ANSI STANDARDS ACTION

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Contents

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

ISSN 0038-9633

Comment Deadline: April 27, 2014

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

Addenda

BSR/ASHRAE Addendum 34d-201X, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum updates the Section E Definitions for occupational exposure limit (OEL) and the workplace environmental exposure level (WEEL) and updates Section 10, References.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE Addendum 34e-201x, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the zeotropic refrigerant blend R-448A to Table 4-2, Date and Safety Classifications for Refrigerant Blends, and Table D-2, Refrigerant Blends.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae.org/default.aspx

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

Addenda

BSR/ASHRAE Addendum 34f-201X, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the zeotropic refrigerant blend R-449A to Table 4-2, Date and Safety Classifications for Refrigerant Blends and Table D-2, Refrigerant Blends.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae.org/default.aspx

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

Addenda

BSR/ASHRAE Addendum 34g-201X, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the zeotropic refrigerant blend R-450A to Table 4-2, Date and Safety Classifications for Refrigerant Blends and Table D-2, Refrigerant Blends.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae.org/default.aspx

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

Addenda

BSR/ASHRAE Addendum 34h-201X, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum adds the zeotropic refrigerant blend R-444B to Table 4-2, Date and Safety Classifications for Refrigerant Blends and Table D-2, Refrigerant Blends.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae.org/default.aspx

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

Addenda

BSR/ASHRAE Addendum 34i-201X, Designation and Safety Classification of Refrigerants (addenda to ANSI/ASHRAE Standard 34-2013)

This addendum revises Section 9.9.5, Quantity, changing the quantity and type of documents refrigerant applicants should submit to ASHRAE.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: https://osr.ashrae.org/default.aspx

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

Addenda

BSR/ASHRAE Addendum 55a-201x, Thermal Environmental Conditions for Human Occupancy (addenda to ANSI/ASHRAE Standard 55-2013)

This proposed addendum separates vertical air stratification limits for standing vs. seated occupants because the previous requirement did not distinguish between the two and would be overly restrictive when applied to standing occupants. This clarification only applies to occupants who are standing still with metabolic rates less than 1.3 met because the entire Section 5.3.4 Local Thermal Discomfort does not apply above 1.3 met.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE Addendum 62.1k-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2013)

This proposed addendum modifies the standard such that laboratory exhaust is assigned a default of Air Class 4, but explicitly allows a responsible EH&S professional to determine that a lower air class is appropriate for particular systems. If they assign a lower air class, then the use of heat wheel energy recovery would be allowed. The SSPC believes that determination of the appropriate air class is best made by a qualified professional on a case-by-case basis.

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 62.1q-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2013)

This proposed addendum modifies Section 5.2 (Exhaust Duct Location) to clarify requirements by including air classes instead of descriptive language, and modifies the requirements by allowing positively pressurized exhaust ducts inside the space of origin. It also modifies the air class of residential kitchen hoods.

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 62.1r-201x, Ventilation for Acceptable Indoor Air Quality (addenda to ANSI/ASHRAE Standard 62.1-2013)

This proposed addendum deletes Sections 6.2.7.1.2 and 6.2.7.1.3, and removes an informative note to Section 6.2.7.1.1. The deleted sections remove language which was potentially confusing, retaining the essential requirement for DCV as stated in Section 6.2.7.1.1. The changes remove the assumption that the Standard is intended for use only as calculations for code review and not physical operation. Proposed changes to Section 5.9.2 clarify the requirements and extend them to apply under conditions of DCV control operation.

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 62.2d-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2013)

This proposed change eliminates gravity or barometric dampers as allowable components of passive makeup air systems for combustion appliances. This change has been proposed because of concerns that such dampers do not reliably open at the low pressures (-1 to -5 Pa) that have the potential to backdraft atmospherically vented appliances.

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 62.2e-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2013)

This proposed addendum accounts for recent data showing what level of air sealing between units is reasonably achievable in new multifamily construction while still providing reasonable protection from contaminants originating in neighboring units.

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 62.2f-201x, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings (addenda to ANSI/ASHRAE Standard 62.2-2013)

This proposed addendum updates a reference from an outdated version. The reference is used regarding duct leakage. It makes no substantive changes to the requirements of Standard 62.2.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE Addendum a to ANSI/ASHRAE Standard 145.2-201x, Test Method for Assessing the Performance of Gas-Phase Air-Cleaning Systems: Air-Cleaning Devices (addenda to ANSI/ASHRAE Standard 145.2-2011)

In Table 6.1.4.1, the same compound is listed under two names: 2-butanone and MEK. This addendum fixes the double entry. It also changes the table so that two different concentrations are no longer required for the same test.

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 b to ANSI/ASHRAE Standard 145.2-201x, Test Method for Assessing the Performance of Gas-Phase Air-Cleaning Systems: Air-Cleaning Devices (addenda to ANSI/ASHRAE Standard 145.2-2011)

This addendum applies to the 100% Efficiency Test. This test depends on the test filter absolutely not breaking through at all. Experience has shown that even filters that exceed the requirements of 22+ pounds of sorbent can break through in less than an hour when a few ppb or less can be >1% breakthrough. Since the ability of the system to measure >99% efficiency can be determined in 5-10 minutes, shortening the test period for the 100% efficiency test makes sense.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/IES Addendum d to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2013)

This addendum adds deeper thermostat setups and setbacks and ventilation control to unrented hotel guestrooms and more clarity to the existing hotel guestroom requirements.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/IES Addendum g to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2013)

The wording in 90.1-2013 regarding the fan power pressure drop limitation adjustment can be interpreted in two ways. This change is intended to clarify which equation is the one that the committee intended and that was originally used in the economic analysis.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/IES Addendum h to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2013)

This proposed addendum modifies the language to provide an efficiency rating for the compressor and condensing unit of the packaged equipment that does not include the fan energy but reflects the standard's minimum performance requirement. Additionally, it provides a method of calculating the appropriate fan power to include in the model for heating and cooling fan energy.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/IES Addendum i to Standard 90.1-201x, Energy Standard for Buildings Except Low-Rise Residential Buildings (addenda to ANSI/ASHRAE/IESNA Standard 90.1-2013)

Based on a complete analysis of a typical computer room in all 17 climate zone using the benchmark city weather data, this addendum eliminates table 6.5.1-2 and requires that table 6.5.1-1 be used for both HVAC and computer room units.

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 189.1aj-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 ISC addresses an issue with the definition of low-emission hybrid and electric vehicles that was raised in the first public review by replacing the definition with a more appropriate statement in the requirements.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1an-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 Independent Substantive Change (ISC) makes changes to Table 7.5.3 based on a comment received during the first public review regarding the values for wood and biomass.

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 189.1aw-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 increases the range of products and materials that are considered and introduces more holistic considerations of supply-chain impacts of products via life-cycle assessment (LCA).

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 189.1bn-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 requirement for an automated pre-occupancy outdoor air purge in order to ameliorate indoor contaminant build-up that may occur during extended periods of time during which ventilation systems are off.

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 189.1bo-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 updates the requirements for economizers to reflect requirements in ANSI/ASHRAE/IES 90.1-2013.

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 189.1bp-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 revises language in the exhaust air energy recovery section to reflect requirements in ANSI/ASHRAE/IES Standard 90.1-2013.

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 189.1bq-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 updates the efficiency requirements for Electrical-Operated Unitary Air Conditioners and Condensing Units.

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 189.1br-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)

The addendum updates the requirements for air and water cooled chillers.

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 189.1bs-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 revises requirements for single-packaged vertical air conditioners, single-packaged vertical heat pumps, room air conditioners, and room air conditioner heat pumps.

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 189.1bt-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 updates requirements for gas- and oil-fired boilers.

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 189.1bu-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 updates requirements for water heating equipment.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1bw-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 proposes to update the performance requirements for heat-rejection equipment.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1bx-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 is intended to revise the existing requirements for addressing moisture in building envelopes to be more stringent and to use largely performance-based design criteria.

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 189.1by-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 proposes changes to provide a higher level of indoor moisture control that currently required in the standard by addressing air leakage with more stringency that the current requirements.

Click here to view these changes in full

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

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1bz-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 replaces an existing requirements in the standard to address outdoor air quality impacts of construction vehicles with a requirement that limits vehicle idling and requires signage.

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

NSF (NSF International)

Revision

BSR/NSF 14-201x (i58r1), Plastics Piping System Components and Related Materials (revision of ANSI/NSF 14-2003)

This Standard establishes minimum physical, performance, and health effects requirements for plastic piping system components and related materials. These criteria were established for the protection of public health and the environment.

Click here to view these changes in full

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

NSF (NSF International)

Revision

BSR/NSF 53-201x (i96r1), Drinking Water Treatment Units - Health Effects (revision of ANSI/NSF 53-2013)

It is the purpose of this Standard to establish minimum requirements for materials, design and construction, and performance of point-of-use and point-of-entry drinking water treatment systems that are designed to reduce specific health-related contaminants in public or private water supplies. Such systems include point-of-entry drinking water treatment systems used to treat all or part of the water at the inlet to a residential facility or a bottled water production facility, and includes the material and components used in these systems.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Monica Leslie, (734) 827 -5643, mleslie@nsf.org; scruden@nsf.org

NSF (NSF International)

Revision

BSR/NSF 61-201x (i110r1), Drinking Water System Components - Health Effects (revision of ANSI/NSF 61-2013)

This Standard establishes minimum health effects requirements for the chemical contaminants and impurities that are indirectly imparted to drinking water from products, components, and materials used in drinking water systems. This Standard does not establish performance, taste and odor, or microbial growth support requirements for drinking water system products, components, or materials.

Click here to view these changes in full

Send comments (with copy to psa@ansi.org) to: Monica Leslie, (734) 827 -5643, mleslie@nsf.org; scruden@nsf.org

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 6-201x, Standard for Safety for Electrical Rigid Metal Conduit - Steel (revision of ANSI/UL 6-2010)

Document (dated 3-28-2014) proposes marking limitations on small trade size elbows and nipples.

Click here to view these changes in full

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

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 6A-201x, Standard for Safety for Electrical Rigid Metal Conduit - Aluminum, Red Brass and Stainless Steel (revision of ANSI/UL 6A-2008 (R2013))

Document (dated 3-28-2014) proposes marking limitations on small trade size elbows and nipples and revisions to conduit with a protective coating for use with threaded couplings.

Click here to view these changes in full

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

Comment Deadline: May 12, 2014

AAMI (Association for the Advancement of Medical Instrumentation)

New National Adoption

BSR/AAMI HA60601-1-11-201x, Medical electrical equipment - Part 1-11: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment (national adoption of IEC 60601-1-11, 2nd ed (in development) with modifications and revision of ANSI/AAMI HA60601-1-11-2011)

Applies to the basic safety and essential performance of medical electrical equipment and medical electrical systems that are intended, as indicated in the instructions for use by their manufacturer, for use in the home healthcare environment regardless of whether the ME equipment or ME system is intended for use by a lay operator by trained healthcare personnel. The home healthcare environment includes:

- the dwelling place in which a patient lives; and

- other places where patients are present, excluding professional healthcare facility environments where operators with medical training are continually available when patients are present.

Single copy price: Free

Order from: Jennifer Moyer, (703) 253-8274, jmoyer@aami.org

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

AMCA (Air Movement and Control Association)

Revision

BSR/AMCA 301-201x, Methods for Calculating Fan Sound Ratings from Laboratory Test Data (revision of ANSI/AMCA 301-2006)

These changes have been made to the document since its last public review:

(1) Removal of end reflection corrections from the generalized and specific methods;

(2) Revision of the treatment of the blade passage frequency in both the generalized and specific methods;

(3) Removal of the bandwidth term from generalized sound power, resulting in complete agreement with the specific sound power method;

(4) Clarification of interpolation and extrapolation for geometrically similar fans;

(5) Clarification of interpolation and extrapolation for nongeometrically similar fans;

(6) Addition of spherical sones; and

(7) Allow calculation of spherical and hemispherical sones.

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

ASABE (American Society of Agricultural and Biological Engineers)

New Standard

BSR/ASABE S516 MONYEAR-201x, Terminology for Forest Operations and Equipment (new standard)

This standard specifies terminology for operations and equipment commonly used to establish, tend, and harvest forest stands. The intent of this Standard is to establish uniform terminology to describe forest operations and equipment in technical papers, specifications, standards, and general use.

Single copy price: $55.00

Obtain an electronic copy from: vangilder@asabe.org

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

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

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

Addenda

BSR/ASHRAE/USGBC/IES Addendum 189.1bv-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 new requirements for VRF (Variable Refrigerant Flow) Air Conditioners and Heat Pumps.

Single copy price: $45.00

Obtain an electronic copy from: http://www.techstreet.com/ashrae/products/1820547

Order from: http://www.techstreet.com/ashrae/products/1820547

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

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME B30.5-201x, Mobile and Locomotive Cranes (revision of ANSI/ASME B30.5-2011)

B30. 5 applies to crawler cranes, locomotive cranes, wheel-mounted cranes, and any variations thereof that retain the same fundamental characteristics. The scope includes only cranes of the above types that are basically powered by internal combustion engines or electric motors. Side boom tractors and cranes designed for railway and automobile wreck clearance, digger derricks, cranes manufactured specifically for, or when used for, energized electrical line service, knuckle boom, trolley boom cranes, and cranes having a maximum rated capacity of one ton or less are excluded. Special adaptions to the general types of machines covered by this Volume, where applicable, fall under this scope.

Single copy price: $free

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

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

Send comments (with copy to psa@ansi.org) to: Kathryn Hyam, (212) 591-8521, hyamk@asme.org

ATIS (Alliance for Telecommunications Industry Solutions)

Revision

BSR ATIS 0700724-201x, UMTS Handover Interface for Lawful Interception (revision of ANSI ATIS 0700724-2004 (R2009))

This standard is based on 3GPP TS33.108, modified to become an American National Standard for Telecommunications. Laws of individual nations and regional institutions (e.g., European Union), and sometimes licensing and operating conditions, define a need to intercept telecommunications traffic and related information in modern telecommunications systems. It has to be noted that lawful interception shall always be done in accordance with the applicable national or regional laws and technical regulations. Nothing in this standard, including the definitions, is intended to supplant national law.

Single copy price: $220.00

Obtain an electronic copy from: kconn@atis.org

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

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

HL7 (Health Level Seven)

New Standard

BSR/HL7 V3 SECPRONT, R1-201x, HL7 Version 3 Standard: Security and Privacy Ontology, Release 1 (new standard)

This project will develop a domain ontology encompassing the healthcare IT security and privacy domains providing a single, formal vocabulary embodying the concepts in each domain as well as concepts shared between the two. The concepts identified and defined in the ontology will be primarily drawn from those concepts contained in the Security and Composite Privacy DAMs. The concepts in this ontology will be extended in order to bridge to standard ontologies in associated domains such as enterprise architecture, clinical care, and biomedicine.

Single copy price: Free to members; free to non-members 90 days following ANSI approval and HL7 publication

Obtain an electronic copy from: Karenvan@HL7.org

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

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

HL7 (Health Level Seven)

Revision

BSR/HL7 V3 INFOB, R2-201x, HL7 Version 3 Standard: Context-Aware Retrieval Application (Infobutton); Knowledge Request, Release 2 (revision of ANSI/HL7 V3 INFOB, R1-2010)

Release 2 of this specification updates Release 1 as follows: 1) Ability to specify additional patient context attributes 2) Ability to represent context in terms of locations of interest3) Ability to specify a health care payor as the performer or information recipient of an Infobutton request. 4) Clarifications and improvement of the description of the Infobutton R-MIM classes and attributes.

Single copy price: $free to members; free to non-members 90 days following ANSI approval and publication by HL7

Obtain an electronic copy from: Karenvan@HL7.org

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

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

NEMA (ASC C8) (National Electrical Manufacturers Association)

Revision

BSR/ICEA S-70-547-201x, Standard for Weather-Resistant Polyethylene Covered Conductors (revision of ANSI ICEA S-70-547-2006)

This standard applies to the materials, construction and testing of weather-resistant polyethylene covered conductors rated at 75°C and 90°C normal service temperatures. Conductors covered under this standard are intended for the distribution of electrical energy under normal overhead (aerial) conditions and installations.

Single copy price: $100.00

Obtain an electronic copy from: https://standards.nema.org/kws/groups/AN08-PCI-SC/download/10043/ICEA%20S-70-547%20Final%20Publication%20Version%20Sept%202013.pdf

Order from: Ryan Franks, (703) 841-3271, ryan.franks@nema.org

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

OEOSC (ASC OP) (Optics and Electro-Optics Standards Council)

New National Adoption

BSR OEOSC OP1.0110-201x, Standard for Optics and Photonics - Preparation of Drawings for Optical Elements and Systems - Part 12: Aspheric Surfaces (national adoption with modifications of ISO 10110-12)

The OP1.0110 series specifies the presentation of design and functional requirements for optical elements in technical drawings used for manufacturing and inspection. This part of OP1.0110 specifies rules for presentation, dimensioning, and tolerancing of optically effective surfaces of aspheric form.

Single copy price: $75.00

Obtain an electronic copy from: daikens@optstd.org

Order from: Dave Aikens, 860-878-0722, daikens@optstd.org

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

OEOSC (ASC OP) (Optics and Electro-Optics Standards Council)

New National Adoption

BSR OEOSC OP1.0110-9-201x, Standard for Optics and Photonics - Preparation of Drawings for Optical Elements and Systems - Part 9: Surface treatment and coatings (national adoption with modifications of ISO 10110-9)

OP1.0110 specifies the presentation of design and functional requirements for optical elements and systems in technical drawings used for manufacturing and inspection. This part of OP1.0110 specifies rules for indicating the treatments and coatings applied to optical surfaces for functional and/or protective purposes.

Single copy price: $50.00

Obtain an electronic copy from: daikens@optstd.org

Order from: Dave Aikens, 860-878-0722, daikens@optstd.org

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

OEOSC (ASC OP) (Optics and Electro-Optics Standards Council)

New Standard

BSR OEOSC OP1.004-201x, Standard for Optics and Electro-Optical Instruments - Optical Elements and Assemblies - Optical Wavefront Measurement (new standard)

This American National Standard specifies standardized methods for indicating surface form and wavefront errors and for evaluating conformance. This standard primarily addresses surface or wavefront errors that are measured using a digital (computer-controlled) interferometer which acquires data over the entire clear aperture of the part under test.

Single copy price: $50.00

Obtain an electronic copy from: daikens@optstd.org

Order from: Dave Aikens, 860-878-0722, daikens@optstd.org

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

SCTE (Society of Cable Telecommunications Engineers)

Revision

BSR/SCTE 152-2014, Test Method for Contact Resistance Measurement of Mainline Plug Interface (revision of ANSI/SCTE 152-2008)

The purpose of this test procedure is to measure the resistance between the contact of the connector and cable interfaces. High-resistance contacts may cause excessive energy losses, overheating, and possibly common path distortions. It is most desirable to have contact resistance as low as possible.

Single copy price: $50.00

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

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

TIA (Telecommunications Industry Association)

Addenda

BSR/TIA 968-B-2-201x, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 2 (addenda to ANSI/TIA 968-B-1-2012)

This Standard specifies technical criteria for terminal equipment approved in accordance with Title 47 of the U.S. Code of Federal Regulations (47 C.F.R.), Part 68 for direct connection to the public switched telephone network, including private line services provided over wireline facilities owned by providers of wireline telecommunications. This addendum adds a new sub-clause specifying the use of an acoustic stimulus signal when testing analog telephones having electroacoustic transducers for live voice input for compliance with out-of-band emissions and in-band longitudinal signal requirements.

Single copy price: $60

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA)

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

TIA (Telecommunications Industry Association)

New Standard

BSR/TIA 455-C-201x, Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components (new standard)

This document, together with its addenda, provides uniform test procedures for testing fiber optic components intended for, or forming a part of, optical communications and data transmission systems. Neither this document, nor its addenda, provide procedures designed for testing fiber optic systems. For test procedures for fiber optic systems or subsystems, refer to the TIA/EIA -526 series of documents.

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA)

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

TIA (Telecommunications Industry Association)

New Standard

BSR/TIA 4994-201x, Standard for sustainable information communications technology. (new standard)

Scope: This Standard addresses the requirements associated with the planning, architecture, design, integration and operation of sustainable information communications technology (ICT). Justifications: This standard describes sustainable concepts for ICT such as lowering energy consumption, reducing material consumption and mitigating the environmental impact.

Single copy price: $99

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA)

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

TIA (Telecommunications Industry Association)

Revision

BSR/TIA 470.220-D-201x, Telecommunications - Telephone Terminal Equipment - Alerter Acoustic Output Performance Requirements for Analog Telephones (revision and redesignation of ANSI/TIA 470.220-C-2004)

The project is required to revise the use of A-weighting for acoustic ringer measurements and performance requirements.

Single copy price: $95

Obtain an electronic copy from: standards@tiaonline.org

Order from: Telecommunications Industry Association (TIA)

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

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 48-201x, Electric Signs (revision of ANSI/UL 48-2012)

(1) Addition of requirements for laminated or organic-coated glass and revision to test method; (2) Addition of requirements for signs with photovoltaic systems or modules; (3) Clarification of drain opening requirements; and (4) Addition of grounding and bonding marking.

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: Megan VanHeirseele, (847) 664-2881, Megan.M.VanHeirseele@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 746A-201x, Standard for Safety for Polymeric Materials - Short Term Property Evaluations (revision of ANSI/UL 746A-2010a)

The following changes in requirements to UL 746A are being proposed: 1. Realignment of Table 9.1 Ingredient Concentrations

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 1286-201x, Standard for Safety for Office Furnishings (revision of ANSI/UL 1286-2013a)

(1) Additional requirement for vertically adjustable surfaces; (2) Revisions to align with the new edition of BIFMA X5.9, Storage Units; (3) Additional requirements for a new supplement covering office furnishings attached to the building structure; and (4) Revisions to align with the new edition of BIFMA X5.5, Desk and Table Products.

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: Susan Malohn, (847) 664-1725, Susan.P.Malohn@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 1323-201x, Standard for Safety for Scaffold Hoists (revision of ANSI/UL 1323-2012)

These proposals cover the following topics: 1) Editorial revisions; 2) Grounding and bonding; 3) Motor requirements; and 4) Increase voltage rating to 1000 V.

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: Marcia Kawate, (408) 754-6743, Marcia.M.Kawate@ul.com

UL (Underwriters Laboratories, Inc.)

Revision

BSR/UL 60745-2-2-201x, Standard for Safety for Hand-Held Motor-Operated Electrical - Tools Safety - Part 2-2: Particular Requirements for Screwdrivers and Impact Wrenches (revision of ANSI/UL 60745-2-2-2009 (R2013))

(1) Addition of national difference clauses to specify ratchet drivers in the scope of the standard and to clarify test requirements as they apply to ratchet drivers.

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: Beth Northcott, (847) 664-3198, Elizabeth.Northcott@ul.com

Comment Deadline: May 27, 2014

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

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

Addenda

BSR/ASHRAE Addendum am to ANSI/ASHRAE Standard 135-201x, BACnet - A Data Communication Protocol for Building Automation and Control Networks (addenda to ANSI/ASHRAE Standard 135-2012)

This addendum extends BACnet/WS with RESTful services for complex data types and subscriptions, extracts data model from Annex Q into separate model, reworks Annex Q to be an XML syntax for the common model, Adds a JSON syntax for the common model, replaces Annex N SOAP services with a migration guide, and changes Clause 21 identifiers to use a consistent format.

Single copy price: $35.00

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

Order from: standards.section@ashrae.org

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

ASME (American Society of Mechanical Engineers)

Reaffirmation

BSR/ASME B1.5-1997 (R201x), Acme Screw Threads (reaffirmation of ANSI/ASME B1.5-1997 (R2009))

This Standard provides for two general applications of Acme threads: namely, general purpose and centralizing. The limits and tolerances in this Standard relate to single-start Acme threads and may be used, if considered suitable, for multiple-start Acme threads. The latter threads are used to provide relatively fast traversing motion when necessary. The three classes (2G, 3G, and 4G) of general purpose threads have clearances on all diameters for free movement. This thread relies on the thread flanks to maintain concentric operation. The three classes of centralizing threads have a limited clearance at the major diameters of the external and internal threads so that a bearing at the major diameter maintains approximate alignment of the thread axis and prevents wedging on the flanks of the threads. For any combination of the three classes of threads covered in this Standard, some end play or backlash will result. This is unavoidable for interchangeable products. When backlash or end play is objectionable, some mechanical means should be provided to eliminate the condition. In any case, sufficient end play must be left to provide a close running fit. In addition to limiting dimensions for the standard series of diameters and pitches of ACME single-start threads, tables of tolerances, in terms of pitch and diameter, provide for a wide choice of diameters for a given standard pitch. By using the formulas for diameter and pitch increments, the pitch diameter tolerances for special diameters and pitches can be determined for each class. Formulas and data are also provided for allowances on external threads and major and minor diameter allowances and tolerances. The Appendices provide text and dimensions on the following: (a) Alternate Centralizing ACME Threads; (b) Multiple-Start ACME Threads; (c) General Purpose ACME Threads, Class 5G; (d) Centralizing ACME Threads, Classes 5C and 6C; (e) Three-Wire Method of Measurement of Pitch Diameter of 29 deg External ACME Screw Threads; (f) Ball Methods for Internal Pitch Diameter Measurement of 29 deg ACME Screw Threads; (g) Go Gage Compensation, Calculation of Flank Angle, Limit Gaging of Setting Rings, and Gaging Problem Areas; (h) Tolerances for ACME Screw Thread Gages over 5 in.; (i) Determining Limits of Size for Special Diameter/Pitch Combinations.

Single copy price: $95.00

Order from: For Reaffirmations and Withdrawn standards please view our catalog at http://www.asme.org/kb/standards

Send comments (with copy to psa@ansi.org) to: Angel Guzman, (212) 591 -8018, guzman@asme.org

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME PTC 22-201x, Gas Turbines (revision of ANSI/ASME PTC 22 -2005)

This Code provides for the testing of gas turbines supplied with gaseous or liquid fuels (or solid fuels converted to liquid or gas prior to entrance to the gas turbine). Tests of gas turbines with emission control and/or power augmentation devices, such as injection fluids and inlet air treatment, are included. It may be applied to gas turbines in combined cycle plants or with other heat recovery systems.

Single copy price: $free

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

Send comments (with copy to psa@ansi.org) to: Lauren Powers, (212) 591 -7008, powersl@asme.org

ASME (American Society of Mechanical Engineers)

Revision

BSR/ASME PCC-2-201x, Repair of Pressure Equipment and Piping (revision of ANSI/ASME PCC-2-2011)

This Standard provides methods for repair of equipment and piping within the scope of ASME Pressure Technology Codes and Standards after they have been placed in service. These repair methods include relevant design, fabrication, examination, and testing practices and may be temporary or permanent, depending on the circumstances. The methods provided in this Standard address the repair of components when repair is deemed necessary based on appropriate inspection and flaw assessment. These inspection and flaw evaluation methods are not covered in this Standard, but are covered in other post-construction codes and standards.

Single copy price: $free

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

Send comments (with copy to psa@ansi.org) to: Richard Lucas, (212) 591 -7541, lucasr@asme.org

UL (Underwriters Laboratories, Inc.)

New National Adoption

BSR/UL 60730-2-15-201X, Standard for Automatic electrical controls for household and similar use - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls (identical national adoption of IEC 60730-2-15)

This standard covers automatic electrical air flow, water flow and water level sensing controls for use in, or in association with, boilers with a maximum pressure rating of 2 000 kPA (20 bar) and equipment for general household and similar use including controls for heating, air-conditioning and similar applications. Examples are water flow and water level sensing controls of the float or electrode-sensor type used in boiler applications and air flow, water flow and water level sensing controls for swimming pool pumps, water tank pumps, cooling towers, dishwashers, washing machines, air conditioning chillers and ventilation applications.

Single copy price: Contact comm2000 for pricing and delivery options

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

Order from: Comm2000, 151 Eastern Ave,Bensenville, IL 60106 USA,1-888 -853-3503

Send comments (with copy to psa@ansi.org) to: Alan McGrath, (847) 664 -3038, alan.t.mcgrath@ul.com

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

HL7 (Health Level Seven)

V3DAM ALLERGY, R1, HL7 Version 3 Domain Analysis Model: Allergies and Intolerances, Release 1 (TECHNICAL REPORT) (technical report)

This project aims to develop a package of Domain Analysis Model artifacts including use cases, conceptual model, class diagrams, interaction diagrams and glossary to inform the revision of the expired Allergy/Intolerance DSTU, and to produce a harmonized, standardized Allergy/Intolerance model.

Single copy price: Free to members and non-members 90 days following publication

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

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

NPES (ASC CGATS) (Association for Suppliers of Printing, Publishing and Converting Technologies)

CGATS/TR 016-2012 (Revision), Graphic technology - Printing Tolerance and Conformity Assessment (TECHNICAL REPORT) (technical report)

This is a revision of CGATS/TR 016-2012. This technical report defines a process that can be used in evaluating the conformance of printed material to a set of reference color characterization data, which are used as the intended printing aim. It also provides a conformance assessment procedure which includes evaluation of within-sheet variation, deviation, and production variation as well as a three level tolerance schema for the combination of the weighted results into a single rank.

Single copy price: Free download

Order from: Debra Orf, (703) 264-7229, dorf@npes.org

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:

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

BSR/ASHRAE/USGBC/IES Addendum 189.1am-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)

Inquiries may be directed to Bert Etheredge, 404-636-8400, betheredge@ashrae.org

Correction

E-mail Address Error

A typographical error has appeared in the e-mail provided for (ASME) American Society of Mechanical Engineers. Instead of the letter i, a lower-case L was placed between the S and B in ANSIBOX@asme.org. The correct address is ansibox@asme.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.

