



November 2003

THE STANDARDS FORUM AND STANDARD ACTIONS

Your publication for news about the DOE Technical Standards Program

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TSP Manager's Note - November 2003

Major Changes for the DOE Technical Standards Program

In recent years, Federal budget reductions have been manifested as steady reductions in funding and staffing for the DOE Technical Standards Program (TSP) Office and for our contractor support at ORNL. To compensate, the TSPO has transitioned all TSP functions from Oak Ridge National Laboratory to Environment, Safety and Health (EH), and as of October 1, 2003, the DOE TSPO is now run entirely from EH and the Office of Nuclear and Facility Safety Policy (EH-22), with support from EH's Information Management (EH-33).

A Salute to Don Williams and ORNL: The DOE Technical Standards Program (TSP) Office has received outstanding support from ORNL in general, and from Don Williams and his staff in particular, in managing and maintaining TSP standards development services for the DOE over the past 10 years. ORNL has provided general support for the DOE TSP going back over 35 years. During this time, the DOE TSP has achieved a reputation for excellence and service across DOE and with other Federal agencies and U.S. standards development organizations (SDOs). Our heartfelt thanks and appreciation goes to Don Williams and his staff (present and past) for a superb job in helping EH develop, operate, and maintain the DOE TSP. It has been a profound experience to be able to work daily with dedicated, competent professionals who understand the needs and applications of technical standards, understand the critical role of standards in safety, and do their best to help the TSP function as a highly competent service organization that actually benefits DOE. The best part of working with Don and his staff is that they have made the job fun – actually an enjoyable, useful and successful experience – and they are truly good folks! Over the years, we have received only high compliments and praise from DOE standards preparing activities and our Technical Standards Managers' Committee (TSMC) members from DOE headquarters, field, and contractor organizations. Success is about coordination, cooperation, lessons learned, and continuous improvement that Don and his staff brought, and we will strive to continue that tradition.



Major Changes - New Staff Assignments: The transition of many TSP functions from ORNL to EH has provided us with many opportunities to learn new applications and expand our knowledge in all standards management areas! The EH TSPO now manages the Technical Standards Information System (TSIS) data base, compiling and entering data, updating information, and preparing routine reports and analyses of DOE standards functions (much of it important to business needs, and required by OMB). We also manage and document standards projects, standards coordination, and standards approval processes, and maintain and conduct related distribution and notifications, coordinating with preparing activities, and providing the final "QA" of format and style for approved standards.

With the consolidation of the TSPO within EH 22 (with much help from EH-33, Information Management!), we are diversifying and overlapping functional assignments. As the TSP Manager, I'll be delegating more to the TSPO staff, with an eye on eventual retirement. Programs should be run on process, not on personality (please, no remarks!). You'll be dealing more with Mary Haughey and Jeff Feit of EH-22 in the future on program-level issues. Other TSPO staff you'll become familiar with include Norm Schwartz, Satish Khanna, Donna Carr and Kathy Easley. If you need to register a new DOE standards project, you should still contact your organizational Technical Standards Manager (TSM). However, you can get help from the EH TSPO through our new Program E-mail at: TechStdPgm@hq.doe.gov. We'll strive to provide "one-stop" service to meet your standards needs, although the first month is going to definitely be a learning process!

There will be few functional changes in TSP Procedures (TSPPs), since these have been pretty well polished over the years, but we will have new staff performing the functions, and our experience will be minimal in many cases. We eventually need to address the recent DOE reorganizations, transition from ORNL, the Central Registry, and adopting RevCom in the TSPPs, once these are "debugged". We are developing two new TSPPs, one related to software quality assurance (SQA) and another for Functional Area Qualification Standards (FAQS) under DOE Technical Qualification Program (TQP) initiatives. The TSPO is helping DOE and the QA staff with the Central Registry for Toolbox Codes, in response to the SQA initiatives recommended by the Defense Nuclear Facilities Safety Board. The TSPO also serves as a nominal TSM for the TQP for coordinating FAQS development and revision.

The EH TSPO now also prepares and publishes the *Standards Action* monthly, and *Standards Forum* quarterly. The staff is working diligently to master Microsoft Publisher 2002 and TSIS/Microsoft Access 2000 in addition to managing form and content. If you have an article (or activity) that would be of interest to the DOE standards community, contact us and it may end up as *Forum* material. DOE Topical Committees (TCs) can also use the Standards Forum to publicize their functions and activities, or to provide background for forming a new TC.

The TSP Home Page will be modified in the near future to meet format standardization guidelines initiated at the DOE level by the CIO. We're looking at the Beta version now, and we'll try to keep the content familiar enough to preclude mayhem among our users (averaging over 2,000 hits a month!). We plan to establish more direct access to high use areas, such as Standards, Forms, Procedures, Archives, and provide prominent links to other DOE standards groups, including Information Technology, Technical Qualification Program, Energy Efficiency, and hydrogen (along with an enhanced search capability).

And - good news - there will soon be a new "button"! As I promised in prior editions of the *Standards Forum*, we are modifying and adopting RevCom - the on-line review and comment system employed for the review of DOE Directives for TSP use (tentatively labeled, "RevCom for TSP"). With one click, you will reach "RevCom for TSP" and be able to review and comment on DOE Technical Standards, Handbooks, and Specifications, or perhaps other documents generated by our DOE Topical Committees, and also see what other commenters have done! "RevCom for TSP" will appear to be structurally similar to Directives RevCom, but underneath, it will accommodate the more rigorous TSP Procedures and

information management requirements of the TSP. We also may rename the "Revcom for TSP" version to avoid confusion; perhaps "StandCom" or "TSPCom" or something similar.

