June 2004

# The Standards Forum and Standards Actions

Visit the Technical Standards Program Web Site at http://tis.eh.doe.gov/techstds/

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***Activity Summary***

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**Inside This Issue**



## Technical Standards Program Manager's Note

This publication features two articles adopted from the "Defense Standardization Program Journal" and the American National Standards Institute (ANSI) "ANSI Reporter" on the use of standards to facilitate interactive compatibility. The first article, *Information Technology Standards and Interoperability; the Challenge of Homeland Security*, by Russell Richards of the Center for Joint and Coalition Interoperability in the Interoperability Directorate of the Defense Information Systems Agency, addresses the use of standards to ensure interoperability of information technology (IT) equipment for Homeland Security. It raises the difficult question of whether government organizations should mandate standards use, encourage it, or let it be market driven.

**Mary Haughey**

The second article, *Modernizing Our Electric Grid; Distributed Resource Systems and Technology Standards Development*, by Thomas Basso of the National Renewable Energy Laboratory discusses how consensus standards have helped move the power industry into the digital age. In particular, it addresses Institute of Electrical and Electronic Engineers (IEEE) 1547™, *Standard for Interconnecting Distributed Resources with Electrical Power Systems*. Actually a family of standards, IEEE 1547 is intended to modernize the electric power grid by establishing standards for two-way flow of power for distributed resources (i.e., local power generators, such as emergency standby sources, and alternative power sources). The DOE Electrical Distribution Transformation Program in the newly formed Office of Electric Transmission and Distribution, has been actively involved in the effort to develop IEEE 1547. IEEE 1547 has the potential to be used by the Federal Government, state public utility commissions, and individual utilities to establish the interconnection requirements for distributed resources with the electric grid.

Both articles illustrate the importance of standards for implementing solutions to critical problems for our nation.

Norm Schwartz provided two articles to update us on the activities of our topical committees, the second co-authored by the Meteorology Topical Committee Chair, Carl Massola. Norm also has nearly completed the effort to transform existing functional area qualification standards into DOE technical standards. If you or someone you know is in the process of developing a new qualification standard, please be sure to contact Norm to register the standard.

You may have noticed a reduction in size in the Standards Actions section of this publication. We replaced the long list of non-government standards that are newly published or available for comment with links to the standards organization web pages. We polled our Technical Standards Managers (TSMs) on this modification and they responded enthusiastically in favor of the change. We believe this will result in more current and complete information. Thanks, it will save Satish hours of boring formatting!

One outcome of using links rather than a list for Standards Actions is that in time the web pages that we link to may expire or be overwritten. Consequently, in the months (years) to come, we suggest that you use the more current publications if you are searching for a good link.

Jeff Feit is busy reworking the Technical Standards (TSP) Program web page. If you have suggestions on improving that page, please e-mail him at Jeffrey.Feit@eh.doe.gov.

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We are also actively reviewing our TSP procedures to update them. The TSMs have already been asked to submit suggestions on procedural updates along with their updates to TSL-1, *Department of Energy Standards List*, and TSL-4, *Directory of DOE and Contractor Personnel Involved in Non-Government Standards Activities*, by June 15, 2004. If you have a suggestion or a correction for our procedures, please e-mail Mary at Mary.Haughey@eh.doe.gov.

We continue to work on determining the scope of standards that we need to access to support DOE functions. We will use TSL-1, as the fundamental list of standards that need to be accessible for our workers. We asked the TSMs to provide necessary updates to that list so it is accurate and complete when we initiate procurement efforts.

By the time this publication goes to press, we should have the long awaited RevCom process ready for its debut in processing review and comments to DOE technical standards. Please be sure to give us a call, an e-mail, or a tap on the shoulder if you need help in using the new process. A link to the RevCom process will be on the DOE Technical Standards web page.

Changes, improvements, and upgrades will continue, but we believe we have successfully navigated the transitions of the last several months. Thanks for all the help and patience we received during that complicated period.