AAMI (Association for the Advancement of Medical Instrumentation)

Office: 4301 N Fairfax Drive
Suite 301
Arlington, VA 22203-1633

Contact: *Jennifer Moyer*

Phone: (703) 253-8274

Fax: (703) 276-0793

E-mail: jmoyer@aami.org

BSR/AAMI HA60601-1-11-201x, Medical electrical equipment - Part 1 -11: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment (national adoption of IEC 60601-1-11, 2nd ed (in development) with modifications and revision of ANSI/AAMI HA60601 -1-11-2011)

ALI (ASC A14) (American Ladder Institute)

Office: 330 N. Wabash
Suite 2000
Chicago, IL 60611

Contact: *Jeff Inks*

Phone: (202) 367-1217

E-mail: jinks@americanladderinstitute.org

BSR/ASC A14.4-201x, Standard Safety Requirements for Job-Made Wooden Ladders (revision of ANSI/ASC A14.4-201x)

ASA (ASC S3) (Acoustical Society of America)

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

Contact: *Susan Blaeser*

Phone: (631) 390-0215

Fax: (631) 390-0217

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

BSR/ASA S3.21-201x, Methods for Manual Pure-Tone Threshold Audiometry (revision of ANSI/ASA S3.21-2004 (R2009))

FCI (Fluid Controls Institute)

Office: 1300 Sumner Avenue
Cleveland, OH 44115

Contact: *Leslie Schraff*

Phone: (216) 241-7333

Fax: (216) 241-0105

E-mail: fci@fluidcontrolsinstitute.org

BSR/FCI 70-3-201x, Regulator Seat Leakage (revision of ANSI/FCI 70-3 -2004)

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

Office: 1101 K Street NW
Suite 610
Washington, DC 20005-3922

Contact: *Deborah Spittle*

Phone: (202) 626-5746

Fax: (202) 638-4922

E-mail: comments@itic.org

INCITS 504-1:2013/AM1-201x, Information Technology - Generic Identity Command Set - Part 1, Amendment 1: Card Application Command Set (supplement to INCITS 504-1-2013)

INCITS 504-1:2013/AM2-201x, Information Technology - Generic Identity Command Set - Part 1, Amendment 2: Card Application Command Set (supplement to INCITS 504-1-2013)

INCITS 504-2:2013/AM1-201x, Information Technology - Generic Identity Command Set - Part 2, Amendment 1: Card Administrative Command Set (supplement to INCITS 504-2:2013)

INCITS 504-2:2013/AM2-201x, Information Technology - Generic Identity Command Set - Part 2, Amendment 2: Card Administrative Command Set (supplement to INCITS 504-2:2013)

OEOSC (ASC OP) (Optics and Electro-Optics Standards Council)

Office: 35 Gilbert Hill Rd.
Chester, CT 06412

Contact: *Dave Aikens*

Phone: 860-878-0722

Fax: 860-555-1212

E-mail: daikens@optstd.org

BSR OEOSC OP1.0110-201x, Standard for Optics and Photonics - Preparation of Drawings for Optical Elements and Systems - Part 12: Aspheric Surfaces (national adoption with modifications of ISO 10110 -12)

TAPPI (Technical Association of the Pulp and Paper Industry)

Office: 15 Technology Parkway South
Peachtree Corners, GA 30092

Contact: *Charles Bohanan*

Phone: (770) 209-7276

Fax: (770) 446-6947

E-mail: standards@tappi.org

BSR/TAPPI T 702 om-201x, Rheological measurements for characterization of polyolefins: Low-density polyethylene (LDPE) for extrusion coating (new standard)

TIA (Telecommunications Industry Association)

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

Contact: *Germaine Palangdao*

Phone: (703) 907-7497

Fax: (703) 907-7727

E-mail: standards@tiaonline.org

BSR/TIA 455-C-201x, Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers, Sensors, Connecting and Terminating Devices, and Other Fiber Optic Components (new standard)

BSR/TIA 470.220-D-201x, Telecommunications - Telephone Terminal Equipment - Alerter Acoustic Output Performance Requirements for Analog Telephones (revision and redesignation of ANSI/TIA 470.220-C-2004)

BSR/TIA 912-C-201x, Telecommunications - IP Telephony Equipment - Voice Gateway Transmission Requirements (revision and redesignation of ANSI/TIA 912-B-2007)

BSR/TIA 968-B-2-201x, Telecommunications - Telephone Terminal Equipment - Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 2 (addenda to ANSI/TIA 968-B-1-2012)

BSR/TIA 4994-201x, Standard for sustainable information communications technology. (new standard)

BSR/TIA 5011-201x, Standard Process for Sustainable Information Communications Technology Manufacturers (new standard)

UL (Underwriters Laboratories, Inc.)

Office: 455 E Trimble Road
San Jose, CA 95131-1230

Contact: *Paul Lloret*

Phone: (408) 754-6618

Fax: (408) 754-6618

E-mail: Paul.E.Lloret@ul.com

BSR/UL 6-201x, Standard for Safety for Electrical Rigid Metal Conduit - Steel (revision of ANSI/UL 6-2010)

BSR/UL 1323-201x, Standard for Safety for Scaffold Hoists (revision of ANSI/UL 1323-2012)

BSR/UL 60730-2-15-201X, Standard for Automatic electrical controls for household and similar use - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls (identical national adoption of IEC 60730-2-15)

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.

CSA (CSA Group)

Reaffirmation

* ANSI/CSA LC 7-2009 (R2014), Standard for Pipe Joint Compound (reaffirmation of ANSI/CSA LC 7-2009): 3/27/2014

HL7 (Health Level Seven)

New Standard

ANSI/HL7 V3XMLITS WFCR1DT, R1-2014, HL7 Version 3 Standard: XML Implementation Technology Specification - Wire Format Compatible Release 1 Data Types, Release 1 (new standard): 3/27/2014

NEMA (ASC C18) (National Electrical Manufacturers Association)

Revision

* ANSI C18.2M, Part 2-2014, Portable Rechargeable Cells and Batteries--Safety Standard (revision of ANSI C18.2M, Part 2-2007): 3/27/2014

NSF (NSF International)

Revision

* ANSI/NSF 50-2014 (i94r1), Equipment for Swimming pools, spas, hot tubs, and other recreational water facilities (revision of ANSI/NSF 50 -2012): 3/18/2014
* ANSI/NSF 61-2014 (i111r1), Drinking Water System Components - Health Effects (revision of ANSI/NSF 61-2013): 3/23/2014
* ANSI/NSF 61-2014 (i114r1), Drinking Water System Components - Health Effects (revision of ANSI/NSF 61-2013): 3/18/2014

TIA (Telecommunications Industry Association)

Revision

ANSI/TIA 470.110-D-2014, Telecommunications - Telephone Terminal Equipment - Transmission Requirements for Analog Telephones with Handsets (revision and redesignation of ANSI/TIA 470.110-C -2004): 3/27/2014

UL (Underwriters Laboratories, Inc.)

New Standard

ANSI/UL 486F-2014, Standard for Safety for Bare and Covered Ferrules (new standard): 3/21/2014

Reaffirmation

ANSI/UL 1030-2010 (R2014), Standard for Safety for Sheathed Heating Elements (reaffirmation of ANSI/UL 1030-2010): 3/27/2014

* ANSI/UL 60745-2-4-2009 (R2014), Standard for Safety for Hand-Held Motor-Operated Electrical - Tools Safety - Part 2-4: Particular Requirements for Sanders and Polishers Other than Disk Type (reaffirmation of ANSI/UL 60745-2-4-2009): 3/13/2014
* ANSI/UL 60745-2-6-2009 (R2014), Hand-Held Motor-Operated Electric Tools - Safety - Part 2-6: Particular Requirements for Hammers (reaffirmation of ANSI/UL 60745-2-6-2009): 3/13/2014
* ANSI/UL 60745-2-8-2009 (R2014), Standard for Safety for Hand-Held Motor-Operated Electrical - Tools Safety - Part 2-8: Particular Requirements for Shears and Nibblers (reaffirmation of ANSI/UL 60745-2-8-2009): 3/13/2014
* ANSI/UL 60745-2-9-2009 (R2014), Standard for Safety for Hand-Held Motor-Operated Electrical - Tools Safety - Part 2-9: Particular Requirements for Tappers (reaffirmation of ANSI/UL 60745-2-9 -2009): 3/13/2014

Revision

ANSI/UL 44-2014, Standard for Safety for Thermoset-Insulated Wires and Cables (revision of ANSI/UL 44-2010): 3/26/2014

ANSI/UL 44-2014a, Standard for Safety for Thermoset-Insulated Wires and Cables, (reciculation dated 04-19-13) (revision of ANSI/UL 44 -2010): 3/26/2014

ANSI/UL 44-2014b, Standard for Safety for Thermoset-Insulated Wires and Cables, (reciculation dated 04-19-13) (revision of ANSI/UL 44 -2010): 3/26/2014

ANSI/UL 83-2014, Standard for Safety for Thermoplastic-Insulated Wires and Cables (revision of ANSI/UL 83-2008): 3/26/2014

ANSI/UL 83-2014a, Standard for Safety for Thermoplastic-Insulated Wires and Cables (revision of ANSI/UL 83-2008): 3/26/2014

ANSI/UL 83-2014b, Standard for Safety for Thermoplastic-Insulated Wires and Cables, (reciculation dated 04-19-13) (revision of ANSI/UL 83-2008): 3/26/2014

ANSI/UL 125-2014, Standard for Safety for Flow Control Valves for Anhydrous Ammonia and LP-Gas (Proposals dated 10-25-13) (revision of ANSI/UL 125-2011b): 3/19/2014

ANSI/UL 125-2014a, Standard for Safety for Flow Control Valves for Anhydrous Ammonia and LP-Gas (Proposals dated 10-25-13) (revision of ANSI/UL 125-2011b): 3/19/2014

ANSI/UL 283-2014, Standard for Safety for Air Fresheners and Deodorizers (revision of ANSI/UL 283-2011b): 3/26/2014

ANSI/UL 283-2014a, Standard for Safety for Air Fresheners and Deodorizers (revision of ANSI/UL 283-2011b): 3/26/2014

ANSI/UL 405-2014, Standard for Safety for Fire Department Connection Devices (revision of ANSI/UL 405-2013): 3/26/2014

ANSI/UL 558-2014, Standard for Safety for Industrial Trucks, Internal Combustion Engine-Powered (revision of ANSI/UL 558-2013): 3/20/2014

ANSI/UL 583-2014, Standard for Safety for Electric-Battery-Powered Industrial Trucks (revision of ANSI/UL 583-2012): 3/20/2014

* ANSI/UL 1278-2014, Standard for Safety for Movable and Wall- or Ceiling-Hung Electric Room Heaters (revision of ANSI/UL 1278 -2011a): 3/21/2014
* ANSI/UL 1278-2014a, Standard for Safety for Movable and Wall- or Ceiling-Hung Electric Room Heaters (revision of ANSI/UL 1278 -2011a): 3/21/2014

ANSI/UL 2024-2014, Standard for Safety for Signaling, Optical Fiber and Communications Raceways and Cable Routing Assemblies (revision of ANSI/UL 2024-2011): 3/25/2014

ANSI/UL 2200-2014, Standard for Safety for Stationary Engine Generator Assemblies (revision of ANSI/UL 2200-2013a): 3/20/2014

ANSI/UL 2368-2014, Standard for Safety for Fire Exposure Testing of Intermediate Bulk Containers for Flammable and Combustible Liquids (revision of ANSI/UL 2368-2012): 3/24/2014

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.

AISI (American Iron and Steel Institute)

Office: 25 Massachusetts Avenue, NW
Suite 800
Washington, DC 20001

Contact: *Helen Chen*

Fax: (202) 452-1039

E-mail: Hchen@steel.org; doates@steel.org

BSR/AISI S250-201x, North American Standard for Cold-Formed Steel Framing - Energy Conservation (new standard)

Stakeholders: Design professionals, code officials, building owners and managers, and general.

Project Need: This standard is intended to provide design methods for the purposes of calculating the heat transfer of roof, wall, and floor assemblies containing cold-formed steel framing; developing details at the interface of the structure and claddings with insulation components; installation quality standards; developing prescriptive solutions for code compliance, and similar issues that impact CFS framing due to energy code requirements.

These Energy Conservation provisions shall apply to the design, construction, and installation of structural and non-structural cold-formed steel framing members in building envelopes that are designed to enclose conditioned space(s).

ALI (ASC A14) (American Ladder Institute)

Office: 330 N. Wabash
Suite 2000
Chicago, IL 60611

Contact: *Jeff Inks*

E-mail: jinks@americanladderinstitute.org

* BSR/ASC A14.4-201x, Standard Safety Requirements for Job-Made Wooden Ladders (revision of BSR/ASC A14.4-201x)

Stakeholders: Ladder manufacturers, users, contractors, trades people,

Project Need: Revision based on the 5-year renewal cycle to incorporate updates/needed amendments.

This safety standard prescribes minimum requirements and recommendations for the construction, design, installation, and use of job-made wooden ladders in order to minimize personal injuries. This standard does not cover portable manufactured or portable job-made ladders, permanent fixed ladders, or mobile-equipment ladders.

ASA (ASC S3) (Acoustical Society of America)

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

Contact: *Susan Blaeser*

Fax: (631) 390-0217

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

BSR/ASA S3.21-201x, Methods for Manual Pure-Tone Threshold Audiometry (revision of ANSI/ASA S3.21-2004 (R2009))

Stakeholders: Audiologists, industrial hygienists, hearing researchers.

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

This Standard provides a procedure for pure-tone audiometry that will serve the needs of persons conducting threshold measurements in industry, schools, medical settings, and other areas where valid audiometric threshold measurements are needed.

ASABE (American Society of Agricultural and Biological Engineers)

Office: 2950 Niles Road
St Joseph, MI 49085

Contact: *Carla VanGilder*

Fax: (269) 429-3852

E-mail: cvgilder@sbcglobal.net

BSR/ASAE S318.18 MONYEAR-201x, Safety for Agricultural Field Equipment (revision and redesignation of ANSI/ASAE S318.17 -2009)

Stakeholders: Manufacturers of tractors and other farm equipment, academia, and users of farm equipment.

Project Need: Pre-periodic review of standard identified the need to update the reference section. Add guarding definitions, requirements and construction sections from S493.1, Guarding for Agricultural Equipment, into S318.

This Standard is a guide to provide a reasonable degree of personal safety for operators and other persons during the normal operation and servicing of agricultural field equipment. This Standard does not apply to skid steer loaders, permanently installed grain dryers, and agricultural equipment covered by other safety standards, such as but not limited to permanently installed farmstead equipment, portable grain augers, and storage structures, except where specifically referenced by other standards.

CSA (CSA Group)

Office: 8501 E. Pleasant Valley Road
Cleveland, OH 44131

Contact: *David Zimmerman*

Fax: (216) 520-8979

E-mail: david.zimmerman@csagroup.org

* BSR Z21.11.3-201x, Gas-fired room heaters, volume III, propane-fired portable emergency use heater systems (revision of ANSI Z21.11.3 -2013)

Stakeholders: Manufacturers, utilities, consumers, testing agencies.

Project Need: Updates and revises the text.

Details test and examination criteria for propane-fired portable emergency-use heater systems for use with a self-contained propane supply in a listed composite cylinder. Such heater systems are not for use with line voltage and limited to a maximum input rating of 15,000 Btu/hr (4396 W).

FCI (Fluid Controls Institute)

Office: 1300 Sumner Avenue
Cleveland, OH 44115

Contact: *Leslie Schraff*

Fax: (216) 241-0105

E-mail: fci@fluidcontrolsinstitute.org

BSR/FCI 70-3-201x, Regulator Seat Leakage (revision of ANSI/FCI 70 -3-2004)

Stakeholders: Manufacturers of pressure regulators.

Project Need: To provide test methods for pilot-operated and direct-acting pressure-reducing, pressure-relieving (back pressure), differential pressure, and temperature regulators.

This standard establishes a series of seat leakage classes for regulators and defines the test procedures.

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

Office: 1101 K Street NW
Suite 610
Washington, DC 20005-3922

Contact: *Deborah Spittle*

Fax: (202) 638-4922

E-mail: comments@itic.org

INCITS 504-1:2013/AM1-201x, Information Technology - Generic Identity Command Set - Part 1, Amendment 1: Card Application Command Set (supplement to INCITS 504-1-2013)

Stakeholders: This amendment will offer additional opportunities for adoption (in particular for the added capabilities OCC and OTA for the mobile industry).

Project Need: The amendment to INCITS 504 Part 1 was made necessary by the changes that occurred in the ID Management industry related to the Security Token standards and related best practices. It is now necessary to align INCITS 504 with the latest revision of the ISO/IEC 7816 family and the Federal FIPS 201-2 specifications.

Aligns Part 1 to the newly released ISO/IEC 7816-4 standard; Simplifies the Opacity protocols and fixes bugs; Modifies SCP03 protocol to describe creation of share secret Z; Makes editorial changes, adds clarifications, and fixes errors.

INCITS 504-1:2013/AM2-201x, Information Technology - Generic Identity Command Set - Part 1, Amendment 2: Card Application Command Set (supplement to INCITS 504-1-2013)

Stakeholders: This amendment will offer additional opportunities for adoption (in particular for the added capabilities OCC and OTA for the mobile industry).

Project Need: The amendment to INCITS 504 Part 1 was made necessary by the changes that occurred in the ID Management industry related to the Security Token standards and related best practices. The large adoption of mobile devices requires additional capabilities of Over the Air (OTA) and Biometrics On Card Comparison (OCC).

Adds On Card Comparison capability (OCC); Adds Over The Air (OTA) capability; Makes editorial changes, adds clarifications, and fixes errors.

INCITS 504-2:2013/AM1-201x, Information Technology - Generic Identity Command Set - Part 2, Amendment 1: Card Administrative Command Set (supplement to INCITS 504-2:2013)

Stakeholders: This amendment will offer additional opportunities for adoption (in particular for the added capabilities OCC and OTA for the mobile industry).

Project Need: The amendment to INCITS 504 Part 2 was made necessary by the changes that occurred in the ID Management industry related to the Security Token standards and related best practices. It is now necessary to align INCITS 504 with the latest revision of the ISO/IEC 7816 family and the Federal FIPS 201-2 specifications. The first pilot programs and industry revisions for INCITS 504 showed some errors and the need of some clarification.

Aligns Part 2 with changes related to Part 1, Amendment 1; Aligns Part 2 to the newly released ISO/IEC 7816-4 standard; Makes editorial changes, adds clarifications, and fixes errors.

INCITS 504-2:2013/AM2-201x, Information Technology - Generic Identity Command Set - Part 2, Amendment 2: Card Administrative Command Set (supplement to INCITS 504-2:2013)

Stakeholders: This amendment will offer additional opportunities for adoption (in particular for the added capabilities OCC and OTA for the mobile industry)

Project Need: The amendment to INCITS 504 Part 2 was made necessary by the changes that occurred in the ID Management industry related to the Security Token standards and related best practices. The large adoption of mobile devices requires additional capabilities of Over the Air (OTA) and Biometrics On Card Comparison (OCC).

Aligns Part 2 with changes related to Part 1, Amendment 2; Makes editorial changes, adds clarifications, and fixes errors; Adds Biometrics On Card Comparison (OCC) capability (possible impact); Adds Over The Air (OTA) capability (possible impact).

NSF (NSF International)

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

Contact: *Mindy Costello*

Fax: (734) 827-7875

E-mail: mcostello@nsf.org

* BSR/NSF 439-201x (i1r1), Glossary of Sustainability Terminology (new standard)

Stakeholders: Industry sustainability representatives, Governmental, user/consultant, academia, NGOs.

Project Need: This standard will be created to standardize terminology used in sustainability standards.

The standard will define terminology commonly used in sustainability standards.

TAPPI (Technical Association of the Pulp and Paper Industry)

Office: 15 Technology Parkway South
Peachtree Corners, GA 30092

Contact: *Charles Bohanan*

Fax: (770) 446-6947

E-mail: standards@tappi.org

BSR/TAPPI T 702 om-201x, Rheological measurements for characterization of polyolefins: Low-density polyethylene (LDPE) for extrusion coating (new standard)

Stakeholders: Manufacturers of pulp, paper, packaging, or related products, consumers or converters of such products, and suppliers of equipment, supplies, or raw materials for the manufacture of such products.

Project Need: To conduct required five-year review of an existing TAPPI standard in order to revise it if needed to address new technology or correct errors.

In optimizing the extrusion coating processing performance, it is of utmost importance to balance the rheology of the polymer. This method describes how rheological measurements can be used to characterize low-density polyethylene (LDPE). The storage modulus and zero shear viscosity have been found to be useful parameters to predict the extrusion-coating performance of LDPE.

TIA (Telecommunications Industry Association)

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

Contact: *Germaine Palangdao*

Fax: (703) 907-7727

E-mail: standards@tiaonline.org

BSR/TIA 5011-201x, Standard Process for Sustainable Information Communications Technology Manufacturers (new standard)

Stakeholders: Manufacturers; architects; engineers; consultants; building owners; information technology managers; tenants; authority having jurisdiction

Project Need: Create new standard

This Standard addresses the requirements associated with the process to establish, implement and recognize sustainable practices in the administration and manufacturing operations, facilities and products.

TIA (Telecommunications Industry Association)

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

Contact: *Marianna Kramarikova*

E-mail: standards@tiaonline.org

BSR/TIA 912-C-201x, Telecommunications - IP Telephony Equipment - Voice Gateway Transmission Requirements (revision and redesignation of ANSI/TIA 912-B-2007)

Stakeholders: Manufacturers of enterprise and residential gateways, Integrated Access Devices (IADs) and Multimedia Terminal Adapters (MTAs); traditional public and private network service providers, packet-based network service providers, and ADSL and cable VoIP service providers.

Project Need: Provide updates for an existing standard

This standard covers transmission requirements for voice gateways (VGs) that provide routing functions between telephones, traditional public and private networks, and modern packet-based networks. VGs include packet-based enterprise equipment, residential gateways, ADSL-based Integrated Access Devices (IADs), and cable-based Multimedia Terminal Adapters (MTAs). The main purpose of this revision is to add requirements for supporting wideband (nominally 100 to 7,000 Hz) analog telephones that may be connected to voice gateways for providing High Definition (HD) voice services such as those available using Voice over Internet Protocol (VoIP).

American National Standards Maintained Under Continuous Maintenance

The ANSI Essential Requirements: Due Process Requirements for American National Standards provides 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)
- AGSC (Auto Glass Safety Council)
- 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, including contact information at the ANSI Accredited Standards Developer, please visit *ANSI Online* at www.ansi.org/asd, select “Standards Activities,” click on “Public Review and Comment” and “American National Standards Maintained Under Continuous Maintenance.” This information is also available directly at www.ansi.org/publicreview.

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

ANSI-Accredited Standards Developers Contact Information

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

AAMI
Association for the Advancement of Medical Instrumentation

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

AISI
American Iron and Steel Institute

25 Massachusetts Avenue, NW
Suite 800
Washington, DC 20001
Phone: (202) 452-7100
Fax: (202) 452-1039
Web: www.steel.org

ALI (ASC A14)
American Ladder Institute

330 N. Wabash
Suite 2000
Chicago, IL 60611
Phone: (202) 367-1217
Web: www.americanladderinstitute.org

AMCA
AMCA International, Inc.

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

ASA (ASC S12)
Acoustical Society of America

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

ASABE
American Society of Agricultural and Biological Engineers

2950 Niles Road
St Joseph, MI 49085
Phone: (269) 429-4197
Fax: (269) 429-3852
Web: www.asabe.org

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

1791 Tullie Circle, NE
Atlanta, GA 30329
Phone: (678) 539-1143
Fax: (678) 539-2159
Web: www.ashrae.org

ASME
American Society of Mechanical Engineers

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

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

CSA
CSA Group

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

FCI
Fluid Controls Institute

1300 Sumner Avenue
Cleveland, OH 44115
Phone: (216) 241-7333
Fax: (216) 241-0105
Web: www.fluidcontrolsinstitute.org

HL7
Health Level Seven

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

ITI (INCITS)
InterNational Committee for Information Technology Standards

1101 K Street NW
Suite 610
Washington, DC 20005-3922
Phone: (202) 626-5746
Fax: (202) 638-4922
Web: www.incits.org

NEMA (ASC C8)
National Electrical Manufacturers Association

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

NPES (ASC CGATS)
NPES

1899 Preston White Drive
Reston, VA 20191
Phone: (703) 264-7229
Fax: (703) 620-0994
Web: www.npes.org

NSF
NSF International

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

OEOSC (ASC OP)
Optics and Electro-Optics Standards Council

35 Gilbert Hill Rd.
Chester, CT 06412
Phone: 860-878-0722
Fax: 860-555-1212
Web: www.optstd.org

SCTE
Society of Cable Telecommunications Engineers

140 Philips Road
Exton, PA 19341
Phone: (610) 594-7308
Fax: (610) 363-5898
Web: www.scte.org

TAPPI
Technical Association of the Pulp and Paper Industry

15 Technology Parkway South
Peachtree Corners, GA 30092
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Web: www.tappi.org

TIA
Telecommunications Industry Association

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

UL
Underwriters Laboratories, Inc.

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Northbrook, IL 60062-2096
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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.

ACOUSTICS (TC 43)

ISO/DIS 17534-1, Acoustics - Software for the calculation of sound outdoors - Part 1: Quality requirements and quality assurance - 6/22/2014, $88.00

ADDITIVE MANUFACTURING (TC 261)

ISO/DIS 17296-2, Additive manufacturing - General principles - Part 2: Overview of process categories and feedstock - 4/25/2014, $53.00

ANAESTHETIC AND RESPIRATORY EQUIPMENT (TC 121)

ISO/DIS 5361, Anaesthetic and respiratory equipment - Tracheal tubes and connectors - 6/28/2014, $119.00

ISO/DIS 5364, Anaesthetic and respiratory equipment - Oropharyngeal airways - 6/28/2014, $67.00

CORROSION OF METALS AND ALLOYS (TC 156)

ISO/DIS 18070, Corrosion of metals and alloys - Crevice corrosion formers with disc springs for flat specimens or tubes of stainless steels in corrosive solutions - 4/28/2014, $53.00

DENTISTRY (TC 106)

ISO/DIS 10650, Dentistry - Powered polymerization activators - 6/28/2014, $67.00

DOCUMENT IMAGING APPLICATIONS (TC 171)

ISO/DIS 18565, Document management - AFP/Archive - 6/28/2014

EQUIPMENT FOR FIRE PROTECTION AND FIRE FIGHTING (TC 21)

ISO/DIS 7165, Fire fighting - Portable fire extinguishers - Performance and construction - 6/22/2014, $155.00

ISO/DIS 11601, Fire fighting - Wheeled fire extinguishers - Performance and construction - 6/22/2014, $112.00

MACHINE TOOLS (TC 39)

ISO/DIS 18217, Safety of woodworking machines - Edge-banding machines fed chain(s) - 4/17/2014, $119.00

PHOTOGRAPHY (TC 42)

ISO/DIS 17957, Photography - Digital cameras - Shading measurements - 6/22/2014, $62.00

PLASTICS PIPES, FITTINGS AND VALVES FOR THE TRANSPORT OF FLUIDS (TC 138)

ISO/DIS 8639, Glass-reinforced thermosetting plastics (GRP) pipes and fittings - Test methods for leaktightness of flexible joints - 6/22/2014, $46.00

ROAD VEHICLES (TC 22)

ISO/DIS 23013, Road vehicles - Determination to forced entry of safety glass constructions used in vehicle glazing - Test of glazing systems - 6/27/2014

TEXTILES (TC 38)

ISO/DIS 16373-1, Textiles - Dyestuffs - Part 1: General principles of testing coloured textiles for dyestuff identification - 6/28/2014, $62.00

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

ISO/DIS 3600, Tractors, machinery for agriculture and forestry, powered lawn and garden equipment - Operators manuals - Content and format - 4/25/2014, $53.00

WELDING AND ALLIED PROCESSES (TC 44)

ISO/DIS 18278-2, Resistance welding - Weldability - Part 2: Evaluation procedures for weldability in spot welding - 6/28/2014, $71.00

ISO/IEC JTC 1, Information Technology

ISO/IEC 10646/DAmd1, Information technology - Universal Coded Character Set (UCS) - Amendment 1: Nushu, Tamil supplement, and other characters - 6/22/2014, $88.00

ISO/IEC CD 16963, Information technology - Digitally recorded media for information interchange and storage - Test method for the estimation of lifetime of optical media for long-term data storage - 6/28/2014

ISO/IEC DIS 19788-8, Information technology - Learning, education and training - Metadata for learning resources - Part 8: Data elements for MLR records - 4/25/2014

ISO/IEC DIS 19788-9, Information technology - Learning, education and training - Metadata for learning resources - Part 9: Data elements for Persons - 4/25/2014

Newly Published ISO & IEC Standards

Listed here are new and revised standards recently approved and promulgated by ISO - the International Organization for Standardization – and IEC – the International Electrotechnical Commission. 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 Standards

BUILDING CONSTRUCTION (TC 59)

ISO 6707-1:2014, Buildings and civil engineering works - Vocabulary - Part 1: General terms, $275.00

ISO 6707-2:2014, Buildings and civil engineering works - Vocabulary - Part 2: Contract terms, $132.00

CRANES (TC 96)

ISO 4305:2014, Mobile cranes - Determination of stability, $123.00

ISO 9374-3:2014, Cranes - Information to be provided for enquiries, orders, offers and supply - Part 3: Tower cranes, $132.00

GEARS (TC 60)

ISO 10300-1:2014, Calculation of load capacity of bevel gears - Part 1: Introduction and general influence factors, $211.00

ISO 10300-2:2014, Calculation of load capacity of bevel gears - Part 2: Calculation of surface durability (pitting), $165.00

ISO 10300-3:2014, Calculation of load capacity of bevel gears - Part 3: Calculation of tooth root strength, $189.00

GEOGRAPHIC INFORMATION/GEOMATICS (TC 211)

ISO 19115-1:2014, Geographic information - Metadata - Part 1: Fundamentals, $314.00

GRAPHICAL SYMBOLS (TC 145)

ISO 9186-1:2014, Graphical symbols - Test methods - Part 1: Method for testing comprehensibility, $123.00

IMPLANTS FOR SURGERY (TC 150)

ISO 11663:2014, Quality of dialysis fluid for haemodialysis and related therapies, $123.00

ISO 13958:2014, Concentrates for haemodialysis and related therapies, $149.00

ISO 13959:2014, Water for haemodialysis and related therapies, $114.00

ISO 23500:2014, Guidance for the preparation and quality management of fluids for haemodialysis and related therapies, $259.00

ISO 26722:2014, Water treatment equipment for haemodialysis applications and related therapies, $173.00

LEARNING SERVICES FOR NON-FORMAL EDUCATION AND TRAINING (TC 232)

ISO 29991:2014, Language learning services outside formal education - Requirements, $108.00

PACKAGING (TC 122)

ISO 13274/Cor1:2014, Packaging - Transport packaging for dangerous goods - Plastics compatibility testing for packaging and IBCs - Corrigendum, FREE

PAPER, BOARD AND PULPS (TC 6)

ISO 14453:2014, Pulps - Determination of acetone-soluble matter, $77.00

ISO 16065-1:2014, Pulps - Determination of fibre length by automated optical analysis - Part 1: Polarized light method, $88.00

PLASTICS (TC 61)