The TSPO also plans (hopes?) to add another button called, "DOE-Wide Standards Service" (with a little luck and the blessings of EH-1, the CIO, and S-1). This button would provide access (through a vendor service) to most of the voluntary consensus standards (VCSs) available from 60 or so SDOs (e.g., ASTM, ASME, IEEE, ANS) of interest to DOE technical community— for all DOE Federal and contractor organizations (for their DOE-related work)! This could eventually be adopted to provide "hotlinks" with VCSs cited in DOE Technical Standards, Directives, and RevCom.

[Note to Senior Managers: In addition to providing broader, more direct access to more VCSs for more DOE staff, this would also save DOE up to \$2M annually over present multi-procurement actions and credit card purchases, and simplify procurement from 22 or so across DOE at present (for just one standards vendor by example) to a single multi-year centrally managed procurement. The Request for Proposal, Statement of Work, Cost Analyses, Justifications, etc., are awaiting action by some cost-conscious, safety-minded senior DOE manager!]

Well, this highlights some of the major ongoing changes within the DOE TSP. The TSPO will continue to support DOE business needs, promote the use of VCSs across DOE, provide essential DOE standards development and maintenance services, and maintain open communications and coordination across DOE Federal and contractor organizations, with other Federal agencies, and with national standards development communities. Your representatives with the DOE TSPO - the TSMC - meet monthly via telecon to plan and review DOE standards activities, review procedures, and identify new issues. If you have a TSP issue, contact your organizational TSM (click on News/Contacts, TS Managers' List, DOE Technical Standards Managers to find yours), or contact us at our new TSPO Mailbox at: TechStdPgm@hq.doe.gov.

Standards Development:

Are You At Risk?

By Amy A. Marasco

Standards do everything from solving issues of product compatibility to addressing consumer safety and health concerns. They form fundamental building blocks for international trade that allow for the systemic elimination of non-value-added product differences (thereby increasing a user's ability to compare competing products), cost reduction, and often the simplification of product development.

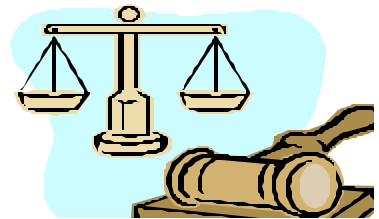
But standards that have market relevance can attract mischief.

While many participants in the process to develop these globally relevant documents understand that the specified game rules for participation provide for fairness and due process, most are not fully aware of the legal issues that can arise when these rules are not properly followed.

Legal Precedence

Claims have been asserted against standards developers-particularly those who develop safety-

related standards-on the grounds that a developer promulgated an allegedly unsafe or otherwise insufficient standard.



Courts generally have held that standards developers do not owe a "duty" to a person injured by a product or by a set of circumstances to which the developer's standard applies unless the developer 1) acted in bad faith, 2) the standards were to some degree compulsory, or 3) the developer had the power to control the operations of the companies that manufactured the particular products involved.

Since late 1996, there have been at least three decisions in which the court held that a standards developer does owe a duty of care to those affected by the application of the developer's standards. In the first case (Snyder v. American Association of Blood Banks), the plaintiff alleged that he had contracted the AIDS virus from a transfusion of blood received during open-heart surgery. The plaintiff brought claims of strict liability, breach of warranty, negligence, and consumer fraud against the American

Association of Blood Banks, Bethesda, Maryland, which was identified as the governing body of a significantly self-regulated industry.

Though the plaintiff's operation was at a time when the precise cause and mode of transmission of AIDS were still matters of contention among health professionals, the court noted that AABB was recognized as the leader in setting blood-banking standards. A jury found AABB negligent for not recommending that its member blood banks conduct surrogate testing of donated blood for HIV. Further, because a blood bank cannot operate unless it is accredited by AABB and maintains that accreditation by complying with AABB standards, the court based its decision on common-law negligence principles, evaluating the foreseeability of injury, nature of the risk, relationship of the parties, and impact on the public.

Both on appeal and in a subsequent court case, the decisions indicated that AABB owed a duty of care to people receiving blood or blood products from its member blood banks and that it had breached this duty to the plaintiffs.

In 1998, a jury in the Superior Court of the State of Washington heard the case of a plaintiff who became a paraplegic after diving into a backyard pool (*Menelly v. S.R. Smith, Inc. et al*). In this case, the plaintiff alleged that the standards developer (the National Spa and Pool Institute, Alexandria, Virginia) was negligent in setting its residential pool safety standards. Though during the trial there was a factual debate as to whether the pool and diving board in question were in compliance with any relevant standard, in summary fashion the trial court agreed that NSPI did owe a duty of care in developing standards and disseminating information about them. The plaintiff was awarded \$11 million in damages, 60 percent of which was to be paid by the standards developer.

Differing Opinions

Several more recent decisions have been issued holding that standards developers do not owe a duty of care to ultimate consumers. In one such case (*Commerce and Industry Insurance Co. v. Grinnell Corp.*), the plaintiffs asserted that the National Fire Protection Association, Quincy, Massachusetts, was liable for the damage resulting from a warehouse fire. The plaintiffs alleged that

NFPA failed to provide sufficient warnings and was negligent in promulgating safety standards relating to the storage of warehouse merchandise.

