January 2012

Standards Actions

Technical Standards Program Newsletter

U.S. DEPARTMENT OF ENERGY | OFFICE OF NUCLEAR SAFETY

HSS

INSIDE THIS ISSUE

FEATURED DOE TECHNICAL STANDARDS ACTIVITIES

DOE Conduct of Operations Standards Revisions

In the early 1990s, the Department of Energy (DOE) developed 17 technical standards to support DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities*. The standards (STDs), listed below, provided examples, good practices, and expanded explanations of the topics in each chapter of the Order. In June 2010, the Order was revised and issued as DOE Order 422.1, *Conduct of Operations*. The material was updated and revised for clarity, to separate DOE and Contractor actions, and incorporate the many technological changes that occurred over the last 20 years. The writing team recognized the need to revise the related technical standards, and a project was started to prioritize the revisions, develop a group of writing teams, and produce the draft technical standard revisions. The Facility Representative community stepped up to work on revisions of several standards, and within the Office of Health, Safety and Security (HSS), staff of the Office of Nuclear Facility Safety Programs (HS-32) is revising the rest.

Persons interested in working on this project should contact Earl Hughes, HS-32, at 202-586-0065 for more information. The following standards are involved in this project (* indicates those that are already being revised by a team):

*DOE-STD-1029-YR, *Technical Procedures*

*DOE-STD-1030-YR, *Lockouts and Tagouts*

*DOE-STD-1031-YR, *Communications*

DOE-STD-1032-YR, *Operations Organization and Administration*

*DOE-STD-1033-YR, *Operations and Administration Updates Through Required Reading*

*DOE-STD-1034-YR, *Timely Orders to Operators*

DOE-STD-1035-YR, *Logkeeping*

DOE-STD-1036-YR, *Independent Verification*

*DOE-STD-1037-YR, *Operations Aspects of Unique Processes*

DOE-STD-1038-YR, *Operations Turnover*

(Continued on next page)

DOE-STD-1039-YR, *Control of Equipment and System Status*

DOE-STD-1040-YR, *Control of On-Shift Training*

*DOE-STD-1041-YR, *Shift Routines and Operating Practices*

DOE-STD-1042-YR, *Control Area Activities*

DOE-STD-1043-YR, *Operator Aid Postings*

DOE-STD-1044-YR, *Equipment and Piping Labeling*

DOE-STD-1045-YR, *Notifications and Investigation of Abnormal Events*

Contact: Earl Hughes, HSS, Office of Nuclear Facility Safety Programs (HS-32)
Phone: 202-586-0065

DOE Technical Standards Updates

New DOE Technical Standards Projects

- **SAFT-0136, DOE STD-XXXX-YR, *DOE Handbook of Operational Safety and Analysis Techniques***

  Contact: Dave Pegram, Office of Health, Safety and Security (HSS), Office of Corporate Safety Programs (HS-23)
  Phone: 301-903-9840

DOE Technical Standards Posted in RevCom for TSP

- **SAFT-0138, DOE-STD-XXXX-YR, *Communicating Waste Characterization and DOT Hazard Classification Requirements for Low Specific Activity Materials and Surface Contaminated Objects***

  Contact: Julia Donkin, Office of Environmental Managment, Office of Packaging and Transportation (EM-45)
  Phone: 301-903-5283

- **OCHS-0007, DOE-STD-XXXX-YR, *Access Handbook-Conducting Health Studies at Department of Energy Sites***

  Contact: Marsha Lawn, HSS, Office of Domestic and International Health Studies (HS-13)
  Phone: 301-903-3721

- **FIRP-0002, DOE-STD-1066-YR, *Fire Protection***

  Contact: Jim Bisker, HSS, Office of Nuclear Facility Safety Programs (HS-32)
  Phone: 301-903-6542

- **NPHZ-0003, DOE-STD-1020-YR, *Natural Phenomena Hazards Design and Evaluation Criteria for DOE Facilities***

  Contact: Gerald Meyers, HSS, Office of Nuclear Safety Basis and Facility Design (HS-31)
  Phone: 301-903-3190

