachment interface for systems manufacturers, system integrators, software suppliers and suppliers of intelligent storage devices.

Single copy price: \$285.00

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

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

New National Adoption

INCITS/ISO/IEC 24739-3:2010, Information technology - AT Attachment with Packet Interface - 7 - Part 3: Serial transport protocols and physical interconnect (ATA/ATAPI-7 V3) (identical national adoption of ISO/IEC 24739-3:2010)

ISO/IEC 24739-3:2010(E) specifies the connectors and cables for physical interconnection between host and storage device, the electrical and logical characteristics of the interconnecting signals, and the protocols for the transporting of commands, data, and status over the interface for the serial interface.

Single copy price: \$285.00

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

NCPDP (National Council for Prescription Drug Programs)

Revision

BSR/NCPDP SC WG110052201xxx#, NCPDP SCRIPT Standard 201xxx# (revision and redesignation of ANSI/NCPDP SC WG110051201xxx#)

The standard provides general guidelines for developers of pharmacy or physician management systems who wish to provide prescription transmission functionality to their clients. The standard addresses the electronic transmission of new prescriptions, prescription refill requests, prescription fill status notifications, and cancellation notifications.

Single copy price: \$200.00 (non-member)

Obtain an electronic copy from: kkrempin@ncdpd.org

Order from: Kittye Krempin, (512) 291-1356, kkrempin@ncdpd.org

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

NCPDP (National Council for Prescription Drug Programs)

Revision

BSR/NCPDP TC vE.1-201x, NCPDP Telecommunication Standard vE.1 -201x (revision and redesignation of ANSI/NCPDP TC vD.9-2012)

The standard supports the format for electronic communication of pharmacy service-related billing, prior authorization processing, and information reporting between pharmacies and other responsible parties. This standard addresses the data format and content, the transmission protocol and other appropriate telecommunication requirements.

Single copy price: \$200.00 (non-member)

Obtain an electronic copy from: kkrempin@ncdpd.org

Order from: Kittye Krempin, (512) 291-1356, kkrempin@ncdpd.org

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

NEMA (ASC C29) (National Electrical Manufacturers Association)**New Standard**

BSR C29.17-201x, Insulators - Composite - Line Post Type (new standard)

This standard describes the qualification test procedures for composite line post insulators that are made of a fiberglass-reinforced resin matrix core, elastomeric weathersheds and metal end fittings. These insulators are intended for use on overhead lines in electric power systems, 70kV and above.

Single copy price: \$44.00

Order from: Steve Griffith, 703-841-3297, Steve.Griffith@nema.org

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

NEMA (National Electrical Manufacturers Association)**New Standard**

BSR/NEMA AB 3-201x, Molded Case Circuit Breakers and Their Application (new standard)

NEMA AB 3-2012 application guide covers molded-case circuit breakers (MCCB) and molded-case switches, single- and multiple-pole, fused and unfused, together with accessories used with them.

Single copy price: Free

Obtain an electronic copy from: gary.macfadden@nema.org

Order from: Gary MacFadden, (703) 841 3253, gary.macfadden@nema.org

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

TAPPI (Technical Association of the Pulp and Paper Industry)**New Standard**

BSR/TAPPI T 657 sp-201x, Sampling of fillers and pigments (new standard)

This document describes procedures for sampling shipments of fillers, pigments, and other materials in finely divided form for the purpose of securing a sample for analysis. Procedures are given for sampling dry bulk and bagged shipments, as well as high-solids slurries.

Single copy price: Free

Obtain an electronic copy from: standards@tappi.org

Order from: Charles Bohanan, (770) 209-7276, standards@tappi.org

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

TIA (Telecommunications Industry Association)**Reaffirmation**

BSR/TIA 664-805-A-2007 (R201x), Wireless Features Description: CDMA Packet Data Service (reaffirmation of ANSI/TIA 664-805-A-2007)

This suite of standards presents a recommended plan for the implementation of uniform features for use in wireless telecommunications systems. Its intent is to describe services and features so that the manner in which they are used by a subscriber can remain reasonably consistent from system to system. It is not intended to require that specific service offerings be required of all service providers.

Single copy price: \$63.00

Obtain an electronic copy from: standards@tiaonline.org

Order from: standards@tiaonline.org

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

TIA (Telecommunications Industry Association)**Reaffirmation**

BSR/TIA 895-A-2002 (R201x), CDMA Tandem Free Operation (reaffirmation of ANSI/TIA 895-A-2002)

This service description document details the Inband Signaling Protocol between Transcoder/Rate adapter Units (TRAU) for speech traffic channels for the Tandem Free Operation (TFO) of Speech Coders, sometimes also termed "Vocoder Bypass." It is applied to the cdma2000 standards.

Single copy price: \$163.00

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: standards@tiaonline.org

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

BSR/UL 94-201x, Standard for Safety Tests for Flammability of Plastic Materials for Parts in Devices and Appliances (revision of ANSI/UL 94-2012)

The following changes in requirements to UL 94 are being recirculated:

(1) Assigning HB ratings for range of thicknesses based on testing of minimum thickness.

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: Raymond Suga, (631) 546-2593, raymond.m.suga@ul.com

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

BSR/UL 746D-201x, Standard for Safety for Polymeric Materials - Fabricated Parts (revision of ANSI/UL 746D-2003 (R2008))

Recycled Plastics - Definition of Testing and Clarification of Quality Program Requirements.

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: Raymond Suga, (631) 546-2593, raymond.m.suga@ul.com

Comment Deadline: November 13, 2012

Reaffirmations and withdrawals available electronically may be accessed at: webstore.ansi.org

AGMA (American Gear Manufacturers Association)**Reaffirmation**

BSR/AGMA 6123-B2006 (R201x), Design Manual for Enclosed Epicyclic Gear Drives (reaffirmation of ANSI/AGMA 6123-B2006)

This standard is applicable to enclosed epicyclic speed reducers and increasers that use spur and helical gears. It applies to non-aircraft, industrial, vehicular, or machine tool gear units with carrier speeds less than 1800 rpm.

Single copy price: \$154.00

Order from: Charles Fischer, (703) 684-0211, fischer@agma.org; tech@agma.org

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

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

BSR/ASME B89.1.9-2002 (R201x), Gage Blocks (reaffirmation of ANSI/ASME B89.1.9-2002 (R2007))

This Standard specifies the most important design and metrological characteristics of gage blocks with a rectangular or square cross-section and a nominal length, in, ranging from 0.5 mm to 1 000 mm for metric sizes and 0.010 in. to 40 in. for inch sizes.

Single copy price: \$35.00

Obtain an electronic copy from: <http://www.asme.org/kb/standards>

For Reaffirmations and Withdrawn standards, please view the ASME catalog at <http://www.asme.org/kb/standards>.

Send comments (with copy to psa@ansi.org) to: Fredric Constantino, (212) 591-8684, constantinof@asme.org

CGA (Compressed Gas Association)**New Standard**

BSR CGA G-2.1-200x, Safety Requirements for the Storage and Handling of Anhydrous Ammonia (new standard)

This standard is intended to apply to the design, construction, repair, alteration, location, installation, and operation of anhydrous ammonia systems including refrigerated ammonia storage systems. This standard does not apply to ammonia manufacturing plants, ammonia transportation pipelines; ammonia barges and tankers; or refrigeration systems where ammonia is used solely as a refrigerant. Such systems are covered in ANSI/ASHRAE 15, American National Standard Safety Code for Mechanical Refrigeration and ANSI/IIAR 2, American National Standard for Equipment, Design and Installation of Ammonia Mechanical Refrigerating Systems.

Single copy price: Free

Order from: Kristy Morrison, 703-788-2728, kmorrison@cganet.com

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

Projects Withdrawn from Consideration

An accredited standards developer may abandon the processing of a proposed new or revised American National Standard or portion thereof if it has followed its accredited procedures. The following projects have been withdrawn accordingly:

NEMA (ASC C29) (National Electrical Manufacturers Association)

BSR C29.19-200x, Solid Rod Fiberglass Insulators (apparatus post type) (new standard)

Inquiries may be directed to Steve Griffith, 703-841-3297, Steve.
Griffith@nema.org

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/TIA J-STD 607-A-2002, Communications Building Grounding (Earthing) and Bonding Requirements for Telecommunications

Correction**Change to Designation and Project Intent****BSR/API 6DA-201x**

The designation of BSR/API 6DA-201x, which was listed as a newly proposed ANS in the Call for Comment section of Standards Action, August 12, 2011, has been changed to BSR/API 6DX-201x. Additionally, as noted in the scope, the project action shall be identified as an (identical national adoption of ISO 12490:2011). For inquiries, please contact Edmund Baniak, (202) 682-8135, baniake@api.org.

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.

AHRI (Air-Conditioning, Heating, and Refrigeration Institute)

Office: 2111 Wilson Boulevard
Suite 500
Arlington, VA 22201

Contact: Daniel Abbate

Phone: (703) 600-0327

Fax: (703) 562-1942

E-mail: dabbate@ahrinet.org

BSR/AHRI Standard 110-201x, Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages (revision of ANSI/AHRI Standard 110-2004)

BSR/AHRI Standard 1140-201x, Sound Quality Evaluation Procedures for Air-Conditioning and Refrigeration Equipment (revision of ANSI/AHRI Standard 1140-2006)

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

Office: 1791 Tullie Circle NE
Atlanta, GA 30329

Contact: Tanisha Meyers-Lisle

Phone: (678) 539-1111

Fax: (678) 539-2111

E-mail: tmlisle@ashrae.org

BSR/ASHRAE Standard 138-201X, Method of Testing for Rating Ceiling Panels for Sensible Heating and Cooling (revision of ANSI/ASHRAE Standard 138-2009)

ISA (ISA)

Office: 67 Alexander Drive
Research Triangle Park, NC 27709

Contact: Eliana Brazda

Phone: (919) 990-9228

Fax: (919) 549-8288

E-mail: ebrazda@isa.org

BSR/ISA 96.03.01-201x, Guidelines for the Specification of Heavy Duty Pneumatically Powered Quarter Turn Valve Actuators (new standard)

ISEA (International Safety Equipment Association)

Office: 1901 North Moore Street, Suite 808
Arlington, VA 22209

Contact: Cristine Fargo

Phone: (703) 525-1695

Fax: (703) 525-1698

E-mail: cfargo@safetysafetyequipment.org

BSR/ISEA Z358.1-201x, Emergency Eyewash and Shower Equipment (revision of ANSI/ISEA Z358.1-2009)

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

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

Contact: Barbara Bennett

Phone: (202) 626-5743

Fax: (202) 638-4922

E-mail: bbennett@ititc.org

INCITS/ISO/IEC 15944-8:2012, Information technology - Business Operational View - Part 8: Identification of privacy protection requirements as external constraints on business transactions (identical national adoption of ISO/IEC 15944-8:2012)

INCITS/ISO/IEC 19775-2-201x, Information technology - Computer graphics and image processing - Extensible 3D (X3D) - Part 2: Scene access interface (SAI) (identical national adoption of ISO/IEC 19775-2:2010 and revision of INCITS/ISO/IEC 19775-2-2011)

INCITS/ISO/IEC 19776-1:201x, Information technology - Computer graphics, image processing and environmental data representation - Extensible 3D (X3D) encodings - Part 1: Extensible Markup Language (XML) encoding (identical national adoption of ISO/IEC 19776-1:2009 and revision of INCITS/ISO/IEC 19776-1-2009 and INCITS/ISO/IEC 19776-1-2005 Amendment 1-2009)

INCITS/ISO/IEC 24739-1-201x, Information technology - AT Attachment with Packet Interface - 7 - Part 1: Register Delivered Command Set, Logical Register Set (ATA/ATAPI-7 V1) (identical national adoption of ISO/IEC 24739-1:2009)

INCITS/ISO/IEC 24739-2:2009, Information technology - AT Attachment with Packet Interface - 7 - Part 2: Parallel transport protocols and physical interconnect (ATA/ATAPI-7) (identical national adoption of ISO/IEC 24739-2:2009)

INCITS/ISO/IEC 24739-3:2010, Information technology - AT Attachment with Packet Interface - 7 - Part 3: Serial transport protocols and physical interconnect (ATA/ATAPI-7 V3) (identical national adoption of ISO/IEC 24739-3:2010)

NEMA (ASC C29) (National Electrical Manufacturers Association)

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

Contact: *Steve Griffith*

Phone: 703-841-3297

Fax: 703-841-3397

E-mail: Steve.Griffith@nema.org

BSR C29.17-201x, Insulators - Composite-Line Post Type (new standard)

NSF (NSF International)

Office: 789 N. Dixboro Road
Ann Arbor, MI 48105

Contact: *Joan Hoffman*

Phone: (734) 769-5159

Fax: (734) 827-6176

E-mail: jhoffman@nsf.org

BSR/NSF 417-201X, American Ginseng Root (*Panax quinquefolius* L.)
(new standard)

TIA (Telecommunications Industry Association)

Office: 2500 Wilson Boulevard, Suite 300
Arlington, VA 22201

Contact: *Stephanie Montgomery*

Phone: (703) 907-7706

Fax: (703) 907-7727

E-mail: standards@tiaonline.org

BSR/TIA 664-805-A-2007 (R201x), Wireless Features Description:
CDMA Packet Data Service (reaffirmation of ANSI/TIA 664-805-A-2007)

BSR/TIA 895-A-2002 (R201x), CDMA Tandem Free Operation
(reaffirmation of ANSI/TIA 895-A-2002)

BSR/TIA 1066-A-201x, Lawfully Authorized Electronic Surveillance for
cdma2000 Voice over IP (new standard)

BSR/TIA 1072-A-201x, LAES for cdma2000® Push-to-Talk over Cellular
(new standard)

Call for Members (ANS Consensus Bodies)

NSF International

Office: 789 N. Dixboro Road
P.O. Box 130140
Ann Arbor, MI 48113-0140, USA
Toll Free (USA): 800-NSF-MARK (800-673-6275)

Contact: *Joan Hoffman*

Phone: (734) 769-5159

Fax: (934) 827-6176

E-mail: jhoffman@nsf.org

NSF is seeking experts to serve on the NSF Joint Committee on Organic Personal Care. Currently, there are openings in the following Interest Categories:

Public Agency: A member who is from a public agency.

Trade Association: A member who offers assistance and represents the interests of those operating in a specific industry.

User/Consumer: A member who purchases, uses, or specifies materials, products, systems, or services covered in the scope of the standard. A member who represents an organization that provides for-profit services applying to the scope of the Standard

NSF/ANSI 305, Personal Care Products Containing Organic Ingredients is the American National Standard that defines labeling and marketing requirements for “contains organic ingredients” claim for products with a minimum organic content of 70 percent (070).

(revision of the 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.

ASSE (ASC A10) (American Society of Safety Engineers)

Revision

ANSI/ASSE A10.32-2012, Fall Protection Systems for Construction and Demolition Operations (revision of ANSI/ASSE A10.32-2004): 9/12/2012

NSF (NSF International)

Revision

- * ANSI/NSF 40-2012 (i25r2), Residential wastewater treatment systems (revision of ANSI/NSF 40-2010): 8/28/2012
- * ANSI/NSF 55-2012 (i35), Ultraviolet microbiological water treatment systems (revision of ANSI/NSF 55-2009): 8/22/2012
- * ANSI/NSF 60-2012 (i54), Drinking Water Treatment Chemicals - Health Effects (revision of ANSI/NSF 60-201x (i54)): 8/22/2012

UL (Underwriters Laboratories, Inc.)

New National Adoption

ANSI/UL 61800-5-2-2012, Standard for Safety for Adjustable Speed Electrical Power Drive Systems - Part 5-2: Safety Requirements - Functional (national adoption with modifications of IEC 61800-5-2): 8/28/2012

ANSI/UL 61800-5-2-2012a, Standard for Safety for Adjustable Speed Electrical Power Drive Systems - Part 5-2: Safety Requirements - Functional (national adoption with modifications of IEC 61800-5-2): 8/28/2012

Reaffirmation

- ANSI/UL 296A-2004 (R2012), Standard for Safety for Waste Oil-Burning Air-Heating Appliances (reaffirmation of ANSI/UL 296A-2004 (R2008)): 8/22/2012
- * ANSI/UL 729-2008 (R2012), Standard for Safety for Oil-Fired Floor Furnaces (reaffirmation of ANSI/UL 729-2008): 8/22/2012
- * ANSI/UL 730-2008 (R2012), Standard for Safety for Oil-Fired Wall Furnaces (reaffirmation of ANSI/UL 730-2008): 8/22/2012
- * ANSI/UL 731-2004 (R2012), Standard for Safety for Oil-Fired Unit Heaters (reaffirmation of ANSI/UL 731-2004 (R2008)): 8/22/2012
- * ANSI/UL 896-2004 (R2012), Standard for Safety for Oil-Burning Stoves (reaffirmation of ANSI/UL 896-2004 (R2008)): 8/22/2012
- ANSI/UL 1315-2003 (R2012), Standard for Safety for Metal Waste Paper Containers (reaffirmation of ANSI/UL 1315-2003 (R2007)): 9/11/2012

Revision

ANSI/UL 1277-2012, Standard for Safety for Electrical Power and Control Tray Cables with Optional Optical-Fiber Members (revision of ANSI/UL 1277-2010): 9/5/2012

ANSI/UL 2231-1-2012, Standard for Safety for Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: General Requirements (revision of ANSI/UL 2231-1-2011): 9/7/2012

ANSI/UL 2231-2-2012, Standard for Safety for Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: Particular Requirements for Protection Devices for Use in Charging Systems (revision of ANSI/UL 2231-2 - 2011): 9/7/2012

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.

APSP (Association of Pool and Spa Professionals)

Office: 2111 Eisenhower Avenue
Alexandria, VA 22314

Contact: *Bernice Crenshaw*

Fax: (703) 549-0493

E-mail: bcrenshaw@APSP.org

* BSR/APSP 1-201x, Standard for Public Swimming Pools (revision of ANSI/NSPI 1-2003)

Stakeholders: Consumers.

Project Need: Revises APSP-1.

This standard covers public swimming pools to be used for swimming, bathing, competitive activities, or recreational activities; and is operated by an owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for use.