The court found that the relationship between NFPA and the occupant of the building in question was too remote to warrant the imposition of such a duty. Noting that NFPA does not list, inspect, certify, or approve any products or materials for compliance with its voluntary standards, the court found that NFPA has no control over whether or which jurisdictions adopt its voluntary standards. The court also dismissed the plaintiffs' claims that NFPA was negligent in developing the standards in question.

Another decision again involved the American Association of Blood Banks (*N.N.V. v. American Association of Blood Banks*). In this 1998 California State court suit the plaintiff was a child who contracted AIDS in 1984 from a blood transfusion. The arguments raised were quite similar to those raised in the previous cases.

The lower court's decision to grant summary judgment to AABB, which was upheld by the California Court of Appeals, was based on the ground that AABB did not owe a duty of care to third parties such as the plaintiff when it voluntarily undertook to set blood-bank safety standards. Among other things, the court based its decision on the lack of scientific evidence presented by the plaintiff to show that there was "a close connection between AABB's recommendations and his injury; he presented only speculation that adoption of the particular standards might have prevented his infection." The court further noted that the problem of how best to test blood for the AIDS virus was, at the time in question, still a matter of contested debate in the medical and scientific community. If under then-current medical thinking there were acceptable alternative approaches, it would be unfair in hindsight to require that the medical community always make the correct selection.

In addition to finding the reasoning in AABB's precedent case flawed, the California court further noted that as a matter of public policy, society benefits from the work done by private sector standards developers: "Leaving these matters solely in the hands of government agencies, which is a possible result of imposing liability here, would not further the public's interests nor guarantee the safety of the nation's blood supply. It would limit debate and would deprive medical practitioners, scientists, and governmental agencies of a valuable resource."

Implications for the Future

The entire voluntary consensus standards system will be severely hampered in its ability to continue its valuable work if standards developers are forced to incur substantial legal and other costs in defending themselves from antitrust and negligence claims.

It can be argued that courts should not impose on standards developers a duty of care to end users absent some control by the developer over the related manufacturers' or producers' implementation of the standards or else intentional misconduct on the part of the developer.

It is also arguable that the public interest is both served and protected if a standard is developed according to common principles of transparency, openness, balance, relevance, consensus, and coherence. Adherence to these principles during the development process typically provides sufficient evidence that the resulting standard has a substantive reasonable basis for existence and that it meets the needs of producers, users, and other interest groups; standards developers accredited by ANSI are required to meet these requirements for approval of American National Standards. Though due process in itself is not a defense to legal claims, it is a safeguard that prevents mischief from taking hold and improperly influencing the resulting standard.

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Best Practices for a DOE Site Engineering Standards Program

By Tobin Oruch

DOE sites and elements anticipating significant new construction or modifications will benefit from an engineering standards program. Such a program captures lessons learned related to improving safety and lowering life cycle cost in site-specific, standardized design criteria, standards, and specifications. "Reinventing the wheel" is avoided.

When properly sized and staffed, the program will pay for itself many times over. This is because DOE usually owns and occupies facilities for many decades (versus the common build-and-sell practice in commercial real estate). This long-term ownership means standardization and better initial/ongoing build quality will pay back in lower maintenance and life cycle costs (standardization can simplify maintenance, training, spare parts, etc).

I will be presenting 15 key elements of a successful DOE site standards program. Virtually all the concepts presented are practiced here at LANL, and other several sites have also implemented many of these concepts. They were presented to the members of the EFCOG Engineering Standards Group on May 20, 2003 who concurred with them as being appropriate for submission to the DOE/EFCOG "Best practices" webpage on the EFCOG homepage.



Tobin Oruch

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Best Practices for an Engineering Standards Program

1. Actively participate in the EFCOG Engineering Standards Group to ensure efficiency and currency with latest thinking.

Working in a vacuum is not likely to result in an ideal and efficient program. Within the DOE complex, most of the leaders involved in using or developing and maintaining an engineering standards program are members of the EFCOG Engineering Standards Subgroup. We meet periodically and share ideas and our standards.

Participation in the DOE Technical Standards Program phone conferences and its topical committees is also helpful.

2. Follow (mandate) national codes and standards whenever possible, plus DOE Standards where appropriate.

As long-time readers of *The Standards Forum* well know, the U.S. Government has directed its agencies to rely on voluntary consensus standards (VCSs) first and foremost (through Public Law 104-113 and OMB Circular A-119; and DOE elements through Order 252.1). When VCSs don't exist, DOE has developed its own standards that should be used by DOE sites and contractors. Site standards programs should invoke VCSs and DOE Standards when appropriate (not just when they're in the site's contract, but when it's the right thing to require).

3. Augment above with site-specific requirements and guidance at a level justified by cost-benefit.

It's rarely enough to simply follow VCSs and DOE Standards. There are also DOE Orders and federal, state, and local laws and regulations that must be followed and should be invoked by the standards program. Beyond those, every site will have lessons learned in design and construction that should be captured in the standards program. These often relate to improved safety measures or lowering of long-term operations and maintenance cost through such things as improved initial quality, standardized designs, and equipment/spare parts/training standardization. Other appropriate drivers for having site-specific requirements include energy efficiency and pollution prevention, adoption of recommended practice guidelines like IEEE color books, and environmental factors such as altitude, temperature, humidity, and soil resistance, and distance to water courses and the public.

4. Include design criteria, drafting standards, master/guide specs, procurement specs, and standard details/drawings in the program.

A comprehensive site standards program will maintain many products. A standard design criteria document will ensure that all projects and modifications follow the codes, standards, and site-specific requirements discussed above. Drafting standards ensure that drawings and sketches are consistent and maintainable. Master guide specifications capture detailed work product requirements (acceptable products and work execution).