# Information Technology Standards and Interoperability

## The Challenge of Homeland Security

***By Russell Richards***

*This article was reprinted with permission from the Defense Standardization Program Office (DSPO) in the Department of Defense (DoD) and was published in the Defense Standardization Program Journal, July/September 2003.*

In 1995, the National Research Council published a report stating:

> Many facets of our daily lives depend on standards …. Standards may function to inform, to facilitate, to control, or to interconnect — frequently, a combination of such elements…. They also serve societal aims, such as protecting health, safety and the environment.[1]

The Council could not have known the extent of the challenge that would occur 6 years later, after the terrorist attacks on September 11, 2001, in "protecting health, safety and the environment." It is now more important than ever to use standards to step up and meet those "societal aims."

Standards for information technology (IT) are key to meeting societal aims because we depend more and more on technology to provide the tools we need to protect health, safety, and the environment:

> Ensuring homeland security necessitates linking many disparate government computer systems together. Security depends on finding ways of tying information together that is held and managed at the federal, state and local government level as well as the private sector, to ensure that the right people have the right information at the time when they require it.[2]

The Congressional Research Service (CRS) addressed some of the standards issues in *Homeland Security: Standards for State and Local Preparedness* (released on January 2, 2003).[3] This article describes some of the actions taken in direct response to the needs identified in the CRS report and describes some initiatives to implement preparedness standards.

A key player in standardization efforts in the United States is the American National Standards Institute (ANSI). ANSI's mission is to enhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and by safeguarding their integrity. As part of fulfilling that mission as it applies to homeland security, ANSI, on February 5, 2003, established a Homeland Security Standards Panel. ANSI tasked the panel to:

- promote a positive, cooperative partnership between the public and private sectors and
- identify and communicate to governmental units the existence of current standards that can meet urgent needs.[4]

The panel's initial tasks will be to catalog, promote, accelerate, and coordinate the development of standards in homeland security areas. Those areas include transportation, biometrics, cyber-security, and interoperability of emergency-response equipment.

**Interoperability is key to the use of information technology in homeland security. Linking many government computer systems ensures access and management of data across traditional boundaries.**

Congress will play an important role in promoting national interoperability through standards. According to *National Strategy for Homeland Security*, the United States has more than 87,000 different jurisdictions. Achieving interoperability across all these jurisdictions is a daunting task. In considering the legislative options, the CRS report noted the following:

> The 107th Congress addressed the issue of preparedness standards, particularly in its debate on the Department of Homeland

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> Security (DHS). Initial versions of the DHS bill (H.R. 5005 and S. 2452) took broad approaches, authorizing the new department to coordinate and develop standards for first responders. The Administration appeared to support such an approach in its *National Strategy for Homeland Security*. Ultimately, however, the enacted version (P.L. 107-296) took a narrower approach, instructing the department to develop standards for a limited number of functions, mostly related to emergency response equipment and technology.[5]

Congress considered a number of approaches it could take to address preparedness standards:[6]

- Congress could mandate that states and localities meet set standards. That approach arguably could ensure adherence to set standards, but would likely raise a number of federalism issues, including unfunded mandates, preemption, and enforcement.
- Congress could make federal assistance conditional on meeting set standards. That approach could prompt states and localities to satisfy standards, but could limit recipients' flexibility with federal funds.
- Congress could encourage the development and implementation of standards. That approach could give states and localities discretion in adapting standards to their unique preparedness needs, but may not lead to nationwide adoption.
- Congress could take no action. Many observers believe that defining a baseline level of preparedness is a daunting challenge with questionable benefits. Also, some believe that current nongovernmental and federal efforts to develop preparedness standards are sufficient to meet public safety needs.

The specific approach to deploying preparedness standards remains undetermined. However, regardless of the approach chosen, IT will play a role. We must call upon technology and supporting standards to:

- ensure that public safety elements can communicate and exchange information effectively, not only across neighboring jurisdictional boundaries but also nationwide;
- provide information on demand, in near real time, to support heightened protection of major bridges and tunnels and key pieces of infrastructure such as nuclear power plants, railroad lines, and ports;
- enhance capabilities to sense the threat of "militarized" diseases using unexpected vectors like the postal system, prevailing winds, water supplies, and sewer systems; and
- improve the nation's methods of screening people and baggage at airports, train and bus depots, and passenger ports for weapons (as small as pocket knives) and explosive devices (including methods for using the transportation fuel system as the actual source of a massive explosion).