ISO 11443:2014, Plastics - Determination of the fluidity of plastics using capillary and slit-die rheometers, $180.00

ROAD VEHICLES (TC 22)

ISO 5011:2014, Inlet air cleaning equipment for internal combustion engines and compressors - Performance testing, $180.00

RUBBER AND RUBBER PRODUCTS (TC 45)

ISO 8331:2014, Rubber and plastics hoses and hose assemblies - Guidelines for selection, storage, use and maintenance, $108.00

ISO 18752:2014, Rubber hoses and hose assemblies - Wire- or textile-reinforced single-pressure types for hydraulic applications - Specification, $114.00

SHIPS AND MARINE TECHNOLOGY (TC 8)

ISO 19292:2014, Ships and marine technology - Lifesaving and fire protection - Point-type resettable flame detectors for ships, $132.00

SIEVES, SIEVING AND OTHER SIZING METHODS (TC 24)

ISO 12154:2014, Determination of density by volumetric displacement - Skeleton density by gas pycnometry, $99.00

SURFACE ACTIVE AGENTS (TC 91)

ISO 17293-1:2014, Surface active agents - Determination of chloroacetic acid (chloroacetate) in surfactants - Part 1: HPLC method, $77.00

ISO 17293-2:2014, Surface active agents - Determination of chloroacetic acid (chloroacetate) in surfactants - Part 2: Ionic chromatographic method, $66.00

TEXTILES (TC 38)

ISO 13935-1:2014, Textiles - Seam tensile properties of fabrics and made-up textile articles - Part 1: Determination of maximum force to seam rupture using the strip method, $77.00

TRACTORS AND MACHINERY FOR AGRICULTURE AND FORESTRY (TC 23)

ISO 500-1:2014, Agricultural tractors - Rear-mounted power take-off types 1, 2, 3 and 4 - Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone, $66.00

ISO 500-3:2014, Agricultural tractors - Rear-mounted power take-off types 1, 2, 3 and 4 - Part 3: Main PTO dimensions and spline dimensions, location of PTO, $114.00

TRANSPORT INFORMATION AND CONTROL SYSTEMS (TC 204)

ISO 21217:2014, Intelligent transport systems - Communications access for land mobiles (CALM) - Architecture, $199.00

ISO 17185-1:2014, Intelligent transport systems - Public transport user information - Part 1: Standards framework for public information systems, $132.00

ISO Technical Reports

BASES FOR DESIGN OF STRUCTURES (TC 98)

ISO/TR 12930:2014, Seismic design examples based on ISO 23469, $314.00

ERGONOMICS (TC 159)

ISO/TR 12295:2014, Ergonomics - Application document for International Standards on manual handling (ISO 11228-1, ISO 11228-2 and ISO 11228-3) and evaluation of static working postures (ISO 11226), $211.00

ISO Technical Specifications

BUILDING CONSTRUCTION (TC 59)

ISO/TS 12720:2014, Sustainability in buildings and civil engineering works - Guidelines on the application of the general principles in ISO 15392, $211.00

DENTISTRY (TC 106)

ISO/TS 17988:2014, Dentistry - Corrosion test methods for dental amalgam, $139.00

HEALTH INFORMATICS (TC 215)

ISO/TS 16791:2014, Health informatics - Requirements for international machine-readable coding of medicinal product package identifiers, $139.00

ISO/TS 18530:2014, Health Informatics - Automatic identification and data capture marking and labelling - Subject of care and individual provider identification, $211.00

IEC Standards

ELECTRIC TRACTION EQUIPMENT (TC 9)

IEC 61375-3-4 Ed. 1.0 b:2014, Electronic railway equipment - Train communication network (TCN) - Part 3-4: Ethernet Consist Network (ECN), $387.00

FIBRE OPTICS (TC 86)

IEC 61300-3-29 Ed. 2.0 b:2014, Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-29: Examinations and measurements - Spectral transfer characteristics of DWDM devices, $254.00

IEC 61753-053-2 Ed. 1.0 en:2014, Fibre optic interconnecting devices and passive components - Performance standard - Part 053-2: Non-connectorized single-mode fibre, electrically controlled, variable optical attenuator for category C - Controlled environments, $61.00

FLUIDS FOR ELECTROTECHNICAL APPLICATIONS (TC 10)

IEC 62021-3 Ed. 1.0 b:2014, Insulating liquids - Determination of acidity - Part 3: Test methods for non-mineral insulating oils, $182.00

INSULATING MATERIALS (TC 15)

IEC 61212-1 Ed. 2.0 en cor.1:2014, Corrigendum 1 - Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 1: Definitions, designations and general requirements, FREE

IEC 60893-3-4 Ed. 2.0 b cor.1:2014, Corrigendum 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-4: Specifications for individual materials - Requirements for rigid laminated sheets based on phenolic resins, FREE

NUCLEAR INSTRUMENTATION (TC 45)

IEC 62694 Ed. 1.0 b:2014, Radiation protection instrumentation - Backpack-type radiation detector (BRD) for the detection of illicit trafficking of radioactive material, $339.00

OTHER

CISPR 16-1-2 Ed. 2.0 b:2014, Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements, $363.00

ROTATING MACHINERY (TC 2)

IEC 60034-8 Amd.1 Ed. 3.0 b:2014, Amendment 1 - Rotating electrical machines - Part 8: Terminal markings and direction of rotation, $14.00

IEC 60034-8 Ed. 3.1 b:2014, Rotating electrical machines - Part 8: Terminal markings and direction of rotation, $290.00

SAFETY OF HAND-HELD MOTOR-OPERATED ELECTRIC TOOLS (TC 116)

IEC 62841-1 Ed. 1.0 b:2014, Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements, $411.00

Registration of Organization Names in the United States

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

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

PUBLIC REVIEW

Association of Chinese Students of Private Schools of America

Public Review: March 21 to June 13, 2014

IdenTrust Services, LLC

Public Review: March 14 to April 12, 2014

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

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

Proposed Foreign Government Regulations

Call for Comment

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

The National Center for Standards and Certification Information (NCSCI) at the National Institute of Standards and Technology (NIST), distributes these proposed foreign technical regulations to U.S. stakeholders via an online service, Notify U.S. Notify U.S. is an e-mail and Web service that allows interested U.S. parties to register, obtain notifications, and read full texts of regulations from countries and for industry sectors of interest to them. To register for Notify U.S., please go to Internet URL: http://www.nist.gov/notifyus/ and click on “Subscribe”.

NCSCI is the WTO TBT Inquiry Point for the U.S. and receives all notifications and full texts of regulations to disseminate to U.S. Industry. For further information, please contact: NCSCI, NIST, 100 Bureau Drive, Gaithersburg, MD 20899-2160; Telephone: (301) 975-4040; Fax: (301) 926-1559; E-mail: ncsci@nist.gov or notifyus@nist.gov.

Information Concerning

American National Standards

INCITS Executive Board

ANSI Accredited SDO and US TAG to ISO/IEC JTC 1, Information Technology

The InterNational Committee for Information Technology Standards (INCITS), an ANSI accredited SDO, is the forum of choice 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 has eleven membership categories that can be viewed at http://www.incits.org/participation/membership-info. Membership in all categories is always welcome. INCITS also seeks to broaden its membership base and looks to recruit new participants in the following under-represented membership categories:

- **Producer – Hardware**

  This category primarily produces hardware products for the ITC marketplace.

- **Producer – Software**

  This category primarily produces software products for the ITC marketplace.

- **Distributor**

  This category is for distributors, resellers or retailers of conformant products in the ITC industry.

- **User**

  This category includes entities that primarily reply on standards in the use of a products/service, as opposed to producing or distributing conformant products/services.

- **Consultants**

  This category is for organizations whose principal activity is in providing consulting services to other organizations.

- **Standards Development Organizations and Consortia**

  o "Minor" an SDO or Consortia that (a) holds no TAG assignments; or (b) holds no SC TAG assignments, but does hold one or more Work Group (WG) or other subsidiary TAG assignments.

- **Academic Institution**

  This category is for organizations that include educational institutions, higher education schools or research programs.

- **Other**

  This category includes all organizations who do not meet the criteria defined in one of the other interest categories.

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

Approvals of Reaccreditations

American Dental Association (ADA)

ANSI's Executive Standards Council has approved the reaccreditation of the American Dental Association (ADA), an ANSI Organizational Member, under its recently revised operating procedures for documenting consensus on ADA-sponsored American National Standards, effective March 21, 2014. For additional information, please contact: Mr. Paul Bralower, Manager, Standards, American Dental Association, 211 E. Chicago Avenue, Chicago, IL 60611-2678; phone: 312.587.4129; e-mail: bralowerp@ada.org.

American Iron and Steel Institute (AISI)

At the direction of ANSI's Executive Standards Council (ExSC), the reaccreditation of the American Iron and Steel Institute (AISI), an ANSI Organizational Member, has been approved under its recently revised operating procedures for documenting consensus on AISI-sponsored American National Standards, effective March 24, 2014.For additional information, please contact: Mr. Jay Larson, P.E., F. ASCE, Managing Director, Construction Technical, American Iron and Steel Institute, 3425 Drighton Court, Bethlehem, PA 18020-1335; phone: 610.691.6334; e-mail: jlarson@steel.org

ASC INCITS, InterNational Committee on Information Technology Standards

ANSI's Executive Standards Council has approved the reaccreditation of ASC INCITS, InterNational Committee on Information Technology Standards under its recently revised INCITS RD-2, Organization and Procedures for documenting consensus on ASC INCITS-sponsored American National Standards, effective March 21, 2014. For additional information, please contact the Secretariat of ASC INCITS: Ms. Lynn Barra, Director, Standards Operations, Information Technology Industry Council, 1101 K Street NW, Suite 610, Washington, DC 20005; phone: 202.626.5739; e-mail: Lbarra@itic.org.

Reaccreditation

ASIS International

Comment Deadline: April 28, 2014

ASIS International, an ANSI Organizational Member, has submitted revisions to its currently accredited operating procedures for documenting consensus on ASIS-sponsored American National Standards, last reaccredited in 2010. As the revisions appear to be substantive in nature, the reaccreditation process is initiated.

To obtain copies of ASIS International's revised procedures or to offer comments, please contact: Ms. Susan Carioti, Director, Standards and Guidelines, ASIS International, 1625 Prince Street, Alexandria, VA 22314-2818; phone: 703.518.1416; e-mail: sue.carioti@asisonline.org. You may view/download a copy of the revisions during the public review period at the following URL: http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fPublic%20Review%20and%20Comment%2fANS%20Accreditation%20Actions&View=%7b21C60355%2dAB17%2d4CD7%2dA090%2dBABEEC5D7C60%7d. Please submit any public comments on the revised policies and procedures to ASIS International by April 28, 2014, with a copy to the ExSC Recording Secretary in ANSI's New York Office (E-mail: Jthompso@ANSI.org).

ANSI Accreditation Program for Third Party Product Certification Agencies

Initial Application

Administrative Management Systems, Inc.

Comment Deadline: April 28, 2014

Terry Schaefer
Administrative Management Systems, Inc
PO Box 730
100 W. Main St
Sackets Harbor, NY 13685
website:www.amscert.com
e-mail: tschaefer@amscert.com

Administrative Management Systems, Inc. has submitted a formal application for accreditation by ANSI for the following scope:

- ASTM Specification E2190 for Sealed Insulating Glass.

Please send your comments by April 28, 2014 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, Senior 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.

International Organization for Standardization (ISO)

Administration of a U.S. TAG

U.S. TAG to ISO/TC 34/SC 18 – Cocoa

Comment Deadline: April 25, 2014

The American Oil Chemists' Society (AOCS) has requested ANSI to delegate the responsibilities of the administration of the US Technical Advisory Group (TAG) to TC 34/SC 18 to AOCS. The scope of TC 34/SC 18 is as follows:

> Standardization in the field of cocoa, including, but not limited to, terminology, sampling, product specifications, test methods, and requirements and verification criteria for determination of the sustainability and traceability of cocoa respectively.

Organizations wishing to comment on the delegation of the responsibilities should contact ANSI's ISO Team isot@ansi.org by April 25, 2014.

Call for US/TAG Administrator

ISO TC 29/SC 9 – Tools with Defined Cutting Edges, Cutting Items

ANSI has been informed that, Cemented Carbide Producers Association (CCPA), the ANSI-accredited US/TAG administrator for ISO/TC 29/SC 9, wishes to relinquish the role as US/TAG administrator.

ISO TC 29/SC 9 operates under the following scope:

> Tools with defined cutting edges, cutting items having functional dimensions linked with cutting edges

Organizations interested in serving as the US/TAG administrator should contact ISOT@ansi.org.

Establishment of Subcommittee

ISO/TC 282/SC 1 – Treated Wastewater Re-Use for Irrigation

TC 282, subject also to ratification from the TMB, has created a new ISO subcommittee on Treated wastewater re-use for Irrigation (ISO/TC 282/SC 1). The secretariat has been assigned to Israel (SII).

Organizations interested in serving as the US/TAG administrator or participating on the US/TAG should contact ANSI's ISO Team at isot@ansi.org.

U.S. Technical Advisory Groups

Approval of TAG Accreditation

U.S. TAG to ISO/TC 276 - Biotechnology

ANSI's Executive Standards Council (ExSC) has formally approved the accreditation of the U.S. Technical Advisory Group to ISO/TC 276 – Biotechnology under the Model Operating Procedures for U.S. Technical Advisory Groups to ANSI for ISO Activities (as contained in Annex A of the ANSI International Procedures) and with the National Institute of Standards and Technology (NIST) serving as TAG Administrator, effective March 19, 2014. For additional information, please contact: Ms. Clare Allocca, Senior Advisory for Planning and Outreach, National Institute of Standards and Technology, 100 Bureau Drive, Stop 2100, Gaithersburg, MD 20899; phone: 301.975.4359; E-mail: clare.allocca@nist.gov.

Transfer of U.S. TAG Administrator

U.S. TAG to ISO/TC 267 – Facilities Management

As no comments were received in response to the January 31, 2014 announcement of the transfer of TAG Administrator responsibilities under the U.S. Technical Advisory Group to ISO/TC 267, Facilities Management from ANSI to the International Facility Management Association, this action is formally approved, effective March 3, 2014. For additional information, please contact: Ms. Laverne Deckert, International Facility Management Association, 976 Rose Creek Terrace, Woodstock, GA 30189; phone: 713.623.4362; e-mail: laverne.deckert@ifma.org.

Meeting Notices

AHRI Meetings

Revision of AHRI Standard 220, Reverberation Room Qualification and Testing Procedures for Determining Sound Power of HVAC

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) will be holding an online meeting on April 21, 10 a.m. – 11 a.m. If you are interested in participating in the meeting or providing comments on the standard, please contact AHRI staff member Danny Abbate, dabbate@ahrinet.org.

Development of AHRI Draft Standard 1310P, Wind Load Design of HVACR Equipment

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) will be holding an online meeting on April 30, 10 a.m. – 11 a.m. If you are interested in participating in the meeting or providing comments on the standard please contact AHRI staff member Danny Abbate, dabbate@ahrinet.org.

ANSI/ASSE A1264 for Floor and Walkway Openings

The next meeting of the ANSI/ASSE A1264 (A1264 ASC) for Floor and Walkway Openings will take place via conference call on April 11, 2014 from 1:00 p.m. (Eastern Time) until conclusion. If you wish to attend or for more information, please contact: Tim Fisher, (847) 768-3411, TFisher@ASSE.Org.

ASC Z133 – Arboriculture Operations – Safety Requirements

The next business meeting of the Accredited Standards Committee Z133 (ANSI Standard for Arboricultural Operations —Safety Requirements) will take place on April 16, 2014, at the Embassy Suites–BWI in Linthicum, Maryland. Recommendations for the anticipated 2017 Z133 standard revision will be discussed. For more information, please contact Janet Huber at the International Society of Arboriculture, ASC Z133 Secretariat, by phone +1 217.355.9411, ext. 259, or e-mail jhuber@isa-arbor.com.

ASC S1 – Acoustics, ASC S3 – Bioacoustics, ASC S3/SC 1 – Animal Bioacoustics, and ASC S12 – Noise

ANSI-Accredited Standards Committees S1 Acoustics, S3 Bioacoustics, S3/SC 1, Animal Bioacoustics, and S12 Noise, along with the ANSI-Accredited 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 May 5-6, 2014, in conjunction with the 167th ASA Meeting, at the Rhode Island Convention Center and Omni Providence Hotel, Providence, RI 02903. 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.

Information Concerning

ANSI Accredited Standards Developers

Application for Accreditation

National Association of State Boating Law Administrators (NASBLA)

Comment Deadline: April 28, 2014

The **National Association of State Boating Law Administrators (NASBLA)**, a new ANSI Organizational Member, has submitted an application for accreditation as an ANSI Accredited Standards Developer (ASD) and proposed operating procedures for documenting consensus on NASBLA-sponsored *American National Standards*. NASBLA's proposed scope of standards activity is as follows:

NASBLA's standards development work focuses on two distinct population segments: the recreational boater and the marine law enforcement/emergency responder community that ensures a safe and secure maritime domain.

The National Boating Education Standards – originally adopted by the NASBLA membership in 1999 – have prescribed the minimum body of knowledge to effect safe, legal and enjoyable recreational boating and have served as the basis for boating education courses approved by NASBLA and recognized by the U.S. Coast Guard. In 2009, separate Paddlesports Education Standards, developed in consultation with the American Canoe Association for the purpose of addressing manually powered vessels, were approved by the NASBLA membership. In 2010, the National Boating Education Standards were placed under the purview of the Education Standards Panel, a distinct and independent body empanelled to meet the ANSI Essential Requirements.

The National Boating Education Standards are referenced in numerous state laws and regulations as the minimum criteria for state-mandated boater education. Over 2.9 million boat operators have earned certificates based on these standards since 2006, providing for consistent course content and testing recognized in every U.S. state and territory and mandated in 49 of the 56 U.S. states, territories and the District of Columbia. Over 90 distinct course providers offer approximately 400 distinct courses of study based on the National Boating Education Standards. A record number of students (491,525) earned certificates based on the standards in 2012 alone.

In addition to the knowledge standards, national training standards for marine law enforcement and emergency rescue personnel is, in part, codified within a Memorandum of Understanding between NASBLA and the United States Coast Guard with the goal to ensure the interoperability across multiple layers of government: federal, state, county, local and tribal.

These professional training standards, offered to the 120,000 maritime fire, 54,000 maritime law enforcement and 250,000 emergency rescue personnel, have the potential to change the domestic preparedness, response and safety of our nation's maritime domain.

The U.S. economy is very dependent on safety and security of our maritime domain. Through the fishing and boating industry, tourism, recreation, and ocean transport, one out of six jobs in the U.S. is maritime-related. In 2009, the ocean economy, which includes six economic sectors that depend on the ocean and Great Lakes, contributed over $223 billion annually to the U.S. gross domestic product (GDP) and provided more than 2.6 million jobs. In addition, tourism and recreation is the largest sector of the ocean economy, contributing to 72% of employment and 28% of GDP.

Through its establishment of the independent consensus bodies such as the National Boating Education Standard Panel and (in the future) the BOAT (Boat Operation and Training) Advisory Panel, and the adoption of an open, consensus-based standards development process conforming to the Essential Requirements of the American National Standards Institute, NASBLA seeks to provide national agreement and consistency in the boating education and training program content and coarse delivery for the nation's boaters and for the emergency responders, instructors, law enforcement officers, or other boating professionals working within or on behalf of the recreational boating community and the maritime domain in which they enjoy legitimate use.

To obtain a copy of NASBLA's proposed operating procedures or to offer comments, please contact: Ms. Pam Dillon, Education Director, NASBLA, 1648 McGrathiana Parkway, Suite 360, Lexington, KY 40511; phone: 859.225.9487, ext. 7368; e-mail: pam@nasbla.org. Please submit your comments to the NASBLA by **April 28, 2014**, with a copy to the Recording Secretary, ExSC in ANSI's New York Office (e-mail: Jthompso@ANSI.org). As the proposed procedures are available electronically, the public review period is **30 days**. You may view or download a copy of the NASBLA's proposed operating procedures from *ANSI Online during the public review period* at the following URL:
http://publicaa.ansi.org/sites/apdl/Documents/Forms/AllItems.aspx?RootFolder=%2fsites%2fapdl%2fDocuments%2fStandards%20Activities%2fPublic%20Review%20and%20Comment%2fANS%20Accreditation%20Actions&View=%7b21C60355%2dAB17%2d4CD7%2dA090%2dBABEEC5D7C60%7d.

Information Concerning

ANSI Accreditation Program for Third Party Personnel Certification Agencies

Initial Applications

360training.com, Inc.

Comment Deadline: April 28, 2014

360training.com, Inc.
13801 Burnet Rd., Suite 100,
Austin, TX 78727, USA

360training.com, Inc. has submitted initial application under ASTM 2659 for the following scope:

- Learn2Serve California Food Handler Training Course
- Learn2Serve Food Handler Training Course
- OSHAcampus 10 hour Construction Safety Course
- OSHAcampus 30 hour Construction Safety Course

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

American Institute of Constructors

Comment Deadline: April 28, 2014

American Institute of Constructors
700 North Fairfax Street, Suite 510
Alexandria, VA 22314

American Institute of Constructors has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- Associate Constructor
- Certified Professional Constructor

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Castle Worldwide, Inc.

Comment Deadline: April 28, 2014

Castle Worldwide, Inc.
900 Perimeter Park Drive, Suite G
Morrisville, NC 27615

Castle Worldwide, Inc. has submitted initial application under ASTM 2659 for the following scope:

- Castle Internet-Based Testing Proctor

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Crane Institute of America Certification

Comment Deadline: April 28, 2014

Crane Institute of America Certification
3880 St. Johns Parkway
Sanford, FL 32771

Crane Institute of America Certification has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- Mobile Crane
- Overhead Crane
- Tower Crane

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Federal IT Security Institute

Comment Deadline: April 28, 2014

Federal IT Security Institute
3213 Duke Street # 190
Alexandria, VA 22314

Federal IT Security Institute has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- Federal IT Security Professional – Manager

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Food Safety Educators

Comment Deadline: April 28, 2014

Food Safety Educators
PO Box 1065
Silverton, OR 97381

Food Safety Educators has submitted initial application under ASTM 2659 for the following scope:

- eFoodcard

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Gulf Technical & Safety Training Centre

Comment Deadline: April 28, 2014

Gulf Technical & Safety Training Centre
P.O. Box 25159
Abu Dhabi, United Arab Emirates

Gulf Technical & Safety Training Centre has submitted initial application under ASTM 2659 for the following scope:

- Basic H25
- H25 Awareness – 1 day
- H25 BA
- H25 Intensive
- H25 Train the Trainer

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Institute of Certified Construction Financial Professionals, Inc.

Comment Deadline: April 28, 2014

Institute of Certified Construction Financial Professionals, Inc.
100 Village Boulevard, Suite 200
Princeton, NJ 08540

Institute of Certified Construction Financial Professionals, Inc. has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- Certified Construction Industry Financial Professional (CCIFP)

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Institute of Food Safety, Health, & Hygiene, Inc.

Comment Deadline: April 28, 2014

Institute of Food Safety, Health, & Hygiene, Inc.
823 W. University
San Diego, CA 921103

Institute of Food Safety, Health, & Hygiene, Inc. has submitted initial application under ASTM 2659 for the following scope:

- Advanced HACCP Certificate Program: Verification & Validation
- Basic HACCP Certificate Program for Food Handlers: Food Manufacturing Establishments
- Food Handler Certificate Program: Fundamentals of Food Safety for Food Manufacturing Establishments
- Food Protection Manager Training Certificate Program: Food Safety Management Systems for Food Manufacturing Establishments
- Food Protection Manager Training Certificate Program: Food Safety Management Systems for Retail Food Establishments

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

International Association of Healthcare Central Service Materiel Management

Comment Deadline: April 28, 2014

International Association of Healthcare Central Service Materiel Management
55 West Wacker Drive, Suite 501
Chicago, IL 60601

International Association of Healthcare Central Service Materiel Management. has submitted initial application under ASTM 2659 for the following scope:

- Certified Registered Central Service Technician (CRCST)

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Japan Third Party Co., Ltd.

Comment Deadline: April 28, 2014

Japan Third Party Co., Ltd.
4-7-35, Kitashinagawa, Shinagawa-ku,
Tokyo 140-0001, Japan

Japan Third Party Co., Ltd., has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- GAIT Certified IT Professional

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

National Elevator Industry Educational Program

Comment Deadline: April 28, 2014

National Elevator Industry Educational Program
11 Larsen Way
Attleboro Falls, MA 02763

National Elevator Industry Educational Program has submitted initial application under ANSI/ISO/IEC 17024 for the following scope:

- Certified Signal Person and Rigger Level 1 (CSPR-1)
- Certified Signal Person and Rigger Level 2 (CSPR-2)

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

National Floor Safety Institute

Comment Deadline: April 28, 2014

National Floor Safety Institute
PO Box 92607
Southlake, TX 76092

National Floor Safety Institute has submitted initial application under ASTM 2659 for the following scope:

- Walkway Auditor Certificate Program

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Solar Energy International

Comment Deadline: April 28, 2014

Solar Energy International
76 South 2nd Street,
Carbondale, CO 81623

Solar Energy International has submitted initial application under ASTM 2659 for the following scope:

- SEI Solar Professionals Certificate Program: Battery-Based Photovoltaic Systems Certificate
- SEI Solar Professionals Certificate Program: International and Developing World Applications Certificate
- SEI Solar Professionals Certificate Program: Renewable Energy Applications Certificate
- SEI Solar Professionals Certificate Program: Residential and Commercial Photovoltaic Systems Certificate
- SEI Solar Professionals Certificate Program: Solar Business and Technical Sales Certificate
- SEI Solar Professionals Certificate Program: Solar Professionals Trainer-of-Trainers Certificate

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

The Aasgaard Company

Comment Deadline: April 28, 2014

The Aasgaard Company
330 West Brambleton Avenue
Norfolk, VA 23501

The Aasgaard Company has submitted initial application under ASTM 2659 for the following scope:

- Starting Strength Seminar Certificate

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

The Center for Agriculture and Food Security and Preparedness, University of Tennessee

Comment Deadline: April 28, 2014

The Center for Agriculture and Food Security and Preparedness,
University of Tennessee
2407 River Drive, A301L
Knoxville, TN 37996

The Center for Agriculture and Food Security and Preparedness, University of Tennessee has submitted initial application under ASTM 2659 for the following scope:

- Special Process at Retail Course Series

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Scope Extensions

Global Information Assurance Certification

Comment Deadline: April 28, 2014

Global Information Assurance Certification

8120 Woodmont Avenue
Suite 205
Bethesda, MD 20814

Global Information Assurance Certification has submitted scope extension application under ANSI/ISO/IEC 17024 for the following scopes:

- GIAC Certified Enterprise Defender (GCED)

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Institute for Energy Management Professionals

Comment Deadline: April 28, 2014

Institute for Energy Management Professionals
Georgia Institute of Technology
75 Fifth Street, NW
Suite 300
Atlanta, GA 30308

Institute for Energy Management Professionals has submitted scope extension application under ANSI/ISO/IEC 17024 for the following scopes:

- SEP Lead Auditor
- SEP Performance Verifier

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Institute of Hazardous Materials Management

Comment Deadline: April 28, 2014

Institute of Hazardous Materials Management
11900 Parklawn Drive
Suite 450
Rockville, MD 20852

Institute of Hazardous Materials Management has submitted scope extension application under ANSI/ISO/IEC 17024 for the following scopes:

- Certified Dangerous Goods Professional

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

KEYW Corporation

Comment Deadline: April 28, 2014

KEYW Corporation
7740 Milestone Parkway
Suite 500
Hanover, MD 21076

KEYW Corporation has submitted scope extension application under ASTM 2659 for the following scopes:

- Adversarial Offensive Training (AOT) Course
- Cyber Leaders Course (CLC)
- Linux Penetration Testing (LPT) Course
- Linux System Fundamentals (LSF) Course
- Tactical Digital Forensics (TDF) Course
- Tool and Capability Development (TCD) Course
- Windows Exploitation and Analysis (WEA) Course
- Windows Incident Response (WIR) Course

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

Professional Evaluation and Certification Board

Comment Deadline: April 28, 2014

Professional Evaluation and Certification Board
6683 Jean Talon E
Suite 336
Montreal, QC, H1S 0A5,
Canada

Professional Evaluation and Certification Board has submitted scope extension application under ANSI/ISO/IEC 17024 for the following scopes:

- EBIOS Risk Manager
- ISO 13053 Lead Auditor
- ISO 13053 Lead Implementer
- ISO 13053 Master
- ISO 13485 Lead Auditor
- ISO 13485 Lead Implementer
- ISO 13485 Master
- ISO 17025 Lead Auditor
- ISO 17025 Lead Implementer
- ISO 17025 Master
- ISO 20121 Lead Auditor
- ISO 20121 Lead Implementer
- ISO 20121 Master
- ISO 21500 Lead Auditor
- ISO 21500 Lead Implementer
- ISO 21500 Master
- ISO 24762 Disaster Recovery Manager
- ISO 27034 Lead Auditor
- ISO 27034 Lead Implementer
- ISO 27034 Master
- ISO 29001 Lead Auditor
- ISO 29001 Lead Implementer
- ISO 29001 Master
- ISO 39001 Lead Auditor
- ISO 39001 Lead Implementer
- ISO 39001 Master
- ISO 50001 Lead Auditor
- ISO 50001 Lead Implementer
- ISO 50001 Master
- ISO/IEC 38500 IT Governance Manager
- Mehari Risk Manager
- Professional SCRUM Master Certification (PSMAC)
- Professional SCRUM Practitioner Certification (PSPRC)
- Professional SCRUM Product Owner Certification (PSPOC)

Please send your comments by April 28, 2014 to Dr. Vijay Krishna, Director, Personnel Certification Accreditation Programs, American National Standards Institute, 1899 L Street, NW, Suite 1100, Washington, DC 20036, Fax: (202) 293-9287 or e-mail: vkrishna@ansi.org.

BSR/ASHRAE Addendum d
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum d to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

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

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FOREWORD

This addendum updates the Section 3 Definitions for OEL and WEEL and updates the References in Section 10.

[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 d to 34-2013

Revise section 3, 9.6.2, and 10 as follows.