Procurement specifications capture product or service and quality requirements. Like specifications, standard details or drawings capture work product requirements but in a graphical format and one designers and drafters can immediately employ.

5. Use a consensus process of site representatives to review/maintain site standards.

Again, working in a vacuum is ill-advised. Having a technical committee composed of senior subject matter experts from across the site participate in the development and maintenance of site standards will invariably result in a better product than one created by a single person – and the site is much more likely to buy into the program knowing they have representation in the process.

6. Publish site standards (and useful links/documents) on an external website to facilitate dissemination to A/Es and other DOE sites.

An internal-only server or website may get the standards to the whole site but necessitates a lot of extra work to continually distribute them to outside architect/engineer firms (e.g., CDs, ftp sites). A website outside the firewall solves this problem and also provides a convenient place to furnish addition web-links of interest. A growing number of DOE sites publish their standards this way which not only helps them but facilitates real-time sharing between sites.

7. Maintain standards current through a periodic review process.

Out-of-date standards cause problems for both the users and maintainers. Thus, they increasingly fail to serve their intended purpose of long term cost savings and can begin to jeopardize the credibility of the entire program. With the state of the art in design and construction changing more rapidly all the time, periodic review is essential. A good goal is every three years at a minimum. If the program maintainers encourage feedback from users then most of the problems will be identified periodically and can be dealt with sooner. Having the standard design criteria broken down into small, individually issued sections facilitates more frequent revision.

8. Follow the CSI Manual of Practice policy of only saying something once in best place (as appropriate).

The Construction Specifications Institute (csinet.org) publishes standards for construction specifying. Their flagship product is a book called the *Manual of Practice*, a guide that covers nearly everything there is to know about specifications – from writing them to using them. One of its major tenets is that a document set like a project's specifications and drawing package should not repeat itself anywhere. This should also be applied to site standards. Worse than just making the standards set longer and more tedious to read, repetition invariably causes conflicts that result in problems of interpretation and compliance. It is better to just give a requirement once in the most logical place. Cross-reference to the requirement if need be to raise awareness of it, but do not overdo this practice since it adds an upkeep workload (and chance of cross-referencing error).

9. For design criteria-type standards, organize by UniFormat II (CSI/ASTM endorsed), or at least cross-reference it; also, justify and document bases for requirements.

UniFormat is a structure for organizing information on facilities system by system. It's a VCS, too, published by CSI and as ASTM E1557. It's increasingly used nationwide and is a pretty good way to organize design criteria (and conceptual design reports). If you don't have access to ASTM, there's a summary at csinet.org (search on "UniFormat Lite") and an in-depth presentation at <http://fire.nist.gov/bfrlpubs/build99/PDF/b99080.pdf>.

Justifying and documenting bases for requirements is another best practice. In today's reality of tight budgets, every requirement is subject to questioning. By documenting the rationale behind it you can capture the source,

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be it a DOE order, lessons learned, or engineering study. Bases can be documented with footnoting, end-noting, hidden comments, or a separate commentary document.

10. For specifications, follow the CSI *Manual of Practice* for numbering, content, and format.

In addition to its content and style guidance, the MOP also includes CSI's *MasterFormat*, *SectionFormat*, and *PageFormat* standards that address numbering and formatting a set of specifications. *MasterFormat* is most familiar as it's the document that sets forth the 16 divisions (e.g., Div 15 is Mechanical), though that's to change in a major way a year from now.

11. For drafting standards and standard drawings, follow the *National CAD Standard* as appropriate.

The NCS is a fairly new, first-of-its-kind effort to bring the benefits of standardization to construction drawings. It's published by the National Institute of Building Sciences along with support from CSI and the American Institute of Architects (AIA). You can read more at <http://www.nationalcadstandard.org/>. The NCS is a good starting point for a site-specific drafting manual.

NOTE: For machined parts, other standards may be a more appropriate basis (e.g., Liebhich's *Drawing Requirements Manual* published by Global Engineering).

12. Ensure widespread management support and user awareness through promotion.

Support for the standards program by the program's own management is essential so that sufficient funding is allocated (after all, an efficient standards effort really pays back). Support by management beyond the standards program organization is equally important since it's the key to compliance (and ignored standards are like not having them). Likewise, without user awareness compliance will not occur either. Promotion of the site standards program through training, newsletters, and other avenues keeps it in front of people.

13. Sponsor training in use of national and site-specific codes, standards, and specifications.

There's a whole universe of standards out there, and it's hard to navigate through them all without some help. There are hundreds of thousands of national standards, applicable state and local building codes, DOE orders and standards, and site-specific standards and specifications. Access to these may be scattered across several webpages and library locations. Then there are other logistical issues like interpretations, variances, and exceptions – especially with guide specification and standard detail editing. The typical user needs help with all of this, and an introduction to standards course will provide this and can yield grassroots supporters of the program. Then, to follow on, teaching discipline-specific standards courses to engineers, designers, and even craft personnel will increase awareness, knowledge, and compliance.

14. Ensure compliance through assessments.

Whether performed by the standards program staff, a QA organization, or design reviewers, it's important to have assurance that standards are being followed. Assessment is also a requirement of every QA program.

15. When site has nuclear facilities, ensure standards are produced and maintained in compliance with 10 CFR 830 quality requirements.