Many initiatives required to help fortify America's security had already been envisioned and pursued when the Office of Homeland Security was formed shortly after September 11, 2001. The following are some of the key initiatives:

- *Supporting first responders.* "First responders" are the personnel typically required immediately at the scene of an emergency. Communicating with and mobilizing first responders quickly—through standardized communications equipment and infrastructure—can save valuable time and, potentially, lives and have a profound impact on crisis management.
- *Securing America's borders.* Standardized technology plays an increasing roll as a means of detecting, analyzing, and tracking the movement of people and goods into and throughout the United States. The thousands of miles of coastline (Atlantic Ocean, Gulf of Mexico, and Pacific Ocean) and our common borders with Mexico and Canada make this task a daunting one. Everywhere along our borders, not just ports of entry, are potential entry points for terrorists (on foot or aboard vehicles on the ground, in the air, or on or under the water).
- *Defending against bioterrorism.* The fight against bioterrorism requires detection and intervention technology, as well as standards - based communications technology and infrastructure. This extends from communicating with the personnel who remotely monitor and inspect the nation's food and water sources, to providing citizens and agencies with information or emergency notification systems, to using multichannel customer relationship management solutions for tracking, collecting, and providing critical information.
- *Leveraging 21st century technologies.* Established and emerging technology, standardized to reduce cost and increase dependability, must be used widely in a practical way to implement solutions and accomplish our security goals. Leveraging technology may be the differentiating factor as we strive to anticipate, detect, and act upon accurate, secure and dependable information that has never been more important.
- *Undertaking government-to-government federal initiatives.* These Office of Management and Budget initiatives (for example, wireless public safety interoperable communications, or Project SAFECOM) will enable sharing and integration of federal, state, and local data to facilitate better leveraging of investments in IT systems (for example, geographical information) and to provide better integration of key government operations, such as disaster response.[7] These initiatives will also support intergovernmental integration requirements for homeland security.

Technology and appropriate standardization to achieve the objectives of the initiatives have been at the forefront, and improvements in the communications infrastructure have been perceived as playing a major role in the transformation of our homeland security infrastructure.

Each of the initiatives deserves a great deal of discussion for a full understanding of the implications of how the landscape of national security has changed and how standardization has and must change to focus on security actions to protect our homeland as well as to support defense and military actions in other parts of the world. To the extent possible, we should leverage the experience of our defense community (DoD, U.S. defense industry, and other stakeholders), as well as the "homeland security" efforts of other nations and NATO, to capitalize on solutions and approaches already devised. At the same time, we must be able to define how the challenges of homeland security and defense are different from the challenges in our leveraging models. And we must find ways to rapidly fill the gaps with standardized, repeatable, extensible solutions that will work to provide fast, cost-effective, and leading-edge advantages to the leaders and managers of homeland security and to those who are on the front lines responding to threats to our security.

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**About the Author**

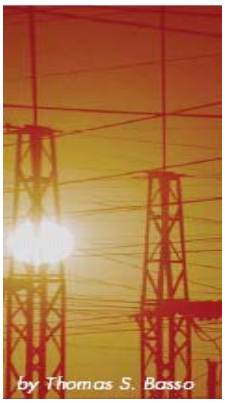
*Russell Richards is the lead engineer for the Center for Joint and Coalition Interoperability in the Interoperability Directorate, Defense Information Systems Agency. He has served in military or civilian capacities for more than 20 years, including several years as the DoD Information Architect, supporting DoD as well as other national defense ministries, U.S. federal organizations, and industry leaders in matters related to information technology and affiliated standards.*