ASME (American Society of Mechanical Engineers)

Office: 3 Park Avenue, 20th Floor (20N2)
New York, NY 10016

Contact: *Mayra Santiago*

Fax: (212) 591-8501

E-mail: ANSIBox@asme.org

BSR/ASME B73.3-201x, Specification for Sealless Horizontal End Suction Metallic Centrifugal Pumps for Chemical Process (revision of ANSI/ASME B73.3-2003 (R2008))

Stakeholders: Manufacturers and users of sealless horizontal end suction centrifugal pumps for chemical process.

Project Need: To reflect the state of the art.

This Standard covers sealless centrifugal pumps of horizontal-end suction single-stage and centerline discharge design. This Standard includes dimensional interchangeability requirements and certain design features to facilitate installation and maintenance. It is the intent of this Standard that pumps of the same standard dimensional designation from all sources of supply shall be interchangeable with respect to mounting dimensions, size, and location of suction and discharge nozzles, input shafts, baseplates, and foundation bolt holes.

ASTM (ASTM International)

Office: 100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

Contact: *Jeff Richardson*

Fax: (610) 834-7067

E-mail: jrichard@astm.org

BSR/ASTM WK38917-201x, New Specification for Braided Aramid Reinforced Thermoplastic Pipe and Connections (new standard)

Stakeholders: Plastic Piping Systems Industry.

Project Need: Develop a new standard for braided aramid fiber reinforced thermoplastic pipe and connections for use in the oil and gas industry to transport typical oilfield crude fluids.

<http://www.astm.org/DATABASE.CART/WORKITEMS/WK38917.htm>

AWS (American Welding Society)

Office: 550 N.W. LeJeune Road
Miami, FL 33126

Contact: *Rosalinda O'Neill*

Fax: (305) 443-5951

E-mail: roneill@aws.org

BSR/AWS F1.2-201x, Laboratory Method for Measuring Fume Generation Rates and Total Fume Emission of Welding and Allied Processes (revision of ANSI/AWS F1.2-2006)

Stakeholders: Occupational health and safety experts; researchers.

Project Need: This document prescribes a laboratory method to standardize measurement of fume emissions for sampling in the welding workplace.

This document outlines a laboratory method for the determination of fume generation rates and total fume emission. A test chamber is used to collect representative fume samples under carefully controlled conditions.

B11 (B11 Standards, Inc.)

Office: PO Box 690905
Houston, TX 77269

Contact: David Felinski

E-mail: rfelinski@b11standards.org; dfelinski@plasticsindustry.org;

BSR B11.26-201x, Safety Control Systems for Machines (new standard)

Stakeholders: Machine suppliers and machine users.

Project Need: There is a strong U.S. need for a standard that provides effective and understandable requirements for functional safety of control systems. Much of this already exists in B11.TR6 and the current effort will not only revise that TR as an ANS but will also incorporate elements of ISO 13849.

This Technical Report provides guidance in understanding and implementing safety-related control functions (functional safety) as they relate to electrical, electronic, mechanical, pneumatic, hydraulic components and systems for machines.

NOTE 1: The terminology used in this document may not be used consistently throughout the industry, but this document does represent concepts that are important when using and designing safety-related control systems.

NOTE 2: This document is not intended to address programmable electronic systems/programmable electronic devices (PES/PED). See B11.TR4.

IAPMO (International Association of Plumbing & Mechanical Officials)

Office: 4755 E. Philadelphia Street
Ontario, CA 91761

Contact: Gabriella Davis

Fax: (909) 472-4241

E-mail: gabriella.davis@iapmo.org

* BSR/IAPMO UPC 1-201x, Uniform Plumbing Code (revision of ANSI/IAPMO UPC 1-2012)

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

Project Need: Designation of the UPC as an ANS has provided the built industry with uniform plumbing standards resulting in a reduction in training costs, product development costs, and in a price reduction for consumers. This ANS provides consumers with safe and sanitary plumbing systems while allowing latitude for innovation and new technologies. This project is intended to keep the code current.

This code provides minimum standards and requirements to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing systems. The provisions of this code apply to the erection, installation, alteration, repair, relocation, addition to, use, or maintenance of plumbing systems.

* BSR/IAPMO UMC 1-201x, Uniform Mechanical Code (revision of ANSI/IAPMO UMC 1-2012)

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

Project Need: Designation of the UMC as an ANS has provided the built industry with uniform mechanical standards resulting in a reduction in training costs, product development costs, and in price reduction for consumers. This ANS provides consumers with safe mechanical systems while allowing latitude for innovation and new technologies. This project is intended to keep the code current.

This code provides minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat-producing appliances. The provisions of this code apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of mechanical systems.

ISEA (International Safety Equipment Association)

Office: 1901 North Moore Street, Suite 808
Arlington, VA 22209

Contact: Cristine Fargo

Fax: (703) 525-1698

E-mail: cfargo@safetysafetyequipment.org

BSR/ISEA Z358.1-201x, Emergency Eyewash and Shower Equipment (revision of ANSI/ISEA Z358.1-2009)

Stakeholders: Equipment suppliers, chemical, manufacturing, construction, medical facilities, educational laboratories.

Project Need: To keep standard current with technology, test methods and user considerations for equipment covered by this standard.

The standard establishes minimum performance and use requirements for emergency flushing fixtures for the immediate treatment of the eyes or body of a person who has been exposed to injurious or corrosive materials. Specific equipment includes:

- emergency shower;
- eyewash equipment;
- eye/face wash equipment;
- combination units; and
- supplemental equipment.

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

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

Contact: *Barbara Bennett*

Fax: (202) 638-4922

E-mail: bbennett@itic.org

INCITS/ISO/IEC 19776-1:201x, Information technology - Computer graphics, image processing and environmental data representation - Extensible 3D (X3D) encodings - Part 1: Extensible Markup Language (XML) encoding (identical national adoption of ISO/IEC 19776-1:2009 and revision of INCITS/ISO/IEC 19776-1-2009)

INCITS/ISO/IEC 19776-1-2005 AMENDMENT 1-2009)

Stakeholders: ICT industry.

Project Need: Adoption of this International Standard will be beneficial to the ICT industry.

ISO/IEC 19775, Extensible 3D (X3D), defines a system that integrates 3D graphics and multimedia. Conceptually, each X3D file is a 3D time-based space that contains graphic and aural objects that can be dynamically modified through a variety of mechanisms. ISO/IEC 19776-1:2009 defines a mapping of the abstract objects in X3D to a specific X3D encoding using the Extensible Markup Language (XML).

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

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

Contact: *Barbara Bennett*

Fax: (202) 638-4922

E-mail: bbennett@itic.org

INCITS/ISO/IEC 19775-2-201x, Information technology - Computer graphics and image processing - Extensible 3D (X3D) - Part 2: Scene access interface (SAI) (identical national adoption of ISO/IEC 19775-2:2010 and revision of INCITS/ISO/IEC 19775-2-2011)

Stakeholders: ICT industry.

Project Need: Adoption of this International Standard will be beneficial to the ICT industry.

ISO/IEC 19775 defines a software system that integrates network-enabled 3D graphics and multimedia. Conceptually, each X3D application is a 3D time-based space that contains graphic and aural objects that can be dynamically modified through a variety of mechanisms.

NSF (NSF International)

Office: 789 N. Dixboro Road
Ann Arbor, MI 48105

Contact: *Joan Hoffman*

Fax: (734) 827-6176

E-mail: jhoffman@nsf.org

* BSR/NSF 417-201X, American Ginseng Root (*Panax quinquefolius* L.) (new standard)

Stakeholders: Regulatory members, consumers, industry representatives, testing laboratories.

Project Need: Establishes a national standard for ensuring the identity, strength, purity, and composition of the dietary supplement ingredient American Ginseng Root (*Panax quinquefolius* L.).

This Standard contains requirements for dietary supplements that contain American ginseng root as an ingredient in a dietary supplement as defined as a dietary substance for use by man to supplement the diet by increasing the total dietary intake, or a concentrate, metabolite, constituent, extract, or combinations of these ingredients. With appropriate modifications to the testing methodology, this Standard can also apply to extracts of the ingredient. Products and ingredients deemed a hazard to public health or safety by a regulatory agency having jurisdiction shall be excluded from the scope of this document.

TIA (Telecommunications Industry Association)

Office: 2500 Wilson Boulevard, Suite 300
Arlington, VA 22201

Contact: *Stephanie Montgomery*

Fax: (703) 907-7727

E-mail: standards@tiaonline.org

BSR/TIA 1066-A-201x, Lawfully Authorized Electronic Surveillance for cdma2000 Voice over IP (new standard)

Stakeholders: LEAs, wireless service providers; wireless manufacturers; LAES access & delivery function vendors.

Project Need: Provide updates for an existing standard.

Since the publication of TIA-1066 LAES for cdma2000® VoIP in July 2006, a number of technological and related referenced Standards changes have occurred. This requires TIA-1066 to be revised in areas that need updating.

BSR/TIA 1072-A-201x, LAES for cdma2000® Push-to-Talk over Cellular (new standard)

Stakeholders: LEAs, wireless service providers; wireless manufacturers; LAES access & delivery function vendors.

Project Need: Provide updates for an existing standard.

Since the publication of TIA-1072 Lawfully Authorized Electronic Surveillance (LAES) for cdma2000® Push-to-Talk over Cellular (PoC) in May 2006, a number of technological and related referenced Standards changes have occurred. This requires TIA-1072 to be revised in areas that need updating.

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.

AGMA

American Gear Manufacturers Association
1001 N Fairfax Street, 5th Floor
Alexandria, VA 22314
Phone: (703) 684-0211
Fax: (703) 684-0242
Web: www.agma.org

AHRI

Air-Conditioning, Heating, and Refrigeration Institute
2111 Wilson Boulevard
Suite 500
Arlington, VA 22201
Phone: (703) 600-0327
Fax: (703) 562-1942
Web: www.ahrinet.org

AMD

Association of Millwork Distributors
10047 Robert Trent Jones Parkway
New Port Richey, FL 34655
Phone: (727) 372-3665
Fax: (727) 372-2879
Web: www.amdweb.com/

APSP

Association of Pool and Spa Professionals
2111 Eisenhower Avenue
Alexandria, VA 22314
Phone: (703) 838-0083 x150
Fax: (703) 549-0493
Web: www.apsp.org

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329
Phone: (678) 539-1214
Fax: (678) 539-2214
Web: www.ashrae.org

ASME

American Society of Mechanical Engineers
3 Park Avenue, 20th Floor (20N2)
New York, NY 10016
Phone: (212) 591-8521
Fax: (212) 591-8501
Web: www.asme.org

ASSE (Safety)

American Society of Safety Engineers
1800 East Oakton Street
Des Plaines, IL 60018-2187
Phone: (847) 768-3411
Fax: (847) 296-9221
Web: www.asse.org

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Phone: (610) 832-9696
Fax: (610) 834-7067
Web: www.astm.org

ATIS

Alliance for Telecommunications Industry Solutions
1200 G Street, NW
Suite 500
Washington, DC 20005
Phone: (202) 434-8841
Fax: (202) 347-7125
Web: www.atis.org

AWS

American Welding Society
550 N.W. LeJeune Road
Miami, FL 33126
Phone: (305) 443-9353
Fax: (305) 443-5951
Web: www.aws.org

B11

B11 Standards, Inc.
PO Box 690905
Houston, TX 77269
Phone: (832) 446-6999

CGA

Compressed Gas Association
14501 George Carter Way, Suite 103
Chantilly, VA 20151
Phone: 703-788-2728
Web: www.cganet.com/

IAPMO

International Association of Plumbing and Mechanical Officials
4755 E. Philadelphia Street
Ontario, CA 91761
Phone: (909) 472-4203
Fax: (909) 472-4241
Web: www.iapmo.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

ISEA

International Safety Equipment Association
1901 North Moore Street, Suite 808
Arlington, VA 22209
Phone: (703) 525-1695
Fax: (703) 525-1698
Web: www.safetysystem.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

NCPDP

National Council for Prescription Drug Programs
9240 East Raintree Drive
Scottsdale, AZ 85260
Phone: (512) 291-1356
Fax: (480) 767-1042
Web: www.ncpdp.org

NEMA (ASC C29)

National Electrical Manufacturers Association
1300 North 17th Street, Suite 1752
Rosslyn, VA 22209
Phone: 703-841-3297
Fax: 703-841-3397
Web: www.nema.org

NEMA (Canvass)

National Electrical Manufacturers Association
1300 North 17th Str., Suite 1752
Rosslyn, VA 22209
Phone: (703) 841 3253
Fax: (703) 841-3353
Web: www.nema.org

NSF

NSF International
789 N. Dixboro Road
Ann Arbor, MI 48105
Phone: (734) 827-6819
Fax: (734) 827-7875
Web: www.nsf.org

TAPPI

Technical Association of the Pulp and Paper Industry
15 Technology Parkway South
Norcross, GA 30092
Phone: (770) 209-7276
Fax: (770) 446-6947
Web: www.tappi.org

TIA

Telecommunications Industry Association
2500 Wilson Boulevard, Suite 300
Arlington, VA 22201
Phone: (703) 907-7706
Fax: (703) 907-7727
Web: www.tiaonline.org

UL

Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062
Phone: (847) 664-3411
Fax: (847) 664-3411
Web: www.ul.com/



ISO Draft International Standards

This section lists proposed standards that the International Organization for Standardization (ISO) is considering for approval. The proposals have received substantial support within the technical committees or subcommittees that developed them and are now being circulated to ISO members for comment and vote. Standards Action readers interested in reviewing and commenting on these documents should order copies from ANSI.

Comments

Comments regarding ISO documents should be sent to Karen Hughes, at ANSI's New York offices (isot@ansi.org). The final date for offering comments is listed after each draft.

Ordering Instructions

ISO Drafts can be made available by contacting ANSI's Customer Service department. Please e-mail your request for an ISO Draft to Customer Service at sales@ansi.org. When making your request, please provide the date of the Standards Action issue in which the draft document you are requesting appears.

AIR QUALITY (TC 146)

ISO/DIS 22262-2, Air quality - Bulk materials - Part 2: Quantitative determination of asbestos by gravimetric and microscopical methods - 11/10/2012, \$112.00

AIRCRAFT AND SPACE VEHICLES (TC 20)

ISO/DIS 9940, Aerospace - Fire resistant hydraulic fluids - 11/10/2012, \$107.00

CRANES (TC 96)

ISO/DIS 16715, Cranes - Hand signals used with cranes - 11/30/2011, \$40.00

ISO/DIS 16716, Cranes - Monitoring for crane design life - 12/7/2012, \$62.00

GRAPHIC TECHNOLOGY (TC 130)

ISO/DIS 15397, Graphic Technology - Communication of graphic paper properties - 12/7/2012, \$58.00

HEALTH INFORMATICS (TC 215)

ISO/HL7 NP 16527, Personal Health Record System Functional Model, Release 1 (PHRS FM) - 12/7/2012, FREE

OTHER

ISO/DIS 18218-1, Leather - Determination of ethoxylated alkylphenols - Part 1: Direct method - 11/9/2029, \$40.00

ISO/DIS 18218-2, Leather - Determination of ethoxylated alkylphenols - Part 2: Indirect method - 11/9/2029, \$58.00

PROJECT COMMITTEE: ASSET MANAGEMENT (TC 251)

ISO/DIS 55000, Asset management - Overview, principles and terminology - 12/14/2012, \$77.00

ISO/DIS 55001, Asset management - Requirements - 12/14/2012, \$62.00

ISO/DIS 55002, Asset management - Guidelines on the application of ISO 55001 - 12/14/2012, \$88.00

TERMINOLOGY (PRINCIPLES AND COORDINATION) (TC 37)

ISO/DIS 13611, Interpreting - Guidelines for community interpreting - 12/2/2012, \$77.00

ISO/DIS 24617-4, Language resource management - Semantic annotation framework (SemAF) - Part 4: Semantic roles (SemAF-SRL) - 12/9/2012, FREE

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

ISO/DIS 11783-1, Tractors and machinery for agriculture and forestry - Serial control and communications data network - Part 1: General standard for mobile data communication - 12/14/2012, \$155.00

ISO/IEC JTC 1, Information Technology

ROAD VEHICLES (TC 22)

ISO/IEC CD 15118-3, Road vehicles - Vehicle to grid Communication Interface - Part 3: Physical and data link layer requirements - 12/4/2012, \$119.00



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>).