The design and construction of nuclear facilities is required to follow a QA program that complies with Subpart A of 10 CFR 830, *Nuclear Safety Management*. So it stands to reason that the engineering standards that are the foundation of these efforts need a nuclear-grade pedigree. This means they need to be produced by people trained and qualified to do the work, reviewed independently, and handled with sound document control and records management principles.

Clearly, there's a lot to maintaining a top-rate site engineering standards program. Nevertheless, experience has shown that sites that do so reap benefits that pay back many times over.

Tobin Oruch is the Engineering Standards Manager at the Los Alamos National Laboratory. He is also the founder and current chair of the Engineering Standards Subgroup of the Group Engineering Practices Working Group, which is part of the DOE Energy Facility Contractors Group (EFCOG.org). He can be reached at 505-665-8475 or oruch@lanl.gov.



The EFCOG Engineering Standards Group at a recent workshop

TOPICAL COMMITTEE DEVELOPMENTS

Norman Schwartz, EH-22

There are currently 26 registered DOE Topical Committees (TC) shown on the Technical Standards Program (TSP) Home Page. The Accreditation TC and the Metrology TC have combined and issued a joint charter. Work is proceeding toward the creation of a Software Quality Assurance (SQA) Topical Committee.

A Safety by Design Topical Committee Workshop was held in Germantown, Maryland, on September 11, 2003. Twenty subject matter experts attended representing Headquarters Offices of Environment, Safety and Health, Environmental Management, and Science as well as field offices in Albuquerque, Chicago, Los Alamos, and Yucca Mountain. Environmental Management (EM) presentations showcased information technology in Technology Safety Data Sheets (TSDS) that provide users with safety and health aspects of remedial technologies employed by EM during cleanup of contaminated DOE sites. Extensive discussion revealed a spectrum of strategies for the formulation of the topical committee. Some expressed concern at the narrow focus of the potential group and thought its scope should be much broader and more involved with "safety" in general. The draft charter was reviewed and comments provided. The resulting final draft has been released for concurrence by workshop participants. Steve Bossart from the National Energy Technology Laboratory in Morgantown, West Virginia, volunteered to be Interim Chairman of this proposed Safety by Design Topical Committee until the next meeting within the next 6 months.

The TSP continues to support efforts at bringing approximately three dozen training standards under the DOE Technical Qualification Program (TQP) within the auspices of the TSP. Eleven of these training standards, known as Functional Area Qualification Standards (FAQS) are in draft for coordination on the TSP Home Page. Eight FAQS are shown as recently approved standards with official numbers. There are already eleven of these standards in the general list of DOE standards on the TSP Home Page. The TQP is working with an end-of-calendar year deadline for final approval of all the FAQS. The status of the remaining unapproved FAQS changes daily. Electrical Systems is final and received an official document identifier number. The Facility Maintenance Management FAQS was posted to the Home Page for coordination and coordination has begun on the Construction Management FAQS. The Technical Training FAQS was submitted for TSP processing.

To enhance coordination among DOE's nuclear safety experts, the TSP continues to look for groups of nuclear safety subject matter experts to form topical committees that are counterparts to American Nuclear Society subcommittees, in particular. Are you a member of a working group or technical group especially dealing with aspects of 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 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 Richard Serbu, 301-903-2856, Richard.Serbu@eh.doe.gov.

NOTE:

Due to transition from ORNL to EH, we are publishing this November 2003 issue as a combination of *THE STANDARDS FORUM & THE STANDARDS ACTIONS*. The following pages relate to activities related to Standards Actions. For the next publication, we will revert to issuing these Standards Newsletters at their regular quarterly and monthly intervals.

DOE Technical Standards Projects Initiated

Complete listings of all DOE Technical Standards projects and their status are given on the Technical Standards Program (TSP) Web site (<http://tis.eh.doe.gov/techstds/>). To access these lists from the home page, click on "DOE Technical Standards," then click on "Projects" in the left-hand frame to show the links to the project lists. No new projects were initiated this month.

DOE Technical Standards Recently Sent for Coordination

The appropriate Technical Standards Managers (TSM) will request specific reviewers to comment on these drafts. The full text of the documents is available on the TSP Web site. If you wish to comment on these document, please notify your TSM.

- *Computer Software Functional Area Qualification Standard*, Project No.: TRNG-0040, contact M. Norman Schwartz, EH-22, phone 301-903-2996, fax 301-903-6172 and e-mail Norm.Schwartz@eh.doe.gov. Comments due by September 24, 2003.
- *Radiation Protection Functional Area Qualification Standard*, Project No.: TRNG-0041, contact M. Norman Schwartz, EH-22, phone 301-903-2996, fax 301-903-6172 and e-mail Norm.Schwartz@eh.doe.gov. Comments due by December 5, 2003.
- *Facility Maintenance Management Functional Area Qualification Standard*, Project No.: TRNG-0042, contact M. Norman Schwartz, EH-22, phone 301-903-2996, fax 301-903-6172 and e-mail Norm.Schwartz@eh.doe.gov. Comments due by December 8, 2003.

NOTE: This document is not applicable to contractor personnel so they are not expected to comment.

- *Construction Management Functional Area Qualification Standard*, Project No.: TRNG-0043, contact M. Norman Schwartz, EH-22, phone 301-903-2996, fax 301-903-6172 and e-mail Norm.Schwartz@eh.doe.gov. Comments due by December 22, 2003.

NOTE: This document is not applicable to contractor personnel so they are not expected to comment.

- *Technical Training Functional Area Qualification Standard*, Project No.: TRNG-0044, contact M. Norman Schwartz, EH-22, phone 301-903-2996, fax 301-903-6172 and e-mail Norm.Schwartz@eh.doe.gov. Comments due by December 29, 2003.