- **SAFT-0134, DOE-STD-1212-YR, *Explosives Safety***

  Contact: Gerald Meyers, HSS, Office of Nuclear Safety Basis and Facility Design (HS-31)
  Phone: 301-903-3190

DOE Technical Standards Change Notices

- **DOE-HDBK-1122-09, *Radiological Control Technician Training***

  Contact: Judy Foulke, HSS, Office of Worker Safety and Health Policy (HS-11)
  Phone: 301-903-5965

(Continued on next page)

DOE Technical Standards Updates *(Continued)*

DOE Technical Standards Published

- **DOE-STD-1156-2011,** ***Environmental Compliance Functional Area Qualification Standard***

  Contact: Steven Black, National Nuclear Safety Administration Service Center, Albuquerque, NM
  Phone: 505-845-6885

- **DOE-STD-3024-2011,** ***Content of System Design Descriptions***

  Contact: Ashley Ruocco, HSS, Office of Nuclear Facility Safety Programs (HS-32)
  Phone: 301-903-7010

- **DOE-STD-1197-2011,** ***Occurrence Reporting Causal Analysis***

  Contact: Phil Wilhelm, HSS, Office of Analysis (HS-24)
  Phone: 301-903-5678

DOE Technical Standards in Revision

- **HFAC 0018, DOE STD-1029-YR,** ***Technical Procedures***
- **SAFT 0137, DOE STD-1030-YR,** ***Lockouts and Tagouts***
- **58GP 0002, DOE STD-1031-YR,** ***Communications***
- **MISC 0033, DOE STD-1032-YR,** ***Operations Organization and Administration***
- **MISC 0034, DOE STD-1033-YR,** ***Operations and Administration Updates Through Required Reading***
- **MISC 0035, DOE STD-1034-YR,** ***Timely Orders to Operators***
- **MISC 0036 DOE STD-1035-YR,** ***Logkeeping***
- **MISC 0037, DOE STD-1036-YR,** ***Independent Verification***
- **MISC 0038, DOE STD-1037-YR,** ***Operations Aspects of Unique Processes***
- **MISC 0039, DOE STD-1038-YR,** ***Operations Turnover***
- **MISC 0040, DOE STD-1039-YR,** ***Control of Equipment of System Status***
- **6910 0072, DOE STD-1040-YR,** ***Control of On-Shift Training***
- **MISC 0041, DOE STD-1041-YR,** ***Shift Routines and Operating Practices***
- **MISC 0042, DOE STD-1042-YR,** ***Control Area Activities***
- **MISC 0043, DOE STD-1043-YR,** ***Operator Aid Postings***
- **FACR 0021, DOE STD-1044-YR,** ***Equipment and Piping Labeling***
- **MISC 0044, DOE STD-1045-YR,** ***Notifications and Investigation of Abnormal Events***

  Contact: Earl Hughes, HSS, Office of Nuclear Facility Safety Programs (HS-32)
  Phone: 202-586-0065

Part of the TSP mission is to promote the use of voluntary consensus standards, and to manage DOE efforts to develop and maintain necessary technical standards.

Workshops and Events

Nuclear Energy Standards Coordination Collaborative

In 2009, the American National Standards Institute (ANSI) and the National Institute for Standards and Technology (NIST) formed the Nuclear Energy Standards Coordination Collaborative (NESCC), a cross-stakeholder forum to identify and respond to the current needs of the nuclear industry.

NESCC works to facilitate and coordinate the timely identification, development, and revision of standards for the design, operation, development, licensing, and deployment of nuclear power plants. Standards for other nuclear technologies, including advanced reactor concepts, will also be addressed.

The most recent meeting of the NESCC was held on July 28, 2011, at NIST Headquarters in Gaithersburg, MD. Topics included:

- Nuclear Regulatory Commission Activities in Response to the Fukushima Accident
- U.S. Nuclear Industry Strategy for Responding to Fukushima Lessons Learned
- Nuclear Fabrication Consortium
- Advanced Nuclear Technology Project Update
- NESCC Update
- Task Group Proposals and Reports Proposal for a Task Group on Electrical Cables
- Report from the National Standards Priority List Task Group
- Proposal for a Task Group on Concrete Repair
- Report from the High Density Polyethylene Piping Task Group
- Report from the Standards Database Task Group

For more information on NESCC and to review the meeting reports, please visit the ANSI website at: www.ansi.org.