ISO/IEC JTC 1 Technical Reports

ISO/IEC TR 15026-1/Cor1:2012, Systems and software engineering - Systems and software assurance - Part 1: Concepts and vocabulary - Corrigendum 1, FREE

ISO/IEC TR 13066-3:2012, Information technology - Interoperability with assistive technology (AT) - Part 3: IAccessible2 accessibility application programming interface (API), \$104.00

ISO/IEC TR 29181-1:2012, Information technology - Future Network - Problem statement and requirements - Part 1: Overall aspects, \$110.00

ISO/IEC TR 29110-5-1-1:2012, Software engineering - Lifecycle profiles for Very Small Entities (VSEs) - Part 5-1-1: Management and engineering guide: Generic profile group: Entry profile, \$122.00

AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO 927/Cor1:2012, Spices and condiments - Determination of extraneous matter and foreign matter content - Corrigendum 1, FREE

AIRCRAFT AND SPACE VEHICLES (TC 20)

ISO 8843/Amd1:2012, Aircraft - Crimp-removable contacts for electrical connectors - Identification system - Amendment 1, \$16.00

DOCUMENTS AND DATA ELEMENTS IN ADMINISTRATION, COMMERCE AND INDUSTRY (TC 154)

ISO 14533-1:2012, Processes, data elements and documents in commerce, industry and administration - Long term signature profiles - Part 1: Long term signature profiles for CMS Advanced Electronic Signatures (CADES), \$86.00

ISO 14533-2:2012, Processes, data elements and documents in commerce, industry and administration - Long term signature profiles - Part 2: Long term signature profiles for XML Advanced Electronic Signatures (XAdES), \$86.00

EARTH-MOVING MACHINERY (TC 127)

ISO 6165:2012, Earth-moving machinery - Basic types - Identification and terms and definitions, \$73.00

MICROBEAM ANALYSIS (TC 202)

ISO 22029:2012, Microbeam analysis - EMSA/MAS standard file format for spectral-data exchange, \$65.00

PLASTICS (TC 61)

ISO 11403-2:2012, Plastics - Acquisition and presentation of comparable multipoint data - Part 2: Thermal and processing properties, \$57.00

PROJECT COMMITTEE: PROJECT MANAGEMENT (TC 236)

ISO 21500:2012, Guidance on project management, \$135.00

TERMINOLOGY (PRINCIPLES AND COORDINATION) (TC 37)

ISO 24616:2012, Language resources management - Multilingual information framework, \$141.00

ISO 24617-2:2012, Language resource management - Semantic annotation framework (SemAF) - Part 2: Dialogue acts, \$206.00

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

ISO 15886-3:2012, Agricultural irrigation equipment - Sprinklers - Part 3: Characterization of distribution and test methods, \$92.00

ISO Technical Reports

COMPRESSORS, PNEUMATIC TOOLS AND PNEUMATIC MACHINES (TC 118)

ISO/TR 12942:2012, Compressors - Classification - Complementary information to ISO 5390, \$157.00

ISO Technical Specifications

ISO/IEC TS 15504-8:2012, Information technology - Process assessment - Part 8: An exemplar process assessment model for IT service management, \$235.00

AGRICULTURAL FOOD PRODUCTS (TC 34)

ISO/TS 21569-2:2012, Horizontal methods for molecular biomarker analysis - Methods of analysis for the detection of genetically modified organisms and derived products - Part 2: Construct-specific real-time PCR method for detection of event FP967 in linseed and linseed products, \$65.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 19752/Cor1:2012, Information technology - Method for the determination of toner cartridge yield for monochromatic electrophotographic printers and multi-function devices that contain printer components - Corrigendum 1, FREE

ISO/IEC 19798/Cor1:2012, Method for the determination of toner cartridge yield for colour printers and multi-function devices that contain printer components - Corrigendum 1, FREE

- ISO/IEC 24711/Cor1:2012, Method for the determination of ink cartridge yield for colour inkjet printers and multi-function devices that contain printer components - Corrigendum 1, FREE
- ISO/IEC 8825-2/Cor2:2012, Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER) - Corrigendum 2, FREE
- ISO/IEC 9594-2/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Models - Corrigendum 2, FREE
- ISO/IEC 9594-2/Cor4:2012, Information technology - Open Systems Interconnection - The Directory: Models - Corrigendum 4, FREE
- ISO/IEC 9594-3/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Abstract service definition - Corrigendum 2, FREE
- ISO/IEC 9594-3/Cor4:2012, Information technology - Open Systems Interconnection - The Directory: Abstract service definition - Corrigendum 4, FREE
- ISO/IEC 9594-5/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Corrigendum 2, FREE
- ISO/IEC 9594-5/Cor3:2012, Information technology - Open Systems Interconnection - The Directory: Protocol specifications - Corrigendum 3, FREE
- ISO/IEC 9594-6/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Corrigendum 2, FREE
- ISO/IEC 9594-6/Cor4:2012, Information technology - Open Systems Interconnection - The Directory: Selected attribute types - Corrigendum 4, FREE
- ISO/IEC 9594-7/Cor1:2012, Information technology - Open Systems Interconnection - The Directory: Selected object classes - Corrigendum 1, FREE
- ISO/IEC 9594-7/Cor1:2012, Information technology - Open Systems Interconnection - The Directory: Selected object classes - Corrigendum 1, FREE
- ISO/IEC 9594-8/Cor2:2012, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks - Corrigendum 2, FREE
- ISO/IEC 9594-8/Cor4:2012, Information technology - Open Systems Interconnection - The Directory: Public-key and attribute certificate frameworks - Corrigendum 4, FREE
- ISO/IEC 14443-4/Amd2:2012, Identification cards - Contactless integrated circuit cards - Proximity cards - Part 4: Transmission protocol - Amendment 2: Bit rates of $fc/8$, $fc/4$ and $fc/2$, protocol activation of PICC Type A and frame size from 512 bytes to 4 096 bytes, \$16.00
- ISO/IEC 23003-1/Cor4:2012, Information technology - MPEG audio technologies - Part 1: MPEG Surround - Corrigendum 4, FREE
- ISO/IEC 23003-2/Cor1:2012, Information technology - MPEG audio technologies - Part 2: Spatial Audio Object Coding (SAOC) - Corrigendum 1, FREE
- ISO/IEC 23003-3/Cor1:2012, Information technology - MPEG audio technologies - Part 3: Unified speech and audio coding - Corrigendum 1, FREE
- ISO/IEC 23007-1/Amd1/Cor1:2012, Information technology - Rich media user interfaces - Part 1: Widgets - Amendment 1 - Corrigendum 1, FREE
- ISO/IEC 18051:2012, Information technology - Telecommunications and information exchange between systems - Services for Computer Supported Telecommunications Applications (CSTA) Phase III, \$235.00
- ISO/IEC 18052:2012, Information technology - Telecommunications and information exchange between systems - ASN.1 for Computer Supported Telecommunications Applications (CSTA) Phase III, \$235.00
- ISO/IEC 18056:2012, Information technology - Telecommunications and information exchange between systems - XML Schema Definitions for Computer Supported Telecommunications Applications (CSTA) Phase III, \$235.00

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

Administrative Reaccreditations

ASC B77 – Aerial Passenger Ropeways

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of Accredited Standards Committee B77, Aerial Passenger Ropeways has been administratively approved under its recently revised operating procedures for documenting consensus on ASC B77-sponsored American National Standards, effective September 11, 2012. For additional information, please contact the Secretariat of ASC B77: Mr. Sid Roslund, Director of Technical Services, National Ski Areas Association, 133 S. Van Gordon Street, Suite 300, Lakewood, CO 80228; phone: 720.963.4210; e-mail: sidr@nsaa.org.

Illuminating Engineering Society of North America (IES)

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of the Illuminating Engineering Society of North America (IES), an ANSI Organizational Member, has been administratively approved under its recently revised operating procedures for documenting consensus on IES-sponsored American National Standards, effective September 11, 2012. For additional information, please contact: Ms. Rita Harrold, Director of Technology, IES, 120 Wall Street, 17th Floor, New York, NY 10005; phone: 212.248.5000, ext. 115; e-mail: rharrold@ies.org.

ANSI Accreditation Program for Third Party Product Certification Agencies

Application for Product Certification Accreditation Program

BM TRADA Certification North America, Inc.

Comment Deadline: October 15, 2012

Applicant:

Mr. Mario Vieira, General Manager

BM TRADA Certification North America, Inc.
2001 Route 46 E, Waterview Plaza, Suite 310
Parsippany, NJ 07054
Phone: 973-434-7517
E-mail: mvieira@bmtradagroup.com
Web: www.bmtrada-usa.com

Certification body has submitted a formal application for accreditation by ANSI of the following scope(s) of this certification body:

Scopes:

Requirements for the SFI 2010-2014 Program

- Section 3 SFI Chain of Custody Standard
- Section 4 Rules for Use of SFI On-Product Labels
- Section 9 Appendix 1 Audits of Multi-site Organizations (Normative)

Please send your comments by October 15, 2012 to Reinaldo Balbino Figueiredo, Senior Program Director, Product Certifier Accreditation, American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036, Fax: 202-293 9287 or e-mail: rfigueir@ansi.org, or Nikki Jackson, Program Manager, Product Certifier Accreditation, American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036, Fax: 202-293 9287 or e-mail: njackson@ansi.org.

Meeting Notices

B11 Standards, Inc.

B11.16 (MPIF#47) Subcommittee

The B11.16 Subcommittee dealing with the safety requirements for powder metal presses and sponsored by the Metal Powder Industries Federation, will hold its next meeting on September 27-28, 2012 at the Sheraton in Niagara Falls, Ontario Canada. B11 Standards, Inc. is an ANSI-Accredited Standards Developing Organization on machine safety, and through a Memorandum of Understanding with both MPIF and ASC B11, the B11.16 Subcommittee develops a standard that deals with the safety requirements for powder / metal compacting presses.

The purpose of this meeting is to continue revision work on the 2003 (R09) American National Standard on machine safety. This meeting is open to anyone with an interest in machine safety, particularly as it relates to powder/metal compacting presses, and who wishes to participate in standards development.

If you have an interest in participating in this meeting or would like more information, please contact David Felinski at dfelinski@b11standards.org.

B11.26 Subcommittee

The B11.26 Subcommittee on safety control systems for machines and sponsored by the Secretariat (B11 Standards, Inc.), will hold a standards development meeting on October 22-23 in Elgin, IL.

The B11 is an ANSI Accredited Standards Committee on machine safety, and the purpose of this meeting is to begin revision work on ANSI B11.TR6. This meeting is open to anyone with an interest in safety and the safe use of machines, particularly as it relates to functional safety, and who wishes to participate in standards development.

If you have an interest in participating in this meeting or would like more information, please contact David Felinski at dfelinski@b11standards.org.

ASC S1 – Acoustics, S2 – Mechanical Vibration and Shock, S3 – Bioacoustics, S3/SC 1 – Animal Bioacoustics, and S12 – Noise, along with the U.S. Technical Advisory Groups for ISO/TC 43 – Acoustics, ISO/TC 43/SC 1 – Noise, ISO/TC 43/SC 3 – Underwater acoustics, ISO/TC 108 – Mechanical vibration, shock and condition monitoring, ISO/TC 108/SC 2 – Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles, and structures, ISO/TC 108/SC 3 – Use and calibration of vibration and shock measuring instruments, ISO/TC 108/SC 4 – Human exposure to mechanical vibration and shock, ISO/TC 108/SC 5 – Condition monitoring and diagnostics of machine systems, and IEC/TC 29 – Electroacoustics

Accredited Standards Committees, S1 Acoustics, S2 Mechanical Vibration and Shock, S3 Bioacoustics, S3/SC 1, Animal Bioacoustics, and S12 Noise, along with the U.S. Technical Advisory Groups for ISO/TC 43 Acoustics; ISO/TC 43/SC 1 Noise; ISO/TC 43/SC 3, Underwater acoustics, ISO/TC 108, Mechanical vibration, shock and condition monitoring, ISO/TC 108/SC 2, Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles, and structures; ISO/TC 108/SC 3, Use and calibration of vibration and shock measuring instruments; ISO/TC 108/SC 4, Human exposure to mechanical vibration and shock; ISO/TC 108/SC 5, Condition monitoring and diagnostics of machine systems; and IEC/TC 29 Electroacoustics, will meet on October 23-24, 2012, in conjunction with the 164th ASA Meeting, at the Kansas City Marriott Downtown Hotel, Kansas City, Missouri. All meetings are open to the public.

For additional information, including specific meeting times, please contact Susan Blaeser sblaeser@aip.org (631) 390-0215. Details regarding lodging, transportation, etc. can be found on the Acoustical Society of America's web site at <http://acousticalsociety.org>.



Revisions to AMD 100 – XX: *Structural Performance Ratings of Side-Hinged Exterior Door Systems and Procedures for Component Substitution*

All proposed revisions below are shown in underline / strike-out format. These revisions are based on comments found persuasive from June 2012 AMD 100 Consensus Body ballot and public comment period. For a complete copy of the draft standard, please visit the AMD website at:

<http://www.amdweb.com/codes-a-standards/amd-100>

Section 1 through Section 7.4 – No change

7. OVERVIEW

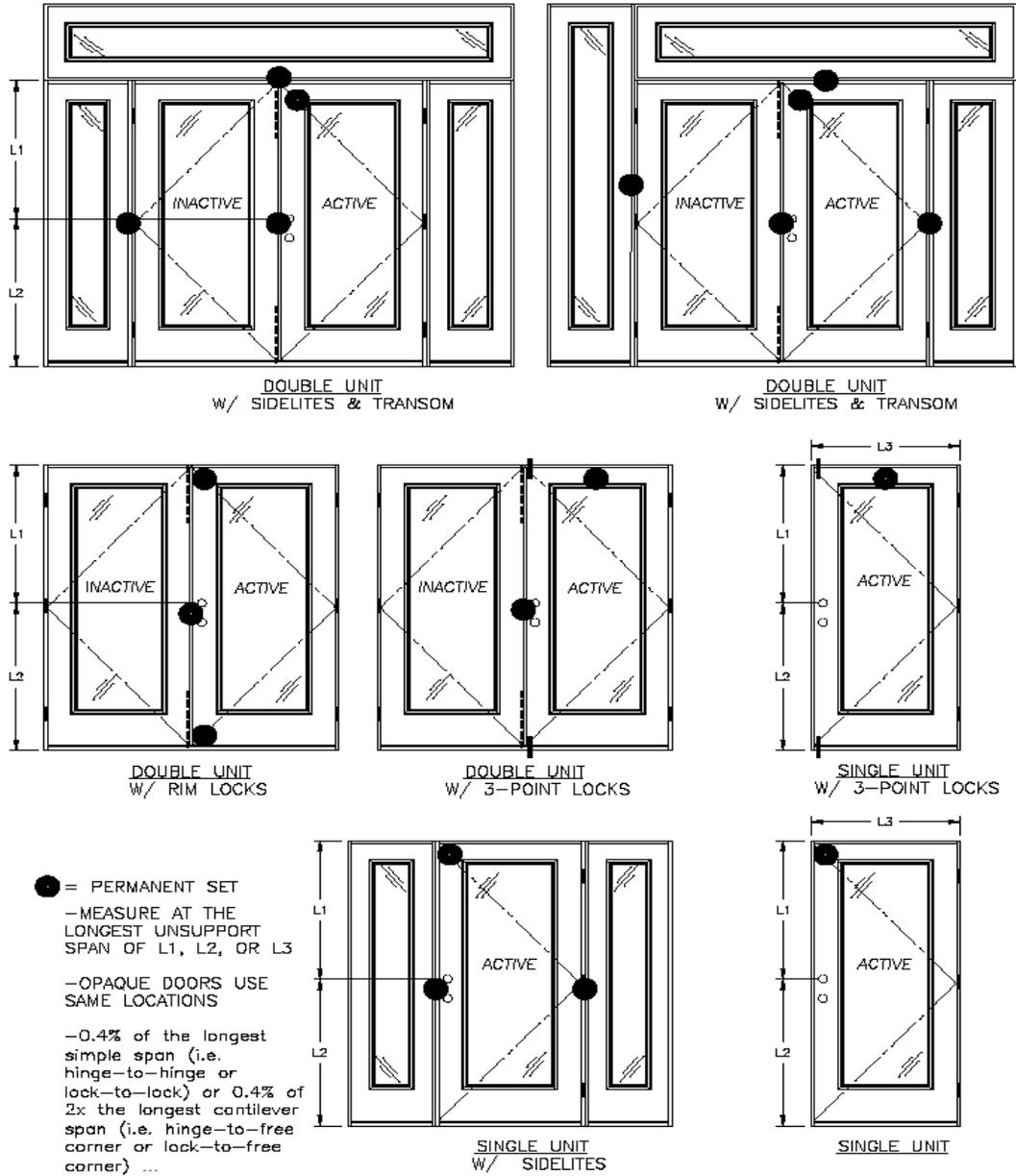
- 7.5 A component shall be permitted to be substituted into a rated door system if it has been tested in accordance with the procedures in this standard. ~~The resulting system shall adopt the lesser rating of the two tests. To maintain the rating of the originally rated door system, the rating of the door system with the~~ substituted component ~~performance level~~ shall be equal to the originally rated door system. Under no circumstance shall a component substitution change the rating or the originally rated door system, or higher than the rated system.

Section 7.6 through Section 8.4 – No change

8. RATED DOOR SYSTEMS

- 8.5 There shall be no permanent deformation of any main frame, panel member, astragal or mullion in excess of 0.4% of the longest simple span (i.e. hinge-to-hinge or lock-to-lock) or 0.4% of 2x the longest cantilever span (i.e. hinge-to-free corner or lock-to-free corner) ~~0.4% of the longest unsupported span~~ in both positive and negative directions. See Figure 8.1 for description of measurement locations. This is not an all-inclusive group of configurations.

Figure 8.1 - Permanent set measurement locations.



L:\Product Development\Deflection testing\PERMANENT SET-A.dwg, 8/29/2012 2:03:48 PM

Section 8.6 through Section 16.1.1 – No Change

16. LOCKSETS

16.1.2 Locksets shall be permitted to be substituted for locksets of the same type without testing if they meet the same grade as the existing rated lockset, as defined by one or more of the following standards: ANSI/BHMA A156.2, A156.6, A156.12, A156.13~~the applicable BHMA standard, as the existing, rated lockset.~~

Section 16.1.3 through Section 17D – No Change

17. REPORTING

17E. The slab stiffness as determined during the test of the assembly or component.

Section 17F through the end of the document – No Change



**BSR/ASHRAE Addendum ac
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ac to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (September 2012)
(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).

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BSR/ASHRAE Addendum ac to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

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FOREWORD

This addendum adds new zeotropic refrigerant R-444A 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 ac 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 = 444A
 Composition (Mass %) = R-32/152a/1234ze(E) (12.0/5.0/83.0)
 Composition tolerances = (±1.0/±1.0/±2.0)
 OEL = 850
 Safety Group = A2L
 RCL = 73,000 ppm v/v; 81 g/m³; 5.1 lb/Mcf
 Highly Toxic or Toxic Under Code Classification = Neither

TABLE D2 Data for Refrigerant Blends

Refrigerant Number = 444A
 Composition (Mass %) = R-32/152a/1234ze(E) (12.0/5.0/83.0)
 Average Molecular Mass = 96.7
 Bubble Point (°C) = -34.3
 Bubble Point (°F) = -29.7
 Dew Point (°C) = -24.3
 Dew Point (°F) = -11.7



**BSR/ASHRAE Addendum ad
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ad to Standard 34-2010, Designation and Safety Classification of Refrigerants

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FOREWORD

This addendum deletes the use of the potential formation of CF₄ in Section 6.1.3.5(a) for Heat of Combustion calculations, as this is not possible when working at stoichiometric concentrations in air. SO₃ is deleted from the sample calculation table in Appendix F. The units in Appendix F example calculations and table are changed from kcal/mol to kJ/mol or kJ/kg, to be consistent with the definition of Heat of Combustion in this standard.