NOTE: This document is not applicable to contractor personnel so they are not expected to comment.

DOE Technical Standards Recently Published

The following DOE Technical Standards were recently published and posted on the TSP Web site:

- DOE-STD-1073-2003, Configuration Management, October 2003.
- DOE-HDBK-1139/3-2003, Chemical Management, Volume 3, September 2003.



- DOE-HDBK-1163-2003, Integration of Multiple Hazard Analysis Requirements and Activities, October 2003.
- DOE-STD-1164-2003, Aviation Safety Officer, Functional Area Qualification Standards, September 2003.
- DOE-STD-1165-2003, Aviation Manager Functional Area Qualification Standard, September 2003.
- DOE-STD-1166-2003, Deactivation and Decommissioning Functional Area Qualification Standard, September 2003.

Published DOE Standards (DOE Standards, Specifications, Handbooks, and Technical Standards lists) may be obtained as follows:

DOE employees and DOE contractors may obtain copies from the ES&H Technical Information Services, U.S. Department of Energy; phone 800-473-4375, fax 301-903-9823.

Subcontractors and the general public may obtain copies from the U.S. Department of Commerce, Technology Administration, National Technical Information Service, Commerce, Technology Administration, National Technical Information Service, Springfield, Virginia 22161; phone: 703-605-6000, fax: 703-605-6900.

Copies are also available on the TSP Web site.

Non-Government Standards

American National Standards Institute

The American National Standards Institute (ANSI) publishes coordination activities of non-Government standards (NGS) biweekly in *ANSI Standards Action*. Recent electronic copies (no hardcopies are produced) are available on the ANSI Web Site at http://web.ansi.org/rooms/room_140. Electronic back copies are available to ANSI members only. For information on site membership, ask your local ANSI contact. For information on individual or group ANSI membership, contact Susan Bose at 212-642-4948 or sbose@ansi.org.

Hardcopy version of published non-Government standards listed in this section may be obtained from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112; phone: 800-854-7179; fax: 303-397-2740, global@iht.com, <http://global.iht.com>. Electronic delivery of selected documents is available through ANSI at <http://webstore.ansi.org>. Copies of the listed draft standards and the procedure for commenting on them may be obtained by contacting the standards developing organization.

The following listings are extracted from *ANSI Standards Action* and are representative of NGS development activities that may be relevant to DOE operations. Refer to *ANSI Standards Action* for a more extensive listing of changes and new publications, standards developing organizations, and additional information about submitting comments. Additional information on ANSI activities and available non-Government standards can be found on the ANSI Web site, <http://www.ansi.org> or through the National Standards System Network, <http://www.nssn.org>. **The following American National Standards are currently in coordination (comment due dates follow each entry):**

API (American Petroleum Institute)

New National Adoptions

- BSR/API Spec 6A/ISO 10423-200x, Specification for Wellhead and Christmas Tree Equipment (national adoption with modifications)- November 30, 2003.
- BSR/API Spec 6D, ISO 200x, Specification for Pipeline Valves (national adoption with modifications)-November 30, 2003.
- BSR/API Spec Q1-200x, Specification for Quality Programs for the Petroleum, Petrochemical and Gas Industry (identical national adoption)- November 30, 2003.
- BSR/API RP 13B-2/ISO 10414-2-200x. Standard Procedure for Field Testing Oil-Based Drilling Fluids (identical national adoption)- December 8, 2003.

- BSR/API Spec 9A/ISO 10425-200x. Specifications for Wire Rope (identical national adoption)-December 8, 2003.

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

Revisions

- BSR/ASRAE 103-200x, Method of Testing for Annual Fuel Utilization Efficiently of Residential Central Furnaces and Boilers (revision of ANSI/ASHRAE 103-1993)-November 30, 2003.
- BSR/ASHRAE/IESNA 90.1ab-200X, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23 2003.
- BSR/ASHRAE / IESNA 90.1t-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1v-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1w-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1y-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1z-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1ae-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE/IESNA 90.1x-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-November 23, 2003.
- BSR/ASHRAE 37p-200x, Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment (new standard)-

December 8, 2003.

- BSR/ASHRAE 72-200x, Method of Testing Open and Closed Commercial Refrigerators and Freezers (revision, redesignation and consolidation of ANSI/ASHRAE 72-1998 and ANSI/ASHRAE 117-2002)-December 8, 2003.

Supplements

- BSR/ASHRAE 15a-200x, Safety Standard for Refrigeration Systems (supplement to ANSI/ASHRAE 15-1994)-December 8, 2003.
- BSR/ASHRAE 62aa-200x, Ventilation for Acceptable Indoor Air Quality (supplement to ANSI/ASHRAE 62-2001)-December 8, 2003.
- BSR/ASHRAE 90-2.h-200x, Energy-Efficient Design of Low-Rise Residential Buildings (supplement to ANSI/ASHRAE 90.2-2001)-December 8, 2003.
- BSR/ASHRAE 902i-200x, Energy-Efficient Design of Low Rise Residential Buildings (supplement to ANSI/ASHRAE 90.2-200x)-December 8, 2003.
- BSR/ASHRAE 90-1q-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.
- BSR/ASHRAE/IESNA 90.1aa-200x, Energy Standard for Buildings Except Low-Rise Residential buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.
- BSR/ASHRAE/IESNA 90.1ac-200x, Energy Standard for Buildings Except Low-Rise Residential buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.
- BSR/ASHRAE/IESNA 90.1ad-200x, Energy Standard for Buildings Except Low-Rise Residential Buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.
- BSR/ASHRAE/IESNA 90.1af-200x, Energy Standard for Buildings Except Low-Rise Residential buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.
- BSR/ASHRAE/IESNA 90.1ag-200x, Energy Standard for Buildings Except Low-Rise Residential buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.