3. DEFINITIONS OF TERMS

occupational exposure limit (OEL): the time-weighted average (TWA) concentration for a normal eight-hour workday and a 40-hour workweek to which nearly all workers can be repeatedly exposed without adverse effect, based on the OSHA PEL, ACGIH TLV-TWA, ~~AIHA~~TERA OARS-WEEL, or consistent value.

workplace environmental exposure level (WEEL): an occupational exposure limit set by the ~~American Industrial Hygiene Association (AIHA)~~Toxicology Excellence for Risk Assessment (TERA) Occupational Alliance for Risk Science (OARS) (previously issued by American Industrial Hygiene Association (AIHA)) .[5] The TWA concentration, measured in the worker breathing zone, for a normal eight-hour workday and 40-hour workweek for which it is believed that nearly all workers can be repeatedly exposed without adverse health effects. OARS-WEEL values may be expressed as time-weighted average TWA concentrations, short-term exposure levels (STELs), or ceiling values.

9.6.2 Chronic Toxicity. For single-compound refrigerants or for each component of blends and for the blend itself, applications shall include the following with identified sources:

a. Repeat exposure toxicity data if available
b. ACGIH TLV-TWA or TLV-C if assigned
c. ~~AIHA~~TERA OARS-WEEL if assigned
d. OSHA PEL if assigned; otherwise, a recommended exposure value, determined on a consistent basis, with an explanation of how it was determined

10. REFERENCES

1. *International Fire Code* (IFC), International Code Council, Fairfax, VA, section ~~3702~~202, ~~2003~~2013.

2. ~~*Uniform Fire Code* (UFC), Western Fire Chiefs Association, Walnut Creek, CA, sections 209 and 221, 2000~~NFPA 1, Fire Code, National Fire Protection Association, Quincy, Massachusetts, section 3.3.173.6, 2012.

3. *Health Hazard ~~Definitions~~Criteria (Mandatory)*, Occupational Safety And Health Administration (OSHA), US Department of Labor, 29 Code of Federal Regulations (CFR) 1910.1200 Subpart Z Appendix A, US Government Printing Office, Washington, DC, ~~2009~~2012.

4. *~~2010~~2013 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*, American Conference of Governmental Industrial Hygienists, Cincinnati, OH, ~~2010~~2013.

5. ~~*AIHA 2011 Emergency Response Planning Guidelines and Workplace Environmental Exposure Level Handbook*, document AEAH11-559, American Industrial Hygiene Association (AIHA), Fairfax, VA, USA, 2011.~~ TERA / OARS WEEL Table, www.tera.org/oars/WEEL.html , Toxicology Excellence for Risk Assessment (TERA), Occupational Alliance for Risk Science (OARS), Cincinnati, OH. (WEELS were previously issued by the American Industrial Hygiene Association (AIHA)).

6. J.M. Calm, "Composition Designations for Refrigerants," *ASHRAE Journal*, Vol. 31, No. 11, pp. 48-51, November 1989.

7. ASTM E681-2009, *Standard Test Method for Concentration Limits of Flammability of Chemicals (Vapors and Gases)*, American Society of Testing and Materials, West Conshohocken, PA, 2009.

8. Jabbour, T., Flammable refrigerant classification based on the burning velocity. PhD Thesis, Ecole des Mines: Paris, France, 2004.

9. Jabbour, T. and Clodic, D.F., Burning velocity and refrigerant flammability classification. *ASHRAE Transactions* 110(2), 2004.

10. *ANSI/ASHRAE Standard 15-~~2010~~2013, Safety Standard for Refrigeration Systems.* American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., Atlanta.

11. *OECD Principles of Good Laboratory Practice, Annex 2 of Decision C(81)30(Final)*, Organization for Economic Co-operation and Development (OECD), Paris, France, 13 May, 1981 as revised through 1999.

12. *Good Laboratory Practice for Nonclinical Laboratory Studies, Food and Drug Administration (FDA), 21 CFR Chapter 1 Part 58, Subparts A-K,* Government Printing Office, Washington, DC, 1 April ~~2009~~2013.

13. *Good Laboratory Practice Standards*, Environmental Protection Agency, 40 CFR Part 792, Subparts A-J, Government Printing Office, Washington, DC, 1 July ~~2007~~2011.

14. *GLP for Industrial Chemicals*, Kikyoku [Basic Industries Bureau] Dispatch 85, Ministry of International Trade and Industry (MITI), and Kanpogyo [Planning and Coordination Bureau] Dispatch 39, Environmental Agency, Tokyo, Japan, 31 March 1984.

15. *A Guide to IUPAC Nomenclature of Organic Compounds (Recommendations 1993).* R. Panico, W.H. Powell, and J.-C. Richer. Blackwell Scientific Publications, 1993. www.acdlabs.com/iupac/nomenclature/.

16. IUPAC. www.iupac.org. Research Triangle Park, NC: International Union of Pure and Applied Chemistry.

BSR/ASHRAE Addendum e
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum e to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

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BSR/ASHRAE Addendum e to ANSI/ASHRAE Standard 34-2013, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds the zeotropic refrigerant blend R-448A, to Table 4-2 and Table D-2.

[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 e to 34-2013

Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 448A
Composition (Mass %) = R-32/125/1234yf/134a/1234ze(E) (26.0/26.0/20.0/21.0/7.0)
Composition tolerances = +0.5, -2.0 / +2.0, -0.5 / +0.5, -2.0 / +2.0, -1.0 / +0.5, -2.0
OEL = 890
Safety Group = A1
RCL = 110,000 ppm v/v; 24 lb/Mcf; 390 g/m^3
Highly Toxic or Toxic Under Code Classification = Neither

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 448A
Composition (Mass %) = R-32/125/1234yf/134a/1234ze(E) (26.0/26.0/20.0/21.0/7.0)
Average Molecular Mass = 86.3
Bubble Point (°C) = -45.9
Bubble Point (°F) = -50.6
Dew Point (°C) = -39.8
Dew Point (°F) = -39.6

BSR/ASHRAE Addendum f
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum f to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(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 f to ANSI/ASHRAE Standard 34-2013, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds the zeotropic refrigerant blend R-449A, to Table 4-2 and Table D-2.

[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 f to 34-2013

Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 449A
Composition (Mass %) = R-32 /125 /1234yf /134a (24.3/24.7/25.3/25.7)
Composition tolerances = +0.2,-1.0 / +1.0,-0.2 / +0.2,-1.0 / +1.0,-0.2
OEL = 830
Safety Group = A1
RCL = 100,000 ppm v/v; 23 lb/Mcf; 370 g/m^3
Highly Toxic or Toxic Under Code Classification = Neither

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 449A
Composition (Mass %) = R-32 /125 /1234yf /134a (24.3/24.7/25.3/25.7)
Average Molecular Mass = 87.2
Bubble Point (°C) = -46.0
Bubble Point (°F) = -50.8
Dew Point (°C) = -39.9
Dew Point (°F) = -39.8

BSR/ASHRAE Addendum g
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum g to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research--technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

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

BSR/ASHRAE Addendum g to ANSI/ASHRAE Standard 34-2013, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

This addendum adds the zeotropic refrigerant blend R-450A, to Table 4-2 and Table D-2.

[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 g to 34-2013

Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 450A
Composition (Mass %) = R-134a/1234ze(E) (42.0/58.0)
Composition tolerances = ±2.0 / ±2.0
OEL = 880
Safety Group = A1
RCL = 72,000 ppm v/v; 20 lb/Mcf; 320 g/m^3
Highly Toxic or Toxic Under Code Classification = Neither

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 450A
Composition (Mass %) = R-134a/1234ze(E) (42.0/58.0)
Average Molecular Mass = 108.7
Bubble Point (°C) = -23.4
Bubble Point (°F) = -10.1
Dew Point (°C) = -22.8
Dew Point (°F) = -9.0

BSR/ASHRAE Addendum h
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum h to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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

BSR/ASHRAE Addendum h to ANSI/ASHRAE Standard 34-2013, *Designation and Safety Classification of Refrigerants*

First Public Review Draft

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FOREWORD

This addendum adds the zeotropic refrigerant blend R-444B, to Table 4-2 and Table D-2.

[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 h to 34-2013

Add the following underlined data to Table 4-2 and Table D-2 in the columns indicated.

TABLE 4-2 Data and Safety Classifications for Refrigerant Blends

Refrigerant Number = 444B
Composition (Mass %) = R-32/152a/1234ze(E) (41.5/10.0/48.5)
Composition tolerances = ±1.0 / ±1.0 / ±1.0
OEL = 890
Safety Group = A2L
RCL = 23,000 ppm v/v; 4.3lb/Mcf; 69 g/m^3
Highly Toxic or Toxic Under Code Classification = Neither

TABLE D-2 Data for Refrigerant Blends

Refrigerant Number = 444B
Composition (Mass %) = R-32/152a/1234ze(E) (41.5/10.0/48.5)
Average Molecular Mass = 72.8
Bubble Point (°C) = -44.6
Bubble Point (°F) = -48.3
Dew Point (°C) = -34.9
Dew Point (°F) = -30.8

BSR/ASHRAE Addendum i
to ANSI/ASHRAE Standard 34-2013

First Public Review Draft

Proposed Addendum i to Standard 34-2013, Designation and Safety Classification of Refrigerants

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This addendum revises Section 9.9.5, Quantity, changing the quantity and type of documents applicants should submit to ASHRAE.

[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 i to 34-2013

Revise Section 9.9.5 Quantity as indicated.

9.9.5 Quantity. A PDF or word searchable electronic file and an unbound copy of the application shall be provided to the ASHRAE Manager of Standards. A scanned PDF file is acceptable for figures and other inserts. A bound copy will only be provided if a committee member or staff shall request it. ~~Thirty-five compact discs with the application in electronic format shall be provided. In addition, a maximum of 35 bound copies may be required for committee and administrative use (contact the ASHRAE Manager of Standards for the exact number of hard copies required). The electronic format shall be an electronically searchable PDF file of minimal size. A scanned PDF file is acceptable for figures and other inserts. Committee members may request only the compact discs, thereby reducing the number of bound paper copies required.~~

BSR/ASHRAE Addendum a
to ANSI/ASHRAE Standard 55-2013

Public Review Draft

Proposed Addendum a to Standard 55-2013, Thermal Environmental Conditions for Human Occupancy

First Public Review (February 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed addendum separates vertical air stratification limits for standing vs. seated occupants because the previous requirement did not distinguish between the two and would be overly restrictive when applied to standing occupants. This clarification only applies to occupants who are standing still with metabolic rates less than 1.3 met because the entire Section 5.3.4 Local Thermal Discomfort does not apply above 1.3 met.

[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 a to 55-2013

Modify Section 5.3.4.4 as shown below.

5.3.4.4 Vertical Air Temperature Difference. Air temperature difference between head level and ankle level shall not exceed 3°C (5.4°F) for seated occupants or 4°C (7.2°F) for standing occupants (see note in Section 5.3.4.1).

Modify Section 6.2.g as shown below.

6.2 Documentation

g. Air speed, radiant temperature asymmetry, vertical ~~radiant~~ air-temperature difference ~~asymmetry~~, surface temperatures, and temperature variations with time shall be determined in accordance with generally accepted engineering standards (e.g., Chapter 57 of *ASHRAE Handbook—HVAC Applications*). The method used and quantified selection criteria, characteristics, sizes, and indices that are applicable to the method shall be stated.

BSR/ASHRAE Addendum k
to ANSI/ASHRAE Standard 62.1-2013

Public Review Draft

Proposed Addendum k to Standard 62.1-2013, Ventilation for Acceptable Indoor Air Quality

Fourth Public Review (February 2014)
(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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FOREWORD

This proposed addendum modifies the standard such that laboratory exhaust is assigned a default of Air Class 4, but explicitly allows a responsible EH&S professional to determine that a lower air class is appropriate for particular systems. If they assign a lower air class, then the use of heat wheel energy recovery would be allowed. The SSPC believes that determination of the appropriate air class is best made by a qualified professional on a case by case basis.

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Addendum k to 62.1-2013 (formerly Addendum k to 62.1-2010)

Revise Table 5.16.1 as shown below.

TABLE 5.16.1 Airstreams or Sources

Description	Air Class
Diazo printing equipment discharge	4
Commercial kitchen grease hoods	4
Commercial kitchen hoods other than grease	3
Laboratory hoods	4[a]
Residential kitchen vented hoods	3
Hydraulic elevator machine room	2

a. Air Class 4 unless determined otherwise by the Environmental Health and Safety professional responsible to the owner or to the owner's designee.

BSR/ASHRAE Addendum q
to ANSI/ASHRAE Standard 62.1-2013

Public Review Draft

Proposed Addendum q to Standard 62.1-2013, Ventilation for Acceptable Indoor Air Quality

Second Public Review (February 2014)
(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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FOREWORD

This proposed addendum modifies Section 5.2 (Exhaust Duct Location) to clarify requirements by including air classes instead of descriptive language, and modifies the requirements by allowing positively pressurized exhaust ducts inside the space of origin. It also modifies the air class of residential kitchen hoods.

[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 q to 62.1-2013 (formerly Addendum q to 62.1-2010)

Revise Section 5.2 as shown below

5.2 Exhaust Duct Location.

5.2.1 Exhaust ducts that convey Class 4 air ~~potentially harmful contaminants~~ shall be negatively pressurized relative to ducts, plenums or occupiable spaces through which the ducts ~~they~~ pass. ~~, so that exhaust air cannot leak into occupied spaces; supply, return, or outdoor air ducts; or plenums.~~

5.2.2 Exhaust ducts under positive pressure that convey Class 2 or Class 3 air shall not extend through ducts, plenums or occupiable spaces other than the space from which the exhaust air is drawn.

Exception: Exhaust ducts conveying Class 2 air that are sealed in accordance with SMACNA Seal Class A.[2]

Revise Table 5.16.1 as shown below.

TABLE 5.16.1 Airstreams

Description	Air Class
Diazo printing equipment discharge	4
Commercial kitchen grease hoods	4
Commercial kitchen hoods other than grease	3
Laboratory hoods	4
Residential kitchen ~~vented~~ hoods	~~3~~ 2
Hydraulic elevator machine room	2

BSR/ASHRAE Addendum r
to ANSI/ASHRAE Standard 62.1-2013

Public Review Draft

Proposed Addendum r to Standard 62.1-2013, Ventilation for Acceptable Indoor Air Quality

Second Public Review (February 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed addendum deletes Sections 6.2.7.1.2 and 6.2.7.1.3, and removes an informative note to Section 6.2.7.1.1. The deleted sections remove language which was potentially confusing, retaining the essential requirement for DCV as stated in Section 6.2.7.1.1. The changes remove the assumption that the Standard is intended for use only as calculations for code review and not physical operation.

Proposed changes to Section 5.9.2 clarify the requirements and extend them to apply under conditions of DCV control operation.

[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 r to 62.1-2013 (formerly Addendum r to 62.1-2010)

Revise Section 5.9.2 as shown below.

5.9.2 Building Exfiltration. ~~For a building, the v~~Ventilation system(s) for a building shall be designed to ensure that the total building ~~minimum~~ outdoor air intake equals or exceeds the total building ~~maximum~~ exhaust under all load and dynamic reset conditions ~~airflow~~.

Exceptions:
1. Where excess exhaust is required by process considerations and approved by the authority having jurisdiction, such as in certain industrial facilities.

2. When outdoor air dry-bulb temperature is below the indoor space dew-point design temperature.

Note: Although individual zones within a building may be neutral or negative with respect to outdoors or to other zones, net positive mechanical intake airflow for the building as a whole reduces infiltration of untreated outdoor air.

Revise Section 6.2.7.1.1 to delete the Note as shown below.

6.2.7.1.1 The breathing zone outdoor airflow (V_{bz}) shall be reset in response to current occupancy and shall be no less than the building component (R_a x A_z) of the DCV zone.

~~***Note:*** Examples of reset methods or devices include population counters, carbon dioxide (CO_2) sensors, timers, occupancy schedules or occupancy sensors.~~

Delete Sections 6.2.7.1.2 and 6.2.7.1.3 and renumber 6.2.7.1.4.

~~**6.2.7.1.2** The ventilation system shall be controlled such that at steady-state it provides each zone with no less than the breathing zone outdoor airflow (V_{bz}) for the current zone population.~~

~~**6.2.7.1.3** The current total outdoor air intake flow with respect to the coincident total exhaust airflow for the building shall comply with Section 5.9.2.~~

6.2.7.1.2 ~~**6.2.7.1.4**~~ **Documentation.**

BSR/ASHRAE Addendum d
to ANSI/ASHRAE Standard 62.2-2013

Public Review Draft

Proposed Addendum d to Standard 62.2-2013, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

First Public Review (February 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed change eliminates gravity or barometric dampers as allowable components of passive makeup air systems for combustion appliances. This change has been proposed because of concerns that such dampers do not reliably open at the low pressures (-1 to -5 Pa) that have the potential to backdraft atmospherically-vented appliances.

[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 d to 62.2-2013

Revise Section 6.4 as shown below.

6.4 Combustion and Solid-Fuel Burning Appliances. 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*[5]; NFPA 31, *Standard for the Installation of Oil-Burning Equipment*[6]; or NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid-Fuel Burning Appliances,*[7] or other equivalent code acceptable to the building official. Where atmospherically vented combustion appliances or solid-fuel burning appliances are located inside the pressure boundary, 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 per 100 ft^2 (75 L/s per 100 m^2) 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 air~~flow~~. Gravity or barometric dampers in non-powered exhaust makeup air systems shall not be used to provide compensating outdoor air. Atmospherically vented combustion appliances do not include direct-vent appliances.

BSR/ASHRAE Addendum e
to ANSI/ASHRAE Standard 62.2-2013

Public Review Draft

Proposed Addendum e to Standard 62.2-2013, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

First Public Review (February 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed change accounts for recent data showing what level of air sealing between units is reasonably achievable in new multifamily construction while still providing reasonable protection from contaminants originating in neighboring units.

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Addendum e to 62.2-2013

Revise Section 8.4.1.1 as shown below.

8.4.1.1 Compliance. One method of demonstrating compliance with Section 8.4.1 shall be to verify a leakage rate below a maximum of ~~0.2~~ 0.3 cfm per ft^2 (150 ~~100~~ L/s per 100 m^2) of the dwelling unit envelope area (i.e., the sum of the area of walls between dwelling units, exterior walls, ceiling, and floor) at a test pressure of 50 Pa by a blower door test conducted in accordance with either ANSI/ASTM-E779, *Standard Test Method for Determining Air Leakage Rate By Fan Pressurization*,[1] or ANSI/ASTM-E1827, *Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door*.[19] The test shall be conducted with the dwelling unit as if it were exposed to outdoor air on all sides, top, and bottom by opening doors and windows of adjacent dwelling units.

BSR/ASHRAE Addendum f
to ANSI/ASHRAE Standard 62.2-2013

Public Review Draft

Proposed Addendum f to Standard 62.2-2013, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings

First Public Review (February 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This proposed change updates a reference from an outdated version. The reference is used regarding duct leakage. It makes no substantive changes to the requirements of Standard 62.2.

[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 e to 62.2-2013

Revise Reference 8 in Section 10 as shown below. The rest of Section 10 remains unchanged.

10. REFERENCES

8. California Energy Commission (2013~~01~~). California Title 24 Standards, ~~*ACM Manual*,~~ Reference Appendix RA3~~F, Sections 4.3.8.2.1 and 4.3.7.2~~.

BSR/ASHRAE Addendum a to
ANSI/ASHRAE Standard 145.2-2011

Public Review Draft

Proposed Addendum a to Standard 145.2-2011, Laboratory Test Method for Assessing the Performance of Gas-Phase Air-Cleaning Systems: Air-Cleaning Devices

First Public Review (March 2014)
(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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Foreword: *In Table 6.1.4.1, the same compound is listed under two names: 2-butanone and MEK. This proposed change fixes the double entry. It also changes the table so that two different concentrations are no longer required for the same test.*

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TABLE 6.1.4.1 Standard Test Challenge Gases

Category / Chemical	CAS #	MW*	Low Conc. (ppb)	High Conc. (ppm)	NIOSH REL TWA (ppm)**	OSHA PEL TWA (ppm)**	High Conc. Rationale ***	Capacity Used****	Required Chemical
VOCs									
2-Butanone (MEK)	78-93-3	72.1	400	65	200	200	AA	20%, z	
~~MEK~~	~~78-93-3~~	~~72.1~~	~~400~~	~~30~~	~~200~~	~~200~~	~~AA~~	~~10%, z~~	

BSR/ASHRAE Addendum b to
ANSI/ASHRAE Standard 145.2-2011

Public Review Draft

Proposed Addendum b to Standard 145.2-2011, Laboratory Test Method for Assessing the Performance of Gas-Phase Air-Cleaning Systems: Air-Cleaning Devices

First Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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Foreword: *This change applies to the 100% Efficiency Test. This test depends on the test filter absolutely not breaking through at all. Experience has shown that even filters that exceed the requirements of 22+ pounds of sorbent can breakthrough in less than an hour when a few ppb or less can be >1% breakthrough. Since the ability of the system to measure >99% efficiency can be determined in 5-10 minutes, shortening the test period for the 100% efficiency test makes sense. Thus a change to Section 5.10 as follows is recommended.*

5.10 100% Efficiency Filter Test and Purge Time Determination.

An initial efficiency test shall be performed using a complete air cleaner as the test device to demonstrate that the test duct and sampling system are capable of providing a >99% efficiency measurement. The possible sources of error are inward leaks of clean air, losses to the test duct wall, or sampling-system leaks and/or dead spaces. This test shall be conducted with readily sorbed contaminants and a 10 kg (22 lb) or greater high-quality sorbent with moderate grain size. The air cleaner shall be installed to be leak-free and the test contaminant chosen shall be one that is easily removed. The computed efficiency values shall be greater than 99% for the test contaminant. <u>For the purposes of the 100% efficiency test, the initial efficiency test only needs to be run long enough to show the >99% measurement. This must include at least 5 downstream measurements.</u>

BSR/ASHRAE/IES Addendum d
to ANSI/ASHRAE/IES Standard 90.1-2013

1st Public Review Draft

Proposed Addendum d to Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

1st Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

This addendum adds deeper thermostat setups and setbacks and ventilation control to unrented hotel guestrooms and more clarity to the existing hotel guestroom requirements. These deeper setups and setbacks will provide additional energy savings without affecting occupant comfort. The technology exists from multiple manufacturers to allow for these reductions in unrented guestrooms. For stand alone controls, rooms are considered unrented if they are unoccupied for longer than 16 hours. For systems connected to a networked guest room control, the control can be configured to indicate whether the room is scheduled to be occupied and thus setbacks and ventilation can be turned off earlier when the room is scheduled to be unoccupied and the networked control can return setpoints to their default levels 60 minutes in advance of scheduled check-in.

This proposal also requires that ventilation air to the room be shut off during unoccupied periods. This proposal includes an exception for a "purge cycle" that would provide ventilation air to the guest room one hour before scheduled check-in to the room as indicated by a networked guest room control or through a timed outdoor air ventilation "purge cycle" one hour per day. It is unclear if shutting off the ventilation air during vacancy complies with ASHRAE Standard 62.1, as the 62.1 requirements regarding ventilation of unoccupied spaces are not clear. In addition, a proposal to change 62.1 to allow ventilation to be shut off in response to sensed vacancy is being developed (in the form of addendum 62.1p) that would clearly allow the requirements contained in this proposal. However, the purge cycle exception allowed by this proposal would allow for enhanced indoor air quality beyond the requirements of Standard 62.1, while still capturing the majority of the energy savings of the ventilation shut-off for the rest of the day. The controls would typically operate from an occupancy sensor, so that cleaning crews in unrented rooms would receive ventilation necessary during cleaning.

An analysis of the small hotel prototypes results in savings and paybacks that meet ASHRAE SSPC 90.1 scalar thresholds for cost effectiveness for all climate zones for systems where the ventilation fan is simply switched off such as PTACs. For central ventilation and exhaust systems typically provided with fan coil units there is some additional cost for ventilation and exhaust dampers and pressure regulation devices. Even with these added costs the proposed measure meets the SSPC 90.1 cost effectiveness criteria. The situation where an energy recovery ventilation device is required was investigated, and it was also found that the measure meets the cost effective criteria even with reduced savings accounting for this measure.

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Addendum d to 90.1-2013

Revise the Standard as follows (IP and SI Units)

Add the following definition to Section 3.2
networked guest room control system: a control system, accessible from the hotel/motel front desk or other central location, that is capable of identifying reserved rooms according to a timed schedule, and is capable of controlling HVAC in each hotel/motel guest room separately.

Add the following to section 6.3.2

k. Systems serving hotel/motel guest rooms shall comply with Section 6.4.3.3.5.
Renumber existing paragraphs k. through r.

Add Section 6.4.3.3.5 as follows:

6.4.3.3.5 Automatic Control of HVAC in Hotel/Motel Guest Rooms. In hotels and motels with greater than 50 guest rooms, *automatic* controls for the HVAC equipment serving each guest room shall be configured according to the following requirements:

6.4.3.3.5.1 Guest Room HVAC setpoint control. Within 30 minutes of all occupants leaving the guest room, HVAC set-points shall be automatically raised by at least 4°F (2°C) from the occupant set-point in the cooling mode and automatically lowered by at least 4°F (2°C) from the occupant set-point in the heating mode. When the guest room is unrented and unoccupied, HVAC set-points shall be automatically reset to 80°F (27°C) or higher in the cooling mode and to 60°F (16°C) or lower in the heating mode. Unrented and unoccupied guest rooms shall be determined by either:

1. The guest room has been continuously unoccupied for up to 16 hours, or
2. A *networked guest room control system* indicates the guest room is unrented and the guest room is unoccupied for no more than 30 minutes.

Exception to 6.4.3.3.5.1:

1. A *networked guest room control system* shall be permitted to return the thermostat set-points to their default occupied set-points 60 minutes prior to the time the room is scheduled to be occupied.
2. Cooling for humidity control shall be permitted during unoccupied periods.

6.4.3.3.5.2 Guest Room Ventilation Control. Within 30 minutes of all occupants leaving the guest room, ventilation and exhaust fans shall automatically be turned off or *isolation devices* serving each guest room shall automatically shut off the supply of outdoor air to the guest room and shut off exhaust air from the guest room.

Exception to 6.4.3.3.5.2: Guest room ventilation systems shall be permitted to have an automatic daily pre-occupancy purge cycle that provides daily outdoor air ventilation during unrented periods at the design ventilation rate for 60 minutes, or at a rate and duration equivalent to one air change.

6.4.3.3.5.3 Automatic control. Captive key card systems shall be permitted to be used to comply with section 6.4.3.3.5.

BSR/ASHRAE/IES Addendum g
to ANSI/ASHRAE/IES Standard 90.1-2013

1st Public Review Draft

Proposed Addendum g to Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

1st Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

The wording in 90.1-2013 regarding the fan power pressure drop limitation adjustment can be interpreted in two ways. This change is intended to clarify which equation is the one that the committee intended and that was originally used in the economic analysis.

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Addendum g to 90.1-2013

Revise the Table 6.5.3.1-2 as follows (IP Units):

TABLE 6.5.3.1-2 Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment
Credits	
Energy Recovery Device, other than coil runaround loop	~~*(2.2 * Energy Recovery Effectiveness) – 0.5 in for each airstream*~~ *For each airstream [(2.2 * Energy Recovery Effectiveness) – 0.5] in wc*

The remainder of the table is unchanged

Revise the Table 6.5.3.1-2 as follows (IP Units):

TABLE 6.5.3.1-2 Fan Power Limitation Pressure Drop Adjustment

Device	Adjustment
Credits	
Energy Recovery Device, other than coil runaround loop	~~*(550 * Energy Recovery Effectiveness) – 0.5 in for each airstream*~~ *For each airstream [(550 * Energy Recovery Effectiveness – 125)] Pa*

The remainder of the table is unchanged

BSR/ASHRAE/IES Addendum h
to ANSI/ASHRAE/IES Standard 90.1-2013

1st Public Review Draft

Proposed Addendum h to Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

1st Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

The current language in Appendix C regarding HVAC fan power is contradictory. The existing language instructs the user to include fan energy in the HVAC packaged efficiency (which is cooling only) and not model the fan power explicitly. However, the current language also instructs the user to model the fan as cycling in heating. By including the fan energy in the packaged cooling efficiency, the fan energy cannot be modeled in heating. This proposed addendum modifies the language to provide an efficiency rating for the compressor and condensing unit of the packaged equipment that does not include the fan energy but reflects the standard's minimum performance requirement. Additionally, it provides a method of calculating the appropriate fan power to include in the model for heating and cooling fan energy.

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Addendum h to 90.1-2013

Revise the Standard as follows (IP and SI Units)

C3.5.8 HVAC Systems. One HVAC system shall be provided for each thermal zone and shall have the following characteristics:

a. Constant-volume fan control.

b. Electrically-provided cooling with constant COP excluding the indoor fan power equal to 4.4. ~~the minimum IEER allowed for air-cooled air conditioners of "All Other" heating section type with ≥ 65,000 Btu/h and <135,000 Btu/h capacity, in accordance with Table 6.8.1-1, divided by 3.412.~~

…

f. System design supply air rates shall be based on a supply-air-to-room-air temperature difference of 20°F(11.0°C) in cooling.

…

h. Fans shall cycle on whenever the space calls for heating or cooling. The fan ~~energy~~ power shall be 0.3W/cfm (0.7 W·s/L) ~~included in the energy efficiency rating of the equipment~~, and the fan energy shall ~~not~~ be modeled explicitly.

BSR/ASHRAE/IES Addendum i
to ANSI/ASHRAE/IES Standard 90.1-2013

1st Public Review Draft

Proposed Addendum i to Standard 90.1-2013, *Energy Standard for Buildings Except Low-Rise Residential Buildings*

1st Public Review (March 2014)
(Draft shows Proposed Changes to Current Standard)

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FOREWORD

In the development of the ASHRAE 2010 standard, addendum AQ to the 2010 Standard revised the threshold capacity requirements for the use of economizers on fan cooling units. A detailed economic analysis was done to justify the expanded requirements for the use of economizers using commercial HVAC buildings. Because there was no benchmark building defined for computer rooms, the economizer requirements for computer rooms were not changed and the requirements in the ASHRAE 2007 standard were used.

The load profile of a data center is different than that of a commercial office building. Due to the high internal load of data processing equipment heat rejection the load profile is much flatter and the HVAC equipment will run in cooling to much lower ambients than for a commercial HVAC comfort cooling system. Considering this, it is obvious that the requirements for the use of economizer on computer rooms should be at least equivalent to the requirements for comfort cooling.