[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 ad to 34-2010

Modify Section 6.1.3.5(a) and Appendix F of this standard:

6.1.3.5 The heat of combustion shall be calculated for conditions of 25°C (77°F) and 101.3 kPa (14.7 psia).

.....If there is insufficient hydrogen (H) available for the formation of HF(g), HCl(g), and H₂O(g), then the formation of HF(g) takes preference over the formation of HCl(g), which takes preference over the formation of H₂O. If there is insufficient hydrogen available for all of the fluorine (F) to form HF(g), then the remaining fluorine produces COF₂ (g) ~~or~~ ~~CF₄(g)~~ in preference of carbon (C) forming CO₂. Any remaining chloride (Cl) produces Cl₂ (g) (chlorine).

INFORMATIVE APPENDIX F— EXAMPLE CALCULATIONS FOR HEATS OF COMBUSTION

F1. REACTION STOICHIOMETRY FOR A REFRIGERANT BLEND

Consider the combustion of the mixture R-125/290 (45/ 55), which corresponds to a mole fraction ratio of (0.2311/ 0.7689). If the R-125 and R-290 were to burn individually, they would undergo the following reactions:



and



Taking $x = 0.2311$ (the mole fraction of R-125) and $y = 0.7689$ (the mole fraction of R-290), the mixture might be thought to undergo the following combustion reaction:



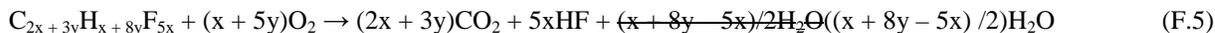
But Equation F.3 would be incorrect. Instead combine the atoms of the R-125 and R-290 into a hypothetical molecule:

BSR/ASHRAE Addendum ad to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

First Public Review Draft



This hypothetical molecule is then reacted with oxygen:



In comparing Equations F.3 and F.5, note that the products of combustion are different. There is no CF_4 or COF_2 formed in Equation F.5; instead, the hydrogen (H) from the R-290 combines with the fluorine (F) from the R-125 to form additional HF.

F2. HEAT OF COMBUSTION FOR A REFRIGERANT BLEND

The enthalpy of formation of the hypothetical blend molecule is the mole-fraction weighted average of the components:

$$\begin{aligned} \Delta h_f(\text{blend}) &= x\Delta h_f(\text{R125}) + y\Delta h_f(\text{R290}) = 0.2311 (-264.0 \text{ kcal} - 1104.58 \text{ kJ/mol}) + 0.7689 (-25.02 \text{ kcal} - 104.70 \text{ kJ/mol}) \\ &= -80.25 \text{ kcal} - 335.77 \text{ kJ/mol} \end{aligned} \quad (F.6)$$

The heat of combustion is the enthalpy of formation of the reactants (refrigerant and oxygen) minus the enthalpy of formation of the products of reaction:

$$\begin{aligned} \Delta h_{\text{combustion}} &= \sum \Delta h_f(\text{reactants}) - \sum \Delta h_f(\text{products}) \\ &= \{ \Delta h_f(C_{2x+3y}H_{x+8y}F_{5x}) + (x+5y)\Delta h_f(O_2) \} - \{ (2x+3y)\Delta h_f(CO_2) + (5x)\Delta h_f(HF) + (x+8y-5x)/2\Delta h_f(H_2O) \} \\ &= \{ -80.25 + [0.2311 + 5(0.7689)][O] \} - \{ [2(0.2311) + 3(0.7689)][94.05] + [5(0.2311)][65.32] + [2(0.2311) + 4(0.7689)][57.80] \} = 406.70 \text{ kcal/mol} \\ &= \frac{-335.77 + [0.2311 + 5(0.7689)][O] - \{ [2(0.2311) + 3(0.7689)][-393.51] + 5(0.2311)[-273.30] + (0.5)[0.2311 + 8(0.7689) - 5(0.2311)][-241.83] \}}{1} = 1701.6 \text{ kJ/mol} \end{aligned} \quad (F.7)$$

Note that the enthalpy of formation of any element (e.g., O_2) in its normal state at 25°C (77°F) is zero, by definition. Sample enthalpies of formation are shown in Table F1.

TABLE F1 Sample Enthalpies of Formation

Refrigerant	Enthalpy of Formation, kcal/mol kJ/mol	
CO ₂ (g)	-94.05	-393.51
H ₂ O (g)	-57.796	-241.83
HF (g)	-65.32	-273.30
HCl (g)	-22.06	-92.31
HI(g)	-6.33	26.50
HBr(g)	-8.69	-36.29
SO ₂ (g)	-70.94	-296.81
SO ₃ (g)	-105.41	
CF ₄ (g)	-223.0	-930.00
CF ₂ O COF ₂ (g)	-152.7	-638.90
COCl ₂ (g)	-52.32	-220.08
R-290 (g)	-25.02	-104.70
R-125 (g)	-264.0	-1104.58



**BSR/ASHRAE Addendum ae
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

Proposed Addendum ae to Standard 34-2010, Designation and Safety Classification of Refrigerants

**First Public Review (September 2012)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum ae to ANSI/ASHRAE Standard 34-2010, *Designation and Safety Classification of Refrigerants*

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FOREWORD

This addendum changes the flammability safety classification from Class 2 to Class 1 for R30 in Table 1, as published data show that at 60°C R30 is nonflammable at 1 atm. pressure.

[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 ae to 34-2010

Change the following safety classification for R30 in Table 1:

TABLE 1 Refrigerant Data and Safety Classifications

Refrigerant Number	Chemical Name^{a,b}	Chemical Formula^a	Safety Group
30	dichloromethane (methylene chloride)	CH ₂ Cl ₂	B2 <u>B1</u>



**BSR/ASHRAE Addendum af
to ANSI/ASHRAE Standard 34-2010**

First Public Review Draft

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FOREWORD

This addendum changes the RCL values for R402A, R415A, R415B, R418A, and R419A in Table 2 of Standard 34-2010, due to prior errors in the flammability properties for these refrigerants.

[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 af to 34-2010

Change the RCL values for the following refrigerants in Table 2:

TABLE 2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number	Composition (Mass %)	Composition Tolerances	RCL ^a		
			(ppm v/v)	(g/m ³)	(lb/Mcf)
402A	R-125/290/22 (60.0/2.0/38.0)	(±2.0/+0.1,-1.0/±2.0)	33,000 <u>66,000</u>	140 <u>270</u>	8.5 <u>17</u>
415A	R-22/152a (82.0/18.0)	(±1.0/±1.0)	57,000 <u>14,000</u>	190 <u>47</u>	12 <u>2.9</u>
415B	R-22/152a (25.0/75.0)	(±1.0/±1.0)	52,000 <u>12,000</u>	120 <u>34</u>	9.3 <u>2.1</u>
418A	R-290/22/152a (1.5/96.0/2.5)	(±0.5/±1.0/±0.5)	59,000 <u>22,000</u>	200 <u>77</u>	13 <u>4.8</u>
419A	R-125/134a/E170 (77.0/19.0/4.0)	(±1.0/±1.0/±1.0)	70,000 <u>15,000</u>	310 <u>67</u>	19 <u>4.2</u>



**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**

**First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE Addendum m to ANSI/ASHRAE Standard 62.1-2010, *Ventilation and Acceptable Indoor Air Quality*
First Public Review Draft

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FOREWORD

This proposed addendum adds 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 standard is widely recognized for HVAC&R system balancing.

[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 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 AABC's National Standards for Total System Balance,^{xx} SMACNA's HVAC Systems—Testing, Adjusting and Balancing,²² or equivalent at least to the extent necessary to verify conformance with the total outdoor airflow and space supply airflow requirements of this standard.

Add a new reference to Section 9:

9. References

^{xx} National Standards for Total System Balance, 6th edition, 2002. Associated Air Balance Council (AABC), Washington, DC.



**BSR/ASHRAE Addendum n
to ANSI/ASHRAE Standard 62.1-2010**

Public Review Draft

**Proposed Addendum n to
Standard 62.1-2010, Ventilation for
Acceptable Indoor Air Quality**

**First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)**

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

BSR/ASHRAE Addendum n to ANSI/ASHRAE Standard 62.1-2010, *Ventilation and Acceptable Indoor Air Quality*
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 increases the filter requirements from MERV 6 to MERV 8. This will reduce the potential for particulate deposition on cooling coils that could lead to biological or other contamination on the coils. In addition, it brings the requirement inline with ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green Buildings.

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Addendum n to 62.1-2010

Modify Section 5.8 as follows:

5.8 Particulate Matter Removal. Particulate matter filters or air cleaners having a minimum efficiency reporting value (MERV) of not less than ~~8~~6 when rated in accordance with ANSI/ASHRAE Standard 52.2¹⁵ shall be provided upstream of all cooling coils or other devices with wetted surfaces through which air is supplied to an occupiable space.



**BSR/ASHRAE Addendum v
to ANSI/ASHRAE Standard 62.2-2010**

Public Review Draft

**Proposed Addendum v to
Standard 62.2-2010, Ventilation and
Acceptable Indoor Air Quality in
Low-Rise Residential Buildings**

**First Public Review (August 2012)
(Draft shows Proposed Changes to Current Standard)**

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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

BSR/ASHRAE Addendum v to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*
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FOREWORD

The SSPC has had comments from users of the Standard, especially Addendum n, that they did not understand which height was to be used when calculating the Normalized Leakage. This proposed change would clarify the intent of the Standard on how to calculate the building height.

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Addendum v to 62.2-2010

Modify the definition for height in the terms of Equation 4.5 in Section 4.1.2 as shown below. This change includes text published in Addendum n to Standard 62.2-2010 currently available for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. There are no changes to the remainder of Section 4.1.2.

...

Normalized Leakage. *Normalized leakage shall be calculated using Equation 4.5:*

$$NL = 1000 \cdot \frac{ELA}{A_{floor}} \cdot \left[\frac{H}{H_r} \right]^z \quad (4.5)$$

where

NL = Normalized leakage

H_r = Reference height, (8.2 ft) [2.5 m]

H = Vertical distance between the lowest and highest above-grade points within the pressure boundary, (ft)
[m] ~~Vertical distance from lowest above-grade floor to highest ceiling, (ft) [m]~~

z = 0.4 for the purpose of calculating the effective annual average infiltration rate below

...



**BSR/ASHRAE Addendum w
to ANSI/ASHRAE Standard 62.2-2010**

Public Review Draft

Proposed Addendum w to Standard 62.2-2010, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

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BSR/ASHRAE Addendum w to ANSI/ASHRAE Standard 62.2-2010, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*
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FOREWORD

As currently written, the standard provides prescriptive combustion safety requirements making assumptions about house airtightness. This proposed addendum provides additional performance-based combustion safety testing options that allow for the range of house characteristics to be accounted for regarding combustion safety. Additionally, this proposed addendum alters the language to make it clear that appliance installation must be to code, but that existing appliances do not have to be brought up to current code in order to comply with the standard.

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Addendum w to 62.2-2010

Modify Section 6.4 as follows:

6.4 Combustion and Solid-Fuel Burning Appliances.

6.4.1 Installation of New Equipment. ~~€~~Newly-Installed combustion and solid-fuel burning appliances must be provided with adequate combustion and ventilation air and vented in accordance with manufacturers' installation instructions, *NFPA 54/ANSI Z223.1, National Fuel Gas Code*,³ *NFPA 31, Standard for the Installation of Oil-Burning Equipment*,⁴ or *NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid-Fuel Burning Appliances*,⁵ or other equivalent code acceptable to the building official.

6.4.2 Combustion Safety. Where atmospherically or induced-draft vented combustion appliances or solid-fuel burning appliances are located inside the pressure boundary, one of the two following combustion safety measures must be performed.

6.4.2.1 Prescriptive Approach. ~~€~~The total net exhaust flow of the two largest exhaust fans (not including a summer cooling fan intended to be operated only when windows or other air inlets are open) shall not exceed 15 cfm/100 ft² (75 Lps/100 m²) of occupiable space when in operation at full capacity. If the designed total net flow exceeds this limit, the net exhaust flow must be reduced by reducing the exhaust flow or providing compensating outdoor airflow. ~~Atmospherically vented combustion appliances do not include direct vent appliances.~~

6.4.2.2 Performance Approach. Combustion safety testing shall be done under worst-case conditions as determined by the BPI Building Analyst Professional Standard or a method approved by the AHJ. Combustion safety tests shall include spillage and draft testing.



**BSR/ASHRAE/ASHE Addendum k
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum k to
Standard 170-2008, Ventilation of
Health Care Facilities**

**Second Public Review (July 2012)
(Draft shows Proposed Changes to Current Standard)**

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BSR/ASHRAE/ASHE Addendum k to ANSI/ASHRAE/ASHE Standard 170-2008, Ventilation of Health Care Facilities
Second Public Review Draft

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FOREWORD

The proposed addendum clarifies the requirement that “all” room air be exhausted directly to the outdoors and provides limitations as to the reuse of exhaust air for energy recovery.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (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 k to 170-2008

Add the following new Section 6.8.

6.8 Energy Recovery Systems.

6.8.1 General. Energy recovery systems shall be located upstream of Filter Bank Number 2. If energy recovery systems are utilized, the systems shall not allow for any amount of cross-contamination of exhaust air back to the supply airstream via purge, leakage, carryover, or transfer except as allowed in 6.8.3.

6.8.2 Airborne Infectious Isolation Room Exhaust Systems. Airborne Infectious Isolation Room exhaust systems serving AII rooms or combination AII/PE rooms shall not be utilized for energy recovery.

Exception: Airborne infectious isolation room exhaust systems serving AII rooms or combination AII/PE rooms may be served by an energy recovery system where the supply airstream components and the exhaust airstream components are fully separated by an air gap of adequate distance to prevent cross-contamination which is open to the atmosphere (e.g. run-around pumped coils).

6.8.3 Energy Recovery Systems With Leakage Potential. If energy recovery systems with leakage potential are utilized, they shall be arranged to minimize the potential to transfer exhaust air directly back into the supply airstream. Energy recovery systems with leakage potential shall be designed to have no more than 5% of the total supply airstream consisting of exhaust air. Energy recovery systems with leakage potential shall not be utilized from these exhaust airstream sources: ER waiting rooms, Triage, ER decontamination, Radiology waiting rooms, Darkroom, Bronchoscopy sputum collection and pentamidine administration, Laboratory fume hood and other directly ducted laboratory equipment exhaust, Waste Anesthesia Gas Disposal, Autopsy, Nonrefrigerated body holding, Endoscope cleaning, Central Medical and Surgical Supply Soiled or decontamination room, Laundry general, Hazardous material storage, Dialyzer reprocessing room, Nuclear medicine hot lab, Nuclear medicine treatment room, and any other space identified by the *Authority Having Jurisdiction* or the ICRA team.



**BSR/ASHRAE/ASHE Addendum n
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

**Proposed Addendum n to
Standard 170-2008, Ventilation of
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BSR/ASHRAE/ASHE Addendum n to ANSI/ASHRAE/ASHE Standard 170-2008, Ventilation of Health Care Facilities
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FOREWORD

This addendum proposes clarifying requirements for the calculation of outside air quantities for air handling systems. This proposed addendum provides designers with two alternative calculation pathways. The Project Committee considers that these multiple methods affords flexibility to a designer as appropriate to the varying system sizes and objectives that are involved in the outdoor air calculation process. As this Standard provides specific guidance on the type of supply air outlets that shall be utilized in the varied healthcare environments, as indicated in Table 6-2, the committee has determined that the minimum outdoor air change rates indicated in Table 7-1 represent the Zone Outdoor Airflow, (thus defining the Zone Air Distribution Effectiveness for these spaces at 1.0 and factored into the determination of these total and outdoor air change rates) as may be needed for use in calculations defined by this addendum including the Ventilation Rate Procedure of ASHRAE Standard 62.1.

[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 n to 170-2008

Revise the Standard as follows (I-P and SI units). Not all the subparagraphs of 7.1 are shown. Subparagraph 7.1 was previously revised in Addendum h which modified subparagraph c and added subparagraphs d. and e. Addendum h is published for free on the ASHRAE website at <http://www.ashrae.org/technology/page/132>.

7.1 General Requirements. The following general requirements shall apply for space ventilation:

1. Spaces shall be ventilated according to Table 7-1.

...

f. For air handling systems serving multiple spaces, system minimum outdoor air quantity shall be calculated utilizing one of the following methods:

1) System minimum outdoor air quantity for an air handling system shall be calculated as the sum of the individual space requirements as defined by this Standard.

2) System minimum outdoor air quantity shall be calculated by the Ventilation Rate Procedure (Multiple Zone Formula) of ASHRAE Standard 62.1.^{XX} The Minimum Outdoor Air Change Rate listed in this Standard shall be interpreted as the V_{oz} (Zone Outdoor Airflow) for purposes of this calculation.

...

Add the following reference to Section 9.

9. Normative References

^{XX}ANSI/ASHRAE Standard 62.1-2010, *Ventilation for Acceptable Indoor Air Quality*, ASHRAE, Atlanta, GA.



**BSR/ASHRAE/ASHE Addendum v
to ANSI/ASHRAE/ASHE Standard 170-2008**

Public Review Draft

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FOREWORD

The proposed addendum provides clarification concerning design relative humidity requirements for spaces whose function is recovery. Addendum d noted that based on recent research, a reduction in the lower limit of the design humidity range for eight spaces designed for short term patient stays was warranted. Addendum t recognizes the applicability of that research to the clinical use of spaces whose function is recovery which are also designed for short term patient stays. This proposed change reduces the lower design humidity limit from 30% to 20% RH to match that of those spaces noted in Addendum d to Standard 170-2008 currently published and posted for free on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>.

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Addendum v to 170-2008

Revise Table 7-1 as follows (I-P and SI units). Table 7-1 column headers were previously revised in Addendum b to Standard 170-2008 currently published and posted on the ASHRAE website at <http://www.ashrae.org/standards-research--technology/standards-addenda>. See the Standard for the remaining portions of Table 7-1 and other footnotes not repeated here.