- BSR/ASHRAE/IESNA 90.1ah-200x, Energy Standard for Buildings Except Low-Rise Residential buildings (supplement to ANSI/ASHRAE/IESNA 90.1-2001)-December 8, 2003.

ASTM (ASTM International)

The URL to search for scopes of ASTM standards is <http://www.astm.org/dsearch.htm>. For reaffirmations and withdrawals, order from: Customer Service, ANSI. For new standards and revisions, order from Faith Lanzetta, ASTM. For all ASTM standards, send comments (with copy to BSR) to: Faith Lanzetta, ASTM.

New National Adoptions

- BSR/ISO 2431-200x, Paints and Varnishes - Determination of Flow Time by Use of Flow Cups (identical national adoption)-December 1, 2003.

ASC X9 (Accredited Standards Committee X9, Incorporated)

New National Adoptions

- BSR X9.105 Part 3-200x, Financial transaction card originated messages-Interchange messages specifications - Part 3)-December 8, 2003.

Revisions

- BSR X9.24 Part 1-200x, Retail Financial Services Symmetric Key Management—Part 1: Using Symmetric Techniques (revision of ANSI X9.24 Part 1-2002)-December 8, 2003.

Draft Standards for Trial Use

In accordance with Annex B: Draft American National Standards for trial use of the ANSI Essential Requirements, the availability of the following draft standard for trial use is announced:

Trial use period: October 15, 2003 through October 15, 2003

HFES (Human Factors & Ergonomics Society)

- BSR/HFES 200-200x, Human Factors Engineering of Software User Interfaces (TRIAL USE STANDARD).

AAMI (Association for the Advancement of Medical Instrumentation)

- ANSI/AAMI/IEC TIR 62296, Consideration of unaddressed safety aspects in the Second Edition of IEC 60601-1 and proposals for new requirements (technical report).

ASME (American Society of Mechanical Engineers)

Revisions

- BSR/ASME B16.9200x, Factory-Made Wrought Steel Butt Welding Fittings (revision of ANSI/ASME B16.9-2003)-November 30, 2003.
- BSR/ASME B30.8-22x, Floating Cranes and Floating Derricks (revision of ANSI/ASME B30.8-1999)-November 30, 2003.
- BSR/ASME PVHO-1-200x, Safety Standard for Pressure Vessels for Human Occupancy (revision of ANSI/ASME PVHO-01-2002)-December 8, 2003.
- BSR-/ASME B30.1-200x, Jacks (revision of ANSI/ASME B30.1-1009)-December 8, 2003.
- BSR/ASME B30.3-200x, Construction Tower Cranes (revision of ANSI/ASME B30.3-1996)-December 8, 2003.
- BSR/ASME B30.14-200x, Side Boom Tractors (revision of ANSI/ASME B30.14-1996)-December 8, 2003.
- BSR/ASME B30.18-200x, Stacker Cranes (Top or Under Running Bridge, Multiple Girder with Top or Under Running Trolley Hoist) (revision of ANSI/ASME B30.18-1998)-December 8, 2003.
- BSR/ASME B107.23M-200x, Pliers, Multiple Position, Adjustable (revision of ANSI/ASME B107.23M-1997)-December 8, 2003.
- BSR/ASME BPVC Revision-200x, ASME Boiler and Pressure Vessel Code (12/12/03 Meeting) (revision of ANSI/ASME BPVC Revision: 2001 Edition)-December 8, 2003.
- BSR/ASME B30.5-200x, Mobile and Locomotive Cranes (revision of ANSI/ASME B30.5-2000)-December 1, 2003.

AWWA (American Water Works Association)**Revisions**

- BSR/AWWA C104-0200x, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water (revision of ANSI/AWWA C104/A21.4-1995)-December 23, 2003.

CCPA (ASC B212) (Cemented Carbide Producers Association)**New Standards**

- BSR/ISO 5609-200x, Boring bars for indexable inserts—Dimensions (new standard)-December 16, 2003.

New National Adoptions

- BSR/ISO 11529-1-200x, Milling cutters- Designation-Part 1: Shank type end mills of solid or tipped design (identical national adoption)-December 16, 2003.
- BSR/ISO11529-2-200x, Milling cutters- Designation—Part 2—Shank type and bore type milling cutters with the indexable inserts (identical national adoption)-December 16, 2003.

IEEE (ASC N42) (Institute of Electrical and Electronics Engineers)**New Standards**

- BSR N42.32-200x, Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security - December 8, 2003.
- BSR N42.33-200x, Radiation Detection Instrumentation for Homeland Security - December 8, 2003.
- BSR N42.34-200x, Performance Criteria for Hand-held Instruments for the Detection and Identification of Radionuclides (new standard)-December 8, 2003.

ISA (ISA-The Instrumentation, Systems, and Automation Society)**New National Adoptions**

- BSR/ISA 84.00.01, Part a (IEC 61511-1 Mod)-200x, Functional Safety - Safety instrumented systems for the process industry sector-Sector Part 1: Framework, definitions, system, hardware and

software requirements (national adoption with modifications and revision of ANSI/ISA S84.01-1996)-December 1, 2003.