We have completed an analysis of a typical computer room in all 17 climate zone using the benchmark city weather data. There is not a benchmark building or load profile that we could use, but we assumed a load profile that is at full design capacity at the design 1% conditions and is at 60% load at 0 F. Due to concerns about humidity control in the computer rooms and having to humidify the outside free cooling air, we cut off the use of economizers when the ambient wetbulb was below 35 F wb Using this data and the cost model developed for the justification of addendum AQ to the ASHRAE 2007 standard we then updated the scalar economic analysis using the new economic criteria developed for the 2013-2016 ASHRAE 90.1 cycle. Assuming a 15 year design life this resulted in a 10.8 year maximum allowable scalar. The analysis show that if the criteria for HVAC economizers was adopted the maximum scalar is 7.4 which is well below the maximum allowed scalar of 10.8 so it has been shown that we can easily justify the elimination of the computer room economizer size criteria and the use of the HVAC economizer table for all products can easily be justified.

Therefore this addendum eliminates table 6.5.1-2 and requires that table 6.5.1-1 be used for both HVAC and computer room units.

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Addendum i to 90.1-2013

Revise the Standard as follows (IP and SI Units)

6.5.1 Economizers. Each cooling system that has a fan shall include either an air or water economizer meeting the requirements of Sections 6.5.1.1 through 6.5.1.6.

Exceptions: Economizers are not required for the following systems:

1. Individual fan-cooling units with a supply capacity less than the minimum listed in Table 6.5.1-1 ~~for comfort cooling applications and Table 6.5.1-2 for computer room applications.~~
2. Systems that include nonparticulate air treatment as required by Section 6.2.1 in Standard 62.1.

The remainder of 6.5.1 is unchanged

IP Tables

TABLE 6.5.1-1 Minimum Fan-Cooling Unit Size for which an Economizer is Required ~~for Comfort Cooling~~

Climate Zones	Cooling Capacity for Which an Economizer is Required
1a, 1b	No economizer requirement
2a, 2b, 3a, 4a, 5a, 6a 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	≥54,000 Btu/h

~~TABLE 6.5.1-2 Minimum Fan-Cooling Unit Size for which an Economizer is Required for Computer Rooms~~

~~Climate Zones~~	~~Cooling Capacity for Which an Economizer is Required~~
~~1a, 1b, 2a, 3a, 4a~~	~~No economizer requirement~~
~~2b, 5a, 6a, 7, 8~~	~~≥135,000 Btu/h~~
~~3b, 3c, 4b, 4c, 5b, 5c, 6b~~	~~≥65,000 Btu/h~~

SI Tables

TABLE 6.5.1-1 Minimum Fan-Cooling Unit Size for which an Economizer is Required ~~for Comfort Cooling~~

Climate Zones	Cooling Capacity for Which an Economizer is Required
1a, 1b	No economizer requirement
2a, 2b, 3a, 4a, 5a, 6a 3b, 3c, 4b, 4c, 5b, 5c, 6b, 7, 8	≥16 kW

~~TABLE 6.5.1-2 Minimum Fan-Cooling Unit Size for which an Economizer is Required for Computer Rooms~~

~~Climate Zones~~	~~Cooling Capacity for Which an Economizer is Required~~
~~1a, 1b, 2a, 3a, 4a~~	~~No economizer requirement~~
~~2b, 5a, 6a, 7, 8~~	~~≥40 kW~~
~~3b, 3c, 4b, 4c, 5b, 5c, 6b~~	~~≥19 kW~~

Public Review Draft

Proposed Addendum aj to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

Second Public Review (March 2014)
(Draft Shows Independent Substantive Change)

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FOREWORD

This ISC addresses an issue with the definition of low emission, hybrid, and electric vehicles. The original definition referred to definitions that were not yet final or for vehicles not sold in every US state. This ISC deletes that definition and instead, in the body of the requirements, references the US EPA SmartWay Certified Passenger Vehicle program criteria ("Smartway"). Smartway is based on the most current vehicle rating criteria for greenhouse gas and smog-forming air pollution emissions as established by the US Environmental Protection Agency (EPA) and Department of Transportation (DOT). Each model year, EPA rates cars and trucks for greenhouse gas and smog-forming emissions on scales of 1-10. For the SmartWay designation, a vehicle must receive a combined score from both scales that is much better than the average vehicle. EPA updates the greenhouse gas and air pollution rating thresholds each model year. The requirement is to meet the SmartWay criteria, which therefore makes it applicable to vehicles outside the US.

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Addendum aj to 189.1-2011 (Independent Substantive Change)

Modify section 5.3.5 as follows:

5.3.5 Mitigation of Transportation Impacts

5.3.5.2 Site Vehicle Provisions. Where onsite vehicle parking is provided for a building that has a building occupant load greater than 100, at least one of the following shall be provided:

a.) **Provisions for Preferred Parking Spaces.** At least 5 percent of the parking spaces provided shall be designated as preferred parking for vehicles that meet both the minimum greenhouse gas and air pollution scores as required for USEPA SmartWay designation ~~*low emission, hybrid and electric vehicles*~~. Preferred parking spaces shall be located on the shortest route of travel from the parking facility to a building entrance, but shall not take precedence over parking spaces that are required to be accessible for individuals with disabilities. Where buildings have multiple entrances with adjacent parking, parking spaces shall be dispersed and located near the entrances. Such parking spaces shall be provided with signage approved by the AHJ that specifies the permitted usage.

b.) **Provisions for Electric Vehicle Charging Infrastructure.** Two or more electric vehicle charging systems shall be available to the building occupants and shall be located no more than ¼ mile (400 m) from the *building project*.

~~*Add the following new definitions to Section 3.2:*~~

~~***Low emission, hybrid and electric vehicles:*** Vehicles that meet the EPA Tier 3 emission standards or the California LEV-II standard.~~

Add the following reference to Chapter 11, United States Environmental Protection Agency (EPA):

Reference	Title	Section
EPA-420-F-07-063, November 2007	SmartWay Program Requirements for Certified Passenger Vehicles, http://epa.gov/greenvehicles/Aboutratings.do#aboutsmartway	5.3.5

Public Review Draft

Proposed Addendum an to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

Second Public Review (March 2014)
(Draft Shows Independent Substantive Change)

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FOREWORD

This Independent Substantive Change (ISC) makes changes to Table 7.5.3 based on a comment received during the first pubic review regarding the values for wood and biomass. Due to the issues raised regarding the values used in the first public review draft, the committee has decided to delete these rows and work on these values in the future.

As an Independent Substantive Change, only the text shown in strikethrough and underline format is being considered for this public review.

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Addendum an to 189.1-2011 (Independent Substantive Change)

Modify Section 8.3 as follows:

7.5.3 Annual Carbon Dioxide Equivalent (CO2e). The *building project* shall have an annual *CO2e* less than or equal to that achieved by compliance with Sections 7.3 and 7.4, and Sections 5.3.2.2, 5.3.2.3, 6.3.2, 6.4.2, 8.3.1, 8.3.4, and 8.4.1. Comparisons shall be made using Normative Appendix D provided that the baseline building design is calculated in accordance with Section 7.5.2. To determine the *CO2e* value for each energy source supplied to the *building project*, multiply the energy consumption by the emissions factor. *CO2e* emission factors shall be taken from Table 7.5.3.

Table 7.5.3 CO_2e Emission Factors

***Building Project* Energy Source**	**CO2e lb/kWh (kg/kWh)**
Grid delivered electricity and other fuels not specified in this table	1.387 (0.630)
LPG or propane	0.600 (0.272)
Fuel Oil (residual)	0.751 (0.341)
Fuel Oil (distillate)	0.706 (0.320)
Coal	0.836 (0.379)
Gasoline	0.689 (0.313)
Natural Gas	0.483 (0.219)
~~Wood and Wood Waste~~	~~0.751 (0.341)~~
~~Agricultural Biomass~~	~~0.943 (0.428)~~

District Chilled Water	0.332 (0.151)
District Steam	0.812 (0.368)
District Hot Water	0.767 (0.348)

Note: The values shown in this table represent national averages for the United States and include both direct and indirect emissions.

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BSR/ASHRAE/USGBC/IES Addendum aw to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings Second Public Review Draft (Independent Substantive Change)

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FOREWORD

This addendum proposes two major changes to Section 9.4.1 of the standard: Increase the range of products and materials that are considered under Section 9.4.1, Reduced Impact Materials, and introduce more holistic considerations of supply chain impacts of products via life-cycle assessment (LCA) based approaches in Section 9.4.1.4, Multiple Attribute Product Declaration or Verification. This addendum previously went out for a public review, and based on the comments received, a number of changes are being proposed in this draft, exclusively to section 9.4.1.4 Multiple Attribute Product Declaration or Certification as well as the references.

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 aw to 189.1-2011 (Independent Substantive Change)

Revise Section 9.4.1 as follows:

9.4.1 Reduced Impact Materials. The *building project* shall comply with any two of the following sections: 9.4.1.1, 9.4.1.2, 9.4.1.3, and 9.4.1.4. Components of mechanical, electrical, plumbing, fire safety systems, and transportation devices shall not be included in the calculations except for piping, plumbing fixtures, ductwork, conduit, wiring, cabling, and elevator and escalator framing. Calculations shall only include materials *permanently installed* in the project. A value of 45% of the total construction cost is allowed to be used in lieu of the actual total cost of materials.

9.4.1.1 Recycled Content and Salvaged Material Content. The sum of the *recycled content* and the salvaged material content shall constitute a minimum of 10%, based on cost, of the total materials in the *building project*.

9.4.1.1.1 Recycled Content. The *recycled content* of a material shall be the post-consumer recycled content plus one-half of the pre-consumer recycled content, determined by weight. The recycled fraction of the material in a product or an assembly shall then be multiplied by the cost of assembly to determine its contribution to the 10% requirement.

The annual average industry values, by country of production, for the *recycled content* of steel products manufactured in basic oxygen furnaces and electric arc furnaces are allowed to be used as the *recycled content* of the steel. For the purpose of calculating the *recycled content* contribution of concrete, the constituent materials in concrete (e.g., the

cementitious materials, aggregates, and water) are allowed to be treated as separate components and calculated separately.

9.4.1.1.2 Salvaged Material Content. For purposes of this standard, a salvaged material is a material that has been removed in a whole form from a structure and reused in the *building project*. The salvaged material content shall be determined based on the cost of a comparable alternative component material.

9.4.1.2 Regional Materials. A minimum of 15% of building materials or products used, based on cost, shall be regionally extracted/harvested/recovered or manufactured within a radius of 500 mi (800 km) of the project *site*. If only a fraction of a product or material is extracted/harvested/ recovered or manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

Exception: For building materials or products shipped in part by rail or water, the total distance to the project shall be determined by weighted average, whereby that portion of the distance shipped by rail or water shall be multiplied by 0.25 and added to that portion not shipped by rail or water, provided that the total does not exceed 500 mi (800 km)

9.4.1.3 Biobased Products. A minimum of 5% of building materials used, based on cost, shall be *biobased product*s. *Biobased products* shall comply with the minimum biobased contents of the USDA's Designation of Biobased Items for Federal Procurement, contain the "USDA Certified *Biobased Product*" label, or be composed of solid wood, engineered wood, bamboo, wool, cotton, cork, agricultural fibers, or other biobased materials with at least 50% biobased content.

9.4.1.3.1 Wood Building Components. Wood building components including, but not limited to, structural framing, sheathing, flooring, sub-flooring, wood window sash and frames, doors, and architectural millwork used to comply with this requirement shall contain not less than 60% certified wood content tracked through a chain of custody process either by physical separation or percentage-based approaches. Acceptable certified wood content documentation shall be provided by sources certified through a forest certification system with principles, criteria, and standards developed using ISO/IEC Guide 59, or the WTO Technical Barriers to Trade. Wood building components from a *vendor* are allowed to comply when the annual average amount of certified wood products purchased by the *vendor*, for which they have chain of custody *verification* not older than two years, is 60% or greater of their total annual wood products purchased.

9.4.1.4 Multiple Attribute Product Declaration or Certification. A minimum of 10 different products installed in the *building project*, at the time of issuance of certificate of occupancy, shall ~~be documented to have~~ comply with one of the following sub-sections.~~:~~ Declarations, reports, and assessments shall be submitted to the *AHJ* and shall contain documentation of the critical peer review by an independent third party, results from the review, the reviewer's name, company name, contact information, and date of the review or certification.

9.4.1.4.1 Industry-wide Declaration. A ~~third-party certified~~ Type III industry-wide ~~(generic)~~ environmental product declaration (EPD) shall be submitted for each product.~~,~~ ~~including external verification where~~ Where the program operator explicitly recognizes the EPD as fully representative of the product group on a National level, it is considered industry-wide. In the case where an industry-wide EPD represents only a subset of an

industry group, as opposed to being industry-wide, the manufacturer shall be ~~is~~ explicitly recognized as a participant by the EPD program operator. All EPD shall be consistent with ISO Standards 14025~~, 14040, 14044~~ and 21930 with at least a cradle-to-gate scope. Each product complying with this section shall be counted as one product for compliance with Section 9.4.1.4.

9.4.1.4.2 Product Specific Declaration. A ~~publicly available~~ product specific ~~third-party certified~~ Type III EPD shall be submitted for each product~~, including external verification~~. The product specific declaration shall be manufacturer specific for a product family. ~~All~~ Type III EPDs shall be certified as complying, with the goal and scope for the cradle-to-gate requirements in accordance ~~consistent~~ with ISO Standards 14025~~, 14040, 14044~~ and 21930~~with at least a cradle-to-gate scope~~. Each product complying with this section shall be counted as two products for compliance with ~~of the minimum 10 required under~~ Section 9.4.1.4.

9.4.1.4.3 Third-Party Multi-attribute Certification. A ~~certification meeting the minimum criteria of a multiple attribute standard developed using a consensus based process by an ANSI accredited standard development organization.~~ material specific assessment shall be submitted for each product in accordance with one of the following standards, where applicable. The assessment shall be certified as meeting the minimum performance level specified in each standard. Each product complying with this section shall be counted as two products for compliance with ~~of the minimum 10 required under~~ Section 9.4.1.4.

a. ANSI/BIFMA e3
b. NSF/ANSI 140
c. NSF/ANSI 332
d. NSF/ANSI 336
e. NSF/ANSI 342
f. NSF/ANSI 347
g. NSC 373
h. TCNA A138.1
i. UL 100
j. UL 102

9.4.1.4.4 Product Life Cycle. A report by a third-party that has critically reviewed the ~~certified~~ life cycle ~~product~~ assessment of a product based on ISO Standards 14040 and 14044 that ~~minimally~~ demonstrates compliance with the goal and scope for the ~~covers~~ cradle-to-gate requirements ~~scope~~. Each product complying with this section shall be counted as two products for compliance with ~~of the minimum 10 required under~~ Section 9.4.1.4.

Add or revise the following references in Section 11:

The Business and Institutional Furniture Manufacturer's Association (BIFMA)
678 Front Avenue NW, Suite 150
Grand Rapids, MI 49504-5368, United States
1-616-285-3963; www.bifma.org; email@bifma.org

ANSI/BIFMA e3-2012~~2008~~	Furniture Sustainability Standard	9.4.1.4.3, Appendix E

International Organization for Standardization (ISO)
ISO Central Secretariat, 1 rue de Varembee, Case postale 56
CH-1211 Geneva 20, Switzerland
+41-22-749-01-11; www.iso.org

ISO 14025 - 2006	Environmental labels and declarations – Type III environmental declarations – Principles and procedures	9.4.1.4
ISO 14040 – 2006	Environmental management – Life cycle assessment – Principles and framework	9.4.1.4
ISO 14044 – 2006	Environmental management — Life cycle assessment — Requirements and guidelines	9.4.1.4, 9.5.1, 9.5.1.2
ISO 21930 – 2007	Sustainability in building construction – Environmental declaration of building products	9.4.1.4

NSF International
789 Dixboro Road
Ann Arbor, MI 48105, United States
734-769-8010; www.nsf.org; info@nsf.org

NSF/ANSI 140-2013	Sustainability Assessment for Carpet	9.4.1.4
NSF/ANSI 332-2012	Sustainability Assessment for Resilient Floor Coverings	9.4.1.4
NSF/ANSI 336-2011	Sustainability Assessment for Commercial Furnishings Fabric	9.4.1.4
NSF/ANSI 342-2012	Sustainability Assessment for Wallcoverings	9.4.1.4
NSF/ANSI 347-2012	Sustainability Assessment for Single Ply Roofing Membranes	9.4.1.4

Natural Stone Council
P.O. Box 539
Hollis, NH 03049, United States
978-391-4130; www.naturalstonecouncil.org; info@genuinestone.org

NSC 373-2013	Sustainability Assessment for Natural Dimension Stone	9.4.1.4

Tile Council of North America
100 Clemson Research Boulevard
Anderson, SC 29625, United States
864-646-8453; www.tcnatile.com; info@tileusa.com

ANSI A138.1-2012	Standard Specifications for Sustainable Ceramic Tiles, Glass Tiles, and Tile Installation Materials	9.4.1.4

Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook, IL 60062, United States
847-272-8800; www.ul.com; cec.us@us.ul.com

UL 100-2012	Standard for Sustainability for Gypsum Boards and Panels	9.4.1.4
UL 102-2012	Standard for Sustainability for Door Leafs	9.4.1.4

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FOREWORD

This addendum adds a requirement for an automated pre-occupancy outdoor air purge in order to ameliorate indoor contaminant buildup that may occur during extended periods of time during which ventilation systems are off.

Means of meeting this requirement include, but are not limited to, incorporating it into the time scheduling capabilities of a DDC system or installing a time-clock on the ventilation system to turn on the ventilation system prior to scheduled building occupancy. Compliance can be as simple as setting the schedules for the HVAC system to be in occupied mode during the pre-occupancy ventilation period.

For systems with air-side economizers, this addendum allows the duration of the pre-occupancy outdoor air purge to be reduced by increasing the amount of ventilation air supplied during the pre-occupancy period, provided weather conditions allow for a high percentage of outdoor air in the supply air.

In humid climates, pre-occupancy purge may necessitate the use of reheat, reduced supply air volumes, or other means to avoid high space humidity levels due to the low internal loads expected prior to occupancy. In cold climates, it may necessitate the use of preheat, reduced supply air volume, or other means to avoid low supply air temperature levels due to a high percentage of outdoor air.

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Addendum bn to 189.1-2011

Modify Section 8.3.1 by adding the following section:

8.3.1.7 Pre-Occupancy Ventilation Control. Ventilation systems serving zones that are not continuously occupied shall have controls designed to automatically provide outdoor air to the zones prior to their scheduled occupancy where the zones served by the ventilation system have been unoccupied for 24 hours or longer. This pre-occupancy ventilation shall be provided continuously at the system design *minimum outdoor airflow* for a period of one hour prior to the

expected occupancy, or at an outdoor air rate and for a time period that provides the same number of air changes as the design *minimum outdoor airflow* for one hour.

If the pre-occupancy ventilation period requires ventilation earlier than required by section 6.4.3 of ANSI/ASHRAE/IES Standard 90.1, the pre-occupancy ventilation start time of section 8.3.1.7 shall take precedence.

Exception: Hotel and motel guest rooms subject to automatic control of HVAC and lighting as required in Sections 7 and 8.

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FOREWORD

This addendum updates the requirements for economizers, as defined in 7.4.3.3 of ASHRAE/IES/USGBC 189.1-2011, to reflect changes that have been made in ASHRAE/IES 90.1-2013.

Several changes have been made to the Standard 90.1 requirements, which include the following;

- *Revisions to the high limit control type and settings*
- *Requirements for capacity control*
- *Definition of control requirements to integrated economizer operation*
- *Separate economizer size requirements for comfort cooling and for computer rooms*
- *New requirements for elimination of economizers*

For Standard 189.1, this addendum proposes to use all of the economizer requirements of Standard 90.1 except for the following changes;

- *Maintain the current Standard 189.1equipment size requirement for economizers at 33KBtu/h capacity vs. the Standard 90.1 size requirement set at 54K.*
- *Maintain the Standard 189.1 special requirements for capacity control small units but decrease it to 54K instead the current 60K size requirement.*
- *Eliminate the separate size requirement for data center economizer capacity and use the same requirements as defined for comfort cooling. The benefits from economizers for data centers are significant more than comfort cooling so it can easily be demonstrated that they are cost justified at the levels defined for comfort cooling.*

Note: In this addendum, changes to the current standard are indicated in the text by <u>underlining</u> (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.

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Addendum bo to 189.1-2011

Modify Section 7.4.3.3 as follows:

7.4.3.3 Economizers. Systems shall ~~have~~ include economizers meeting the requirements in Section 6.5.1 of ANSI/ ASHRAE/IES 90.1 except as ~~noted below~~ modified by the following.

1. The minimum size requirements for economizers for comfort cooling and for computer rooms are defined in Table 7.4.3.3 and supersede the requirements in Table 6.5.1 of ANSI/ASHRAE/IES Standard 90.1 as defined in Tables 6.5.1-1 and 6.5.1-2.
2. Rooftop units with a capacity of less than ~~60,000~~ 54,000 Btu/h (~~18~~ 16 kW) shall have two stages of capacity control, with the first stage controlling ~~used for cooling with~~ the economizer and the second stage ~~to add~~ controlling mechanical cooling. Units with a capacity equal to or greater than 54,000 Btu/h (16kW) shall comply with the staging requirements defined in ANSI/ASHRAE/IES Standard 90.1 6.5.3.1
3. For systems that control to a fixed leaving air temperature (i.e., *VAV* systems), the system shall be capable of resetting the supply air temperature up at least 5°F (3°C) during economizer operation.

~~**Exceptions:**~~ All the exceptions in Section 6.5.1 of ANSI/ ASHRAE/IES Standard 90.1 shall apply except as ~~noted below~~ modified by the following:

1. ~~The use of~~ Where the reduced renewable approach defined in Section 7.4.1.1.1 is used, exception ~~(i)~~ 9 to Section 6.5.1 of ANSI/ASHRAE/IES Standard 90.1 shall be permitted to eliminate the economizer requirement, provided the requirements in Table ~~6.3.2~~ 6.5.1-3 of ANSI/ASHRAE/IES Standard 90.1 are applied to the efficiency requirements required by Section ~~7.4.3.1.~~7.4.1.1.2. If the standard renewable approach is chosen as defined in 7.4.1.1.1then the requirements in table in 6.5.1-3 of ANSI/ASHRAE/IES Standard 90.1 shall be applied to the efficiency requirements in ANSI/ASHRAE/IES Standard 90.1 Tables 6.8.1-1 to 6.8.1-11.
2. For water-cooled units with a capacity less than 54,000 Btu/h (16 kW) that are used in systems where heating and cooling loads are transferred within the building (i.e., water-source heat pump systems), the requirement for an air or water economizer can be eliminated if the condenser-water temperature controls are capable of being set to maintain full load heat rejection capacity down to a 55°F (12°C) condenser-water supply temperature and the HVAC equipment is capable of operating with a 55°F (12°C) condenser-water supply temperature.

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FOREWORD

This addendum revises the exhaust air energy recovery requirements defined in 7.4.3.6 of ASHRAE/IES/USGBC 189.1-2011 to reflect new requirements that are included in ASHRAE/IES 90.1-2013.

Standard 90.1-2013 has expanded the exhaust air energy recovery requirements in 6.5.6.1 to cover percent outdoor air requirements that are currently covered in ASHRAE 189.1-2011. It has also expanded the requirements to include two tables that cover buildings that are occupied less than 8000 hrs and buildings that are occupied more than 8000 hrs. Since the requirements of Standard 90.1-2013 now cover all the requirements in the Standard 189.1-2011 Table 7.4.3.6, Standard 189.1 can just simply reference Standard 90.1 tables 6.5.6.1-1 and 6.5.6.1-2. However, the Standard 189.1 requirement for a minimum effectiveness of 60% will be maintained rather than the Standard 90.1 requirement for 50% effectiveness.

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Addendum bp to 189.1-2011

Modify Section 7.4.3.6 as follows

7.4.3.6 Exhaust Air Energy Recovery. The exhaust air energy recovery requirements defined in Section 6.5.6.1 of ANSI/ASHRAE/IES Standard 90.1 <u>including the requirements in tables 6.5.6.1-1 and 6.5.6.1-2</u> shall be used except that the energy recovery effectiveness shall ~~be~~ <u>not be less than</u> 60%, <u>superseding the 50% effectiveness requirement in ASHRAE 90.1 Section 6.5.5.1</u> ~~and the requirements of Table 7.4.3.6 shall be used instead of those of Table 6.5.6.1 of ANSI/ASHRAE/IES Standard 90.1.~~

TABLE 7.4.3.6 Energy Recovery Requirement (I-P)

Climate Zone	% Outside Air at Full Design Flow							
	≥10% and <20%	≥20% and <30%	≥30% and <40%	≥40% and <50%	≥50% and <60%	≥60% and <70%	≥70% and <80%	≥80%
	Design Supply Fan Flow, cfm							
3B, 3C, 4B, 4C, 5B	NR	NR	NR	NR	NR	NR	≥5000	≥5000
1B, 2B, 5C	NR	NR	NR	NR	≥26,000	≥12,000	≥5000	≥4000
6B	NR	≥22,500	≥11,000	≥5500	≥4500	≥3500	≥2500	≥1500
1A, 2A, 3A, 4A, 5A, 6A	≥30,000	≥13,000	≥5500	≥4500	≥3500	≥2000	≥1000	≥0
7, 8	≥4000	≥3000	≥2500	≥1000	≥0	≥0	≥0	≥0

TABLE 7.4.3.6 Energy Recovery Requirement (SI)

Climate Zone	% Outside Air at Full Design Flow							
	≥10% and <20%	≥10% and <20%	≥10% and <20%	≥10% and <20%	≥10% and <20%	≥10% and <20%	≥10% and <20%	≥10% and <20%
	Design Supply Fan Flow, L/s							
3B, 3C, 4B, 4C, 5B	NR	NR	NR	NR	NR	NR	≥2360	≥2360
1B, 2B, 5C	NR	NR	NR	NR	≥12,271	≥5663	≥2360	≥1888
6B	NR	≥10,619	≥5191	≥2596	≥2124	≥1652	≥1180	≥708
1A, 2A, 3A, 4A, 5A, 6A	≥14,158	≥6135	≥2596	≥2124	≥1652	≥944	≥472	>0
7, 8	≥1888	≥1416	≥1180	≥472	>0	>0	>0	>0

Public Review Draft

Proposed Addendum bq to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

First Public Review (March 2014)
(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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ASHRAE, 1791 Tullie Circle, NE, Atlanta GA 30329-2305

At (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 updates the efficiency requirements for Electrical-Operated Unitary Air Conditioners and Condensing Units as defined in table C-1 and Electrical-Operated Unitary Air Conditioners and Applied Heat Pumps as defined in table C-2 in appendix C of ANSI/ASHRAE/IES/USGBC 189.1-2011.

The efficiencies used for the update are based the CEE (Consortium for Energy Efficiency) guideline that was effective January 6, 2012 for categories of products where the CEE standard has a defined efficiency requirement. From this guideline we used the CEE tier 1 requirements, which represent approximately the top 25% of the market when the standard was developed in 2012. For products that are not covered by the CEE requirements the efficiency requirements defined in ANSI/ASHRAE/IES 90.1-2013 table 6.8.1-1 were used.

The CEE efficiency levels were chosen as they are the common industry level used for higher tier products, which would be applicable to a high performance green standard like ASHRAE/IES/ASHRAE 189.1. Their includsion also means that these products are commonly available from manufacturers.

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 bq - to 189.1-2011

Modify Appendix C as follows:

BSR/ASHRAE/USGBC/IES Addendum bq 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 the existing table C-1 and C-2 (I-P) and C-1 and C-2 (S-I) and replace with the revised table C-1 and C-2 (I-P) and C-1 and C-2 (SI) as shown below.

~~TABLE C-1 (Supersedes Table 6.8.1A in ANSI/ASHRAE/IES Standard 90.1)~~
~~Electrical-Operated Unitary Air Conditioners and Condensing Units (I-P)~~

~~Equipment Type~~	~~Size Category~~	~~Heating Section Type~~	~~Sub-Category or Rating Conditions~~	~~Minimum Efficiency~~	~~Test Procedure~~[a]
~~Air conditioners, air cooled~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~14.0 SEER 12.0 EER~~	~~ARI 210/240~~
			~~Single packaged~~	~~14.0 SEER 11.6 EER~~	
~~Through-the-wall, air cooled~~	~~<30,000 Btu/h~~	~~All~~	~~Split systems~~	~~12.0 SEER~~	
			~~Single packaged~~	~~12.0 SEER~~	
~~Small-duct high-velocity, air cooled~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~10 SEER~~	
~~Air conditioners air cooled~~	~~≥65,000 Btu/h and <135,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~11.5 EER 12.0 IEER~~	~~ARI 340/360~~
		~~All other~~	~~Split systems and single package~~	~~11.3 EER 11.8 IEER~~	
	~~≥135,000 Btu/h and <240,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~11.5 EER 12.0 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~11.3 EER 11.8 IEER~~	
	~~≥240,000 Btu/h and <760,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~10.0 EER 10.5 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~9.8 EER 10.3 IEER~~	
	~~≥760,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~9.7 EER 10.2 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~9.5 EER 10.0 IEER~~	
~~Air conditioners, water and evaporatively cooled~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems and single package~~	~~14.0 EER 14.3 IEER~~	~~ARI 210/240~~
	~~≥65,000 Btu/h and <135,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~14.0 EER 14.3 IEER~~	~~ARI 340/360~~
		~~All other~~	~~Split systems and single package~~	~~13.8 EER 14.1 IEER~~	
	~~≥135,000 Btu/h and <240,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~14.0 EER 14.3 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~13.8 EER 14.1 IEER~~	
	~~≥240,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~14.0 EER 14.0 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~13.8 EER 13.8 IEER~~	
~~Condensing units, air cooled~~	~~≥135,000 Btu/h~~			~~Not applicable match with indoor coil~~	~~ARI 365~~
~~Condensing, water or evaporatively cooled~~	~~≥135,000 Btu/h~~			~~Not applicable match with indoor coil~~	

a. Section 11 contains a complete specification of the referenced test procedures, including year version of the test procedure.