[1]National Research Council, *Standards, Conformity Assessment, and Trade—Into the 21st Century* (Washington, DC: National Academy Press, 1995), p. 9.
[2]Open GIS Consortium, Inc., *The Importance of Open Interoperability Standards in Homeland Security*.
[3]Library of Congress, Congressional Research Service, *Homeland Security: Standards for State and Local Preparedness*, January 2, 2003.
[4]American National Standards Institute, "ANSI Forms Homeland Security Standards Panel as Coordination Body for Private and Public Sectors" [online article], February 5, 2003. Available from http://www.ansi.org/news_publications.
[5]See Note 3.
[6]See Note 3.
[7]The eGov Task Force specified that public safety personnel must be able to communicate with local, state, and federal agencies in the event of an emergency or other public safety response event. The task force indicated that the efforts of the Project SAFECOM partners will be focused on specific results, including effective, interoperable communications throughout government; integration across levels of governments; saved lives through quicker response and coordination; and realized cost savings through standardization and sharing. See http://snad.ncsl.nist.gov/fwuf/may02slides/wiesner.pdf.
**"Web addresses in the footnotes may not be current"**

## MODERNIZING OUR ELECTRIC GRID

### Distributed Resource Systems and Technology Standards Development

***By Thomas S. Basso***




*This article has been reprinted with permission from the American National Standards Institute (ANSI). The Article by Thomas S. Basso from National Renewable Energy Laboratory (NREL) was first Published in the Winter/Spring 2004 Issue of the Quarterly Magazine, ANSI Reporter.*

Consensus standards developed under an open and fair setting deserve credit for helping move our power industry from the electromechanical age to the digital age. Such development drives technology and business standardization, as well as providing means for assuring smoother navigation of the ongoing confluence of the energy industries and the information technology industries. To satisfy the substantive levels of our growing electricity needs, technology advances and electricity restructuring are prime factors contributing to the potential for smaller scale electric power systems, or distributed resources (DR).

Successful deployment of DR systems are methodically being realized by the dedicated professionals involved in moving the electric power industry forward — from electric generation to end-use energy efficiency advances — and new business models in the energy sector are making inroads in facilitating application of sound options for DR meeting our growing energy needs.

Distributed resources are sources of electric power not directly connected to bulk power transmission. DR are generally located next to and connected to the load being served, and DR includes both distributed generators (DG) and energy storage systems. More generally, distributed energy resources (DER) could include load management or energy management systems, and combined heat and power (CHP) systems that supply thermal as well as electric power.

Often, DR, DG, and DER are used interchangeably and should be discerned based on their context. (Editor's Note: see Standard Snapshot on page 6).

**Standards Development**

In October 2003, IEEE 1547™ (2003), *Standard for Interconnecting Distributed Resources with Electric Power Systems,* was designated as an American National Standard. Its culmination is a tribute to the commitment of the 444 working group and ballot group members composed of nearly equal balance among producer, general interest, and user interests. IEEE 1547 is the first in a family of interconnection standards for distributed resources from the Institute of Electrical and Electronic Engineers (IEEE). Other standards in the family currently underway are:

- IEEE P1547.1™, which will provide the detailed test procedures to prove or validate that interconnection specifications and equipment conform to the functional and test requirements of IEEE 1547.
- IEEE P1547.2™, which will provide technical background and application details to make IEEE 1547 easier to use. It will characterize various distributed resource technologies and their associated interconnection issues.
- IEEE P1547.3™, which will aid interoperability by offering guidelines for monitoring, information exchange and control among fuel cells, photovoltaics, wind turbines and other distributed generators interconnected with an electrical power system.
- IEEE P1547.4™, which will address engineering aspects of how local facilities could function as "electrical islands" providing power when utility grid power is not available.

IEEE 1547 is expected to have a significant effect on how the energy industry does business, and should influence the electrical distribution system to operate with distributed generators and two-way flow of electric energy. It gives

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utilities the framework they need to integrate power from DR. Quoting from the standard's abstract:

> *Traditionally, utility electric power systems (EPS-grid or utility grid) were not designed to accommodate active generation and storage at the distribution level. As a result, there are major issues and obstacles to an orderly transition to using and integrating distributed power resources with the grid. The lack of uniform national interconnection standards and tests for interconnection operation and certification, as well as the lack of uniform national building, electrical, and safety codes, are understood. IEEE Standard 1547 and its development demonstrate a model for ongoing success in establishing additional interconnection agreements, rules and standards on a national, regional and state level. IEEE Standard 1547 has the potential to be used in federal legislation and rule making, state public utilities commission (PUC) deliberations, and by over 3000 utilities in formulating technical requirements for interconnection agreements for distributed generators powering the electric grid.*

IEEE 1547 provides the mandatory functional technical requirements and criteria universally needed for interconnection, and that should be sufficient for most installations. Functional technical requirements are statements of what the system needs to do or what behavior the system must offer. In general, non-functional technical requirements address a specific property desired, or constraint on how the system will be implemented.