- BSR/ISA 84.00.01, Part 2 (IEC 61511-2 Mod)-200x, Functional safety-Safety instrumented systems for the process industry sector—Part 2: Guidelines for the application of IEC 61511-1 (national adoption with modifications and revision of ANSI/ISA S84.01-1996)-December 1, 2003.
- BSR/ISA 84.00.01, Part 3 (IEC 61511-3 Mod)-200x, Functional Safety - Safety instrumented systems for the process industry sector - Part 3: Guidance for the determination of the required safety integrity levels (national adoption with modifications and revision of ANSI/ISA S84.01-1996)-December 1, 2003.

NECA (National Electrical Contractors Association)**New Standards**

- BSR/NECA 410-200x, Installing and Maintaining Liquid-Filled Transformers - December 30, 2003.

Projects Withdraw 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:

NFPA (ASC B93) National Fluid Power Association)

- BSR/(NSFPA) T3.10.8.3-1990, Hydraulic fluid power - Filter element - Method for determining the quantity of built-in contaminant (new standard).

NEMA (ASC C136) (National Electrical Manufacturers Association)**Revisions**

- BSR C136.1-200x, Roadway and Area Lighting Equipment - Filament Lamps - Guide for Selection (revision of ANSI C136.1-1979 (R1996))-December 16, 2003.
- BSR C136.2-200X, Roadway and Area Lighting Equipment - Luminaire Voltage Classification

(revision of ANSI C136.2-1996)-
December 16, 2003.

- BSR C136.16-200x, Roadway and Area Lighting Equipment - Enclosed, Post Top-mounted luminaries (revision of ANSI C136.16-1995) - December 16, 2003.

TIA (Telecommunications Industry Association)

New Standards

- BSR/TIA 1019-200x, Structural Standards for Steel Gin Poles Used for Installation of Antenna Towers and Antenna Supporting Structures - December 8, 2003.

Reaffirmations

- BSR/TIA 530A-1992 (R200x), High Speed 25-Position Interface for Data Terminal Equipment, and Data Circuit-Terminating Equipment, Including Alternative 26-Position Connector (reaffirmation of ANSI/TIA 530-A1992 (R2003))-December 8, 2003.
- BSR/TIA 561-1990 (R200x), Simple 8-Position Non-Synchronous Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange (reaffirmation of ANSI/TIA 561-1990 (R2003))-December 8, 2003.
- BSR/TIA 562-1989 (R200x), Electrical Characteristics for an Unbalanced Digital Interface (reaffirmation of ANSI/TIA 562-1989) (R2003))-December 8, 2003.
- BSR/TIA 574-1990 (R200x), 9-Position Non-Synchronous Interface Between Data Terminal Equipment and Data Circuit Terminating Equipment Employing Serial Binary Data Interchange (reaffirmation of ANSI/TIA 574-1990 (R2003))-December 8, 2003.

UL (Underwriters Laboratories, Inc.)

New Standards

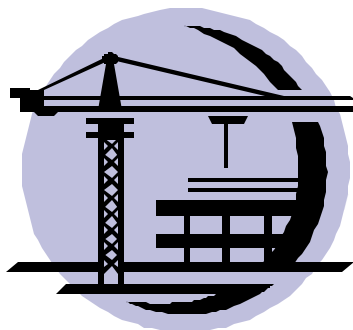
- BSR/UL 499-200x, Standard for Safety for Electric Heating Appliances (Bulletin dated October 24, 2003)-November 30, 2003.
- BSR/UL 793-200x, Standard for Safety for

Automatically Operated Roof Vents for Smoke and Heat - November 30, 2003.

- BR/UL 1559-200x, Standard for Safety for Insect-Control Equipment-Electrocution Type (Bulletin dated October 31, 2003) - November 30, 2003.

Revisions

- BSR/UL 122-200x, Photographic Equipment (Bulletin dated November 7, 2003) (revision of ANSI/UL 122-1997)-November 30, 2003.
- BSR/UL 6A-200x, Electrical Rigid Metal Conduit-Aluminum and Stainless Steel (Bulletin dated 10/24/03) revision of ANSI/UL6A-2003)-November 30, 2003.
- BSR/UL 1703-200x, Standard for Safety for Flat-plate Photovoltaic Modules and Panels (Bulletin dated 10/15/2003) (revision of ANSI/US1703-2003)-December 8, 2003.
- BSR/UL 507-200x, Electric Fans (Bulletin dated October 24, 2003) (revision of ANSI/UL 507-200x)-December 1, 2003.
- BSR/UL 2044-200x, Commercial Closed-Circuit Television Equipment (bulletin dated 10/17/03) (revision of ANSI/UL 2044-1994)-December 16, 2003.
- BSR/UL 1086-200x., Standard for Safety for Household Trash Compactors (Bulletin dated 10/10/03) (revision of ANSI/UL 1086-1999)-December 1, 2003.



Correction

Incorrect Comment Deadline

In the 10/10/03 issue of *Standards Action*, BSR/ASME PTC 19.5-200x and BSR/ICC A117.1-200x were submitted for a **30-day public review**. However, due to a computer error, the wrong date was posted as the comment deadline for these two standards.

The correct deadline was **November 9, 2003**.



THE STANDARDS FORUM AND STANDARDS ACTIONS

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NOTE:

Due to transition from ORNL to EH, we are publishing this November 2003 issue as a combination of *THE STANDARDS FORUM* & *THE STANDARDS ACTIONS*. For the next publication, we will revert to issuing these Standards Newsletters at their regular quarterly and monthly intervals.