Nuclear Quality Assurance - Fall 2011 Meeting

The Nuclear Quality Assurance (NQA) Fall 2011 Meeting was held on October 18 - 20, 2011 in St. Petersburg, Florida.

UPCOMING MEETINGS

International Electrotechnical Commission (IEC) Technical Committee (TC) 45, *Nuclear Instrumentation* Meetings

- *TC 45, Nuclear Instrumentation*
- *TC 45/Subcommittee 45A - Instrumentation and Control of Nuclear Cacilitie*
- *TC 45/Subcommittee 45B - Radiation Protection Instrumentation*

When: February 23 – March 2, 2012
Where: Karlsruhe, Germany

Interested parties who wish to participate in the IEC meetings/activities should contact the American National Standards Institute (ANSI)/IEC representative, Mr. Charlie Zegers (Phone: 212-642-4964).

International Organization for Standardization (ISO) Technical Committee (TC) 85, *Nuclear Energy* Meetings

- *TC 85/Working Group 1 Terminology, Definitions, Units and Symbols*
- *TC 85/Working Group 3 Dosimetry for Radiation Processing*
- *TC 85/Ssubcommittee 2 Working Groups - Radiation Protection*
- *TC 85/Subcommittee 5 Working Groups - Nuclear Fuel Technology*

When: June 4-8, 2012
Where: Paris, France

To participate in the ISO meetings/activities, it is necessary to be appointed as an ANSI Delegate by the U.S. Nuclear Technical Advisory Group Chair, Mr. George Campbell (Phone: 707-882-1640, email: cglen@mcn.org).

More upcoming meetings listed on page 11

Nuclear Safety-Related Standards Activity

By Calvin M. Hopper for the U.S. Department of Energy

This report provides insights into domestic nuclear safety standards development activities with a graded focus on incidental information regarding international standards. Standards that could have current or immediate potential interests to the Department of Energy regarding nuclear facility safety are listed below. Public comment periods for proposed or new standards are typically 30 days.

Proposed Industry Standards

American Nuclear Society (ANS)

Revisions

- Board of Standards Review (BSR)/ANS 8.3-201x, *Criticality Accident Alarm System* (revision to ANSI/ANS 8.3-1997 (R2003)). Applicable to all operations involving fissionable materials in which inadvertent criticality can occur and cause personnel to receive unacceptable exposure to radiation.
- BSR/ANS 19.1-201x, *Nuclear Data Sets for Reactor Design Calculations* (revision of ANSI/ANS 19.1-2002 (R2011)). Identifies and describes the specifications for developing, preparing, and documenting nuclear data sets to be used in reactor design calculations. The specifications include:
  - criteria for acceptance of evaluated nuclear data sets;
  - criteria for processing evaluated data and preparation of processed continuous data and averaged data sets; and
  - identification of specific evaluated, processed continuous, and averaged data sets that meet these criteria for specific reactor types.
- BSR/ANS 19.11-201x, *Calculation and Measurement of the Moderator Temperature Coefficient of Reactivity for Pressurized Water Reactors* (revision of ANSI/ANS 19.11-1997 (R2011)). Provides guidance and specifies criteria for determining the Moderator Temperature Coefficient in water-moderated power reactors.
- BSR/ANS 3.5-201x, *Nuclear Power Plant Simulators for Use in Operator Training and Examination* (revision of ANSI/ANS 3.5-2009). Establishes the functional requirements for full-scope nuclear power plant control room simulators used for operator training and examination. Criteria are established for the degree of simulation, performance, and functional capability of the simulated control room instrumentation and controls.
- BSR/ANS 3.2-201x, *Managerial and Administrative Controls for Nuclear Power Plants* (revision of ANSI/ANS 3.2-2006). Provides requirements and recommendations for managerial and administrative controls to ensure that activities associated with operating a nuclear power plant are carried out without undue risk to the health and safety of the public. Provides requirements for implementing Quality Assurance programs consistent with requirements of Title 10, Code of Federal Regulations, Part 50, *Domestic Licensing of Production and Utilization Facilities*, Appendix B.
- BSR/ANS 56.8-201x, *Containment System Leakage Test Requirements* (revision of ANSI/ANS 56.8-2002). Specifies acceptable primary containment leakage rate test requirements to assure valid testing. The scope includes:
  - leakage test requirements;
  - test instrumentation;
  - test procedures;
  - test methods;
  - acceptance criteria;
  - data analysis; and
  - inspection and recording of test results.