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 RH (k), (%)	Design Temperature (l), (°F/°C)
		Outdoor ach	Total ach				
SURGERY AND CRITICAL CARE							
Recovery room	N/R	2	6	N/R	No	20 30-60	70-75/21-24

BSR/ASHRAE/IES/USGBC Addendum
h to ANSI/ASHRAE/USGBC/IES
Standard 189.1-2011

Public Review Draft

Proposed Addendum h to Standard 189.1-2011 Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

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FOREWORD

This addendum clarifies the requirements for a continuous air barrier in section 7 of the standard as well as the requirements for airtightness commissioning in section 10. As part of these changes, the addendum replaces the definition for a continuous air barrier with the definition from Standard 90.1, which is clearer than the existing definition. The requirement for a continuous air barrier currently contained in 7.4.2.9 is deleted since the reference to Standard 90.1 (section 5.4) under the mandatory requirements in 7.3 already includes such a requirement. However, a new section is added under 7.3.1 to modify the continuous air barrier requirement in Standard 90.1 by not allowing the exceptions to the requirement in Standard 90.1. These exceptions are not allowed in order to make the requirement more demanding, consistent with the higher performance objectives of Standard 189.1 relative to Standard 90.1. Appendix B is removed since that material is already required by reference to Standard 90.1 and to reflect the addition of a new commissioning requirement in Section 10. That commissioning can be done in two ways, either a whole building pressurization test to demonstrate a level of airtightness consistent with the value in the Army Corps of Engineers requirement, or a comprehensive air barrier commissioning program.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 h to 189.1-2011

Modify Section 3.2 as follows:

continuous air barrier: ~~the combination of interconnected materials, assemblies, and flexible sealed joints and components of the building envelope that provide airtightness to a specified permeability. (See *building envelope*.)~~ see ANSI/ASHRAE/IES Standard 90.1

Insert the following new Section 7.3.1.1 as follows:

7.3.1.1 Continuous Air Barrier. The exceptions to the requirement for a *continuous air barrier* in section 5.4.3.1 of ANSI/ASHRAE/IES Standard 90.1 for specific climate zones and constructions shall not apply.

BSR/ASHRAE/USGBC/IES Addendum h to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings
First Public Review Draft

Delete Section 7.4.2.9:

~~**7.4.2.9 Continuous Air Barrier.** The *building envelope* shall be designed and constructed with a *continuous air barrier* that complies with Normative Appendix B to control air leakage into, or out of, the *conditioned space*. All air barrier components of each envelope assembly shall be clearly identified on construction documents and the joints, interconnections, and penetrations of the air barrier components shall be detailed.~~

~~**Exception:** *Building envelopes of semiheated spaces* provided that the *building envelope* complies with Section 5.4.3.1 of ANSI/ASHRAE/IES Standard 90.1.~~

Modify Section 10.3.1.2 as follows, adding a new section 10.3.1.2.5 and renumbering the current section 10.3.1.2.5 as 10.3.1.2.6:

10.3.1.2.4 Systems. The following systems, if included in the *building project*, shall be commissioned:

- a. Heating, ventilating, air-conditioning, ~~IAQ~~, and refrigeration systems (mechanical and/or passive) and associated controls. Control sequences to be verified for compliance with construction documentation as part of *verification*.
- b. *Building envelope* systems, components, and assemblies to verify the airtightness, thermal and moisture integrity. *Building envelope* airtightness commissioning shall also comply with Section 10.3.1.2.5.
- ~~c. *Building envelope* pressurization to confirm air tightness if included in *BOD* requirements.~~
- ~~d.~~ Lighting systems.
- ~~e.~~ Fenestration control systems: Automatic controls for shading devices and *dynamic glazing*.
- ~~f.~~ Irrigation.
- ~~g.~~ Plumbing.
- ~~h.~~ Domestic and process water pumping and mixing systems.
- ~~i.~~ *Service water heating* systems.
- ~~j.~~ Renewable energy systems.
- ~~k.~~ Water measurement devices, as required in Section 6.3.3.
- ~~l.~~ Energy measurement devices, as required in Section 7.3.3.

10.3.1.2.5 Building Envelope Airtightness: Building envelope airtightness shall comply with one of the following:

1. Whole building pressurization testing shall be conducted in accordance with ASTM E779, CAN/CGSB-149.10-M86, CAN/CGSB-149.15-96 or equivalent. The measured air leakage rate of the *building envelope* shall not exceed 0.25 cfm/ft^2 ($2.0 \text{ L/s}\cdot\text{m}^2$) under a pressure differential of 0.3 in. water (75 Pa), with this air leakage rate normalized by the sum of the above and below grade *building envelope* areas of the *conditioned* and *semiheated space*
2. An air barrier commissioning program consistent with generally accepted engineering standards that consists of the following elements shall be implemented:

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- a. A third party design review shall be conducted and documented to assess the design documentation describing the air barrier systems and materials, the manner in which continuity will be maintained across joints between air barrier components and at all envelope penetrations, and the constructability of the air barrier systems; and
- b. Incremental field inspection and testing of air barrier components shall be conducted and documented during construction to ensure proper construction of key components while they are still accessible for inspection and repair

10.3.1.2.56 Documentation. *Owner* shall retain the System Manual and Final Commissioning Report.

Modify Section 11 by inserting the following new text:

Canadian General Standards Board
Place du Portage III, 6B1
11 Laurier Street
Gatineau, Quebec □ K1A 1G6
Canada
819-956-0425
<http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/index-eng.html>

CAN/CGSB 149.10-M86 Determination of the Airtightness of Building Envelopes by the Fan Depressurization Method

CAN/CGSB 149.15-96 Determination of the Overall Envelope Airtightness of Buildings by the Fan Pressurization Method Using the Building's Air Handling Systems

Delete Appendix B as follows:

~~NORMATIVE APPENDIX B~~
~~PRESCRIPTIVE CONTINUOUS AIR BARRIER~~

~~B1. CHARACTERISTICS~~

~~The *continuous air barrier* shall have the following characteristics:~~

- a. ~~It shall be continuous throughout the envelope (at the lowest *floor*, exterior *walls*, and ceiling or *roof*), with all joints and seams sealed and with sealed connections between all transitions in planes and changes in materials and at all penetrations.~~
- b. ~~The air barrier component of each assembly shall be joined and sealed in a flexible manner to the air barrier component of adjacent assemblies, allowing for the relative movement of these assemblies and components.~~
- c. ~~It shall be capable of withstanding positive and negative combined design wind, fan, and stack pressures on the air barrier without damage or displacement, and shall transfer the load to the structure. It shall not displace adjacent materials under full load.~~

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- d. ~~It shall be installed in accordance with the manufacturer's instructions and in such a manner as to achieve the performance requirements.~~
- e. ~~Where lighting fixtures with ventilation holes or other similar objects are to be installed in such a way as to penetrate the continuous air barrier, provisions shall be made to maintain the integrity of the continuous air barrier.~~

Exception: ~~Buildings that comply with (c) below are not required to comply with either (a) or (e) above.~~

B2. COMPLIANCE

~~Compliance of the continuous air barrier for the opaque building envelope shall be demonstrated by one of the following:~~

- a. **Materials.** ~~Using individual materials that have an air permeability not to exceed 0.004 cfm/ft² under a pressure differential of 0.3 in. water (1.57 lb/ft²) (0.02 L/s·m² under a pressure differential of 75 Pa) when tested in accordance with ASTM E2178. These materials comply with this requirement when all joints are sealed and the above section on characteristics are met:~~
 - 1. ~~Plywood—minimum 3/8 in. (10 mm)~~
 - 2. ~~Oriented strand board—minimum 3/8 in. (10 mm)~~
 - 3. ~~Extruded polystyrene insulation board—minimum 3/4 in. (19 mm)~~
 - 4. ~~Foil back urethane insulation board—minimum 3/4 in. (19 mm)~~
 - 5. ~~Exterior or interior gypsum board—minimum 1/2 in. (12 mm)~~
 - 6. ~~Cement board—minimum 1/2 in. (12 mm)~~
 - 7. ~~Built up roofing membrane~~
 - 8. ~~Modified bituminous roof membrane~~
 - 9. ~~Fully adhered single ply roof membrane~~
 - 10. ~~A Portland cement/sand parge, or gypsum plaster minimum 5/8 in. (16 mm) thick~~
 - 11. ~~Cast in place and precast concrete~~
 - 12. ~~Fully grouted concrete block masonry~~
 - 13. ~~Sheet steel~~
- b. **Assemblies.** ~~Using assemblies of materials and components that have an average air leakage not to exceed 0.04 cfm/ft² under a pressure differential of 0.3 in. water (1.57 lb/ft²) (0.2 L/s·m² under a pressure differential of 75 Pa) when tested in accordance with ASTM E2357 or ASTM E1677. These assemblies comply with this requirement when all joints are sealed and the above section on characteristics are met:~~
 - 1. ~~Concrete masonry walls coated with:~~
 - a. ~~one application of block filler and two applications of a paint or sealer coating, or~~
 - b. ~~a Portland cement/sand parge, stucco or plaster minimum 1/2 in. (12 mm) thick.~~
- c. **Building.** ~~Testing the completed building and demonstrating that the air leakage rate of the building envelope does not exceed 0.4 cfm/ft² under a pressure differential of 0.3 in. water~~

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~~(1.57 lb/ft²) (2.0 L/s·m² under a pressure differential of 75 Pa) in accordance with ASTM E779 or an equivalent approved method.~~

Modify Informative Appendix G by adding the following standard under ASTM:

ASTM E2813 Standard Practice for Building Enclosure Commissioning

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to ANSI/ASHRAE/USGBC/IES Standard
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FOREWORD

This addendum modifies the climate zones to which the heat island section on roofs (5.3.2.3) applies. Climate zone 4 was added to this list after review of a definitive paper from Lawrence Berkeley National Lab published in 2009 by Ronnen Levinson and Hashem Akbari. This paper identified the building energy (heating and cooling) impacts of “cool roofs” for several different building types in 236 cities around the U.S., and also included a summary of the associated environmental impacts (CO₂, NO_x, So₂ and Hg) and net cost benefits for changes in the energy consumption. Benefits of including cool roofs on buildings tend to outweigh the negative consequences in many regions in the country, with variations based on energy costs and regional variations in methods for producing electricity. For example, the paper cited above found that cool roofs in West Virginia may result in annual net energy cost savings of about \$0.0117 per square foot of roof area. ~~Based on this, it~~ It is apparent that including climate zone 4 in the roof requirements will also offers benefits help mitigate the “daytime urban heat island” by making cities cooler in summer. Cooler outside air improves air quality by slowing the temperature-dependent formation of smog.

Reference: Levinson and Akbari, 2009. “Potential benefits of cool roofs on commercial buildings: conserving energy, saving money, and reducing emission of greenhouse gases and air pollutants” Energy Efficiency (2010) 3:53–109. DOI 10.1007/s12053-008-9038-2.

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Addendum i to 189.1-2011

Modify the first paragraph in Section 5.3.2.3 Roofs as follows:

5.3.2.3 Roofs. This section applies to the building and covered parking *roof* surfaces for *building projects* in climate zones 1, 2, and 3 through 4. A minimum of 75% of the entire *roof* surface not used for *roof* penetrations and associated equipment, *on-site renewable energy systems* such as photovoltaics or solar thermal energy collectors including necessary space between rows of panels or collectors, portions of the roof used to capture heat for building energy technologies, rooftop decks or walkways, or vegetated (green) roofing systems shall be covered with products that comply with one or more of the following:

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FOREWORD

This addendum clarifies shading provided by vegetation for the site hardscape and walls for heat island mitigation (5.3.2.1 and 5.3.2.2). The modification requires the planting of vegetation either prior to the issuance of the certificate of occupancy or a contract established that requires planting no later than 12 months after the final approval by the AHJ, so that required shade is provided within ten years.

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 j to 189.1-2011

Modify Sections 5.3.2.1 and 5.3.2.2 as follows:

5.3.2 Mitigation of Heat Island Effect

5.3.2.1 Site Hardscape. ~~For the purposes of this section, the *site hardscape* includes roads, sidewalks, courtyards, and parking lots but does not include the constructed building surfaces and not nor any portion of the *site hardscape* covered by photovoltaic panels generating electricity or other *solar energy systems* used for space heating or water heating.~~ At least 50% of the *site hardscape* that is not covered by *solar energy systems* shall be provided with one or any combination of the following:

- a. existing trees and vegetation or new *bio-diverse plantings of native plants and adapted plants* ~~located~~ shall be planted prior to the final approval by the AHJ or a contract shall be established that requires planting no later than 12 months after the final approval by the AHJ so as to provide the required shade no later than within ten years after of the final approval certificate of occupancy. The effective shade coverage on the *hardscape* shall be the arithmetic mean of the shade coverage calculated at 10 a.m., noon, and 3 p.m. on the summer solstice.
- b. paving materials with a minimum initial *SRI* of 29. A default *SRI* value of 35 for new concrete without added color pigment is allowed to be used instead of measurements.
- c. *open-graded (uniform-sized) aggregate, permeable pavement, permeable pavers, and porous pavers (opengrid pavers)*. *Permeable pavement* and *permeable pavers* shall have a percolation rate of not less than 2 gal/ min·ft² (100 L/min·m²).
- d. shading through the use of structures, provided that the top surface of the shading structure complies with the provisions of Section 5.3.2.3.

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- e. parking under a building, provided that the *roof* of the building complies with the provisions of Section 5.3.2.3.
- f. buildings or structures that provide shade to the *site hardscape*. The effective shade coverage on the *hardscape* shall be the arithmetic mean of the shade coverage calculated at 10 a.m., noon, and 3 p.m. on the summer solstice.

Exception: Section 5.3.2.1 shall not apply to *building projects* in *climate zones* 6, 7, and 8.

5.3.2.2 Walls. Above-grade building *walls* and retaining *walls* shall be shaded in accordance with this section. The building is allowed to be rotated up to 45 degrees to the nearest cardinal orientation for purposes of calculations and showing compliance. Compliance with this section shall be achieved through the use of shade-providing *plants*, man-made structures, existing buildings, hillsides, permanent building projections, *on-site renewable energy systems* or a combination of these, using the following criteria:

- a. shade shall be provided on at least 30% of the east and west above-grade *walls* and retaining *walls* from grade level to a height of 20 ft (6 m) above grade or the top of the exterior *wall*, whichever is less, ~~within five years of issuance of the final certificate of occupancy.~~ Shade coverage shall be calculated at 10 a.m. for the east *walls* and 3 p.m. for the west *walls* on the summer solstice.
- b. where shading is provided by vegetation, such vegetation (~~including trees~~) shall be existing trees and vegetation or new *bio-diverse plantings* of *native plants* and *adapted plants*. Such planting shall occur prior to the final approval by the AHJ or a contract established that requires planting no later than 12 months after the final approval by the AHJ so as to provide the required shade no later than ten years after the final approval. Vegetation shall be and appropriately sized, selected, planted, and maintained so that they do not interfere with overhead or underground utilities. ~~Such~~ Trees shall be placed a minimum of 5 ft (1.5 m) from and within 50 ft (15 m) of the building or retaining *wall*.

Exceptions:

1. The requirements of this section are satisfied if 75% or more of the opaque *wall* surfaces on the east and west have a minimum *SRI* of 29. Each *wall* is allowed to be considered separately for this exception.
2. East *wall* shading is not required for buildings located in *climate zones* 5, 6, 7, and 8. West *wall* shading is not required for buildings located in *climate zones* 7 and 8.

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FOREWORD

This proposal updates the Section 7.4.3.7, which was written to reference the language in ASHRAE/ANSI/IES Standard 90.1-2007. The proposed Section 7.4.3.7 references ASHRAE/ANSI/IES Standard 90.1-2010 and supersedes 6.5.7.1.3 and 6.5.7.1.4 of Standard 90.1-2010 as follows.

1. *Added sections 7.4.3.7.1 and 7.4.3.7.2 reduce the threshold in Sections 6.5.7.1.3 and 6.5.7.1.4 of ASHRAE/ANSI/IES Standard 90.1-2010 from 5,000 cfm to 2,000 cfm to cover small kitchen/dining facilities.*
2. *Added note (a) under Table 7.4.3.7 limits the single-island hood to be no more than 5000 cfm in a kitchen/dining facility since this hood type is less efficient than other types. ASHRAE Research Project RP-1480 confirmed that single-island canopy hoods need significantly higher exhaust airflow rates than their wall-mounted counterparts to effectively ventilate cooking equipment for any given duty class.*
3. *Added 7.4.3.7.2b modifies option (b) in Section 6.5.7.1.4 of ASHRAE/ANSI/IES Standard 90.1-2010 to provide kitchen occupants minimum ventilation and maintain a safe environment in the event of a hood control failure.*
4. *Added 7.4.3.7.2d adds an additional option to meet Section 6.5.7.1.4 of ASHRAE/ANSI/IES Standard 90.1-2010.*
5. *Modified D1.1.5 updates NORMATIVE APPENDIX D section D1.1.5 to reflect the change in prescriptive requirements.*

The texts in Sections 6.5.7.1.3, and 6.5.7.1.4 of Standard 90.1-2010 are moved to Section 7.4.3.7 for the convenience of the readers, and editorial changes are made for clarification.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 k to 189.1-2011

Modify Section 3 definitions as follows:

mechanical cooling: see ANSI/ASHRAE/IESNA Standard 90.1

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Modify Chapter 12. NORMATIVE REFERENCES definitions as follows:

ANSI/ASHRAE Standard 154-2003 Ventilation for Commercial Cooking Operations

Modify Section 7.4.3.7 as follows:

~~7.4.3.7 Variable Speed Fan Control for Commercial Kitchen Hoods–Kitchen Exhaust Systems.~~ ~~In addition to the requirements in Section 6.5.7.1 of ANSI/ASHRAE/IES Standard 90.1, commercial kitchen Type I and Type II hood systems shall have variable speed control for exhaust and makeup air fans to reduce hood airflow rates at least 50% during those times when cooking is not occurring and the cooking appliances are up to temperature in a standby, ready to cook mode. All exceptions in Section 6.5.7.1 of ANSI/ASHRAE/IES Standard 90.1 shall apply. The requirements in Sections 6.5.7.1, 6.5.7.2 and 6.5.7.5 of ASHRAE/ANSI/IES Standard 90.1 shall apply. Sections 7.4.3.7.1 and 7.4.3.7.2 supersede the requirements in Sections 6.5.7.1.3 and 6.5.7.1.4 of ANSI/ASHRAE/IES Standard 90.1.~~

7.4.3.7.1 For kitchen/dining facilities with total kitchen hood exhaust airflow rate greater than 2,000 cfm, the maximum exhaust airflow rate for each hood shall be determined in accordance with Table 7.4.3.7. For single hoods, or hood sections installed over appliances with different duty ratings, the maximum allowable airflow rate for the hood or hood section shall be determined in accordance with Table 7.4.3.7 for the highest appliance duty rating under the hood or hood section. Refer to ASHRAE Standard 154 for definitions of hood type, appliance duty, and net exhaust flow rate.