TABLE C-1 (Supersedes Table 6.8.1A in ANSI/ASHRAE/IES Standard 90.1)
Electrical-Operated Unitary Air Conditioners and Condensing Units (SI)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Conditions	Minimum Efficiency	Test Procedure[a]
Air conditioners, air-cooled	<19 kW	All	Split systems	4.10 SCOP 3.52 COP	ARI 210/240
			Single packaged	4.10 SCOP 3.52 COP	
Through-the-wall, air-cooled	<9 kW	All	Split systems	3.52 SCOP	
			Single packaged	3.52 SCOP	
Small-duct high-velocity, air-cooled	<19 kW	All	Split systems	2.93 SCOP	
Air conditioners air-cooled	≥19 kW and <40 kW	Electric resistance (or none)	Split systems and single package	3.37 COP 3.52 ICOP	ARI 340/360
		All other	Split systems and single package	3.31 COP 3.46 ICOP	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	3.37 COP 3.52 ICOP	
		All other	Split systems and single package	3.31 COP 3.46 ICOP	
	≥70 kW and <223 kW	Electric resistance (or none)	Split systems and single package	2.93 COP 3.08 ICOP	
		All other	Split systems and single package	2.87 COP 3.02 ICOP	
	≥223 kW	Electric resistance (or none)	Split systems and single package	2.84 COP 2.99 ICOP	
		All other	Split systems and single package	2.78 COP 2.93 ICOP	
Air conditioners, water and evaporatively cooled	<19 kW	All	Split systems and single package	4.10 COP 4.19 ICOP	ARI 210/240
	≥19 kW and <140 kW	Electric resistance (or none)	Split systems and single package	4.10 COP 4.19 ICOP	ARI 340/360
		All other	Split systems and single package	4.04 COP 4.13 ICOP	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	4.10 COP 4.19 ICOP	
		All other	Split systems and single package	3.81 COP 4.13 ICOP	
	≥70 kW	Electric resistance (or none)	Split systems and single package	4.10 COP 4.10 ICOP	
		All other	Split systems and single package	3.81 COP 3.81 ICOP	
Condensing units, air-cooled	≥40 kW			Not applicable match with indoor coil	ARI 365
Condensing, water or evaporatively cooled	135,000 Btu/h			Not applicable match with indoor coil	

~~a. Section 11 contains a complete specification of the referenced test procedures, including year version of the test procedure.~~

~~TABLE C-2 (Supersedes Table 6.8.1B in ANSI/ASHRAE/IES Standard 90.1)~~
~~Electrically Operated Unitary and Applied Heat Pumps-Minimum Efficiency Requirements (I-P)~~

~~Equipment Type~~	~~Size Category~~	~~Heating Section Type~~	~~Sub-Category or Rating Conditions~~	~~Minimum Efficiency~~	~~Test Procedure~~[a]
~~Air conditioners, air-cooled (cooling mode)~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~14.0 SEER 12.0 EER~~	~~ARI 210/240~~
			~~Single packaged~~	~~14.0 SEER 11.6 EER~~	
~~Through-the-wall, air-cooled (cooling mode)~~	~~<30,000 Btu/h~~	~~All~~	~~Split systems~~	~~12.0 SEER~~	
			~~Single packaged~~	~~12.0 SEER~~	
~~Small-duct high velocity, air-cooled (cooling mode)~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~10.0 SEER~~	
~~Air conditioners, air-cooled (cooling mode)~~	~~≥65,000 Btu/h and <135,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~11.3 EER 11.8 IEER~~	~~ARI 340/360~~
		~~All other~~	~~Split systems and single package~~	~~11.1EER 11.6 IEER~~	
	~~≥135,000 Btu/h and <240,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~11.3 EER 11.8 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~11.1EER 11.6 IEER~~	
	~~≥240,000 Btu/h~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~9.8 EER 9.8 IEER~~	
		~~All other~~	~~Split systems and single package~~	~~9.6 EER 9.6 IEER~~	
~~Water-source (cooling mode)~~	~~<17,000 Btu/h~~	~~All~~	~~86°F entering water~~	~~14.0 EER~~	~~ISO-13256-1~~
	~~≥17,000 Btu/h and <65,000 Btu/h~~	~~All~~	~~86°F entering water~~	~~14.0 EER~~	
	~~>65,000 Btu/h and <135,000 Btu/h~~	~~All~~	~~86°F entering water~~	~~14.0 EER~~	
~~Groundwater-source (cooling mode)~~	~~<135,000 Btu/h~~	~~All~~	~~59°F entering water~~	~~16.2 EER~~	
			~~77°F entering water~~	~~13.4 EER~~	
~~Air conditioners, air-cooled (heating mode)~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~8.5 HSPF~~	~~ARI210/240~~
			~~Single packaged~~	~~8.0 HSPF~~	
~~Through-the-wall, air-cooled (heating mode)~~	~~<30,000 Btu/h~~	~~All~~	~~Split systems~~	~~7.4 HSPF~~	
			~~Single packaged~~	~~7.4 HSPF~~	
~~Small-duct high velocity, air-cooled (heating mode)~~	~~<65,000 Btu/h~~	~~All~~	~~Split systems~~	~~6.8 HSPF~~	
~~Air-cooled (heating mode)~~	~~≥65,000 Btu/h and <135,000 Btu/h (cooling capacity)~~		~~47°F DB/43°F WB *Outdoor air*~~	~~3.3 COP~~	~~ARI 340/360~~
			~~17°F DB/15°F WB *Outdoor air*~~	~~2.2 COP~~	
	~~≥135,000 Btu/h (cooling capacity)~~		~~47°F DB/43°F WB *Outdoor air*~~	~~3.2 COP~~	
			~~17°F DB/15°F WB *Outdoor air*~~	~~2.0 COP~~	
~~Water-source (heating mode)~~	~~<135,000 Btu/h (cooling capacity)~~		~~68°F entering water~~	~~4.2 COP~~	~~ISO-13256-1~~

~~Groundwater-source (heating mode)~~	~~<135,000 Btu/h (cooling capacity)~~	~~50°F entering water~~	~~3.6 COP~~
		~~32°F entering fluid~~	~~3.1 COP~~

~~a. Section 11 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.~~

~~TABLE C-2 (Supersedes Table 6.8.1B in ANSI/ASHRAE/IES Standard 90.1)~~
~~Electrically Operated Unitary and Applied Heat Pumps-Minimum Efficiency Requirements (SI)~~

~~Equipment Type~~	~~Size Category~~	~~Heating Section Type~~	~~Sub-Category or Rating Conditions~~	~~Minimum Efficiency~~	~~Test Procedure[a]~~
~~Air conditioners, air cooled (cooling mode)~~	~~<19 kW~~	~~All~~	~~Split systems~~	~~4.10 $SCOP_C$ 3.52 COP_C~~	~~ARI 210/240~~
			~~Single packaged~~	~~4.10 $SCOP_C$ 3.52 COP_C~~	
~~Through-the-wall, air cooled (cooling mode)~~	~~<9 kW~~	~~All~~	~~Split systems~~	~~3.52 $SCOP_C$~~	
			~~Single packaged~~	~~3.52 $SCOP_C$~~	
~~Small-duct high-velocity, air cooled (cooling mode)~~	~~<19 kW~~	~~All~~	~~Split systems~~	~~2.93 COP_C~~	
~~Air conditioners, air cooled (cooling mode)~~	~~≥19 kW and <40 kW~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~3.31 COP_C 3.46 $ICOP_C$~~	~~ARI 340/360~~
		~~All other~~	~~Split systems and single package~~	~~3.25COP_C 3.40 $ICOP_C$~~	
	~~≥40 kW and <70 kW~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~3.31 COP_C 3.46 $ICOP_C$~~	
		~~All other~~	~~Split systems and single package~~	~~3.25COP_C 3.40 $ICOP_C$~~	
	~~≥70 kW~~	~~Electric resistance (or none)~~	~~Split systems and single package~~	~~2.87 COP_C 2.87 $ICOP_C$~~	
		~~All other~~	~~Split systems and single package~~	~~2.81 COP_C 2.81 $ICOP_C$~~	
~~Water-source (cooling mode)~~	~~<5 kW~~	~~All~~	~~30°C entering water~~	~~4.10 COP_C~~	~~ISO-13256-1~~
	~~≥5 kW and <19 kW~~	~~All~~	~~30°C entering water~~	~~4.10 COP_C~~	
	~~≥19 kW and <40 kW~~	~~All~~	~~30°C entering water~~	~~4.10 COP_C~~	
~~Groundwater-source (cooling mode)~~	~~<40 kW~~	~~All~~	~~15°C entering water~~	~~4.75 COP_C~~	
			~~25°C entering water~~	~~13.4 COP_C~~	

~~a. Section 11 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.~~

TABLE C-1 (Supersedes Table 6.8.1-1 in ANSI/ASHRAE/IES Standard 90.1)
Electrical-Operated Unitary Air Conditioners and Condensing Units (I-P)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Conditions	Minimum Efficiency	Test Procedure[a]
Air conditioners, air-cooled	<65,000 Btu/h (1 phase)	All	Split systems	14.0 SEER 12.0 EER	AHRI 210/240
			Single packaged	14.0 SEER 11.6 EER	
	<65,000 Btu/h (3 phase)	All	Split systems	14.0 SEER 12.0 EER	
			Single packaged	14.0 SEER 11.6 EER	
Through-the-wall, air-cooled	<30,000 Btu/h	All	Split systems	12.0 SEER	
			Single packaged	12.0 SEER	
Small-duct high velocity, air-cooled	<65,000 Btu/h (1 phase)	All	Split systems	11.0 SEER before 1/1/2015 12.0 SEER after 1/1/2015	
	<65,000 Btu/h (3 phase)	All	Split systems	11.0 SEER	
Air conditioners air-cooled	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split systems and single package	11.7 EER 13.0 IEER	AHRI 340/360
		All other	Split systems and single package	11.5 EER 12.8 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split systems and single package	11.7 EER 12.5 IEER	
		All other	Split systems and single package	11.5 EER 12.3 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	Electric resistance (or none)	Split systems and single package	10.5 EER 11.3 IEER	
		All other	Split systems and single package	10.3 EER 11.1 IEER	
	≥760,000 Btu/h	Electric resistance (or none)	Split systems and single package	9.9 EER 11.1 IEER	
		All other	Split systems and single package	9.7 EER 10.9 IEER	
Air conditioners, water cooled	<65,000 Btu/h	All	Split systems and single package	14.0 EER 14.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 15.3 IEER	AHRI 340/360
		All other	Split systems and single package	13.8 EER 15.1 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
	≥760,000 Btu/h	Electric resistance (or none)	Split systems and single	14.0 EER	

			package	14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
Air conditioners, evaporatively cooled	<65,000 Btu/h	All	Split systems and single package	14.0 EER 14.3 IEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 15.3 IEER	AHRI 340/360
		All other	Split systems and single package	13.8 EER 15.1 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
	≥240,000 Btu/h and <760,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
	≥760,000 Btu/h	Electric resistance (or none)	Split systems and single package	14.0 EER 14.8 IEER	
		All other	Split systems and single package	13.8 EER 14.6 IEER	
Condensing units, air-cooled	≥135,000 Btu/h			Not applicable match with indoor coil	AHRI 365
Condensing, water or evaporatively cooled	≥135,000 Btu/h			Not applicable match with indoor coil	

a. Section 11 contains details on the referenced test procedures, including year and version of the test procedure.

TABLE C-1 (Supersedes Table 6.8.1-1 in ANSI/ASHRAE/IES Standard 90.1)
Electrical-Operated Unitary Air Conditioners and Condensing Units (SI)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Conditions	Minimum Efficiency	Test Procedure[a]
Air conditioners, air-cooled	<19 kW (1 phase)	All	Split systems	4.10 $SCOP_C$ 3.52 COP_C	AHRI 210/240
			Single packaged	4.10 $SCOP_C$ 3.40 COP_C	
	<19 kW (3 phase)	All	Split systems	4.10 $SCOP_C$ 3.52 COP_C	
			Single packaged	4.10 $SCOP_C$ 3.40 COP_C	
Through-the-wall, air-cooled	<9 kW	All	Split systems	3.52 $SCOP_C$	
			Single packaged	3.52 $SCOP_C$	
Small-duct high velocity, air-cooled	<19 kW (1 phase)	All	Split systems	3.22 $SCOP_C$ before 1/1/2015 3.52 $SCOP_C$ after 1/1/2015	
	<19 kW (3 phase)	All	Split systems	3.22 $SCOP_C$	
Air conditioners air-cooled	≥19 kW and <40 kW	Electric resistance (or none)	Split systems and single package	3.43 COP_C 3.81 $ICOP_C$	ARI 340/360
		All other	Split systems and single package	3.31 COP_C 3.75 $ICOP_C$	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	3.43 COP_C 3.66 $ICOP_C$	
		All other	Split systems and single package	3.37 COP_C 3.60 $ICOP_C$	
	≥70 kW and <223 kW	Electric resistance (or none)	Split systems and single package	3.08 COP_C 3.31 $ICOP_C$	
		All other	Split systems and single package	3.02 COP_C 3.25 $ICOP_C$	
	≥223 kW	Electric resistance (or none)	Split systems and single package	2.90 COP_C 3.25 $ICOP_C$	
		All other	Split systems and single package	2.84 COP_C 3.19 $ICOP_C$	
Air conditioners, water cooled	<19 kW	All	Split systems and single package	4.10 COP_C 4.19 $ICOP_C$	AHRI 210/240
	≥19 kW and <140 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.48 $ICOP_C$	AHRI 340/360
		All other	Split systems and single package	4.04 COP_C 4.43 $ICOP_C$	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
	≥70 kW and <223 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
	≥223 kW	Electric resistance (or none)	Split systems and single	4.10 COP_C	

			package	4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
Air conditioners, evaporatively cooled	<19 kW	All	Split systems and single package	4.10 COP_C	AHRI 210/240
				4.19 $ICOP_C$	AHRI 340/360
	≥19 kW and <140 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.48 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.43 $ICOP_C$	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
	≥70 kW and <223 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
	≥223 kW	Electric resistance (or none)	Split systems and single package	4.10 COP_C 4.34 $ICOP_C$	
		All other	Split systems and single package	4.04 COP_C 4.28 $ICOP_C$	
Condensing units, air-cooled	≥40 kW			Not applicable match with indoor coil	AHRI 365
Condensing, water or evaporatively cooled	135,000 Btu/h			Not applicable match with indoor coil	

a. Section 11 contains details on the referenced test procedures, including year and version of the test procedure.

TABLE C-2 (Supersedes Table 6.8.1-2 in ANSI/ASHRAE/IES Standard 90.1)
Electrically-Operated Unitary and Applied Heat Pumps Minimum Efficiency Requirements (I-P)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Conditions	Minimum Efficiency	Test Procedure[a]
Air conditioners, air-cooled (cooling mode)	<65,000 Btu/h (1 phase)	All	Split systems	14.0 SEER 12.0 EER	AHRI 210/240
			Single packaged	14.0 SEER 11.6 EER	
	<65,000 Btu/h (3 phase)	All	Split systems	14.0 SEER 12.0 EER	
			Single packaged	14.0 SEER 11.6 EER	
Through-the-wall, air-cooled (cooling mode)	<30,000 Btu/h	All	Split systems	12.0 SEER	
			Single packaged	12.0 SEER	
Small-duct high velocity, air-cooled (cooling mode)	<65,000 Btu/h (1 phase)	All	Split systems	11.0 SEER before 1/1/2015 12.0 SEER after 1/1/2015	
	<65,000 Btu/h (3 phase)	All	Split systems	11.0 SEER	
Air conditioners, air-cooled (cooling mode)	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split systems and single package	11.3 EER 12.3 IEER	AHRI 340/360
		All other	Split systems and single package	11.1EER 12.1 IEER	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split systems and single package	10.9 EER 11.9 IEER	
		All other	Split systems and single package	10.7 EER 11.7 IEER	
	≥240,000 Btu/h	Electric resistance (or none)	Split systems and single package	10.3 EER 10.9 IEER	
		All other	Split systems and single package	10.1 EER 10.7 IEER	
Water to air water loop (cooling mode)	<17,000 Btu/h	All	86°F entering water	14.0 EER	ISO-13256-1
	≥17,000 Btu/h and <65,000 Btu/h	All	86°F entering water	14.0 EER	
	>65,000 Btu/h and <135,000 Btu/h	All	86°F entering water	14.0 EER	
Water to air ground water (cooling mode)	<135,000 Btu/h	All	59°F entering water	18.0 EER	
Water to air ground loop (cooling mode)	<135,000 Btu/h	All	77°F entering water	14.1 EER	
Water to water water loop (cooling mode)	<135,000 Btu/h	All	86°F entering water	10.6 EER	ISO-13256-2
Water to water groundwater (cooling mode)	<135,000 Btu/h	All	59°F entering water	16.3 EER	
Brine to water ground loop cooing mode)	<135,000 Btu/h	All	77°F entering water	12.1 EER	

Air conditioners, air-cooled (heating mode)	<65,000 Btu/h (cooling capacity) (1 phase)	All	Split systems	9.0 HSPF	AHRI 210/240
			Single packaged	8.5 HSPF	
	<65,000 Btu/h (cooling capacity) (3 phase)	All	Split systems	9.0 HSPF	
			Single packaged	8.5 HSPF	
Through-the-wall, air-cooled (heating mode)	<30,000 Btu/h (cooling capacity)	All	Split systems	7.4 HSPF	
			Single packaged	7.4 HSPF	
Small-duct high velocity, air-cooled (heating mode)	<65,000 Btu/h (cooling capacity) (1 phase)	All	Split systems	6.8 HSPF before 1/1/2015 7.2 HSPF after 1/1/2015	
	<65,000 Btu/h (cooling capacity) (3 phase)	All	Split systems	6.8 HSPF	
Air-cooled (heating mode)	≥65,000 Btu/h and <135,000 Btu/h (cooling capacity)		47°F DB/43°F WB *Outdoor air*	3.3 COP_H	AHRI 340/360
			17°F DB/15°F WB *Outdoor air*	2.25 COP_H	
	≥135,000 Btu/h (cooling capacity)		47°F DB/43°F WB *Outdoor air*	3.2 COP_H	
			17°F DB/15°F WB *Outdoor air*	2.05 COP_H	
Water-to air water loop (heating mode)	<135,000 Btu/h (cooling capacity)		68°F entering water	4.3COP_H	
Water to air groundwater (heating mode)	<135,000 Btu/h (cooling capacity)		50°F entering water	3.7 COP_H	ISO-13256-1
Brine to air ground loop (heating mode)	<135,000 Btu/h (cooling capacity)		32 F entering fluid	3.2 COP_H	
Water to water water loop (heating mode)	<135,000 Btu/h (cooling capacity)		68°F entering water	3.7 COP_H	
Water to water groundwater (heating mode)	<135,000 Btu/h (cooling capacity)		50°F entering water	3.1 COP_H	ISO-13256-2
Brine to water ground loop (heating Mode)	<135,000 Btu/h (cooling capacity)		32 F entering fluid	2.5 COP_H	

a . Section 11 contains details on the referenced test procedures, including year and version of the test procedure.

TABLE C-2 (Supersedes Table 6.8.1-2 in ANSI/ASHRAE/IES Standard 90.1)
Electrically-Operated Unitary and Applied Heat Pumps Minimum Efficiency Requirements (SI)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Conditions	Minimum Efficiency	Test Procedure[a]
Air conditioners, air-cooled (cooling mode)	<19 kW (1 phase)	All	Split systems	4.10 $SCOP_C$ 3.52 COP_C	AHRI 210/240
			Single packaged	4.10 $SCOP_C$ 4.00 COP_C	
	<19 kW (3 phase)	All	Split systems	4.10 $SCOP_C$ 3.52 COP_C	
			Single packaged	4.10 $SCOP_C$ 3.40 COP_C	
Through-the-wall, air-cooled (cooling mode)	<9 kW	All	Split systems	3.52 $SCOP_C$	
			Single packaged	3.52 $SCOP_C$	
Small-duct high velocity, air-cooled (cooling mode)	<19 kW (1 phase)	All	Split systems	3.22 $SCOP_C$ before 1/1/2015 3.52 $SCOP_C$ after 1/1/2015	
	<19 kW (3 phase)	All	Split systems	3.22 $SCOP_C$	
Air conditioners, air-cooled (cooling mode)	≥19 kW and <40 kW	Electric resistance (or none)	Split systems and single package	3.31 COP_C 3.60 $ICOP_C$	AHRI 340/360
		All other	Split systems and single package	3.25 COP_C 3.55 $ICOP_C$	
	≥40 kW and <70 kW	Electric resistance (or none)	Split systems and single package	3.19 COP_C 3.49 $ICOP_C$	
		All other	Split systems and single package	3.14 COP_C 3.43 $ICOP_C$	
	≥70 kW	Electric resistance (or none)	Split systems and single package	3.02 COP_C 3.19 $ICOP_C$	
		All other	Split systems and single package	2.96 COP_C 3.14 $ICOP_C$	
Water-to air water loop (cooling mode)	<5 kW	All	30°C entering water	4.10 COP_C	ISO-13256-1
	≥5 kW and <19kW	All	30°C entering water	4.10 COP_C	
	>19kW and <40 kW	All	30°C entering water	4.10 COP_C	
Water to air ground water (cooling mode)	<40 kW	All	15°C entering water	5.28 COP_C	
Water to air ground loop (cooling mode)	<40 kW	All	25°C entering water	4.13 COP_C	
Water to water water loop (cooling mode)	<40 kW	All	30°C entering water	3.11 COP_C	ISO-13256-2
Water to water groundwater (cooling mode)	<40 kW	All	15°C entering water	4.78 COP_C	
Brine to water ground loop	<40 kW	All	30° C entering water	3.52 COP_C	

cooing mode)					
Air conditioners, air-cooled (heating mode)	<19kW (cooling capacity) (1 phase)	All	Split systems	2.64 COP_H	AHRI 210/240
			Single packaged	2.49 COP_H	
Air conditioners, air-cooled (heating mode)	<19kW (cooling capacity) (3 phase)	All	Split systems	2.64 COP_H	
			Single packaged	2.49 COP_H	
Through-the-wall, air-cooled (heating mode)	<9 kW (cooling capacity)	All	Split systems	2.17 COP_H	
			Single packaged	2.17 COP_H	
Small-duct high velocity, air-cooled (heating mode)	<19kW (cooling capacity) (1 phase)	All	Split systems	1.99 COP_H before 1/1/2015 2.11 COP_H after 1/1/2015	
	<19kW (cooling capacity) (3 phase)	All	Split systems	1.99 COP_H	
Air-cooled (heating mode)	≥19kW and <40 kW (cooling capacity)		8.3°C DB/6.1°C WB *Outdoor air*	3.3 COP_H	AHRI 340/360
			-8.3°C DB/9.415°C WB *Outdoor air*	2.25 COP_H	
	≥40 kW (cooling capacity)		8.3°C DB/6.1°C WB *Outdoor air*	3.2 COP_H	
			-8.3°C DB/9.415°C WB *Outdoor air*	2.05 COP_H	
Water-to air water loop (heating mode)	<40 kW (cooling capacity)		20°C entering water	4.3COP_H	ISO-13256-2
Water to air groundwater (heating mode)	<40 kW (cooling capacity)		10°C entering water	3.7 COP_H	
Brine to air ground loop (heating mode)	<40 kW (cooling capacity)		0°C entering fluid	3.2 COP_H	
Water to water water loop (heating mode)	<40 kW (cooling capacity)		20°C entering water	3.7 COP_H	
Water to water groundwater (heating mode)	<40 kW (cooling capacity)		10°C entering water	3.1 COP_H	
Brine to water ground loop (heating Mode)	<40 kW (cooling capacity)		0°C entering fluid	2.5 COP_H	

a. . Section 11 contains details on the referenced test procedures, including year and version of the test procedure..

Public Review Draft

Proposed Addendum br to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

First Public Review (March 2014)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

The addendum updates Table C-3, which covers the requirements for air and water cooled chillers to match the new requirements implemented in ASHRAE/IES 90.1-2013. A full economic justification was done for the Standard 90.1 efficiencies and the new efficiencies were shown to be at the limit of economic life cycle economic justification so further improvements cannot be justified for ASHRAE/IES/USGBC 189.1-2013.

For Standard 90.1-2013 the new efficiency requirements are effective 1/1/2015. For Standard 189.1 the efficiency requirements are effective when Standard 189.1-2014 is published.

The following is a summary of the changes that are include relative to the requirements in Standard 189.1-2011 as well as Standard 90.1-2010

Change 1

This addendum makes changes to the requirements for air and water cooled chillers as defined in Table C-3. This change is a continuation of the efficiency improvements implemented in ASHRAE 90.1-2010 and further improved in Standard 90.1-2013. In Standard 90.1 2010 Path B was added for part load intensive water cooled chillers. This change expands the Path B by adding requirements for air cooled chillers. Also as part of this change, efforts were made to bring the efficiency requirements for water cooled positive displacement and centrifugal chillers together while considering the available technology, and that chillers can be applied at application conditions where one technology may better suited than the other.

In 2010 the overall weighted average savings resulted in a 16.2% improvement in chiller annualized energy use vs Standard 90.1-2004. The new efficiency requirements increase the savings to 23.1% vs Standard 90.1-2004 and 8.3% vs Standard 90.1-2010 and Standard 189.1-2011. .

Change 2

In addition to the change in efficiency requirements this addendum improves the wording of requirements to clarify their use. AHRI has recently updated the AHRI 550/590 rating standard that is used for the rating of chillers and the certification program. As part of this update a hard metric rating standard with slightly different rating conditions than the IP ratings defined in AHRI 550/590 has been released as AHRI 551/591. The SI ratings in this addendum reflected the change in ratings conditions defined in the new AHRI 551/591 standard.

Change 3

AHRI Standard 550/590 was updated in 2011, The update allows chillers with water cooled condensers to have heat reclaim application ratings up to 160 °F leaving condenser fluid temperatures. The older version of the 550/590 excluded water-cooled chillers with entering condenser fluid temperatures above 105 °F. A leaving condenser

temperature of 115°F would be a common expectation of this equipment when the entering temperature is 105°F.

Because Standard 189.1-2014 will reference the newer, 2011 version of AHRI Standard 550/590, this addendum adds a high limit on the efficiency table until new efficiency requirements can be generated for high-lift heat reclaim chiller equipment.

Change 4

This addendum updates the reference to the AHRI 550/590 rating standard to include the latest released addendum 3 to AHRI 550/590 and adds a reference to AHRI 551/591, which is the SI version of the AHRI Standard 550/590 standard.

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 br to 189.1-2011

Delete current Tables C-3 and replace with the following:

TABLE C-3 (Supersedes Table 6.8.1-3 in ANSI/ASHRAE/IES Standard 90.1-2013)
Water Chilling Packages – Efficiency Requirements (I-P) [a, b, e]

Equipment Type	Size Category	Units	Path A	Path B	Test Procedure
Air-Cooled Chillers	< 150 Tons	EER (Btu/W)	≥10.100 FL ≥13.700 IPLV	≥9.700 FL ≥15.800 IPLV	AHRI 550/590
	≥150 Tons		≥10.100 FL ≥14.000 IPLV	≥9.700 FL ≥16.100 IPLV	
Air-Cooled without Condenser, Electrically Operated	All Capacities	EER(Btu /W)	Condenserless units shall comply with air cooled chiller requirement with matched condensers		
Water-Cooled, Electrically Operated Positive Displacement	< 75 Tons	kW/ton	≤0.750 FL ≤0.600 IPLV	≤0.780 FL ≤0.500 IPLV	
	≥ 75 tons and <150 tons		≤0.720 FL ≤0.560 IPLV	≤0.750 FL ≤0.490 IPLV	
	≥ 150 tons and < 300 tons		≤0.660 FL ≤0.540 IPLV	≤0.680 FL ≤0.440 IPLV	
	≥ 300 tons and < 600 tons		≤0.610 FL ≤0.520 IPLV	≤0.625 FL ≤0.410 IPLV	
	≥ 600 tons		≤0.560 FL ≤0.500 IPLV	≤0.585 FL ≤0.380 IPLV	
Water Cooled, Electrically Operated Centrifugal[f]	< 150 Tons	kW/ton	≤0.610 FL ≤0.550 IPLV	≤0.695 FL ≤0.440 IPLV	
	≥ 150 tons and <300 tons		≤0.610 FL ≤0.550 IPLV	≤0.635 FL ≤0.400 IPLV	
	≥ 300 tons and <400 tons		≤0.560 FL ≤0.520 IPLV	≤0.595 FL ≤0.390 IPLV	
	≥ 400 tons and <600 tons		≤0.560 FL ≤0.500 IPLV	≤0.585 FL ≤0.380 IPLV	
	≥ 600 tons		≤0.560 FL ≤0.500 IPLV	≤0.585 FL ≤0.380 IPLV	
Air-Cooled	All	COP	≥0.600 FL	NA[d]	AHRI

Absorption, Single Effect	Capacities				560
Water-Cooled Absorption, Single Effect	All Capacities	COP	≥0.700 FL	NA[d]	
Absorption Double-Effect, Indirect-Fired	All Capacities	COP	≥1.000 FL ≥1.050 IPLV	NA[d]	
Absorption Double-Effect, Direct-Fired	All Capacities	COP	≥1.000 FL ≥1.000 IPLV	NA[d]	

[a] The requirements for centrifugal chiller shall be adjusted for non-standard rating conditions per 6.4.1.2.1 and are only applicable for the range of conditions listed in AHRI 550/590. The requirements for air-cooled, water-cooled positive displacement and absorption chillers are at standard rating conditions defined in the reference test procedure.

[b] Both the full load and IPLV requirements must be met or exceeded to comply with this standard. When there is a Path B, compliance can be with either Path A or Path B for any application.

[c] Section 11 contains details for the referenced test procedure, including the referenced year version of the test procedure.

[d] NA means the requirements are not applicable for Path B and only Path A can be used for compliance.