(Continued on next page)

ANS Standards Development

The American Nuclear Society currently supports four Consensus Committees that provide the balanced body that conducts the consensus ballot on proposed standards in order for them to become official, approved standards. Each Consensus Committee has a defined scope of activities. The four ANS Consensus Committees are as follows:

- N16, *Nuclear Criticality Safety;*
- N17, *Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods;*
- Nuclear Facilities Standards Committee (NFSC); and
- Risk Informed Standards Committee (RISC).

New

- BSR/ANS 2.21-201x, *Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink* (new standard). Establishes criteria for use of meteorological data collected at nuclear facilities to evaluate the atmospheric effects on ultimate heat sink performance.

Reaffirmations

- BSR/ANS 8.22-1997 (R201x), *Nuclear Criticality Safety Based on Limiting and Controlling Moderators* (reaffirmation of ANSI/ANS 8.22 -1997 (R2006)). Applies to limiting and controlling moderators to achieve criticality safety in operations with fissile materials in a moderator control area.

- BSR/ANS 8.14-2004 (RR201X), *Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors* (reaffirmation of ANSI/ANS 8.14-2004). Provides guidance for the use of soluble neutron absorbers for criticality control. This standard addresses neutron absorber selection, system design and modifications, safety evaluations, and quality control programs.

American Institute of Steel Construction

Revisions

- BSR/AISC N690-201x, *Specification for Safety-Related Steel Structures for Nuclear Facilities* (revision of ANSI/AISC N690-2006). Applies to the design of safety-related steel structures and steel elements in nuclear facilities. Includes load and resistance factor design and allowable strength design methods of design. It is a supplement to the AISC 2005, *Specification for Structural Steel Buildings.*

American Society of Mechanical Engineers (ASME)

Revisions

- BSR/ASME HRT-1-201x, *Rules for Hoisting, Rigging, and Transporting Equipment for Nuclear Facilities* (revise and partition ANSI/ASME Nuclear Quality Assurance (NQA)-1-2008).

- BSR/ASME BPVC Section III-201x, *Rules for Construction of Nuclear Facility Components* (addenda to ANSI/ASME BPVC Section III-2011). The rules of this Section constitute requirements for the design, construction, stamping, and overpressure protection of items used in nuclear power plants and other nuclear facilities. This Section consists of the following three divisions:

  - Division 1. Metallic vessels, heat exchangers, storage tanks, piping systems, pumps, valves, core support structures, supports, and similar items;

  - Division 2. Concrete containment vessels; and

  - Division 3. Metallic containment systems for storage or transportation of spent nuclear fuel and high-level radioactive materials and waste.

- BSR/ASME BPVC Section XI-201x, *Rules for In-service Inspection of Nuclear Power Plant Components* (addenda to ANSI/ASME BPVC Section XI-2011). Provides requirements for in-service inspection and testing of light-water cooled nuclear power plants. The requirements identify the areas subject to inspection, responsibilities, provisions for accessibility and inspectability, examination methods, and procedures, personnel qualifications, frequency of inspection, record keeping and report requirements, procedures for evaluation of inspection results and subsequent disposition of results of evaluations, and repair/replacement activity requirements, including procurement, design, welding, brazing, defect removal, fabrication, installation, examination, and pressure testing.