Exception to 7.4.3.7.1: When at least 75% of all the replacement air is transfer air that would otherwise be exhausted.

Table 7.4.3.7 Maximum Net Exhaust Flow Rate, CFM per Linear Foot of Hood Length

<u>Type of Hood</u>	<u>Light Duty Equipment</u>	<u>Medium Duty Equipment</u>	<u>Heavy Duty Equipment</u>	<u>Extra Heavy Duty Equipment</u>
<u>Wall-mounted canopy</u>	<u>140</u>	<u>210</u>	<u>280</u>	<u>385</u>
<u>Single island^a</u>	<u>280</u>	<u>350</u>	<u>420</u>	<u>490</u>
<u>Double island (per side)</u>	<u>175</u>	<u>210</u>	<u>280</u>	<u>385</u>
<u>Eye brow</u>	<u>175</u>	<u>175</u>	<u>Not allowed</u>	<u>Not allowed</u>
<u>Backshelf/Pass-over</u>	<u>210</u>	<u>210</u>	<u>280</u>	<u>Not allowed</u>

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a. The total exhaust flow rate for all single-island hoods in a kitchen/dining facility shall be no more than 5000 cfm.

7.4.3.7.2 Kitchen/dining facilities with total kitchen hood exhaust airflow rate greater than 2,000 cfm shall comply with at least one of the following:

a. At least 50% of all replacement air must be transfer air that would otherwise be exhausted.

b. At least 75% of kitchen hood exhaust air shall be controlled by a demand ventilation system(s) which shall

i. be capable of reducing exhaust and replacement air system airflow rates no more than the larger of:

(i) 50% of total design exhaust and replacement air system airflow rate, or

(ii) The outdoor airflow and exhaust rates required to meet the ventilation and exhaust requirements of Sections 6.2 and 6.5 of ANSI/ASHRAE Standard 62.1 for the zone;

ii. include controls to modulate airflow in response to appliance operation and to maintain full capture and containment of smoke, effluent and combustion products during cooking and idle;

iii. include controls that result in full flow when the demand ventilation system(s) fail to modulate airflow in response to appliance operation; and

iv. allow occupants to temporarily override the system(s) to full flow.

c. Listed energy recovery devices with a sensible heat recovery effectiveness of not less than 40% shall be applied on at least 50% of the total exhaust airflow.

d. In Climate Zones 1B, 2B, 3B, 4B, 5B, 6B, 7B, and 8B, when makeup air is uncooled or cooled without the use of *mechanical cooling*, the capacity of any non-mechanical cooling system(s) (for example, natural cooling or evaporative cooling) shall be demonstrated to be no less than the system capacity of a *mechanical cooling* system(s) necessary to meet the same loads under design conditions.

Modify NORMATIVE APPENDIX D as follows:

D1.1.5 Baseline HVAC System Type and Description (Section G3.1.1 of ANSI/ASHRAE/IES Standard 90.1). ~~The hood or hood section modeled according to Exception (d) to Section G3.1.1 of ANSI/ASHRAE/IES Standard 90.1 shall also meet the requirements of Section 7.4.3.9.~~
Exception (d) to Section G3.1.1 of ANSI/ASHRAE/IES Standard 90.1 shall be replaced as:

For kitchens with a total exhaust hood airflow rate greater than 2,000 cfm, use system type 5 or 7 with a demand ventilation system on 75% of the exhaust air. The system shall reduce exhaust

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and replacement air system airflow rates by 50% for one half of the kitchen occupied hours in the baseline design. If the *proposed design* uses demand ventilation the same air flow rate schedule shall be used. The maximum exhaust flow rate allowed for the hood or hood section shall meet the requirements of Section 7.4.3.7.1 for the numbers and types of hoods and appliances provided for the in the proposed design. For all-electric buildings, the heating shall be electric resistance.

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Proposed Addendum I to Standard 189.1-2011 Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (September 2012) (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 addendum, go to the ASHRAE web site at <http://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 web site) remains in effect.

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FOREWORD

This proposal recommends the inclusion into ASHRAE Standard 189.1 a new Table C-17 which contains the minimum efficiencies of transformers for buildings that are following path B of Section 7.4.3.1 (b) i.e. those buildings that have a lower amount of on-site renewable generation and have required minimum efficiencies greater than the minimum federal efficiencies. All of normative appendix C tables are referenced by the alternate path which has a lesser amount of on-site renewables than the primary path with higher levels of renewables and equipment that is minimally compliant with the federal efficiency standards as contained in 42 U.S.C. 6295(y). Addendum y to ASHRAE 189.1-2011 has clarified that appendix C only applies to the alternate path with higher equipment efficiencies and less on-site renewable generation

*Note: In this addendum, changes to the current standard are indicated in the text by **underlining** (for additions) and ~~striketrough~~ (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 I to 189.1-2011

Modify Section 3.0 as follows

3.2 Definitions

Low Voltage Dry-Type Distribution Transformers. Transformers that are not oil or fluid cooled with an input voltage less than or equal to 600V, and range in size from 15-333 kVA for single phase and 15-1000 kVA for three-phase equipment and are used for general purpose applications as described in 42 USC § 6291.

Modify Section 7.4.3 as follows:

7.4.3.1 Minimum Equipment Efficiencies. Projects shall comply with one of the following:

- a. **EPAct baseline.** Products shall comply with the minimum efficiencies addressed in the

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National Appliance Energy Conservation Act (NAECA), Energy Policy Act (EPAct), and the Energy Independence and Security Act (EISA).

- b. **Higher Efficiency.** Products shall comply with the greater of the ENERGY STAR requirements in Section 7.4.7.3 and the values in Normative Appendix C. These requirements supersede the requirements in Tables 6.8.1A to 6.8.1G of ANSI/ASHRAE/IES Standard 90.1. The building project shall comply with Sections 7.4.1.1 and 7.4.5.1 with the following modifications:
1. The *on-site renewable energy systems* required in Section 7.4.1.1 shall provide an annual energy production of not less than 4.0 kBtu/ft² (13 kWh/m²) multiplied by the total *roof* area in ft² (m²) for single-story buildings and not less than 7.0 kBtu/ft² (22 kWh/m²) multiplied by the total *roof* area in ft² (m²) for all other buildings.
 2. The peak load reduction systems required in Section 7.4.5.1 shall be capable of reducing electric peak demand by not less than 5% of the projected peak demand.

(Note that addendum y changed the above text)

Modify Normative Appendix C as follows:

Normative Appendix C

Prescriptive Efficiency Tables

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TABLE C-17 Low Voltage Dry-Type Distribution Transformers Minimum Nominal Efficiencies by Transformer Rating, kilo Volt-Amperes (kVA).

<u>Single-phase</u>		<u>Three-phase</u>	
<u>kVA</u>	<u>Efficiency</u>	<u>kVA</u>	<u>Efficiency</u>
<u>15</u>	<u>98.39%</u>	<u>15</u>	<u>97.90%</u>
<u>25</u>	<u>98.60%</u>	<u>30</u>	<u>98.25%</u>
<u>37.5</u>	<u>98.74%</u>	<u>45</u>	<u>98.39%</u>
<u>50</u>	<u>98.81%</u>	<u>75</u>	<u>98.60%</u>
<u>75</u>	<u>98.95%</u>	<u>112.5</u>	<u>98.74%</u>
<u>100</u>	<u>99.02%</u>	<u>150</u>	<u>98.81%</u>
<u>167</u>	<u>99.09%</u>	<u>225</u>	<u>98.95%</u>
<u>250</u>	<u>99.16%</u>	<u>300</u>	<u>99.02%</u>
<u>333</u>	<u>99.23%</u>	<u>500</u>	<u>99.09%</u>
-	-	<u>750</u>	<u>99.16%</u>
-	-	<u>1000</u>	<u>99.23%</u>

Note:

Efficiencies are based on procedures in the Code of Federal Regulations 10 CFR 431, Subpart K, Appendix A, “Uniform Test Method for Measuring the Energy Consumption of Distribution Transformers”

Add to Chapter 11:

Add following reference under “United States Congress”

Reference	Title	Section
<u>42 USC§ 6291</u>	<u>Title 42 - THE PUBLIC HEALTH AND WELFARE CHAPTER 77 - ENERGY CONSERVATION SUBCHAPTER III - IMPROVING ENERGY EFFICIENCY Part A - Energy Conservation Program for Consumer Products Other Than Automobiles Sec. 6291 - Definitions</u>	<u>Appendix C Table C-17</u>

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Rationale (not for public review draft)

The 189.1 standard does not need to document the minimum federal transformer efficiency standards as they are the least efficient transformers that one can buy. This table provides requirements for path B when higher than minimum federal efficiency requirements are allowed. The first alternate reduced transformer losses by 30% and payback within 12.5 years for a transformer that has an expected useful life of 32 years.

The table below summarizes the efficiencies and the simple payback calculations as presented in a USDOE presentation dated November 28, 2011.¹ These reference sized transformers are representative of the cost-effectiveness of the NEMA premium class of transformers.

The first alternate reduced transformer losses by 30% and payback within 12.5 years for a transformer that has an expected useful life of 32 years.

		DOE Proposed Rule	Current Proposal		Alt Proposal 2	
Size kVA	Phase	Eff (%)	Eff (%)	Simple Payback (yr)	Eff (%)	Simple Payback (yr)
25	1	98.00	98.60	11.8	98.80	12.5
75	3	98.47	98.60	3.8	98.93	5.5
300	3	99.02	99.02	7.9	99.25	11.6

The following pages describe the various efficiency levels and their simple paybacks. The following charts indicate the types of technologies used to achieve these levels. What can be seen in these graphs is that the highest efficiency levels are cost-effective but that they use amorphous steel which has limited availability. As a result the second proposal identifies the lowest life cycle cost without using amorphous steel.

However, the proposal above “Current Proposal” is specifying the lower efficiencies of the two options as there is wide availability of NEMA premium transformers where availability of higher efficiency transformers would be more difficult.

¹ *Distribution Transformers* Energy Conservation Program. LBNL Staff on behalf of U.S. Department of Energy. Energy Efficiency & Renewable Energy. November 28, 2011

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To keep the simple paybacks in context the 32 year discount rates are compared against simple paybacks. The longest simple payback considered is 12.5 years or equivalent to a 7% discount rate.

32	period of analysis (years)
Discount rate	Simple payback (scalar)
1%	27.3
2%	23.5
3%	20.4
4%	17.9
5%	15.8
6%	14.1
7%	12.6
8%	11.4
9%	10.4
10%	9.5

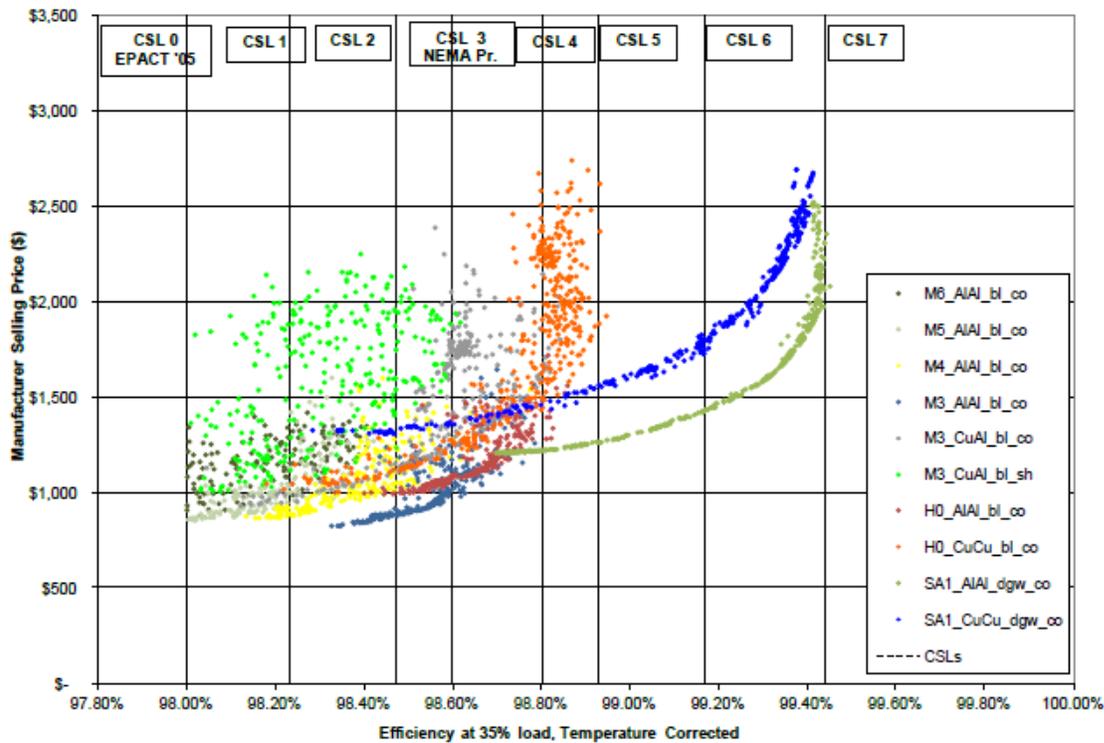
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Design Line 6 Results (single phase 25 kVA)

Alt Proposal 1: NEMA Premium – Efficiency Level 3. Alt Proposal 2 – Efficiency Level 4.

	Efficiency Level						
	1	2	3	4	5	6	7
Efficiency (%)	98.23%	98.47%	98.60%	98.80%	98.93%	99.17%	99.44%
Transformers with Net Increase in LCC (%)	0.03%	4.80%	20.70%	20.62%	20.45%	40.61%	95.05%
Transformers with Net LCC Savings (%)	90.30%	95.20%	79.30%	79.38%	79.55%	59.39%	4.95%
Transformers with No Impact on LCC (%)	9.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mean LCC Savings (\$)	272	301	193	279	300	138	-939
Median LCC Savings (\$)	275	294	173	246	269	97	-990

	Efficiency Level						
	1	2	3	4	5	6	7
Mean Payback (Years)	0.8	6.1	13.8	13.7	13.8	17.5	35.1
Median Payback (Years)	0.7	5.1	12.2	13.0	13.3	16.9	33.8
Transformers having Well Defined Payback (%)	90.33%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Transformers having Undefined Payback (%)	9.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mean Retail Cost (\$)	1,122	1,198	1,335	1,657	1,716	1,944	2,818
Mean Installation Costs (\$)	996	1,025	1,115	1,026	1,059	1,164	1,490
Mean Operating Costs (\$)	133	126	119	102	96	87	80
Mean Incremental First Cost (\$)	9	114	341	573	665	998	2,199
Mean Operating Cost Savings (\$)	15	22	29	46	52	61	68
Payback of Average Transformer	0.6	5.1	11.8	12.5	12.8	16.3	32.3



The two lines to the right are transformers with amorphous steel.

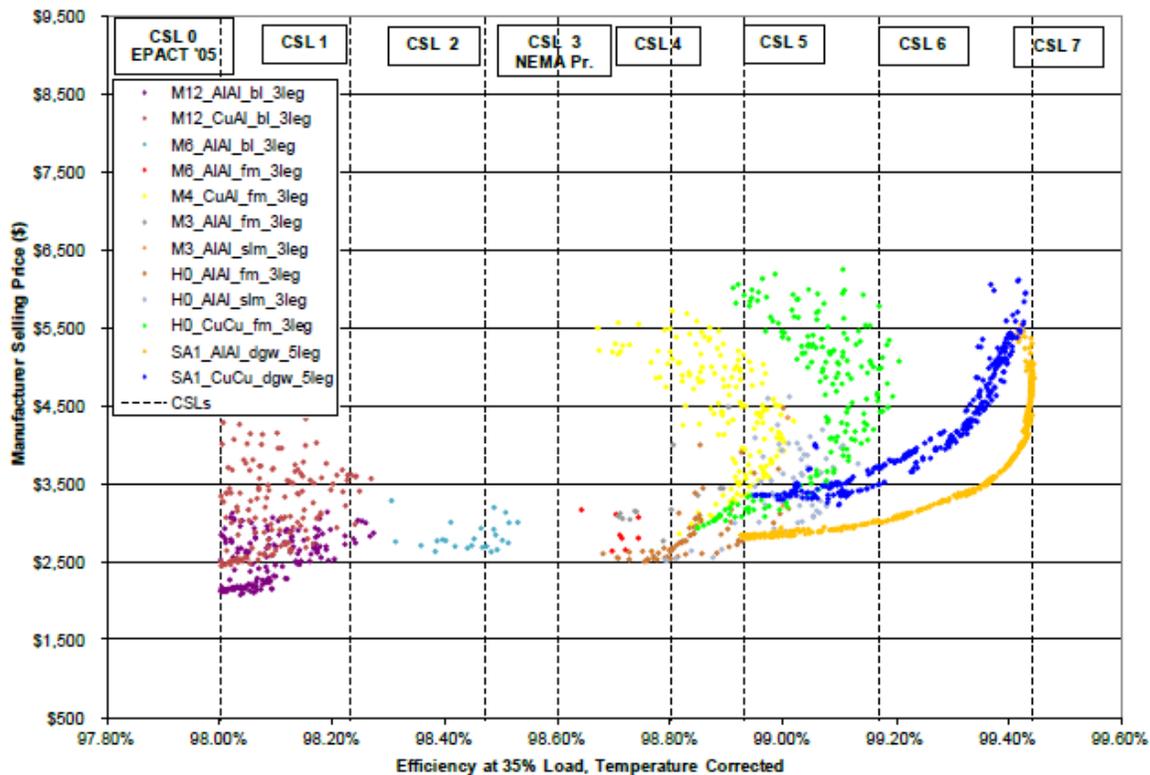
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Design Line 7 Results (three phase 75 kVA)

Alt Proposal 1: NEMA Premium – Efficiency Level 3. Alt Proposal 2 – Efficiency Level 5.