**International Standards for Electrical Systems**

International standards help improve global industrial efficiency and facilitate development of world trade. Further, conformity assessment and product certification schemes ensure a certified product has been manufactured and type-tested to well-established standards. The end-user is then assured the product meets quality standards and need not be concerned with further testing or evaluation of the product. However, in the international arena, harmonization of IEEE and International Electrotechnical Commission (IEC) standards has presented challenges. Fortunately, harmonization of such standards may prove easier in the future. IEEE and IEC have agreed on a dual-logo arrangement for IEC to adopt IEEE electronics, telecom, and power generation standards for international use.

Additionally, IEC Technical Committee 8 (TC 8), *System Aspects of Electrical Energy Supply*, has recently been reconstituted with a modified scope and purpose. The IEC TC 8 prepares and coordinates the development of standards to facilitate the functioning of electricity supply systems, which encompass transmission and distribution networks and includes interfaces with user installations (generators and consumers). The main TC 8 system aspects include electrical system reliability, connection practices, operation, network responsibility, metering, data exchange and balancing, communication, characteristics of energy supply, and terminology. TC 8 also prepares basic IEC publications related to these aspects and ensures consistency among IEC publications related to its scope. Shortly before TC 8 was being reinvigorated, IEC had enacted a *Joint Coordinating Group on Distributed Rural Electrification Systems* (JCGDRES). Due in part to decentralized electrification projects being implemented in developing countries, they recognized the need for standards to be developed and used as a reference for assessing the quality, acceptance, and operation of these electric systems.

In the past, the electric grid was not traditionally designed for two-way flow of power, especially at the distribution level. But even then, utilities and merchant power suppliers have worked out the approaches and interconnected with the grid.

**Technology Standardization**

As many readers of ANSI publications know, standards development and technology standardization provide the framework for economies of design, greater product and service quality, more interoperability, and better production and delivery efficiency, while helping safeguard against hazards. That framework often results in higher quality design and manufacture, creation and expansion of markets, increased competitiveness in industry, and facilitation of trade and commerce.

In the past, the electric grid was not traditionally designed for two-way flow of power, especially at the distribution level. But even then, utilities and merchant power suppliers have worked out the approaches and interconnected with the grid. That process often involved expensive, custom engineering and differing requirements based on each utility's requirements and for each utility commission's agreements. There was a lack of uniform national interconnection standards and tests for interconnection operation and certification — as well as the lack of uniform national building, electrical, and safety codes.

Effectively deploying distributed energy systems requires careful attention to ensuring compatibility with the existing grid. To accomplish that, DR systems and grid and interconnection technologies must satisfy numerous functions. Through technology evolution, we are seeing new application architectures and integrated technology platforms meeting requirements by providing complementary functions. While a suite of product offerings is already available today, more integrated and intelligent, less costly, and higher reliability solutions are continually being worked on.

**Modernizing the Grid**

Developing a modernized electric utility grid involving advanced operations offers sound solutions to meet our needs for reliable and cost effective energy. Using DR systems interconnected with that grid, integrated with customer energy management systems and coordinated with the grid operator, offers potential benefits to all involved. Approaches based on intelligent solutions consisting of high-value technology, information exchange, and technical services will provide enhanced interoperability, flexibility, and operational robustness among utility customers, the grid and loads. Further, integrated approaches and standardized interconnection systems would simplify conformance to standards, permitting, and rules, while promoting advanced communication and software platforms that enable grid intelligence.