ASTM (ASTM International)

Revisions

- BSR/ASTM D7301-201x, *Specification for Nuclear Graphite Suitable for Components Subjected to Low Neutron Irradiation Dose* (revision of ANSI/ASTM D7301-2008). Documents the classification, processing, and minimum acceptable properties and levels of quality assurance and traceability for nuclear grade graphite suitable for components subjected to low irradiation dose.

(Continued on next page)

Health Physics Society (HPS)

HPS Accredited Standards Committee, N13 develops consensus standards dealing with or pertaining to radiation protection, including the protection of individuals or groups from occupational or environmental exposure to radiation or radioactive materials.

New

- BSR N2.1-201x, *Radiation Symbol* (new standard).
- BSR N13.41-201x, *Criteria for Performing Multiple Dosimetry* (new standard). Provides criteria for when and how to use multiple dosimeters under conditions incident to routine activities in the presence of ionizing radiation, as well as the recommended methodology for determining the effective dose equivalent when the use of multiple dosimeters has been deemed necessary by radiation protection professionals.

Institute of Electrical and Electronics Engineers (IEEE)

Revised

- BSR N42.57-201x, *Performance, Test and Calibration of Instrumentation for Monitoring Radionuclides in Liquid Effluents and Surface Waters* (revise and partition ANSI N42.18-2004).

New

- BSR/IEEE C57.156-201x, *Guide for Tank Rupture Mitigation of Liquid-Immersed Power Transformers and Reactors* (new standard). Describes measures that may be taken to help mitigate tank rupture of energized liquid-immersed power transformers and reactors due to internal electrical faults. This guide does not cover the release of oil or oil mist due to failure of the following components: load tap changer compartments, bushings and their turrets, conservator tank, piping, valves, pumps and radiators.

Reaffirmations

- BSR/IEEE 649-2006 (R201x), *Standard for Qualifying Class 1E Motor Control Centers for Nuclear Power Generating Stations* (reaffirmation of ANSI/IEEE 649-2006). Describes the basic principles, requirements, and methods for qualifying Class 1E motor control centers for both harsh and mild environment applications in nuclear power generating stations.
- BSR/IEEE 845-1999 (R201x), *Guide for the Evaluation of Human-System Performance in Nuclear Power Generating Stations* (reaffirmation of ANSI/IEEE 845-1999 (R2005)). Guidance for evaluating human-system performance related to systems, equipment, and facilities in nuclear power generating stations is provided.

National Fire Protection Association (NFPA)

Revisions

- BSR/NFPA 1951-201x, *Standard on Protective Ensembles for Technical Rescue Incidents* (revision of ANSI/NFPA 1951-2006). Establishes minimum protection for emergency services personnel assigned to or involved in search, rescue, treatment, recovery, decontamination, site stabilization, extrication, and similar operations at technical rescue incidents.

International Atomic Energy Agency (IAEA)

New

- DS451, *Schedules of Provisions of the IAEA Regulations for the Safe Transport of Radioactive Material* (2009 Edition).
- DS357, *Monitoring and Surveillance of Radioactive Waste Disposal Facilities.*

Revised, New and Affirmed Standards

American Nuclear Society (ANS)

Revisions

- ANSI/ANS 19.3-2011, *Steady-State Neutronics Method for Power Reactors Analysis* (revision of ANSI/ANS 19.3-2005): 8/26/2011. Provides guidance for performing and validating the sequence of steady-state calculations leading to prediction, in all types of commercial nuclear reactors, of reaction-rate spatial distributions, reactivity, and change of isotopic compositions with time. The standard provides guidance for:
  - selection of computational methods;
  - criteria for verification and validation of

(Continued on next page)

calculational methods used by reactor core analysts;
- criteria for evaluation of accuracy and range of applicability of data and methods; and
- requirements for documentation of the preceding.

- ANSI/ANS-2.3-2011, *Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Facility Sites* (revision of withdrawn standard ANSI/ANS-2.3-1983). Establishes guidelines to estimate the frequency of occurrence and the magnitude of parameters associated with rare meteorological events such as tornadoes, hurricanes, and extreme straight line winds at nuclear facility sites within the continental United States. The parameters addressed include: wind velocity, atmospheric pressure change, and design basis missile characteristics.