	Efficiency Level						
	1	2	3	4	5	6	7
Efficiency (%)	98.23%	98.47%	98.60%	98.80%	98.93%	99.17%	99.44%
Transformers with Net Increase in LCC (%)	1.4%	1.4%	1.4%	1.7%	2.8%	3.5%	45.0%
Transformers with Net LCC Savings (%)	98.6%	98.6%	98.6%	98.4%	97.2%	96.5%	55.1%
Transformers with No Impact on LCC (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mean LCC Savings (\$)	1779	1779	1779	1856	2036	2286	334
Median LCC Savings (\$)	1717	1717	1717	1787	1941	2194	190

	Efficiency Level						
	1	2	3	4	5	6	7
Mean Payback (Years)	4.1	4.1	4.1	4.4	5.9	6.9	18.2
Median Payback (Years)	4.0	4.0	4.0	4.3	5.8	6.8	17.7
Transformers having Well Defined Payback (%)	100%	100%	100%	100%	100%	100%	100%
Transformers having Undefined Payback (%)	0%	0%	0%	0%	0%	0%	0%
Mean Retail Cost (\$)	3,414	3,414	3,414	3,458	3,813	4,089	5,929
Mean Installation Costs (\$)	1,744	1,744	1,744	1,761	1,734	1,839	2,362
Mean Operating Costs (\$)	222	222	222	215	187	153	131
Mean Incremental First Cost (\$)	466	466	466	527	854	1,236	3,599
Mean Operating Cost Savings (\$)	121	121	121	129	156	190	212
Payback of Average Transformer	3.8	3.8	3.8	4.1	5.5	6.5	17.0



The two lines to the right are transformers with amorphous steel.

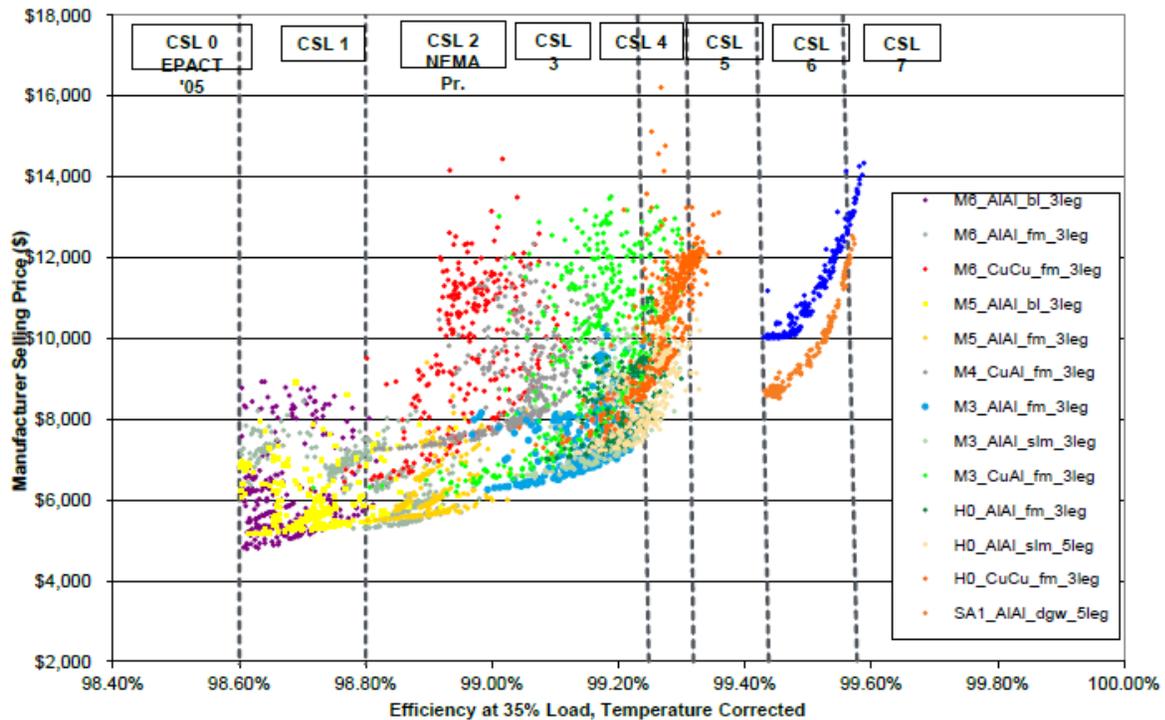
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Design Line 8 (3 phase 300 kVA)

Alt Proposal 1: NEMA Premium – Efficiency Level 2. Alt Proposal 2 – Efficiency Level 4.

	Efficiency Level						
	1	2	3	4	5	6	7
Efficiency (%)	98.80%	99.02%	99.14%	99.25%	99.32%	99.44%	99.58%
Transformers with Net Increase in LCC (%)	7.06%	5.11%	8.56%	14.23%	10.54%	10.52%	77.90%
Transformers with Net LCC Savings (%)	92.94%	94.89%	91.44%	85.77%	89.46%	89.48%	22.10%
Transformers with No Impact on LCC (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mean LCC Savings (\$)	1020	2517	2722	2707	4131	4139	-2724
Median LCC Savings (\$)	901	2368	2517	2476	3864	3869	-3067

	Efficiency Level						
	1	2	3	4	5	6	7
Mean Payback (Years)	9.1	8.4	10.4	12.3	11.2	11.2	24.9
Median Payback (Years)	8.6	8.2	10.1	12.1	11.0	11.0	24.3
Transformers having Well Defined Payback (%)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Transformers having Undefined Payback (%)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mean Retail Cost (\$)	7,209	8,136	9,110	10,478	11,557	11,556	18,709
Mean Installation Costs (\$)	2,849	2,999	3,153	3,271	3,158	3,158	3,905
Mean Operating Costs (\$)	739	600	528	449	320	320	264
Mean Incremental First Cost (\$)	788	1,865	2,994	4,479	5,445	5,444	13,343
Mean Operating Cost Savings (\$)	98	236	308	388	517	517	573
Payback of Average Transformer	8.1	7.9	9.7	11.6	10.5	10.5	23.3



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The two lines to the right are transformers with amorphous steel.

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FOREWORD

This addendum adds lighting quality requirements to Standard 189.1, recognizing that following good lighting practices is part of creating a high-performance building where occupants will be productive, comfortable, safe, and healthy. Control of lighting to suit individual or group needs, in particular, has been shown to increase comfort, satisfaction, and productivity of the people in the space.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striethrough~~ (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 m to 189.1-2011

Add to Section 3.2 Definitions:

space. See ANSI/ASHRAE/IES 90.1 definition.

bi-level lighting control: lighting control in a space that provides at least one intermediate level of lighting power in addition to fully on and fully off. Continuous dimming systems are covered by this definition.

Multi-level lighting control: lighting control in a space that provides at least two intermediate levels of lighting power in addition to fully on and fully off. Continuous dimming systems are covered by this definition.

Lighting quality: the degree to which the luminous environment in a *space* supports the requirements of the occupants.

Modify Section 8.1 as follows:

8.1 Scope. This section specifies requirements for indoor environmental quality, including indoor air quality, environmental tobacco smoke control, *outdoor air* delivery monitoring, thermal comfort, *building entrances*, acoustic control, lighting quality, daylighting, and low emitting materials.

Add the following new mandatory section:

8.3.6 Lighting Quality. The interior lighting shall be installed to meet the requirements of 8.3.6.1 and 8.3.6.2.

8.3.6.1 Enclosed Office Spaces. Lighting for at least 90% of enclosed office spaces with less than 250 sq.ft of floor area shall include *multi-level lighting control*. Task lighting shall be permitted to be used to comply with the requirements of this section. Power used by any task lighting to comply with the requirements of this section shall be included in the installed interior lighting power.

8.3.6.2 Multi-occupant Spaces. Lighting for conference/meeting/multipurpose spaces, classroom/lecture/training spaces, gymnasiums, auditoriums, ballrooms and cafeterias shall include *bi-level lighting control*, with at least one lighting power level between 30% and 70% inclusively. Such spaces shall include, at least two separately controlled groups of luminaires. Individual lighting settings shall be labeled at the control device.

8.3.6.2.1 Lighting and Lighting Control for Presentations. Lighting in the same multi-occupant spaces shall be installed to separately illuminate permanently mounted audio/visual presentation screens, whiteboards, or chalkboards and this lighting shall be controlled separately from all other lighting.

DISCLAIMER FOR RATIONALE

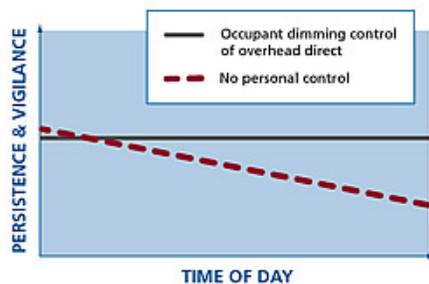
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RATIONALE

The results of independent studies that show productivity, comfort, and occupant satisfaction increase with personal control of lighting. Examples include:

1) Light Right Consortium. Research Study on the Effects of Lighting on Office Workers.

- Normally, the persistence and vigilance of office workers will decline over the course of a workday. However, the presence of personal control of their lighting increased subject motivation allowing workers to sustain their performance—they persisted longer on difficult tasks and were more accurate on a task requiring sustained attention



2) Boyce et al. Lighting Quality and Office Work: A Field Simulation Study. <http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/b3214.1/B3214.1.pdf>

- “People with dimming control reported higher ratings of lighting quality, overall environmental satisfaction, and self-rated productivity.”
- “People with dimming control showed more sustained motivation and improved performance on a measure of attention.”

3) Lighting and Office Renovation Effects on Employee and Organizational Well-Being

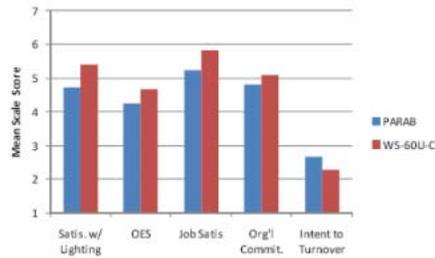
Jennifer A. Veitch, Guy R. Newsham, Sandra Mancini, and Chantal D. Arsenaault

NRC-IRC Research Report RR-306 September 30, 2010

<http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/rr/rr306.pdf>

- Workstation-specific lighting with individual (personal) lighting control is the higher quality lighting solution over parabolic luminaires

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4) Lighting Controls Association paper highlighting the productivity benefits of lighting control:
<http://lightingcontrolsassociation.org/personal-control-boosting-productivity-energy-savings/>

Additional references that help support 8.3.6.1.3 Lighting and Lighting Control provisions for Presentations include:

1) IES Handbook 10th Edition

Chapter 16 in IES handbook basically states that presentation spaces should have scene-based lighting (multi-level lighting) which implies that presentation lighting be separate from general lighting and be separately controlled to create lighting scenes for presentations:

- 16.1.3.1 Control Zones and Load Schedules
By architectural feature, area, or task being illuminated
To provide multilevel control in spaces through switching or dimming
- 16.2.3 Scene Control
 - Examples of spaces in which scene control is commonly applied include: A conference room, where activities such as face-to-face meetings, audiovisual presentations, and video conference activities require different lighting conditions
 - A lecture hall or large classroom where visual tasks vary between a chalkboard or whiteboard, projection screen, or the desktop in the case of an exam

2) IES DG17 (Design Guide 17-- Lighting for Video Conferencing)

- Requires preset dimming in presentation spaces which implies that lighting on presentation screens is separately adjustable.

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BSR/ASHRAE/USGBC/IES Addendum o to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green 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 addendum adds a new mandatory provision to Section 9 The Building's Impact on the Atmosphere, Materials, and Resources, establishing maximum mercury content levels for certain types of electric lamps. The requirements are consistent with a new law in the State of Oregon governing the sale of electric lamps.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 o to 189.1-2011

Add new Section 9.3.5 as follows:

9.3.5 Mercury Content Levels of Lamps. Electric lamps used in the building project shall not contain mercury in an amount exceeding, per lamp, the maximum mercury content levels of Table 9.3.5.

Exceptions:

1. 8-foot models of straight fluorescent T8 lamps.
2. High-output and very high-output, straight fluorescent lamps greater than 1.25 in. (32 mm) in diameter.
3. Mogul bi-pin based lamps.
4. Preheat straight fluorescent lamps of any size.
5. U-bend and Circline fluorescent lamps.
6. High intensity discharge lamps.
7. Induction lamps.
8. Special purpose lamps: appliance, black light, germicidal, bug colored, plant, straight fluorescent reflector, reprographic, shatter resistant, cold temperature and three-way lamp.

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First Public Review Draft

TABLE 9.3.5 Maximum Mercury Content for Electric Lamps

<u>Lamp</u>	<u>Maximum Mercury Content</u>
<u>Screw-base compact fluorescent lamps < 25 watts</u>	<u>4 mg</u>
<u>Screw-base compact fluorescent lamps ≥ 25 watts and < 40 watts</u>	<u>5 mg</u>
<u>Pin-base compact fluorescent lamps, all wattages</u>	<u>5 mg</u>
<u>Straight fluorescent T5 normal lifetime lamps¹</u>	<u>3 mg</u>
<u>Straight fluorescent T8 normal lifetime lamps¹</u>	<u>4 mg</u>
<u>Straight fluorescent T5 and T8 long lifetime lamps²</u>	<u>5 mg</u>
<u>T12 8-foot straight fluorescent lamps</u>	<u>15 mg</u>

1. Electric lamps with a rated lifetime less than 25,000 hours when tested on an electronic fluorescent ballast, including T8 instant start ballasts and T5 programmed start ballasts, and turned off and on every three hours.

2. Electric lamps with a rated lifetime equal to or greater than 25,000 hours when tested on an electronic fluorescent ballast, including T8 instant start ballasts and T5 programmed start ballasts, and turned off and on every three hours.

BSR/ASHRAE/IES/USGBC Addendum
q to ANSI/ASHRAE/USGBC/IES
Standard 189.1-2011

Public Review Draft

Proposed Addendum q to Standard 189.1-2011 Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (September 2012) (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 addendum, go to the ASHRAE web site at <http://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 web site) remains in effect.

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FOREWORD

This addendum is to ensure and clarify that systems that require commissioning also include commissioning of the associated control systems.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~striketrough~~ (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 q to 189.1-2011

Modify Section 10.3.1.2.4 as follows:

10.3.1.2.4 Systems. **The following systems and associated controls, if included in the building project, shall be commissioned:**

- a. Heating, ventilating, air-conditioning, IAQ, and refrigeration systems (mechanical and/or passive) ~~and associated controls~~. Control sequences to be verified for compliance with construction documentation as part of *verification*.
- b. *Building envelope* systems, components, and assemblies to verify the thermal and moisture integrity.
- c. *Building envelope* pressurization to confirm air-tightness if included in *BOD* requirements.
- d. Lighting systems.
- e. Fenestration control systems: Automatic controls for shading devices and *dynamic glazing*.
- f. Irrigation.
- g. Plumbing.
- h. Domestic and process water pumping and mixing systems.
- i. *Service water heating* systems.
- j. Renewable energy systems.
- k. Water measurement devices, as required in Section 6.3.3.

BSR/ASHRAE/IES/USGBC Addendums
to ANSI/ASHRAE/USGBC/IES
Standard 189.1-2011

Public Review Draft

Proposed Addendums to Standard 189.1-2011 Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

Second Public Review (Independent Substantive
Change - September 2012) (Draft Shows Proposed
Changes to Current Standard)

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Second Public Review Draft (Independent Substantive Change)

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FOREWORD

This addendum clarifies the requirements for outdoor airflow monitoring in Section 8, along with operational requirements for such monitoring in Section 10. The intent is not to add a new set of requirements but rather to clarify what is currently in the standard. A new definition is included for outdoor air fault condition that indicates when the measured outdoor airflow is significantly different from the expected value under a given set of operating conditions. This newly defined term allows reference to it, when needed, without having to redefine each time. In addition, the definition for minimum outdoor airflow is clarified.

The proposed revision of Section 8 still requires an outdoor monitoring device, but clarifies that it is intended to monitor the minimum outdoor airflow over the range of occupancy and system operation. It also clarified the exception intended for smaller and simpler ventilation systems. The proposed revision of Section 10 clarifies what is to be done with such monitoring devices during operation as well as the associated maintenance requirements.

Note to Reviewers: This public review draft makes proposed independent substantive changes to the previous public review draft. These changes are indicated in the text by underlining (for additions) and strikethrough (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the previous draft 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 s to 189.1-2011

Modify the Section 3 as follows:

Add to Section 3.2 Definitions:

airflow rate, minimum outdoor: ~~the rate of outdoor airflow provided by a ventilation system when running when all densely occupied spaces with demand control ventilation are unoccupied~~

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Second Public Review Draft (Independent Substantive Change)

to meet requirements for indoor air quality, excluding any additional outdoor air intake to reduce or eliminate the need for mechanical cooling.

outdoor air fault condition: a situation in which the measured minimum outdoor airflow rate of a ventilation system is ~~15%~~ 10% or more below the set point value ~~corresponding that corresponds~~ to the occupancy and operation conditions during at the time of the measurement.

Modify Sections 8.3.1.2 as follows:

8.3.1.2 Outdoor Air Delivery Monitoring.

8.3.1.2.1 System Design for Outdoor Air Intake Measurement. Each mechanical ventilation system shall be configured to allow for the measurement of the outdoor air intake-for use in testing and balancing, recommissioning and outdoor air monitoring as required in 8.3.1.2.2.

8.3.1.2.2 Monitoring Requirements. Each mechanical ventilation system shall have a permanently installed device to measure the ~~minimum outdoor air intake rate~~ minimum outdoor airflow, which meets the following requirements: ~~Where the minimum outdoor air intake rate varies, as in demand control ventilation systems, the device shall be capable of measuring the minimum outdoor air intake over the entire range of operation.~~

1. The device shall employ methods ~~as described in Section 7.6 of ASHRAE Standard 111,~~ and
2. The device shall have an accuracy of $\pm 15\%$ $\pm 10\%$ of the minimum outdoor airflow across the range of ~~minimum outdoor air intake flows.~~ Where the minimum outdoor airflow varies, as in demand control ventilation systems, the device shall maintain this accuracy over the entire range of occupancy and system operation.
3. The device shall ~~also~~ be capable of notifying the building operator, either by activating a local indicator or by sending a signal to a building monitoring system, whenever ~~measured airflow rate is in an outdoor air fault condition~~ exists. This notification shall require manual reset.