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**Looking Forward**

The ANSI standards development consensus process that resulted in IEEE Standard 1547 successfully demonstrates a model for development of further national standards for moving technology application forward modernizing our nation's electric power system. In closing, 21st century technology advances along with improved business models facilitated by universal consensus standards should help us all afford next generation power options meeting our needs for reliable, secure, and cost effective electricity.

| **Uniformly Interconnecting DR Provides Shared Benefits** | |
|---|---|
| **Potential Consumer Benefits** | **Potential Grid Benefits** |
| • Clean energy<br>• Lower cost electricity<br>• Reduced price volatility<br>• Greater reliability and power quality<br>• Energy and load management<br>• Combined Heat and Power | • Reduced electric line loss<br>• Reduced T&D congestion<br>• Grid investment deferment and improved grid asset utilization<br>• Improved grid reliability<br>• Ancillary services, e.g., voltage support and stability, contingency reserves, and black start capability |
| *** Greater flexibility and energy security *** | |
| Proven technologies, customer choice, open market access, and easy interconnection is required to achieve these benefits. | |

**End Notes and References**


- IEEE 1547 series of standards development: http://grouper.ieee.org/groups/scc21
- The USNC Technical Advisory Group for IEC TC 8 is administered by the National Renewable Energy Laboratory, and IEC JCG DRES is chaired by NREL staff.
- NREL/SR-560-32459, *Distributed Energy Resources Interconnection Systems: Technology Review and Research Needs*
- NREL/BK-560-32865, *Universal Interconnection Technology Workshop Proceedings,* July 25-26, 2002, available at www.nrel.gov/publications


**Thomas S. Basso** is a Senior Scientist/ Engineer working at the National Renewable Energy Laboratory (NREL) for the NREL/DOE Distributed Energy and Electricity Reliability (DEER) Program. He serves as secretariat for IEEE SCC21 1547 standards and is Technical Advisor and Administrator for U.S. TAG/IEC TC 8 *System Aspects of Electrical Energy Supply*. Tom is also a member of the IEC Joint Coordination Group for Distributed Rural Electrification Systems and was a founding member and is an officer in the IEEE Denver Reliability Society.

Photo Credit his article: Sandia National Laboratory


A variety of factors can lead to a power failure, whether it is a natural disaster like a tornado or earthquake, or a larger series of events, like the massive Blackout of 2003 that left more than 50 million North Americans in the dark. For some businesses or facilities, it is essential to maintain power in emergency situations no matter the cause, and there are a number of sources other than the utility grid that can fill this need.

On-site electric power generation, or "distributed generation," is any method of producing power that will be used on or near the site at which it is generated. This includes many non-utility applications, from emergency standby sources, to peak shaving using other sources of energy to supplement the normal amounts delivered to customers during peak-use periods), and many others. It can even encompass alternative power sources such as wind, solar, and fuel cells.

The Electrical Generating Systems Association and the National Electrical Contractors Association, both ANSI members and accredited standards developers, have teamed up on American National Standard NECA/EGSA 404-2000, *Recommended Practice for Installing Generator Sets*, which describes installation procedures for generator sets used for on-site power production, including emergency applications. It is intended to define what is meant by installing equipment in a "neat and workmanlike manner" as required by the National Electrical Code (ANSI/NFPA 70), Section 110-12.

During the Blackout of 2003, hospitals, businesses, and many office and apartment buildings were able to generate their own electricity through the use of distributed generation technology. Distributed generation allows large consumers of electricity to generate their own power independent of local grids.

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# TOPICAL COMMITTEE DEVELOPMENTS

***By M. Norman Schwartz, Office of Nuclear and Facility Safety Policy, EH-22***

M. Norman Schwartz

## Combined Metrology/Accreditation Topical Committee Activities

The Combined Metrology/Accreditation Topical Committee held its annual meeting March 15 - 18, 2004. Barry Sachs of Pacific Northwest National Laboratory (PNNL) hosted the meeting. Twenty-nine attendees represented the DOE, DOE National Nuclear Security Administration (NNSA), and NNSA contractor laboratories. Recent efforts to revise the American National Standard ANSI/NCSL Z540.1-1994 (R2002), "Calibration Laboratories and Measuring and Test Equipment - General Requirements," headlined a variety of discussed topics. Efforts are underway to align this document with the internationally accepted ANSI/ISO/IEC 17025:2000 "General Requirements for the Competence of Testing and Calibration Laboratories." Principals from each of the thirteen laboratories represented at the meeting gave review presentations. The NNSA laboratories held a half-day workshop to consider the impact of recent changes to QC-1 (Rev. 10) and proposed adjustments to sections of the Primary Standards Laboratory Memorandum that governs: 1) methods of shipping measurement standards and test equipment , and 2) evaluation of test accuracy ratios.