[e] FL is the full load performance requirements and IPLV is for the part load performance requirements

[f] Centrifugal chillers that are not designed for operation at AHRI Standard 550/590 test conditions of 44°F leaving chilled-fluid temperature and 2.4 gpm/ton evaporator fluid flow and 85°F entering condenser-fluid temperature with 3.0 gpm/ton condenser-fluid flow (and, thus, cannot be tested to meet the requirements of Table C-3) shall have maximum full-load kW/ton (FL) and NPLV part load ratings requirements adjusted using the following equations:

$$FL_{adj} = FL / K_{adj}$$
$$PLV_{adj} = IPLV / K_{adj}$$
$$Kadj = A \times B$$

Where

FL = full-load kW/Ton value from Table 6.8.1C

FL_{adj} = maximum full-load kW/Ton rating, adjusted for non-standard conditions

IPLV = IPLV value from Table C-3

PLV_{adj} = maximum *NPLV* rating, adjusted for non-standard conditions

$A = 0.00000014592 \times (LIFT)^4 - 0.0000346496 \times (LIFT)^3 + 0.00314196 \times (LIFT)^2 - 0.147199 \times (LIFT) + 3.9302$

$B = 0.0015 \times LvgEvap + 0.934$

$LIFT = LvgCond - LvgEvap$

LvgCond = Full-load condenser leaving fluid temperature (°F)

LvgEvap = Full-load evaporator leaving temperature (°F)

The FL_{adj} and ~~N~~PLV_{adj} values are only applicable for centrifugal chillers meeting all of the following full-load design ranges:

- Minimum Evaporator Leaving Temperature: 36°F
- Maximum Condenser Leaving Temperature: 115°F
- 20°F ≤ LIFT ≤ 80°F

TABLE C-3 (Supersedes Table 6.8.1-3 in ANSI/ASHRAE/IES Standard 90.1-2013)
Water Chilling Packages – Efficiency Requirements (SI) [a, b, e]

Equipment Type	Size Category	Units	Path A	Path B	Test Procedure[c]
Air-Cooled Chillers	< 528 kW	COP (W/W)	≥ 2.985FL ≥ 4.048 IPLV	≥ 2.866 FL ≥ 4.669 IPLV	
	≥528 kW		≥ 2.985 FL ≥ 4.137 IPLV	≥ 2.866 FL ≥ 4.758 IPLV	
Air-Cooled without Condenser, Electrically Operated	All Capacities	COP (W/W)	Condenserless units shall comply with air cooled chiller requirements with a matched condenser		
Water-Cooled, Electrically Operated Positive Displacement	< 264 kW	COP (W/W)	≥4.694 FL ≥5.867 IPLV	≥4.513 FL ≥7.041 IPLV	AHRI 551/591
	≥ 264 kW and <528 kW		≥4.889 FL ≥6.286 IPLV	≥4.694 FL ≥7.184 IPLV	
	≥ 528 kW and < 1055 kW		≥5.334 FL ≥6.519 IPLV	≥5.177 FL ≥8.001 IPLV	
	≥ 1055kW and < 2110 kW		≥5.771 FL ≥6.770 IPLV	≥5.633 FL ≥8.586IPLV	
	≥ 2100 kW		≥6.286 FL ≥7.041 IPLV	≥6.018 FL ≥9.264 IPLV	
Water Cooled, Electrically Operated Centrifugal	< 528 kW	COP (W/W)	≥5.771 FL ≥6.401 IPLV	≥5.065 FL ≥8.001 IPLV	
	≥ 528 kW and <1055 kW		≥5.771 FL ≥6.401 IPLV	≥5.544 FL ≥8.801 IPLV	
	≥ 1055 kW and <1407kW		≥6.286 FL ≥6.770 IPLV	≥5.917 FL ≥9.027 IPLV	
	≥ 1407 kW and <2110 kW		≥6.286 FL ≥7.041 IPLV	≥6.018 FL ≥9.264 IPLV	
	≥ 2110 kW		≥6.286 FL ≥7.041 IPLV	≥6.018 FL ≥9.264 IPLV	
Air-Cooled Absorption, Single Effect	All Capacities	COP (W/W)	≥0.600 FL	NA[d]	AHRI 560

Water-Cooled Absorption, Single Effect	All Capacities	COP (W/W)	≥0.700 FL	NA[d]
Absorption Double-Effect, Indirect-Fired	All Capacities	COP (W/W)	≥1.000 FL ≥1.050 IPLV	NA[d]
Absorption Double-Effect, Direct-Fired	All Capacities	COP (W/W)	≥1.000 FL ≥1.000 IPLV	NA[d]

[a] The requirements for centrifugal chillers shall be adjusted for non-standard rating conditions per 6.4.1.2.1 and are only applicable for the range of conditions listed in AHRI 551/591. The requirements for air-cooled, water-cooled positive displacement and absorption chillers are at standard rating conditions defined in the reference test procedure.

[b] Both the full load and IPLV requirements must be met or exceeded to comply with this standard. When there is a Path B compliance can be with either Path A or Path B for any application.

[c] Section 11 contains details for the referenced test procedure, including the referenced year version of the test procedure..

[d] NA means the requirements are not applicable for Path B and only Path A can be used for compliance.

[e] FL is the full load performance requirements and IPLV is for the part load performance requirements.

[f] Centrifugal chillers not designed for operation at AHRI Standard 551/591 test conditions of 7.0°C leaving and 12.0 C° entering chilled-fluid temperatures, and with 30.0°C entering and 35.0°C leaving condenser-fluid temperatures (and, thus, cannot be tested to meet the requirements of Table C-3) shall have maximum full-load (FL) COP and NPLV part load ratings requirements adjusted using the following equations:

$$FL_{adj} = FL \times K_{adj}$$
$$PLV_{adj} = IPLV \times K_{adj}$$
$$Kadj = A \times B$$

Where

FL = full-load COP value from Table 6.8.1C
FL_{adj} = minimum full-load COP rating, adjusted for non-standard conditions
IPLV = IPLV value from Table 6.8.1C
PLV_{adj} = minimum *NPLV* rating, adjusted for non-standard conditions

$A = 0.0000015318 \times (LIFT)^4 - 0.000202076 \times (LIFT)^3 + 0.0101800 \times (LIFT)^2 - 0.264958 \times (LIFT) + 3.9302$~~196~~
$B = 0.0027 \times LvgEvap + 0.982$
LIFT= LvgCond – LvgEvap
LvgCond = Full-load condenser leaving fluid temperature (°C)
LvgEvap = Full-load evaporator leaving temperature (°C)
The FL_{adj} and PLV_{adj} values are only applicable for centrifugal chillers meeting all of the following full-load design ranges:

- Minimum Evaporator Leaving Temperature:2.0°C
- Maximum Condenser Leaving Temperature:46°C
- 11.0°C ≤ LIFT ≤ 44.0°C

Revise Section 11, Normative references as follows:

Air-Conditioning, Heating, and Refrigeration Institute (AHRI)
2111 Wilson Blvd., Suite 500

Arlington, VA 22201, United States **1-703-524-8800; www.ahrinet.org**		
ANSI/AHRI 210/240-2008 - with Addendum 1 and 2	Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment	Appendix C
ANSI/AHRI 310/380-2004	Standard for Packaged Terminal Air-Conditioners and Heat Pumps	Appendix C
ANSI/AHRI 340/360-~~2003~~2007 with Addendum 2	Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment	Appendix C
ANSI/AHRI 390-2003	Performance Rating of Single Packaged Terminal Air-Conditioners and Heat Pumps	Appendix C
AHRI 550/590-~~2003~~2011 with Addendum ~~1~~3 AHRI 551/591-2011 with addendum 3	Performance Rating of Water Chilling Packages Using the Vapor Compression Cycle	Appendix C
ANSI/AHRI 560-2000	Absorption Water Chilling an Water Heating Packages	Appendix C
ANSI/AHRI 1230-2010 with Addendum 1	Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment	Appendix C

Public Review Draft

Proposed Addendum bs to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

First Public Review (March 2014)
(Draft Show s Proposed Changes to Current Standard)

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BSR/ASHRAE/USGBC/IES Addendum bm 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.

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FOREWORD

This addendum changes table C-5, which defines the requirements for Single Packaged Vertical Air Conditioners, Single Packaged Vertical Heat Pumps, Room Air Conditioners, and Room Air Conditioner Heat Pumps.

The efficiencies are revised as follows;

- *SPVAC efficiencies are revised to match the efficiency levels for Unitary Products as defined in table 6.8.1-1 and 6.8.1-2 of ASHRAE/IES 90.1-2013, which are greater than the efficiencies for SPVAC products as listed in Standard 90.1-2013 table 6.8.1-4.*
- *The room air conditioner requirements are modified to match the latest Energy Star requirements.*

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 bs to 189.1-2011

Delete Tables C-5 and replace with the following:

TABLE C-5 (Supersedes Table 6.8.1-4 in ANSI/ASHRAE/IES Standard 90.1)
Single Packaged Vertical Air Conditioners, Single Packaged Vertical Heat Pumps, Room Air Conditioners, and Room Air Conditioner Heat Pumps—Minimum Efficiency Requirements (I-P)

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure[a]
SPVAC (cooling mode)	<65,000 Btu/h	95°F DB/75°F WB *Outdoor air*	14.0 SEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	95°F DB/75°F WB *Outdoor air*	11.2 EER 12.9 IEER	AHRI 340/360
	≥135,000 Btu/h and <240,000 Btu/h	95°F DB/75°F WB *Outdoor air*	11.0 EER 12.4 IEER	
SPVHP (cooling mode)	<65,000 Btu/h	95°F DB/75°F WB *Outdoor air*	14.0 SEER	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	95°F DB/75°F WB *Outdoor air*	11.0 EER 12.2 IEER	AHRI 340/360
	≥135,000 Btu/h and <240,000 Btu/h	95°F DB/75°F WB *Outdoor air*	10.6 EER 11.6 IEER	
SPVHP (heating mode)	<65,000 Btu/h	47°F DB/43°F WB *Outdoor air*	8.0 HSPF	AHRI 210/240
	≥65,000 Btu/h and <135,000 Btu/h	47°F DB/43°F WB *Outdoor air*	3.3 COP_H	AHRI 340/360
	≥135,000 Btu/h and <240,000 Btu/h	47°F DB/43°F WB *Outdoor air*	3.2 COP_H	
Room air conditioners, with louvered sides	<6000 Btu/h		10.7 SEER	ANSI/AHAM RAC-1
	≥6000 Btu/h and <8000 Btu/h		10.7 EER	
	≥8000 Btu/h and <14,000 Btu/h		10.8 EER	
	≥14000 Btu/h and <20,000 Btu/h		10.7 EER	
	≥20,000 Btu/h		9.4 EER	
Room air conditioners, without louvered sides	<8000 Btu/h		9.9 EER	
	≥8000 Btu/h and <20,000 Btu/h		9.4 EER	
	≥20,000 Btu/h		9.3 EER	
Room air conditioner heat pump with louvered sides	<20,000 Btu/h		9.9 EER	
	≥20,000 Btu/h		9.3 EER	
Room air conditioner heat pump without louvered sides	<14,000 Btu/h		9.4 EER	
	≥14,000 Btu/h		8.8 EER	
Room air conditioner, casement only	All capacities		9.6 EER	
Room air conditioner, casement-slider	All capacities		10.5 EER	

a. Section 11 contains details for the referenced test procedure, including the referenced year version of the test procedure.

TABLE C-5 (Supersedes Table 6.8.1-4 in ANSI/ASHRAE/IES Standard 90.1)
Single Packaged Vertical Air Conditioners, Single Packaged Vertical Heat Pumps, Room Air Conditioners, and Room Air Conditioner Heat Pumps—Minimum Efficiency Requirements (SI)

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure[a]
SPVAC (cooling mode)	<19 kW	35°C DB/23.9°C WB *Outdoor air*	4.10 $SCOP_C$	ANSI/AHAM RAC-1
	≥19 kW and <40 kW	35°C DB/23.9°C WB *Outdoor air*	3.28 COP_C 3.78 $ICOP_C$	
	≥40 kW and <70 kW	35°C DB/23.9°C WB *Outdoor air*	3.22 COP_C 3.63 $ICOP_C$	
SPVHP (cooling mode)	<19 kW	35°C DB/23.9°C WB *Outdoor air*	4.10 $SCOP_C$	
	≥19 kW and <40 kW	35°C DB/23.9°C WB *Outdoor air*	3.22 COP_C 3.58 $ICOP_C$	
	≥40 kW and <70 kW	35°C DB/23.9°C WB *Outdoor air*	3.11 COP_C 3.40 $ICOP_C$	
SPVHP (heating mode)	<19 kW	8.3°C DB/6.1°C WB *Outdoor air*	2.34 $SCOP_H$	
	≥19 kW and <40 kW	8.3°C DB/6.1°C WB *Outdoor air*	3.30 COP_H	
	≥40 kW and <70 kW	8.3°C DB/6.1°C WB *Outdoor air*	2.9 COP_H	
Room air conditioners, with louvered sides	<1.8 kW		3.14 COP_C	
	≥1.8 kW and <2.3 kW		3.14 COP_C	
	≥2.3 kW and <4.1 kW		3.17 COP_C	
	≥4.1 kW and <5.9 kW		3.14 COP_C	
	≥5.9 kW		2.75 COP_C	
Room air conditioners, without louvered sides	<2.3 kW		2.90 COP_C	
	≥2.3 kW and <5.9 kW		2.75 COP_C	
	≥5.9 kW		2.73 COP_C	
Room air conditioner heat pump with louvered sides	<5.9 kW		2.90 COP_C	
	≥5.9 kW		2.73 COP_C	
Room air conditioner heat pump without louvered sides	<4.1 kW		2.75 COP_C	
	≥4.1 kW		2.58 COP_C	
Room air conditioner, casement only	All capacities		2.81 COP_C	
Room air conditioner, casement-slider	All capacities		3.08 COP_C	

a. Section 11 contains details for the referenced test procedure, including the referenced year version of the test procedure

Public Review Draft

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FOREWORD

This addendum updates table C-7 which covers Gas and Oil Fired Boilers, as follows:

1. *The ASHRAE/IES/USGBC 189.1-2011 standard required a 91% efficiency for oil fired boilers. Based on feedback that products with a 91% efficiencies are not available. This addendum changes the efficiency requirement to 85% where products from at least 3 manufacturers which are at least 85% efficient for 300,000 to 2,500,000 Btu/h boilers and 86% efficient for boilers with capacity greater than 2,500,000 Btu/h.*
2. *ASHRAE/IES 90.1-2013 has increased the efficiency requirements for oil fired boilers greater than 300,000 Btu/h so this addendum proposes require the same values in Standard 189.1.*
3. *Standard 90.1-2013 has increased the efficiency requirement for gas fired steam boilers <300,000 Btu/h to 80% AFUE, so this addendum proposes to require the same values in Standard 189.1.*
4. *For oil fired steam boilers Standard 90.1-2013 has increased the efficiency for <300,000 Btu/h boilers to 82% AFUE so this addendum proposes that Standard 189.1 require the same value.*
5. *Modified footnote g and added footnotes h, i*

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 bt to 189.1-2011

Modify Appendix C as follows:

TABLE C-7 (Supersedes Table ~~6.8.1F~~ 6.8.1-6 in ANSI/ASHRAE/IES Standard 90.1)
Gas- and Oil-Fired Boilers—Minimum Efficiency Requirements (I-P)

Equipment Type[a]	Subcategory or Rating Condition	Size Category (Input)	Efficiency[b,c]	Test Procedure
Boilers, hot water	Gas-fired	<300,000 Btu/h[h,i]	89% AFUE[f,h]	10 CFR Part 430
		□300,000 Btu/h and □2,500,000 Btu/h[d]	89% E_t [f]	10 CFR Part 431
		>2,500,000 Btu/h[a]	91% E_c [f]	
	Oil-fired[e]	<300,000 Btu/h	89% AFUE[f]	10 CFR Part 430
		□300,000 Btu/h and □2,500,000 Btu/h[d]	~~89%~~85% E_t [f]	10 CFR Part 431
		>2,500,000 Btu/h[a]	~~91%~~ 86% E_c [f]	
Boilers, steam	Gas-fired	<300,000 Btu/h[i]	~~75%~~ 80% AFUE	10 CFR Part 430
	Gas-fired all, except natural draft	□300,000 Btu/h and □2,500,000 Btu/h[d]	79% E_t	10 CFR Part 431
		>2,500,000 Btu/h[a]	79% E_t	
	Gas-fired natural draft	□300,000 Btu/h and □2,500,000 Btu/h[d]	77% E_t	
		>2,500,000 Btu/h[a]	77% E_t	
	Oil-fired[e]	<300,000 Btu/h	~~80% E_t~~ 82% AFUE	10 CFR Part 430
		□300,000 Btu/h and □2,5000,000 Btu/h[d]	81% E_t	10 CFR Part 431
		>2,500,000 Btu/h[a]	81% E_t	

a These requirements apply to boilers with rated input of 8,000,000 Btu/h or less that are not packaged boilers, and to all packaged boilers. Minimum efficiency requirements for boilers cover all capacities of packaged boilers.
b E_c = thermal efficiency (100% less flue losses). See reference document for detailed information.
c E_t = thermal efficiency. See reference document for detailed information.
d Maximum capacity - minimum and maximum ratings as provided for and allowed by the unit's controls
e Includes oil fired (residual)
f Systems shall be designed with lower operating return hot water temperatures (<130°F) and use hot water reset to take advantage of the much higher efficiencies of condensing boilers
g Section 11 contains ~~a complete specification of~~ details for the referenced test procedure, including the referenced year version of the test procedure.
h. A boiler not equipped with a tankless domestic water heating coil shall be equipped with an automatic means for adjusting the temperature of the water such that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of the water supplied.
i. Boilers shall not be equipped with a continuous pilot ignition system.

TABLE C-7 (Supersedes Table ~~6.8.1F~~ 6.8.1-6 in ANSI/ASHRAE/IES Standard 90.1)
Gas- and Oil-Fired Boilers—Minimum Efficiency Requirements (SI)

Equipment Type[a]	Subcategory or Rating Condition	Size Category (Input)	Efficiency[b,c]	Test Procedure
Boilers, hot water	Gas-fired	<87.9 kW[h,i]	89% AFUE[f]	10 CFR Part 430
		□87.9 kW and □732.7 kW[d] >732.7 kW[a]	89% E_t [f] 91% E_c [f]	10 CFR Part 431
	Oil-firede	<87.9 kW	89% AFUE[f]	10 CFR Part 430
		□87.9 kW and □732.7 kW[d]	~~89%~~85% E_t [f]	10 CFR Part 431
		>732.7 kW[a]	~~91%~~ 86% E_c [f]	
Boilers, steam	Gas-fired	<87.9 kW[i]	~~75%~~ 80% AFUE	10 CFR Part 430
	Gas-fired all, except natural draft	□87.9 kW and □732.7 kW[d]	79% E_t	10 CFR Part 431
		>732.7 kW[a]	79% E_t	
	Gas-fired natural draft	□87.9 kW and □732.7 kW[d]	77% E_t	
		>732.7 kW[a]	77% E_t	
	Oil-fired[e]	<87.9 kW	~~80% E_t~~ 82% AFUE	10 CFR Part 430
		□87.9 kW and □732.7 kW[d]	81% E_t	10 CFR Part 431
		>732.7 kW[a]	81% E_t	

a These requirements apply to boilers with rated input of 2,344 kW or less that are not packaged boilers, and to all packaged boilers. Minimum efficiency requirements for boilers cover all capacities of packaged boilers.
b E_c = thermal efficiency (100% less flue losses). See reference document for detailed information.
c E_t = thermal efficiency. See reference document for detailed information.
d Maximum capacity - minimum and maximum ratings as provided for and allowed by the unit's controls
e Includes oil fired (residual)
f Systems shall be designed with lower operating return hot water temperatures (<55°C) and use hot water reset to take advantage of the much higher efficiencies of condensing boilers
g Section 11 contains ~~a complete specification of~~ details for the referenced test procedure, including the referenced year version of the test procedure.
h. A boiler not equipped with a tankless domestic water heating coil shall be equipped with an automatic means for adjusting the temperature of the water such that an incremental change in inferred heat load produces a corresponding incremental change in the temperature of the water supplied.
i. Boilers shall not be equipped with a continuous pilot ignition system.

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FOREWORD

This addendum revises Table C-11, which covers Water Heating Equipment, as follows:

1. *Add a requirement for an electrical table top water heater with the same efficiency level as ASHRAE/IES 90.1-2013*
2. *For equipment with EnergyStar requirements revise the efficiency requirements to agree with the latest EnergyStar requirements.*
3. *For equipment with no EnergyStar requirements revise the efficiency levels and loss equations to agree with ASHRAE/IES 90.1-2013*

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 bu to 189.1-2011

Modify Appendix C as follows:

TABLE C-11 (Supersedes Table 7.8 in ANSI/ASHRAE/IES Standard 90.1)
Performance Requirements for Water Heating Equipment (I-P)

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Performance Required[a]	Test Procedure[b,c]
Electric table top water heaters	≤12 kW	Resistance ≥20 gal	EF ≥ 0.93-0.00132V	DOE 10 CFR Part 430
Electric water heaters	12 kW	Resistance ≥20 gal	EF ≥ 0.97 – 0.00132V	DOE 10 CFR Part 430
	>12 kW	Resistance ≥20 gal	~~SL ≤ 20 + 35√V, Btu/h~~ SL≤0.3 + 27/Vm%/h	ANSI Z21.10.3
	All sizes	Heat Pump	EF ≥ 2.0	DOE 10 CFR Part 430
Gas storage water heaters	≤75,000 Btu/h	≥20 gal	~~EF ≥ 0.67~~ TE ≥ 0.94 or EF ≥ 0.93 SL ≤ .84 x (Q/800 + 110 √V),	DOE 10 CFR Part 430
	>75,000 Btu/h	<4000 (Btu/h)/gal	~~E_t ≥ 80%~~ E ≥ 0.94 or EF ≥ 0.93 and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ .84 x (Q/800 + 110 √V), Btu/h	ANSI Z21.10.3
Gas instantaneous water heaters	>50,000 Btu/h and <200,000 Btu/h	≥4000 (Btu/h)/gal and <2 gal	~~EF ≥ 0.82~~ TE ≥ 0.94 or EF ≥ 0.93	DOE 10 CFR Part 430
	≥200,000 Btu/h[c]	≥4000 (Btu/h)/gal and <10 gal	~~E_t ≥ 80%~~ TE ≥ 0.94 or EF ≥ 0.93	ANSI Z21.10.3
	≥200,000 Btu/h	4000 (Btu/h)/gal and ≥10 gal	~~E_t ≥ 80% and~~ TE ≥ 0.94 or EF ≥ 0.93 ~~SL ≤ (Q/800 + 110 √V), Btu/h~~	
Oil storage water heaters	≤105,000 Btu/h	≥20 gal	EF ≥ 0.59-0.0019V	DOE 10 CFR Part 430
	>105,000 Btu/h	<4000 (Btu/h)/gal	E_t ≥ ~~78%~~80% and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ (Q/799 + 16.6 √V), Btu/h	ANSI Z21.10.3
Oil instantaneous water heaters	≤210,000 Btu/h	≥4000 (Btu/h)/gal and <2 gal	EF ≥ 0.59-0.0019V	DOE 10 CFR Part 430
	>210,000 Btu/h	≥4000 (Btu/h)/gal and <10 gal	E_t ≥ 80%	ANSI Z21.10.3
	>210,000 Btu/h	≥4000 (Btu/h)/gal and ≥10 gal	E_t ≥ 78% and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ (Q/799 + 16.6 √V), Btu/h	
Hot-water supply boilers, gas and oil	300,000 Btu/h and <12,500,000 Btu/h	≥4000 (Btu/h)/gal and <10 gal	E_t ≥ 80%	ANSI Z21.10.3

Hot-water supply boilers, gas		≥4000 (Btu/h)/gal and ≥10 gal	$E_t \geq 80\%$ and ~~$SL \leq (Q/800 + 110 \sqrt{V})$~~, $SL \leq (Q/799 + 16.6 \sqrt{V})$, Btu/h	
Hot-water supply boilers, oil		≥4000 (Btu/h)/gal and ≥10 gal	$E_t \geq 78\%$ and ~~$SL \leq (Q/800 + 110 \sqrt{V})$~~, $SL \leq (Q/799 + 16.6 \sqrt{V})$, Btu/h	
Pool heaters, oil and gas	All sizes		$E_t \geq 78\%$	ASHRAE 146
Heat pump pool heaters	All sizes		≥4.0 COP	ASHRAE 146
Unfired storage tanks	All sizes		≥R-12.5	(none)

a Energy factor (EF) and thermal efficiency (E_t) are minimum requirements, while standby loss (SL) is maximum Btu/h based on a 70°F temperature difference between stored water and ambient requirements. In the EF equation, V is the rated volume in gallons. In the SL equation, V_m is the rated volume in gallons and Q is the nameplate input rate in Btu/h

b Section 11 contains ~~a complete specification~~, details on the referenced test procedures including the year version, of the referenced test procedure.

~~c. Instantaneous water heaters with input rates below 200,000 Btu/h shall comply with these requirements if the water heater is designed to heat water to temperatures 180°F or higher.~~

c Section G.1 is titled "Test Method for Measuring Thermal Efficiency" and Section G.2 is titled "Test Method for Measuring Standby Loss."

d Instantaneous water heaters with input rates below 200,000 Btu/h must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

e. Electric water heaters with input rates below 12 kW must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

f. Refer to ASHRAE 90.1 Section 7.5.3 for additional requirements for gas storage and instantaneous water heaters and gas hot-water supply boilers

TABLE C-11 (Supersedes Table 7.8 in ANSI/ASHRAE/IES Standard 90.1)
Performance Requirements for Water Heating Equipment (SI)

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Performance Required[a]	Test Procedure[b]
Electric table top water heaters	≤12 kW	Resistance > 75.7L	EF ≥ 0.93-0.00132V	DOE 10 CFR Part 430
Electric water heaters	12 kW	Resistance > 75.7L	EF ≥ 0.93-0.00132V	DOE 10 CFR Part 430
	>12 kW	Resistance > 75.7L	EF ≥ 0.97 – 0.00132V	ANSI Z21.10.3
	All	Heat Pump	~~SL ≤ 20 + 35√V, Btu/h~~ SL≤0.3 + 27/Vm%/h	DOE 10 CFR Part 430
Gas storage water heaters	≤22.98 kW	Resistance > 75.7L	~~EF ≥ 2.0~~ TE ≥ 0.94 or EF ≥ 0.93 SL ≤ .84 x (Q/800 + 110 √V),	DOE 10 CFR Part 430
	>22.98 kW	<309.75 W/L	~~EF ≥ 0.67~~ E ≥ 0.94 or EF ≥ 0.93 and SL ≤ .84 x (Q/800 + 110 √V), Btu/h	ANSI Z21.10.3
Gas instantaneous water heaters	>14.66 kW and <58.62 kW	≥309.75 W/L and <7 L	~~EF ≥ 0.82~~ TE ≥ 0.94 or EF ≥ 0.93	DOE 10 CFR Part 430
	>58.62 kW [c]	≥309.75 W/L and <37.5 L	~~E_t ≥ 80%~~ TE ≥ 0.94 or EF ≥ 0.93	ANSI Z21.10.3
	>58.62 kW	≥309.75 W/L and ≥37.5 L	~~E_t ≥ 80% and~~ TE ≥ 0.94 or EF ≥ 0.93 ~~SL ≤ (Q/800 + 110 √V), Btu/h~~	
Oil storage water heaters	<30.78 kW	Resistance > 75.7L	E_t ≥ 80% and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ (Q/799 + 16.6 √V), Btu/h	DOE 10 CFR Part 430
	>30.78 kW	<309.75 W/L	EF ≥ 0.59-0.0019V	ANSI Z21.10.3
Oil instantaneous water heaters	<61.55 kW	≥309.75 W/L and <7.56L	E_t ≥ ~~78%~~80% and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ (Q/799 + 16.6 √V), Btu/h	DOE 10 CFR Part 430
	>61.55 kW	≥309.75 W/L and <37.5 L	EF ≥ 0.59-0.0019V	ANSI Z21.10.3
	>61.55 kW	≥309.75 W/L and ≥37.5 L	E_t ≥ 80%	
Hot-water supply boilers, gas and oil	61.55 kW and <3663.8 kW	≥309.75 W/L and <37.5 L	E_t ≥ 78% and ~~SL ≤ (Q/800 + 110 √V),~~ SL ≤ (Q/799 + 16.6 √V), Btu/h	ANSI Z21.10.3

Hot-water supply boilers, gas		≥309.75 W/L and ≥37.5 L	$E_t \geq 80\%$	
Hot-water supply boilers, oil		≥309.75 W/L and ≥37.5 L	$E_t \geq 80\%$ and ~~$SL \leq (Q/800 + 110\sqrt{V})$~~, $SL \leq (Q/799 + 16.6\sqrt{V})$, Btu/h	
Pool heaters, oil and gas	All		$E_t \geq 78\%$ and ~~$SL \leq (Q/800 + 110\sqrt{V})$~~, $SL \leq (Q/799 + 16.6\sqrt{V})$, Btu/h	ASHRAE 146
Heat pump pool heaters	All		$E_t \geq 78\%$	ASHRAE 146
Unfired storage tanks	All		≥4.0 COP	(none)

a Energy factor (EF) and thermal efficiency (E_t) are minimum requirements, while standby loss (SL) is maximum W based on a 21.1°C temperature difference between stored water and ambient requirements. In the EF equation, V is the rated volume in gallons. In the SL equation, V is the rated volume in gallons and Q is the nameplate input rate in kW

b Section 11 contains ~~complete specification~~, details on the referenced test procedures, including the year version, of the referenced test procedure.

~~e. Instantaneous water heaters with input rates below 58.62 shall comply with these requirements if the water heater is designed to heat water to temperatures 82.2°C or higher."~~

c. Section G.1 is titled "Test Method for Measuring Thermal Efficiency" and Section G.2 is titled "Test Method for Measuring Standby Loss."

d. Instantaneous water heaters with input rates below 200,000 Btu/h must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

e. Electric water heaters with input rates below 12 kW must comply with these requirements if the water heater is designed to heat water to temperatures of 180°F or higher.

f. Refer to ASHRAE 90.1 Section 7.5.3 for additional requirements for gas storage and instantaneous water heaters and gas hot-water supply boilers

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FOREWORD

This addendum proposes to update the Performance Requirements for Heat Rejection Equipment contained in Table C-8 (which supersedes Table 6.8.1-7 in ANSI/ASHRAE/IES Standard 90.1) to remain current with industry trends as well as coordinate with the requirements of ASHRAE 90.1-2013. The updates in Table C-8 include the following:

- *A small increase in the listed minimum efficiency requirement for open-circuit axial fan cooling towers*
- *An effective increase in the minimum efficiency requirements for both open and closed circuit cooling towers by requiring that these devices meet the minimum efficiency requirements of Table 6.8.1-7 with the effect of any options and/or accessories that affect thermal performance included in the rating (footnote "f").*
- *The addition of minimum efficiency requirements for centrifugal and axial fan evaporative condensers using both Ammonia and R-507A refrigerants. Evaporative condensers are utilized in cold storage warehouses, food processing facilities, supermarkets, industrial processes, and, to a limited extent, HVAC systems. Besides being energy efficient heat rejection devices, evaporative condensers increase the energy efficiency of the entire refrigeration system by enabling a much lower condensing temperature, thus lowering compressor lift, as compared to air cooled designs.*
- *Reference to CTI Standard 201 has been updated as this standard has now been divided into Standard 201RS and Standard 201OM. Standard 201RS sets forth a program whereby the Cooling Tower Institute will certify that all models of a line of evaporative heat rejection equipment offered for sale by a specific manufacturer will perform thermally in accordance with the manufacturer's published ratings. Standard 201OM is a manual to guide program participants in complying with the provisions of the latest edition of Standard 201RS.*
- *Reinstated requirements for stand-alone air cooled condensers, which are often applied in supermarket refrigeration systems as well as small HVAC subsystem applications (i.e., small computer rooms within a large building). Note that these requirements do not apply to air cooled condensers that are rated as part of other cooling equipment found in Table C-3.*
- *The wording, format, and notes have been updated to match Table 6.8.1-7 of ASHRAE Standard 90.1-2013.*

Incorporating these changes and updates will keep ASHRAE 189.1 current and relevant in the marketplace and also meet the goals of increased energy efficiency.