Exception: Constant volume air supply systems that do not employ demand controlled control ventilation and that use an indicator to confirm that the intake damper is open to the position, determined during system startup and balancing, needed to maintain ~~this the~~ the design flow minimum outdoor airflow.

Modify Sections 10.3 2 as follows:

10.3.2 Plans for Operation

10.3.2.1 High Performance Building Operation

10.3.2.1.4 Indoor Environmental Quality The Plan for Operation shall include the requirements of Section 8 of ANSI/ASHRAE Standard 62.1, and shall describe additional procedures, as outlined in sections 10.3.2.1.4.1 through 10.3.2.1.4.7, for implementing a regular indoor environmental quality measurement and *verification* program after building occupancy.

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10.3.2.1.4.1 Outdoor Airflow Measurement. The Plan for Operation shall document procedures for implementing a regular outdoor airflow monitoring program after building occupancy and shall meet the following requirements.

- a. For each mechanical ventilation system where direct *outdoor airflow* measurement is required according to Section 8.3.1.2, a procedure shall be in place to respond when there is notification that the minimum outdoor airflow is in an *outdoor air fault condition*. For systems that use a damper indicator instead of a direct measurement, per the exception to 8.3.1.2, a procedure shall be in place to respond when there is notification that the indicator identifies that the damper is out of position.
- b. For each mechanical ventilation system where direct minimum outdoor airflow measurement is ~~not~~ required according to Section 8.3.1.2, the minimum outdoor airflow shall be recorded every three months in either electronic or written form.
- c. For systems that use a damper indicator, per the exception to 8.3.1.2, the minimum outdoor airflow shall be measured and recorded in either electronic or written form every two years for air handling systems with a design supply airflow rate of more than 2000 cfm (1000 L/s). The minimum outdoor airflow shall be measured using methods as described in ~~Section 7.6 of~~ ASHRAE Standard 111 and with an accuracy of $\pm 15\%$ $\pm 10\%$ or better.

Modify Section 10.3.2.2 as follows:

10.3.2.2 Maintenance Plan. A Maintenance Plan shall be developed for mechanical, electrical, plumbing, and fire protection systems, which includes the following:

- c. Outdoor air delivery monitors required by Section 8.3.1.2 shall be visually inspected at least once each quarter and cleaned or repaired as necessary and calibrated at the manufacturer's recommended interval or not less than once per year, ~~which ever~~ whichever is more frequent. ~~In cases where monitors are not intended for field calibration by the manufacturer, every year the outdoor airflow measured by the monitor shall be compared with an independent measurement made using instruments that comply with methods described in Section 7.6 of ASHRAE Standard 111 and with an accuracy of $\pm 15\%$ or better. If the reading of the monitor and the independent measurement differ by more than 15%, the manufacturer or their authorized representative shall be contacted to make the necessary adjustments.~~
- d. For systems with a damper indicator and with less than 2000 cfm (1000 L/s) of supply air, the system components that control the minimum outdoor airflow intake shall be visually inspected every two years. Records of this inspection shall be maintained on-site either in electronic or written form.
- e. Documentation of the Plan and of completed maintenance procedures shall be maintained on the building site at all times in:
 1. Electronic format for storage on the building Energy Management System (EMS), Building Management System (BMS), computerized maintenance management system (CMMS) or other computer storage means, or
 2. Maintenance manuals specifically developed and maintained for documenting completed maintenance activities.

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 Second Public Review Draft (Independent Substantive Change)

Add to Section 11 Normative References as follows:

11.NORMATIVE REFERENCES

Reference	Title	Section
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), 1791 Tullie Circle NE Atlanta, GA 30329 United States 1-404-636-8400; www.ashrae.org		
ANSI/ASHRAE Standard 111- 2008	Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems	8.3.1.2.2, <u>10.3.2.2</u>

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NSF Draft Standard for
Pharmaceutical Excipients –

Good Manufacturing Practices (GMP) for Pharmaceutical Excipients

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4.1.2 Outsourcing General Requirements

Where manufacturing, testing, or other operations that may affect excipient quality are outsourced, the organization shall:

- a) define the responsibility for quality and the control measures within the quality management system (see 7.4), and
- b) ~~assure and demonstrate~~ that the applicable GMP principles in accordance with this Standard are applied to those operations.

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4.2.4 Control of Records

The organization shall establish and maintain a documented procedure for the identification, collection, indexing, filing, storage, maintenance, protection, retention time, and disposition of records.

Records shall be established and maintained to demonstrate achievement of the defined specifications and conformance with this Standard. Records shall be legible and stored in such a manner that they are readily retrievable. Electronic records shall be subjected to the same stringency of controls as those required for other records. Pertinent subcontractor quality data shall be an element of these records.

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6.2.2 Competence, Awareness, and Training

The organization shall identify, establish, and document the training needs for personnel ~~performing activities~~ having the potential to affect excipient quality or elements of this Standard. These employees ~~and including~~ their supervisors shall be adequately trained prior to carrying out their assigned duties. Training shall include, at a minimum:

- a) the particular operations the employee performs,
- b) the elements of this Standard as they relate to the employee's duties,
- c) the elements of hygienic practices for personnel whose activities or responsibilities have the potential to result in contamination of the excipient including an explanation of how these are a hazard to the end user / patient,
- d) the reporting of significant failures and deviations from procedures including the impact deviations from procedures may have on excipient quality, and

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- e) the importance of consistent adherence to good manufacturing practice, and their role in assuring drug product performance and patient safety.

The training shall be delivered by qualified individuals at sufficient frequency to ensure employees remain familiar with current procedures and applicable elements of this Standard. The organization shall maintain records of training, including content, attendance, and trainer qualifications.

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6.3 Infrastructure

The infrastructure shall be operated, cleaned, and maintained in accordance with this Standard to ensure excipient quality and the avoidance of **contamination or** mix ups. ~~There shall be adequate facilities for the relevant activities conducted at the site with adequate separation or segregation to prevent cross-contamination or mix-ups.~~

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6.3.1 Buildings and Facilities

Contamination prevention shall be considered in the design, maintenance, refurbishing, or upgrading of buildings and facilities.

The organization shall conduct a risk assessment based on the organization's expressed, intended use of the excipient (see 7.2.3) to identify areas in which the excipient is at risk of contamination, **cross-contamination**, or mix-ups due to deficiencies in buildings and/or facilities. The risk assessment shall consider the following, at a minimum, to identify where the excipient is at risk of contamination:

- a) state of repair of the building and facility,
- b) suitable size, construction, and location to allow for separation or segregation,
 NOTE - Where equipment is located outdoors there shall be suitable control to minimize the risk to excipient quality from the environment, including seasonal variations.
- c) ability to maintain a suitably clean building and facility environment,
- d) operations inside or outside of the building or facility that may affect the excipient quality, and
- e) presence of airborne contaminants, including microorganisms.

Suitable control measures shall be implemented to mitigate the identified risks. Access to areas of the buildings and facilities designated as limited access areas shall be controlled.

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7.4.1 Purchasing Process

The organization shall establish a documented system for selecting, approving, and reapproving suppliers of materials and services. Quality-critical materials and services shall be identified from risk assessments. Materials shall be purchased against a mutually agreed specification.

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The organization's quality unit shall approve suppliers of quality-critical materials, critical packaging material, and quality-critical services.

For quality-critical materials, **quality-critical packaging materials**, and services, the supplier shall have an agreement to notify the organization of significant changes. If an agreement cannot be obtained, a risk assessment shall be performed and a written justification and mitigation plan for continued use of the supplier implemented.

The organization shall require that contract service providers adhere to the relevant sections of this Standard.

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7.5.5.2 Excipient Packaging Systems

The selection of excipient packaging systems shall be justified by the organization. Excipient packaging systems shall include the following features:

- a) documented specifications,
- b) documented evidence that the packaging does not adversely impact quality (e.g., packaging is not reactive, additive, or absorptive),
- c) documented cleaning procedures (where containers are reused),
- d) tamper-evident seals, unless written justification demonstrates that it is not feasible, and

NOTE – A tamper-evident seal **is generally feasible**. The seal should have a distinct design and possess unique identifying characteristics that are difficult to duplicate. Tamper-evident seals should be traceable to and, where feasible, accounted for by the excipient manufacturer and should not be reusable once the seal is broken.

- e) compliance with relevant regulatory requirements.

Containers shall be stored so as to protect their cleanliness. Where reusable excipient containers are returned, the organization shall undertake a risk assessment and establish appropriate controls for their further use. Procedures shall ensure all previous labels are removed or completely obliterated.

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8.2.2 Internal Audit

The organization shall carry out a comprehensive system of planned, scheduled, and documented internal quality audits. Audits shall be conducted by qualified individuals, independent of the area being audited, according to documented procedures that include, at a minimum, the following:

- a) determination of the effectiveness of quality activities,
- b) compliance with procedures and processes described by the quality management system,

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- c) schedules based on findings from previous audits, performance measures (see 8.2.3), and criticality of the activity to the finished excipient quality,
- d) provisions for follow-up actions,
- e) positive findings that support the effective implementation of GMP, and
- f) deficiencies that need corrective and/or preventive action.

Audit results shall be documented and discussed with management personnel having responsibility in the area(s) audited. Management personnel responsible for the area(s) audited shall take corrective action and/or preventive action without undue delay on each nonconformance found.

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8.2.3 Monitoring and Measurement of Processes

The organization shall identify the tests and measurements necessary to adequately control the manufacture and quality of the excipient.

Where critical to excipient quality, methods used to verify that the processes are in control shall be established and documented.

Regular review of key indicators, process performance, including material inputs, critical process parameters and critical quality attributes, shall be conducted to assess the need for improvements.

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8.3 Control of Nonconforming Product

Raw material, intermediate, or finished excipient not meeting its specification shall be clearly identified and controlled to prevent inadvertent use or release for sale.

A record of each incidence of nonconformance shall be maintained. Nonconformances shall be investigated to identify the root cause and impact on other batches/products. The investigation shall be documented and a determination made if action can be taken to prevent recurrence (see 8.5). The potential impact of any change on validation shall be assessed.

There shall be a documented procedure defining how the retrieval of an excipient from distribution shall be conducted and recorded.

Procedures shall exist for the evaluation and subsequent disposition of nonconforming intermediates and excipients (see 5.5.1).

Nonconforming excipient shall be reviewed in accordance with documented procedures to determine if it may be:

- a) ~~reprocessed or reworked to meet the specified requirements~~ accepted as-is by the customer with their written agreement,
- a) ~~accepted by the customer with their agreement to further processing to make the material suitable for use~~ reprocessed or reworked to meet the specified requirements,

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- b) re-graded for other applications, or
- c) destroyed.

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8.3.2 Reworking

Reworking is a change under the provisions of change control in this Standard (see 4.3) and shall only be conducted following a documented review of risk to excipient quality that is approved by the quality unit.

When performing the risk assessment, a documented investigation shall be completed and the following shall be considered, unless otherwise justified:

- a) additional testing to monitor and control the reworking,
- b) additional acceptance criteria for the reworked excipient,
- c) impact on stability or the validity of the re-evaluation interval,
- d) composition profile changes as a result of reworking,
- e) performance of the excipient, and
- a) need to notify the customer of reworked excipient.

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8.4 Analysis of Data

The organization shall define methods for evaluating:

- a) the effectiveness of its quality management system,
- b) the ability to consistently produce conforming excipients,
- c) excipient nonconformance with this Standard, customer complaints, deviations, etc., and
- d) supplier nonconformance.

The organization shall use ~~these~~ results and trends to identify opportunities for improvement (see 5.6 and 8.5.1).

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NSF International Standard for Dietary Supplements —

Dietary supplements

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5.3.6.2 Contaminants in Glycerin

For ingredients and products containing glycerin, manufacturers shall have good manufacturing controls in place to verify that any specific lot of glycerin used in the manufacture or preparation of products is tested for diethylene glycol (DEG).

Diethylene glycol in glycerin raw materials shall not exceed 0.1% as stated in the USP Glycerin monograph.¹⁹

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7.5.2 Test methods for Glycerin

Testing for diethylene glycol in the glycerin raw material shall be performed utilizing identity tests, including the gas chromatographic limit test for DEG, which appear in the USP Glycerin monograph or other method that is scientifically valid and demonstrated as fit for purpose.

Manufacturers shall meet this testing requirement by providing testing documentation which can be reviewed and clearly shows the association of the test results with the lot of finished product material being certified.

Manufacturers shall meet this test requirement by either providing their own data, providing data from their qualified supplier(s) or acquiring third party test data.

8 Good Manufacturing Practices

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8.4 Requirement for Testing of Diethylene Glycol (DEG) in Glycerin Ingredients

Written procedures shall be established and followed for testing for diethylene glycol in the glycerin raw materials. Testing shall be performed utilizing identity tests, including the gas chromatographic limit test for DEG, which appear in the USP Glycerin monograph or other method that is scientifically valid and demonstrated as fit for purpose.

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Issue 46, Draft 1 (August 2012)

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Manufacturers shall meet this testing requirement by providing testing documentation which can be reviewed and clearly shows the association of the test results with the lot of finished product material being certified.

Manufacturers shall meet this test requirement by either providing their own data, providing data from their qualified supplier(s) or acquiring third party test data.

REASON - During an NSF International audit by American National Standards Institute (ANSI), manufacturer data was presented and reviewed by NSF in order to support a NSF/ANSI 173 requirement. The ANSI auditor indicated that only data generated by a laboratory audited to ISO 17025 can be used to support certification decisions under ISO Guide 65. Current language in NSF/ANSI 173 indicates that review of GMP documentation is allowable and yet it is not appropriate to assume or expect that the manufacturer's labs or subcontractors are meeting ISO 17025. It would also be cost prohibitive to the industry to suggest auditing such labs to these criteria when, in the US, labs must operate under GMPs per 21CFR111. Therefore, a recommendation that this requirement be demonstrated by the manufacturer during audit is being proposed. After good discussion at the Joint Committee on Dietary Supplements meeting held Tuesday, May 15, 2012, there was general agreement that language in NSF/ANSI 173 be updated.

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NSF/ANSI Standard for Personal Care Products

Personal Care Products Containing Organic Ingredients

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6.3 Mined minerals, water and salt

Mined minerals (including allowed processed mineral ingredients in 5.4), water and salt shall be considered “neutral” in calculating the percent organic content. Therefore, they shall be excluded from the net weight or net volume.

When a standard of identity exists or there is an onsite scientific method used to measure moisture removed from a plant, water, equal to the amount removed, may be added to that processed product and be considered as part of the original plant. For instance, a concentrate that fulfills the organic requirements of this Standard may be rehydrated to single strength or rehydrated to the same moisture content it had when harvested or first tested; the added water shall be considered part of the organic content of that ingredient or product.

Added water shall be included in the organic content of an ingredient only under the following circumstances:

- Reconstituting juice concentrates to their USDA single strength standard of identity;
- reconstituting or rehydrating aloe concentrates to single strength based on Aloe Council compliance and standards; and
- Water content of extracts and hydrosols are specified in 6.4 of this Standard.

NOTE – Water added to rehydrate dried powders or dried plant material is counted as added water. Manufacturer-specific 'standards of identity' regarding water content, single strength values, or moisture content are not acceptable.

NOTE – A product meeting the requirements of NSF/ANSI 305 may not meet the minimum requirements of the California Organic Products Act of 2003 if using mined minerals. If manufacturing personal care products containing mined minerals with intent to market in the state of California, please refer to COPA 2003 for the proper calculation of the percent organic contribution of mined minerals.

REASONS:

There was general agreement within the OPC Task Group on Mined Minerals that processed mined minerals, providing they are approved materials that go through an approved process, continue to be counted as neutral in the percent organic calculation.

There was general agreement at the March 8, 2012 Joint Committee Meeting that both reconstitution and rehydration of aloe should be allowed, based on the International Aloe Science Council (IASC) view that the addition of water to both liquid

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***aloe concentrates and also to dried powders as “reconstitution” not “rehydration.”
Thus, in the case of aloe, the liquid concentrate and the powdered aloe are treated
as concentrates that water can be added to bring the aloe back up to single
strength.***

BSR/UL 1206, Standard for Electric Commercial Clothes-Washing Equipment

1. Installation Clearances and Cycle Selection

36.11.1 An appliance, other than a recessed or wall-insert appliance, shall be placed on a horizontal surface and located within an enclosure formed by three flat-black-painted, vertical surfaces of nominal 9.5 mm thick plywood. The spacings to each enclosure surface shall be as specified by the installation instructions. If no spacings are specified in the installation instructions, the enclosure surfaces shall be located as close to the back and both sides of the appliance as possible. The sides shall extend not less than 610 mm beyond the physical limits of the front and the top of the appliance. Temperatures are to be measured at points on the inside surface of the test enclosure.

36.12 An appliance intended to be operated in cycles is to be operated for successive operations of the machine through the complete cycle dictated by the control. If the appliance has more than one cycle selection or the cycle parameters may be adjusted, the complete program cycle(s) that results in the highest temperature rises shall be used. A 4-min interval is to be allowed between successive cycles to permit rearrangement of the clothes load. Hot water is to be supplied to the appliance at a temperature of 82°C (180°F), and both hot and cold water are to be supplied to the appliance at a pressure of 40 - 60 psi (276 - 414 kPa). If the appliance is intended to be drained to an opening above floor level, the outlet of the hose from the drain pump is to be 36 in (914 mm) above the floor on which the appliance rests. With the concurrence of those concerned, laundry detergent in accordance with the operating instructions may be added to the appliance at the beginning of each cycle.

51 Installation Instructions

51.1 An appliance other than a recessed or wall-insert appliance shall be provided with installation instructions that specify the required clearances to all adjacent surfaces.

Exception: The installation instructions need not specify clearances to all adjacent surfaces if the appliance complies with the Temperature Test of 36 with the appliance installed so that the enclosure surfaces are located as close to the back and both sides of the appliance as possible. See 36.11.1.