## 2004 Fire Safety Workshop

The DOE/Contractor Fire Protection Workshop will be held this year in Las Vegas, Nevada, from June 21-25, 2004. Workshop presentations will be given on topics related to DOE carreer firefighters, fire protection engineers, and environment, safety and health (ES&H) supervisors responsible for overseeing DOE's fire protection program. A series of topical committee meetings involving Energy Facility Contractors' Group (EFCOG), Fire Safety Committee, and Fire Chiefs will take place concurrently with a select training seminar for either firefighters or fire protection engineers. Further information is available at: http://tis.eh.doe.gov/fire/workshop2004/.

## Activities of the Meteorology Topical Committee

***By M. Norman Schwartz, Office of Nuclear and Facility Safety Policy, EH-22, and Carl Mazzola, Certified Consulting Meteorologist, Shaw Environmental, Inc.***

In August 1998, the Technical Standards Program Office (TSPO) chartered the Department of Energy (DOE) Meteorology Topical Committee (MTC). The Committee's overarching mission is to facilitate interaction between DOE and DOE Contractor personnel with common interests in identifying and resolving meteorological standards-related issues for the DOE TSPO. Mr. Carl Mazzola, Certified Consulting Meteorologist, Shaw Environmental, Inc., is the Chairman of the MTC. The MTC operates under the oversight of the DOE Meteorological Coordinating Council (DMCC), a technically-oriented coordinating group of DOE and DOE contractors associated with meteorological programs at sixteen DOE facilities and national laboratories. Darryl Randerson, DOE NNSA Nevada Site Office, chairs the DMCC. Two of the many MTC objectives include developing and implementing new meteorological standards for the TSPO, and providing assistance to interested DOE offices regarding coordination and adoption of newly published meteorological standards. As the need arises, the MTC assists counterpart DOE topical committees (e.g., environmental restoration, radiological doses to biota) in the development and review of national and international technical standards.

A 30-member working group of subject matter experts in the atmospheric sciences, inclusive of members of the MTC, were involved in the development of a comprehensive meteorological data monitoring standard (i.e., ANSI/ANS-3.11 (2000), "American National Standard for Determining Meteorological Information at Nuclear Facilities"). The process took almost 4 years. This modern, state-of-the-art, well-written voluntary consensus standard (VCS) was approved on February 18, 2000. It has enjoyed widespread use in the public and private sectors over the past 4 years. The MTC is currently revising this standard to include recent advances in instrumentation and data handling. A final draft is due to the ANS-25 Consensus Subcommittee in May or June 2004. The MTC has reviewed the application of this standard relative to DOE meteorological programs, and the Topical Committee continues to recommend its use, as appropriate. The MTC also continues to assist DOE meteorological program managers with the adoption and subsequent implementation of this new VCS.

The MTC has formed working groups to begin the initial activities to develop three national standards that use meteorological data for analysis. Work on these standards was suspended in the 1980's, but the time is right to address the need for such standards. They are the following:

- ANSI/ANS-2.15: "Guidelines for Assessing Atmospheric Transport of Routine Release of Nuclear Reactor Effluent;"
- ANSI/ANS-2.16: "Guidelines for Assessing Atmospheric Transport of Accidental Release of Nuclear Reactor Effluent;" and
- ANSI/ANS-2.21: "Ultimate Heat Sink."

The MTC is performing a peer review capacity of an American Society of Testing and Materials standard associated with the use of SODARS, a remote sensing technique to acquire meteorological data in the vertical dimension. For further information on this effort or other MTC activities, contact Mr. Carl Mazzola (706.650.0939; carl.mazzola@shawgrp.com).