30-Day Withdrawal Notice

- ANSI/ANS 58.6-1996(R2001), *Criteria for Remote Shutdown for Light Water Reactors*. Provides design criteria that require:
  - specific controls and monitoring equipment be provided for achieving and maintaining the plant in a safe shutdown condition;
  - these controls be installed at a location that is physically remote from the Control Room and cable spreading areas;
  - simultaneous control from both locations shall be prevented by administrative controls or devices for transfer of control from the Control Room to the remote location; and
  - the remote controls be used as a defense-in-depth measure in addition to the control room shutdown controls and, as a minimum, provide for one complete channel of shutdown.

ASTM (ASTM International)

Revisions

- ANSI/ASTM E1702-2011, *Practice for Dosimitry in a Gamma Irradiation Facility for Radiation Processing* (revision of ANSI/ASTM E1702-2004): 6/21/2011. Outlines dosimetric procedures to be followed in irradiator characterization, process qualification, and routine processing in a gamma irradiation facility.
- ANSI/ASTM E1940-2011, *Guide for Irradiation of Insects for Sterile Release Programs* (revision of ANSI/ASTM E1940-2004): 6/21/2011. Outlines dosimetric procedures to be followed for the radiation sterilization of live insects for use in pest management programs.
- ANSI/ASTM E2303-2011, *Guide for Absorbed-Dose Mapping in Radiation Processing Facilities* (revision of ANSI/ASTM E2303 -2003): 7/1/2011. Provides guidance in determining absorbed-dose distributions (mapping) in products, materials or substances irradiated in gamma, X-ray (bremsstrahlung) and electron beam facilities.

30-Day Withdrawal Notice

- ANSI/ASTM E1204-2004, *Practice for Dosimetry in Gamma Irradiation Facilities for Food Processing* (withdrawal of ANSI/ASTM E1204 -2004): 6/21/2011. Outlines dosimetric procedures to be followed in irradiator characterization, process qualification, and routine processing of food with ionizing radiation from isotopic gamma sources to ensure that all of the product has been treated within a predetermined range of absorbed dose.

Health Physics Society (HPS)

New

- ANSI N43.14-2011, *Radiation Safety for Active Interrogation Systems for Security Screening of Cargo, Energies Up to 100 MeV* (new standard): 8/4/2011.

Reaffirmations

- ANSI N13.36-2001 (R2011), *Ionizing Radiation Safety Training for Workers* (reaffirmation of ANSI N13.36-2001): 7/19/2011. Establishes minimum requirements and provides recommendations and guidelines for the analysis, design, development, implementation, and evaluation of ionizing radiation safety training for workers.
- ANSI N13.39-2001 (R2011), *Design of Internal Dosimetry Programs* (reaffirmation of ANSI N13.39-2001): 7/19/2011. Contains the essential elements of the internal dosimetry component of a radiation protection program. It provides general policies and the framework for the design and implementation of an acceptable internal dosimetry program.

(Continued on next page)

Institute of Electrical and Electronics Engineers (IEEE)

New

- ANSI/IEEE C37.105-2010, *Standard for Qualifying Class 1E Protective Relays and Auxiliaries for Nuclear Power Generating Stations* (new standard): 7/19/2011. Provides basic principles, requirements, and methods for qualifying Class 1E protective relays and auxiliaries in nuclear power generating stations including digital and analog devices, but excluding devices located inside the primary containment.

- IEC/IEEE 62582-1 Ed. 1.0 b:2011, *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 1: General* (new standard): 8/31/2011. Contains requirements for application of the other parts of IEC/IEEE 62582 related to specific methods for condition monitoring in electrical equipment important to safety of nuclear power plants.

- IEC/IEEE 62582-2 Ed. 1.0 b:2011, *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 2: Indenter Modulus* (new standard): 8/31/2011. Contains methods for condition monitoring of organic and polymeric materials in instrumentation and control systems using the indenter modulus technique in the detail necessary to produce accurate and reproducible measurements.

- IEC/IEEE 62582-4 Ed. 1.0 b:2011, *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 4: Oxidation Induction Techniques* (new standard): 8/31/2011. Specifies methods for condition monitoring of organic and polymeric materials in instrumentation and control systems using oxidation induction techniques in the detail necessary to produce accurate and reproducible measurements.