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.

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

Modify Tables C-8 as follows:

TABLE C-8 (Supersedes Table 6.8.1-7 in ANSI/ASHRAE/IES Standard 90.1)
Performance Requirements for Heat Rejection Equipment (I-P)

Equipment Type	Total System Heat Rejection Capacity at Rated Conditions	~~Rating Standard~~	Subcategory or Rating Conditions[g]	Performance Required [a,b,c,d,e,f,i]	Test Procedure[h]
~~Open-loop p~~Propeller or axial fan open-circuit cooling towers[a]	All	~~CTI ATC-105 and CTI STD-201~~	95°F entering water 85°F leaving water 75°F ~~wb~~ entering ~~air~~wb	~~>~~≥40.2 gpm/hp	CTI ATC-105 and CTI STD-201RS
~~Open-loop c~~Centrifugal fan open-circuit cooling towers[a]	All	~~CTI ATC-105 and CTI STD-201~~	95°F entering water 85°F leaving water 75°F ~~wb~~ entering ~~air~~wb	~~>~~≥22.0 gpm/hp	CTI ATC-105and CTI STD-201RS
~~Closed-loop p~~Propeller or axial fan closed-circuit cooling towers[b]	All	~~CTI ATC-105 and CTI STD-201~~	102°F entering water 90°F leaving water 75°F ~~wb~~ entering ~~air~~wb	~~>~~≥15.0 gpm/hp	CTI ATC-105S and CTI STD-201RS
~~Closed-loop c~~Centrifugal fan closed-circuit cooling towers[b]	All	~~CTI ATC-105 and CTI STD-201~~	102°F entering water 90°F leaving water 75°F ~~wb~~ entering ~~air~~wb	~~>~~≥8.0 gpm/hp	CTI ATC-105S and CTI STD-201RS
Propeller or axial fan evaporative condensers	All		Ammonia Test Fluid 140°F entering gas temperature 96.3°F condensing temperature 75°F entering wb	≥134,000 Btu/h·hp	CTI ATC-106
Centrifugal fan evaporative condensers	All		Ammonia Test Fluid 140°F entering gas temperature 96.3°F condensing temperature 75°F entering wb	≥110,000 Btu/h·hp	CTI ATC-106
Propeller or axial fan evaporative condensers	All		R-507A Test Fluid 165°F entering gas temperature 105°F condensing temperature 75°F entering wb	≥157,000 Btu/h·hp	CTI ATC-106
Centrifugal fan evaporative condensers	All		R-507A Test Fluid 165°F entering gas temperature 105°F condensing temperature 75°F entering wb	≥135,000 Btu/h·hp	CTI ATC-106

TABLE C-8 (Supersedes Table 6.8.1-7 in ANSI/ASHRAE/IES Standard 90.1)
Performance Requirements for Heat Rejection Equipment (I-P)

Equipment Type	Total System Heat Rejection Capacity at Rated Conditions	~~Rating Standard~~	Subcategory or Rating Conditions[g]	Performance Required [a,b,c,d,e,f,i]	Test Procedure[h]
Air-cooled condensers	All	~~ARI 460~~	190°F entering gas temperature 125°F condensing temperature 15°F subcooling 95°F entering wb	~~Not applicable, air-cooled condenser shall be matched to the HVAC system and rated per Table C-3~~ ≥176,000 Btu/h·hp	AHRI 460

[a] For purposes of this table, ~~open circuit cooling tower performance~~ *open-circuit cooling tower performance* is defined as the water flow rating of the tower at the thermal rating condition listed in ~~this table~~ Table C-8 divided by the fan ~~nameplate rated~~ motor nameplate power.

[b] For purposes of this table, ~~closed circuit cooling tower performance~~ *closed-circuit cooling tower performance* is defined as the process water flow rating of the tower at the thermal rating condition listed in ~~this table~~ Table C-8 divided by the sum of the fan motor nameplate power and the integral spray pump motor nameplate power.

[c] For purposes of this table, *evaporative condenser performance* is defined as the heat rejected at the specified rating condition in the table divided by the sum of the fan motor nameplate power and the integral spray pump nameplate power.

[d] For purposes of this table, *air-cooled condenser performance* is defined as the heat rejected from the refrigerant divided by the fan motor nameplate power.

[e] The efficiencies and test procedures for both *open-* and *closed-circuit cooling towers* are not applicable to hybrid cooling towers that contain a combination of separate wet and dry heat exchange sections. The certification requirements do not apply to field erected cooling towers.

[f] All cooling towers, closed-circuit coolers, evaporative condensers and air-cooled condensers shall comply with the minimum efficiency listed in the table for that specific type of equipment with the capacity effect of any project specific accessories and/or options included with the equipment.

[g] Requirements for evaporative condensers are listed with ammonia (R-717) and R-507A as test fluids in the table. Evaporative condensers intended for use with halocarbon refrigerants other than R-507A must meet the minimum efficiency requirements listed for R-507A as the test fluid.

[h] Informative Appendix G contains information on the referenced test procedures.

i. Not applicable for air cooled condensers applied to condenserless chillers. The air cooled condenser and condenserless chiller shall comply with the requirements for air cooled chillers as defined in Table C-3.

BSR/ASHRAE/USGBC/IES Addendum bw 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.

Modify Table C-8(SI) as follows:

TABLE C-8 (Supersedes Table 6.8.1-7 in ANSI/ASHRAE/IES Standard 90.1)
Performance Requirements for Heat Rejection Equipment (SI)

Equipment Type	Total System Heat Rejection Capacity at Rated Conditions	~~Rating Standard~~	Subcategory or Rating Conditions[g]	Performance Required [a,b,c,d,e,f,i]	Test Procedure[h]
~~Open-loop p~~Propeller or axial fan open-circuit cooling towers[a]	All	~~CTI ATC-105 and CTI STD-201~~	35.0°C entering water 29.4°C leaving water 23.9°C ~~wb~~ entering ~~air~~wb	~~≥3.38~~≥3.40 L/s kW	CTI ATC-105 and CTI STD-201RS
~~Open-loop c~~Centrifugal fan open-circuit cooling towers[a]	All	~~CTI ATC-105 and CTI STD-201~~	35.0°C entering water 29.4°C leaving water 23.9°C ~~wb~~ entering ~~air~~wb	~~>~~≥1.86 L/s kW	CTI ATC-105 and CTI STD-201RS
~~Closed-loop p~~Propeller or axial fan closed-circuit cooling towers[b]	All	~~CTI ATC-105 and CTI STD-201~~	38.9°C entering water 32.2°C leaving water 23.9°C ~~wb~~ entering ~~air~~wb	~~>~~≥1.27 L/s kW	CTI ATC-105S and CTI STD-201RS
~~Closed-loop c~~Centrifugal fan closed-circuit cooling towers[b]	All	~~CTI ATC-105 and CTI STD-201~~	38.9°C entering water 32.2°C leaving water 23.9°C ~~wb~~ entering ~~air~~wb	~~>~~≥0.68 L/s kW	CTI ATC-105S and CTI STD-201RS
Propeller or axial fan evaporative condensers	All		Ammonia Test Fluid 60.0°C entering gas temperature 35.7°C condensing temperature 23.9°C entering wb	≥52.6 COP	CTI ATC-106
Centrifugal fan evaporative condensers	All		Ammonia Test Fluid 60.0°C entering gas temperature 35.7°C condensing temperature 23.9°C entering wb	≥43.2 COP	CTI ATC-106
Propeller or axial fan evaporative condensers	All		R-507A Test Fluid 73.9°C entering gas temperature 40.6°C condensing temperature 23.9°C entering wb	≥61.7 COP	CTI ATC-106
Centrifugal fan evaporative condensers	All		R-507A Test Fluid 73.9°C entering gas temperature 40.6°C condensing temperature 23.9°C entering wb	≥53.1 COP	CTI ATC-106
Air-cooled condensers	All	~~ARI 460~~	88°C entering gas temperature 52°C condensing temperature 8°C subcooling 35°C entering wb	~~Not applicable, air-cooled condenser shall be matched to the HVAC system and rated per Table C-3~~ ≥69 COP	AHRI 460

[a] For purposes of this table, ~~open circuit cooling tower performance~~ *open-circuit cooling tower performance* is defined as the water flow rating of the tower at the thermal rating condition listed in ~~this table~~ Table C-8 divided by the fan ~~nameplate rated~~ motor nameplate power.

[b] For purposes of this table, ~~closed circuit cooling tower performance~~ *closed-circuit cooling tower performance* is defined as the process water flow rating of the tower at the thermal rating condition listed in ~~this table~~ Table C-8 divided by the sum of the fan motor nameplate power and the integral spray pump motor nameplate power.

[c] For purposes of this table, *evaporative condenser performance* is defined as the heat rejected at the specified rating condition in the table divided by the sum of the fan motor nameplate power and the integral spray pump nameplate power.

[d] For purposes of this table, *air-cooled condenser performance* is defined as the heat rejected from the refrigerant divided by the fan motor nameplate power.

[e] The efficiencies and test procedures for both *open-* and *closed-circuit cooling towers* are not applicable to hybrid cooling towers that contain a combination of separate wet and dry heat exchange sections. The certification requirements do not apply to field erected cooling towers.

[f] All cooling towers, closed-circuit coolers, evaporative condensers and air-cooled condensers shall comply with the minimum efficiency listed in the table for that specific type of equipment with the capacity effect of any project specific accessories and/or options included with the equipment.

[g] Requirements for evaporative condensers are listed with ammonia (R-717) and R-507A as test fluids in the table. Evaporative condensers intended for use with halocarbon refrigerants other than R-507A must meet the minimum efficiency requirements listed for R-507A as the test fluid.

[h] Informative Appendix G contains information on the referenced test procedures.

i. Not applicable for air cooled condensers applied to condenserless chillers. The air cooled condenser and condenserless chiller shall comply with the requirements for air cooled chillers as defined in Table C-3.

BSR/ASHRAE/USGBC/IES Addendum bw to ANSI/ASHRAE/USGBC/IES Standard 189.1-2011, Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings
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Revise Section 11 NORMATIVE REFERENCES as follows:

Cooling Technology Institute (CTI) **2611 FM 1960 West, Suite A-101** **Houston, TX 77068-3730; P.O. Box 73383** **Houston, TX 77273-3383**		
CTI ATC-105 (00)	Acceptance Test Code for Water Cooling Towers	Appendix C
CTI ATC-105S (11)	Acceptance Test Code for Closed-Circuit Cooling Towers	Appendix C
CTI ATC-106 (11)	Acceptance Test Code for Mechanical Draft Evaporative Vapor Condensers	Appendix C
CTI STD-201RS (13)	Performance Rating of Evaporative Heat Rejection Equipment	Appendix C
CTI STD-201OM (13)	Operations Manual for Thermal Performance Certification of Evaporative Heat Rejection Equipment	Appendix C

Public Review Draft

Proposed Addendum bx to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

First Public Review (March 2014)
(Draft Shows Proposed Changes to Current Standard)

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

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FOREWORD

These proposed changes to Standard 189.1 are intended to revise the existing requirements for addressing moisture in building envelopes, where currently the minimum requirements are in Standard 62.1 by reference, to be more stringent and to use largely performance-based design criteria. This approach is consistent with modern building science practice and allows for freedom in building design while minimizing IEQ issues associated with uncontrolled moisture. This, coupled with mechanical system criteria being addressed in DA19 of SSPC 189.1 WG08 will move 189.1 beyond the minimum moisture control requirements in 62.1 .

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 bx to 189.1-2011

Add Section 8.3.6 as follows:

8.3.6 Moisture Control Either a dynamic heat and moisture analysis in accordance with ASHRAE Standard 160 or steady-state water vapor transmission analysis in accordance with 8.3.6.1 and 8.3.6.2 shall be performed on above-grade portions of the *building envelope* and on interior partitions as described in 8.3.6.2. Conditions conducive to condensate formation, as demonstrated by analysis, shall not occur at any location within the *building envelope* or partition components or on the interior side of surfaces not specifically designed and constructed to manage moisture. Exception: Where analysis indicates that incidental condensate occurs in components engineered to allow or manage such condensate without damage to the *building envelope* components.

8.3.6.1 Exterior Building Envelope. The analysis shall be conducted using the average of at least 10 consecutive years of weather data for the outdoor air temperature for the warmest three months of the year (summer condition) and the outdoor air temperature for the coldest three months of the year (winter condition). The analysis shall include all *building envelope* components including interior wall finishes of the exterior walls.

8.3.6.2 Humid Spaces A separate analysis shall be performed in spaces where process or occupancy requirements dictate dew point conditions, that are unique with respect to other spaces in the building, such as kitchens, water therapy rooms, swimming pool enclosures, ice rink enclosures, shower rooms, locker rooms, operating rooms in health care facilities and exhibit areas in museums,

8.3.6.2.1 For exterior *building envelope* components of humid spaces the analysis shall use the outdoor air temperature conditions described in section 8.3.6.1.

8.3.6.2.2 For walls, floors and ceilings between occupied spaces and adjacent spaces, the analysis shall be performed using design summer (cooling) conditions and design winter (heating) conditions of both types of conditioned space.

Exception: Spaces and their individual mechanical systems that are designed to control condensation and moisture accumulation in the adjacent *building envelope*, walls, or ceilings.

8.3.6.3 Flashing of Fenestration, Door Assemblies, Mechanical Equipment and Other Penetrations of Building Envelope. Flashing or sealants shall be installed around fenestration, door assemblies, and penetrations associated with mechanical equipment and utility services, except where there is a mechanism for drainage to the outdoors or where the materials are designed for long term contact with water.

Add to Chapter 11 - Normative References

Reference	Title	Section
ANSI/ASHRAE Standard 160-2009	Criteria for Moisture-Control Design Analysis in Buildings	8.3.6

Add to Informative Appendix G - Informative References

Reference	Title	Section
ASTM C755-10	Standard Practice for Selection of Water Vapor Retarders for Thermal Insulation, Appendix X1 Problem Analysis	8.3.6

Public Review Draft

Proposed Addendum by to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

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FOREWORD

These proposed changes to Standard 189.1 are intended to provide a higher level of indoor moisture control than currently required in the standard by its reference to Standard 62.1, primarily to reduce the likelihood of microbial growth on interior surfaces. These air leakage requirements include design cooling exfiltration and design heating infiltration, superseding Section 5.9.2 of Standard 62.1. Standard 62.1 only requires more outdoor air intake flow than exhaust airflow on a whole-building level at design conditions during mechanical cooling operation.

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 by to 189.1-2011

Modify Section 8.3 as follows:

8.3.1.5 Building Pressure. *Building projects* shall be designed in accordance with the following sections. **Exception**: *Building projects* located in climate zones 2b, 3b, 3c, 4b, 4c, and 5b.

8.3.1.5.1 Mechanical Exhaust. Mechanical systems shall include controls capable of disabling exhaust fans and closing exhaust dampers whenever mechanical intake airflow is discontinued.

8.3.1.5.2 Exfiltration. Ventilation systems shall be designed to provide operation in accordance with the following:

1. System controls shall be provided to ensure that during mechanical cooling operation, total outdoor air intake flow exceeds total mechanical exhaust air flow by at least the sum of the top floor perimeter area plus the roof area, multiplied by 0.011 cfm/ft^2 (0.06 L/s*m^2).

Exception: Where excess exhaust is required by process considerations such as certain industrial or healthcare facilities.

2. System controls shall be provided to ensure that during central heating or supply air tempering operation, total mechanical exhaust air flow exceeds total outdoor air intake flow by at least the sum of the top floor perimeter area plus the roof area, multiplied by 0.007 cfm/ft^2 (0.04 L/s*m^2).

~~8.3.1.4~~ 8.3.1.6 Environmental Tobacco Smoke …

Renumber subsequent sections accordingly.

Add new Section 10.3.2.1.4.7 and renumber existing section as follows:

10.3.2.1.4.7 Moisture Measurement. The Plan for Operation shall document procedures for implementing a regular humidity-sensor monitoring program after building occupancy. Such procedures shall include provisions for the following:

a. For systems complying with Section 8.3.1.4 using relative humidity sensors to determine HVAC zone relative humidity directly, or using a dew point sensor and zone temperature sensor to determine HVAC zone relative humidity indirectly, the relative humidity shall be measured annually and compared to the relative humidity determined using methods described in ASHRAE Standard 111.

b. Sensors shall be cleaned or repaired and recalibrated as necessary to ensure that sensor measurements are within 10% of actual relative humidity measurements.

10.3.2.1.4.~~7~~8 Document all …

Modify Section 11 as follows:

Reference	Title	Section
Air Movement and Control Association International, 30 West University Drive, Arlington Heights, IL 60004-1806		
AMCA 500-D-07	Laboratory methods of Testing Dampers for Rating	8.3.6.2.2
ANSI/ASHRAE Standard 111-2008	Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems	8.3.1.2.2, 10.3.2.1.4.7, 10.3.2.2

Public Review Draft

Proposed Addendum bz to Standard 189.1-2011

Standard for the Design of High-Performance Green Buildings

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FOREWORD

This addendum revises an existing requirement in the standard to address outdoor air quality impacts of construction vehicles. It replaces the requirement for a staging area with a limit on vehicle idling and a signage requirement.

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 bz to 189.1-2011

Modify Section 10.3.1.6 as follows:

10.3.1.6 Construction Activity Pollution Prevention: ~~No~~ Idling of Construction Vehicles

~~Vehicle staging areas shall be established for waiting to load or unload materials. These staging areas shall be located 100 ft (30 m) from any outdoor air intakes, operable openings, and hospitals, schools, residences, hotels, daycare facilities, elderly housing, and convalescent facilities.~~ Construction related vehicles shall not idle on the construction site for more than 5 minutes in any 60 minute period except where necessary to idle longer to perform their construction-related function. Signage shall be posted at vehicle entrances to the *building project* providing notice of this requirement.

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5.8.2 Stress corrosion resistance

5.8.2.1 Sampling

Three test specimens selected at random shall be conditioned to standard laboratory conditions prior to testing.

5.8.2.2 Testing

Test specimens shall be tested according to ASTM B858 “Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys” or ISO 6957 “Copper alloys – Ammonia test for stress corrosion resistance” in a test solution of pH 9.5.

5.8.2.3 Requirements

There shall be no evidence of cracking when viewed with a microscope with a minimum magnification of 10X, with the exception of surface cracking. Surface cracking is defined as small imperfections that do not penetrate beyond the immediate surface of the part. For verification, the specimen shall be cross sectioned, polished and examined under a metallographic microscope. Surface penetration shall not exceed 1% of the minimum wall thickness. Failure of one of the three specimens tested is cause for retest of three additional specimens. Failure of one specimen in the retest shall constitute failure in the test.

NOTE – The requirements for resistance to dezincification and resistance to stress corrosion cracking are intended to establish a minimum level of performance for products intended for use in potable water systems. These requirements are not a guarantee that erosion or corrosion will not occur.

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[Note – the changes are seen below using strikeout for removal of old text and gray highlights to show the suggested text. ONLY the highlighted text is within the scope of this ballot.]

NSF/ANSI Standard
for Drinking Water Treatment Units – Health Effects

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Annex A

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A.5 Enumeration of stock oocyst suspension

The procedures outlined in A.5.1 or A.5.2 shall be used for stock suspension enumeration.

A.5.1 Procedure using well slides

1) The stock oocyst suspension shall be vortexed, and 10 µL of an appropriate dilution (80-120 oocysts) shall be applied to 10 wells.

2) 10 µL of a positive antigen (approximately enough for 200 oocysts) shall be applied to the positive well.

3) 75 µL of the working solution of PBS shall be applied to the negative well.

4) The wells shall be dried at 42 °C (108 °F) for 1 to 2 h.

5) After drying, 50 µL of anhydrous methanol shall be applied to each well and allowed to evaporate for 3 to 5 min.

6) A 5-carboxy-fluorescein-labeled monoclonal antibody for *Cyrptosporidium* oocysts stain shall be prepared according to the manufacturer's instructions.

7) 50 µL of a 5-carboxy-fluorescein-labeled monoclonal antibody for *Cyrptosporidium* oocysts stain shall be applied to the 12 wells and shall be incubated in a humid chamber for 45 to 60 min.

8) The wells shall be washed with the working solution of PBS three times.

9) The wells shall be mounted with 10 µL of DABCO-glycerol mounting medium.

10) The slides shall be stored at 4 °C (39 °F) in the dark until enumerated.

11) The slides shall be enumerated, and the concentration of the stock suspension shall be determined using the mean of the counts from the 10 wells.

A.5.2 Procedure using well slides

1) The procedures in A.6.2 through A.6.8 shall be used with an appropriate sample volume of the stock suspension.

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Annex B

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B.4 Enumeration of stock microspheres

B.4.1 Procedure using well slides

The procedures outlined in B.4.1 or B.4.2 shall be used for stock suspension enumeration.

1) The stock microsphere suspension shall be vortexed, and 10 µL of an appropriate dilution (80 to 120 microspheres) shall be applied to all wells.

2) The wells shall be dried at 42 °C (108 °F) for 1 to 2 h.

3) The wells shall be mounted with 10 µL of DABCO-glycerol mounting medium.

4) The slides shall be enumerated and the concentration of the stock suspension shall be determined using the mean counts from the slides.

B.4.2 Procedure using well slides

1) The procedures in B.5.2 through B.5.7 shall be used with an appropriate sample volume of the stock suspension.

Reason: Revised to allow for alternate methods per 2012 annual DWTU JC meeting discussion (May 16, 2012).

[Note – the changes are seen below using strikeout for removal of old text and gray highlights to show the suggested text. ONLY the highlighted text is within the scope of this ballot.

NSF/ANSI Standard
for Drinking Water System Components – Health Effects

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3 General requirements

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3.5 Restriction on use of lead containing materials

There shall be no lead added as an intentional ingredient in any product, component, or material submitted for evaluation to this standard, with the following exceptions:

- Brass or bronze used in products meeting the definition of "lead free" under the specific provisions of the Safe Drinking Water Act of the United States.

- Solders and flux meeting the definition of "lead free" under the specific provisions of the Safe Drinking Water Act of the United States.

- Brass or bronze used in products specifically identified as exemptions within section (a)(4)(B) of the Safe Drinking Water Act of the United States.

- Fire sprinklers.

- Trace amounts required for operation of products used to monitor the characteristics of drinking water, such as the glass membranes used with some selective ion or pH electrodes.

- Materials of components with a diluted surface area less than or equal to 0.0001 in^2/L.

NOTE – To the maximum extent possible, lead should not be added as an intentional in any product covered by the scope of this standard. The exception above relative to the diluted surface area has only been included in recognition of formulation information exemption for applications with this condition.

Reason: Residential fire sprinklers are installed in multipurpose piping systems in one and two family dwellings and townhouse as a part of the potable water distribution system. They are also installed in standalone systems that are piped in potable water piping material (complying with NSF 61) without any backflow preventer. Fire sprinklers are always at the end of the line, similar to a water closet connection or shower connection. They operate by opening in the event of a fire. As such, water does not continuously pass over a fire sprinkler.

The State of California was the first state to adopt the no-lead requirements. The state issued an interpretation that fire sprinklers are not included in the list of products that must meet the no-lead requirements. The state concluded that fire sprinklers are not used to supply water for drinking nor cooking. As such, they did not have to meet the no-lead requirements.

Similarly, the State of Maryland adopted the no-lead requirements prior to the Federal adoption. The State of Maryland, like California, mandates residential fire sprinklers in all residential buildings, including one and two family dwellings. Maryland has also interpreted their requirements as not applying to fire sprinklers.

Fire sprinklers have been listed to NSF 61 for many years. The sprinklers meet all the requirements including the lead limits. The sprinklers are not a contributor of contaminants to the drinking water in any adverse way.

This change will allow fire sprinklers to continue to be tested and listed to NSF 61.

BSR/UL 6, Standard for Safety for Electrical Rigid Metal Conduit - Steel

Proposal to revise Marking Limitation on Small Trade Size Elbows and Nipples:

PROPOSAL

7.6 Each straight length of conduit, elbow, or nipple provided with an alternate corrosion-resistant coating, and not meeting the requirements of Clause 6.2.4.1, shall be marked "Use Threaded Couplings Only ", or with an equivalent wording. The conduit shall be marked at a minimum of once every 3.05 m (10 ft) and no less than once per piece. Conduit, elbows, or nipples intended for use with fittings that have been subjected to the required assembly, bending resistance, pull, and fault current tests without removal of the alternate corrosion-resistant coating are not required to be so marked. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container.

7.7 Each finished length of conduit, elbow, or nipple shall be legibly and durably marked "Consult manufacturer for proper installation" or equivalent marking. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container instead of the product.

7.10 Conduit, elbows, or nipples provided with a supplementary coating or coatings which have not been evaluated for furnishing corrosion protection for the tube shall be marked "Corrosion protection properties of the _____ coating were not investigated" or equivalent wording. The blank shall be filled in with the type of supplementary coating. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container instead of the product.

7.11 Conduit, elbows, or nipples provided with two or more primary coatings shall be marked, "Properties of the _____ have been investigated as primary corrosion protection. The combination of these systems has not been evaluated for additional corrosion protection" or equivalent wording. The blank shall be filled in with the types of primary coating. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container instead of the product.

BSR/UL 6A, Standard for Safety for Electrical Rigid Metal Conduit – Aluminum, Red Brass and Stainless Steel, UL 6A

Proposal to revise:

1. Marking Limitation on Small Trade Size Elbows and Nipples

2. Conduit with a Protective Coating for Use with Threaded Couplings

PROPOSALS

1. Marking Limitation on Small Trade Size Elbows and Nipples

7.7 Each finished length of conduit, elbow, or nipple shall be legibly and durably marked "Consult manufacturer for proper installation" or an equivalent marking. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container instead of the product.

7.8 Conduit, elbows, or nipples provided with a protective coating or coatings that have not been evaluated for furnishing corrosion-resistance for the conduit shall be marked "Corrosion protection properties of the ____ coating were not investigated" or equivalent wording. The blank shall be filled in with the type of protective coating. Elbows and nipples trade sizes 2 (53) and smaller may be marked on the smallest shipping container instead of the product.

2. Conduit with a Protective Coating for Use with Threaded Couplings

5.3 Protective coatings

5.3.4 A protective coating shall comply with the requirements of Clause 6.2. When the conduit, elbows, and nipples are intended to be used with either set-screw or compression type couplings, they shall comply with the requirements of Clause 6.2 and be subjected to the assembly, bending, resistance, pull, and fault current tests, without removal of the protective coating, in accordance with the relevant standard for fittings for cable and conduit as indicated in Reference Item No. 4A, Annex A. Conduit, elbows, and nipples provided with a protective coating and marked in accordance with Clause 7.9 are not suitable for use with these couplings and therefore do not require evaluation.

6.2 Protective coatings

6.2.1 A protective coating shall be subjected to the assembly, bending, resistance, pull, and fault current tests in accordance with Reference Item No. 4B, Annex A, with both set-screw and compression-type couplings.

6.7.9 Each straight length of conduit, elbow, or nipple provided with a protective coating, and not meeting the requirements of Clause 6.2, shall be marked "Use Threaded Couplings Only", or with an equivalent wording. The conduit shall be marked at a minimum of once every 3.05 m (10 ft) and no less than once per piece. Conduit, elbows, or nipples intended for use with fittings that have been subjected to the required assembly, bending resistance, pull, and fault current tests without removal of the protective coating are not required to be so marked.

Annex A (normative)

A1 Normative references

(See Clause 2.1)

Reference item no.	Clause where referenced	United States	Canada	Mexico
1	1.1	NFPA 70-2008, *National Electrical Code*	CSA C22.1-06, *Canadian Electrical Code, Part 1*	NOM-001-SEDE, *Standard for Electrical Installations*
2	1.3	UL 6 ,*Electrical Rigid Metal Conduit - Steel*	CAN/CSA C22.2 No. 45.1-07, *Electrical Rigid Metal Conduit - Steel*	NMX-J-534-ANCE-2005 , *Electrical Rigid Metal Conduit and Fittings to Protect Electrical Conductors*
3	5.1.1	ASTM B 43 , *Specification for Seamless Red Brass Pipe, Standard Sizes*	ASTM B 43, *Specification for Seamless Red Brass Pipe, Standard Sizes*	No equivalent
4	5.3.3	UL 746A ,*Polymeric Materials - Short Term Property Evaluations*, and UL 514B ,*Conduit, Tubing, and Cable Fittings*	CAN/CSA-C22.2 No. 0.17-00 (R2004), *Evaluation of Properties of Polymeric Materials* and CAN/CSA C22.2 No. 18.3-04, *Conduit, Tubing, and Cable Fittings*	NMX-J-023/1-ANCE-2000, *Electrical Products - Output Metallic Boxes - Part 1 - Specifications and Test Methods* and NMX-J-017-2003~~6~~, *Conduit, Tubing, and Cable Fittings- Specifications and Test Methods*
4A	5.3.4	UL 514B ,*Conduit, Tubing, and Cable Fittings*	CAN/CSA C22.2 No. 18.3-12, *Conduit, Tubing, and Cable Fittings*	NMX-J-017-2006, *Conduit, Tubing, and Cable Fittings - Specifications and Test Methods*
4B	6.2.1	UL 514B ,*Conduit, Tubing, and Cable Fittings*	CAN/CSA C22.2 No. 18.3-12, *Conduit, Tubing, and Cable Fittings*	NMX-J-017-2006, *Conduit, Tubing, and Cable Fittings - Specifications and Test Methods*
5	5.4.1.1	ASME B1.20.1-1983 (R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	ASME B1.20.1-1983 (R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	NMX-J-554-ANCE-2004, *Threads for Conduit and Fittings*
6	5.4.3.1	ASME B1.20.1-1983 (R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	ASME B1.20.1-1983 (R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	NMX-J-554-ANCE-2004, *Threads for Conduit and Fittings*
7	5.7.4	ASME B1.20.1-1983	ASME B1.20.1-1983	NMX-J-554-ANCE-2004,

		(R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	(R2006), *Pipe Threads, General Purpose (Inch) - Revision and Redesignation of ASME/ANSI B2.1-1968*	*Threads for Conduit and Fittings*

ASME: American Society of Mechanical Engineers

ASTM: American Society for Testing and Materials

NFPA: National Fire Protection Association