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**Search for New Topical Committees**

The Technical Standards Program continues to look for subject matter experts who would like to form a viable topical committee. Are you a member of a working group or technical group especially dealing with aspects of nuclear or non-nuclear safety that would like to be recognized across the DOE complex? Would you like the opportunity to share ideas with like-minded scientists and engineers in the Department in a time of scarce resources and be more involved in standards work? If you are part of such a group of subject matter experts that would like to affiliate with the TSP as a topical committee, contact M. Norman Schwartz, 301-903-2996, Norm.Schwartz@eh.doe.gov, or Mary Haughey, 301-903-2867, Mary.Haughey@eh.doe.gov.

# Welcome Aboard the TSMC!

The Technical Standards Managers (TSMs) are the backbone of the DOE Technical Standards Program! These knowledgeable individuals serve as their organization's standards point of contact and contribute to the coordination of Department-wide TSP activities. A great deal of their work time is spent in assuring that standards activities take place in a manner that will promote safe, economical, and efficient operations locally and across the DOE complex.

With nearly 90 active and mobile people involved in TSM activities, it can be a daunting task just to keep up with the retirements and reassignments affecting the TSM roster. This "Welcome Aboard" feature is designed to introduce you to the new TSMs and help you keep abreast of the rapidly changing make-up of the Technical Standards Managers' Committee (TSMC).

The following are the recent changes in the membership list.

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# DOE STANDARDS ACTIONS

## 1.0 DOE Technical Standards Projects

The complete list of all DOE Technical Standards projects and their status is available on the Technical Standards Program (TSP) web page at http://tis.eh.doe.gov/techstds/. To access these standards, go to our web page, click on "DOE Technical Standards," then choose Projects, Approved Standards, Recently Approved Standards, or Drafts for Review, as appropriate, on the left frame of the page.

### 1.1 DOE Technical Standards Recently Sent for Coordination

No entry was received for posting under this section during May 2004.

### 1.2 DOE Technical Standards Recently Published

The following DOE Technical Standard was recently published and posted on the TSP web site:

*Nuclear Safety Specialist Functional Area Qualification Standard*, DOE-STD-1183-2004, April 2004.

Copies are available on the TSP web site.

# NON-GOVERNMENT STANDARDS ACTIONS

### Note to Readers

The *Standards Actions* portion of this newsletter uses web links to the primary non-government Standards Development Organizations (SDOs) for access to their standards actions site. This is the first issue of the DOE Standards Actions implementing this proposal, which received overwhelming support from DOE Technical Standards Managers during May 2004.

## 2.0 Non-Government Standards

### 2.1 American National Standards Institute

American National Standards Institute (ANSI) publishes coordination activities of non-Government standards (NGS) weekly in ANSI Standards Action. Recent electronic copies are available on the ANSI Web Site at http://www.ansi.org/news_publications/periodicals/standards_action/standards_action.aspx?menuid=7. Refer to ANSI Standards Action for the complete list of changes and new publications, standards developing organizations, and information about submitting comments. Electronic delivery of selected documents is available through ANSI at http://webstore.ansi.org.

ANSI lists standards actions on new and revised American National Standards and International Standards Organization (ISO) Standards.

### 2.2 American Society of Mechanical Engineers (ASME)

ASME lists recently published standards on the ASME web site at http://www.asme.org/codes/newdocuments.html. Refer to the ASME web site for the complete list of changes and new publications, standards developing organizations, and information about submitting comments.

### 2.3 ASTM

The listing of approved ASTM standards actions during May 2004 is accessible at http://www.astm.org/cgi-bin/SoftCart.exe/SNEWS/MAY_2004/acta_may04.html?L+mystore+yfzx4804+1085583988 . Refer to the ASTM web site for the complete list of new publications.

### 2.5 National Fire Protection Association (NFPA)

The May 2004 NFPA News lists NFPA standards available for comment, newly proposed standards, newly issued standards, and the call for members on committees. View it at http://www.nfpa.org/PDF/NFPANews0504.pdf?src=nfpa.


## *The Standards Forum and Standards Actions*

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