Reaffirmations

- ANSI/IEEE 1082-1997 (R2010), *Guide for Incorporating Human Action Reliability Analysis for Nuclear Power Generating Stations* (reaffirmation of ANSI/IEEE 1082-1997 (R2003)): 8/11/2011.

- ANSI/IEEE 1023-2004 (R2010), *IEEE Recommended Practice for the Application of Human Factors Engineering to Systems, Equipment, and Facilities of Nuclear Power Generating Stations and Other Nuclear Facilities* (reaffirmation of ANSI/IEEE 1023-2004): 6/28/2011.

International Organization for Standardization (ISO)

New

- ISO 11311:2011, *Nuclear Criticality Safety - Critical Values for Homogeneous Plutonium-Uranium Oxide Fuel Mixtures Outside of Reactors* (new standard): 7/05/2011. Specifies common reference critical values for homogeneous water-moderated plutonium-uranium oxide mixtures based on an inter-code comparison of calculated critical values.

- ISO 11320:2011, *Nuclear Criticality Safety - Emergency Preparedness and Response* (new standard): 9/22/2011. Provides criteria for emergency preparedness and response to minimize consequences due to a nuclear criticality accident.

International Electrotechnical Commission (IEC)

Technical Committee 45, *Nuclear Instrumentation*

New

- IEC 61513 Ed. 2.0 b:2011, *Nuclear Power Plants - Instrumentation and Control Important to Safety - General Requirements for Systems* (new standard, replaces IEC 61513 Ed. 1.0 b:2001): 8/25/2011. Provides requirements and recommendations for the overall instrumentation and control architecture which may contain either or both technologies. The main technical changes with regard to the previous edition are as follows:
  - alignment with the latest revisions of IAEA documents;
  - alignment with new editions of IEC 60880, IEC 61226, IEC 62138, IEC 62340, and IEC 60987;

(Continued on next page)

- alignment with significant advances of software engineering techniques; and
- integration of requirements for staff training.

Approved Final Draft International Standard for Voting

- 45A/838/FDIS, IEC 61513 Ed.2: *Nuclear Power Plants - Instrumentation and Control Important to Safety - General Requirements for Systems:* 7/29/2011.
- 45A/840/FDIS, IEC/IEEE 62582-1 Ed.1: *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 1: General:* 8/05/2011.
- 45A/841/FDIS, IEC/IEEE 62582-2 Ed.1: *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 2: Indenter Modulus:* 8/05/2011.
- 45A/842/FDIS, IEC/IEEE 62582-4 Ed.1: *Nuclear Power Plants - Instrumentation and Control Important to Safety - Electrical Equipment Condition Monitoring Methods - Part 4: Oxidation Induction Techniques:* 8/05/2011.
- 45B/700/FDIS, IEC 61577-3 Ed.2: *Radiation Protection Instrumentation - Radon and Radon Decay Product Measuring Instruments - Part 3: Specific Requirements for Radon Decay Product Measuring Instruments:* 11/25/2011.

International Atomic Energy Agency (IAEA)

New

- IAEA Safety Standards Series No. SSR-2/2: *Safety of Nuclear Power Plants: Commissioning and Operation Specific Safety Requirements:* 7/14/2011.
- IAEA Safety Standards Series No. SSG-19: *National Strategy for Regaining Control over Orphan Sources and Improving Control over Vulnerable Sources:* 8/18/2011.
- IAEA Safety Standards Series No. SSG-14: *Geological Disposal Facilities for Radioactive Waste:* 9/21/2011.

Standards Development Organizations

Points of Contact Information

Patricia Schroeder
American Nuclear Society
555 North Kensington Avenue
La Grange Park, IL 60525
Ph: 708-579-8269 Fax: 708-352-6464
E-Mail: pschroeder@ans.org

Mayra Santiago
American Society of Mechanical Engineers
Three Park Avenue 20th Floor
New York, NY 10016
Ph: 212-591-8520 Fax: 212-591-8501
E-Mail: ansibox@asme.org

Jeff Richardson
ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
Ph: 610-832-9727 Fax: 610-832-9666
E-Mail: jrichard@astm.org

Cynthia Duncan
American Institute of Steel Construction
E-mail: duncan@aisc.org

Nancy Johnson
Health Physics Society
1313 Dolley Madison Blvd. Suite 402
McLean, VA 22101
Ph: 703-790-1745 Fax: 703-790-2672
E-Mail: njohnson@burkinc.com

International Electrotechnical Commission
3, rue de Varembé, P.O. Box 131
CH - 1211 GENEVA 20, Switzerland
Ph: +41 22 919 02 11
Fax: +41 22 919 03 00
E-mail: IEC Central Office

Christian Dubay
National Fire Protection Association
One Batterymarch Park
Quincy, MA 02169-7471
Ph: 617-770-3000 Fax: 617-770-0700
E-Mail: cdubay@nfpa.org

David Ringle
Institute of Electrical and Electronics Engineers
445 Hoes Lane
Piscataway, NJ 08854-4141
Ph: 732-562-3806 Fax: 732-875-0524
E-Mail: d.ringle@ieee.org

Richard Rawl (N14)
Institute of Nuclear Materials Management
Oak Ridge National Laboratory
P.O. Box 2008, MS-6472
Oak Ridge, TN 37831-6472
Ph: 865-574-6461 Fax: 865-574-3431
E-Mail: rawlrr@ornl.gov

Carrie Mathews (N15)
Institute of Nuclear Materials Management
Pacific Northwest National Laboratory
P.O. Box 999, MS- K8-46
Richland, WA 99352
Ph: 509-375-6783 Fax: 509-372-4316
E-Mail: carrie.mathews@pnl.gov

William (Bill) Ash
International Organization for Standardization, ISO TC85, *Nuclear Energy*
Association française de normalisation
11 rue Francis de Pressensé
FR-93571 La Plaine Saint-Denis Cedex
Ph: +33 1 41 62 80 00
Fax: +33 1 49 17 90 00
E-mail: w.ash@afnor.org

More Upcoming Meetings *(Continued from page 4)*

ASTM January 2012 Committee Week

When: January 29, 2012 - February 2, 2012
February 1: E10, *Nuclear Technology and Applications*
February 2: C26, *Nuclear Fuel Cycle*
Where: Atlanta, GA

2012 Mid-year Topical Meeting - Issues in Waste Management

When: February 5-8, 2012
Where: Dallas, TX

Institute of Nuclear Materials Management 53rd Annual Meeting

When: July 15-19, 2012
Where: Orlando, FL

TECHNICAL STANDARDS PROGRAM

- ***Promotes*** the use of voluntary consensus standards at DOE.
- ***Manages*** and facilitates DOE efforts to develop and maintain necessary technical standards when voluntary consensus standards do not meet DOE needs.
- ***Communicates*** information on national consensus and departmental technical standards activities to developers and users of technical standards in DOE.

TECHNICAL STANDARDS PROGRAM MISSION

Mission

To enhance DOE's transition to a standards-based culture by providing information, coordinating activities, and promoting the use of consensus standards, and when needed, the development of DOE technical standards.

FOR MORE INFORMATION

To learn more about the DOE Technical Standards Program or to view the *Standards Actions* Newsletters, go to:
www.hss.energy.gov/nuclearsafety/ns/techstds/.

Standards Actions is published by the Office of Nuclear Safety; Office of Health, Safety and Security; Department of Energy, 1000 Independence Avenue, S.W., Washington, DC 20585-1290

Publishing Organization:

Office of Nuclear Safety

Office of Health, Safety and Security

Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585-1290

Editor-in-Chief:
Jeff Feit: 301-903-0471
jeffrey.feit@hq.doe.gov

General/Compiling Editor:
Kathy Knight: 301-903-4439
kathy.knight@hq.doe.gov

Questions or Comments?

Please contact Jeff Feit, HS-30, Manager, DOE Technical Standards Program Office: 301-903-0471 or jeffrey.feit@hq.doe.gov.