

**ORDER**

**DOE O 252.1A**

Approved: 2-23-2011

# **TECHNICAL STANDARDS PROGRAM**



**U.S. DEPARTMENT OF ENERGY**  
Office of Health, Safety and Security



## TECHNICAL STANDARDS PROGRAM

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1. PURPOSE. This Order establishes the DOE Technical Standards Program (TSP) to accomplish the following:
  - a. promote the use of Voluntary Consensus Standards (VCS) by the Department of Energy (DOE) as the primary method for application of technical standards, except where inconsistent with law or otherwise impractical, per Office of Management and Budget (OMB) Circular No. A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, and Public Law (P.L.) 104-113, the National Technology Transfer and Advancement Act of 1995;
  - b. sustain and manage the TSP including technical standards development, information, activities, issues, and interactions;
  - c. encourage and support participation in DOE topical committees and VCS development organizations; and
  - d. provide DOE interface with the Interagency Committee on Standards Policy, other Federal agencies, and national and international standards development organizations on broad technical standards issues and activities.
2. CANCELLATION. DOE O 252.1, *Department of Energy Technical Standards Program*, dated 11-19-99, and DOE G 252.1-1 *Technical Standards Program Guide*, dated 11-19-99, are canceled. Cancellation of a directive does not, by itself, modify or otherwise affect any contractual or regulatory obligation to comply with the directive. Contractor Requirements Documents (CRDs) that have been incorporated into a contract remain in effect throughout the term of the contract unless and until the contract or regulatory commitment is modified to either eliminate requirements that are no longer applicable or substitute a new set of requirements.
3. APPLICABILITY.
  - a. Departmental Applicability. All DOE elements, including Government-Owned and Government-Operated (GOGO) elements, engaged in technical standards activities, such as the planning, development, coordination, approval, issuance, revision, cancellation, conversion, or periodic review of DOE technical standards are to follow this Order, except as stated in paragraph 3c.

The Administrator of the National Nuclear Security Administration (NNSA) must assure that NNSA employees comply with their responsibilities under this directive. Nothing in this directive will be construed to interfere with the NNSA Administrator's authority under section 3212 (d) of P.L. 106-65, to establish Administration-specific policies, unless disapproved by the Secretary.

- b. DOE Contractors. Except for the equivalencies/exemptions in paragraph 3.c. the Contractor Requirements Document (CRD), Attachment 1, sets forth requirements of this Order that will apply to contracts that include the CRD. The CRD must be included in contracts whose scope of work includes assisting DOE with the development, or review, of DOE technical standards or revisions.
- c. Equivalencies/Exemptions. Equivalencies and exemptions to this Order are processed in accordance with DOE O 251.1C, *Departmental Directives Program*.
  - (1) Equivalency. In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at Title 50 United States Code (U.S.C.) sections 2406 and 2511, and to ensure consistency throughout the joint Navy/DOE Naval Nuclear Propulsion Program, the Deputy Administrator for Naval Reactors (Director) will implement and oversee requirements and practices pertaining to this directive for activities under the Director's cognizance, as deemed appropriate.
  - (2) Exemption. This Order does not apply to the Bonneville Power Administration (BPA), in accordance with Secretarial Delegation Order Number 00-033.00B to the BPA Administrator and Chief Executive Officer, dated 7-20-09.

#### 4. REQUIREMENTS.

- a. Where available and appropriate or adaptable for DOE purposes, VCSs must be used to support DOE activities, including the design, construction, testing, modification, operation, decommissioning, decontamination, and remediation of DOE's facilities, in lieu of developing DOE Technical Standards, except where use of VCSs is inconsistent with law or impractical.
- b. DOE Technical Standards may only be developed when (1) suitable VCSs do not exist; (2) existing VCSs are impractical or are not appropriate for the intended application; or (3) a new VCS cannot be readily developed through a standards development organization. Appendix A describes the DOE Technical Standard Document types. The TSP established by this Order must be used in accordance with the process described in Appendix B when developing, coordinating, approving, and maintaining DOE Technical Standards.
- c. A Department Standards Executive (representing the Secretary of Energy) must be designated, in accordance with OMB A-119, to coordinate the overall technical standards activities and participation in interagency technical standards policy development under the TSP.
- d. A Technical Standards Manager (TSM) must be designated for each DOE headquarters and field organization to serve as the point-of-contact for the TSP.

- e. Participation in VCS activities conducted in support of DOE missions and functions must be reported through a designated TSM and the TSP [use Form DOE F 1300.2 (05/2010)].
- f. DOE Elements with technical or programmatic interest in, or elements that will be affected by, the content of DOE Technical Standards must have the opportunity to participate in development and review processes for those technical standards.

5. RESPONSIBILITIES.

a. Deputy Secretary of Energy.

Appoints the Department Standards Executive in accordance with OMB A-119 to represent DOE on the Interagency Committee on Standards Policy and coordinates implementation of the policies and requirements of OMB A-119 and P.L. 104-113 within DOE.

b. Chief Health, Safety and Security Officer.

- (1) Designates a DOE TSP Manager and establishes the programs, requirements, and guidance necessary to effectively and efficiently manage, coordinate, and report technical standards activities conducted on behalf of DOE and ensures the participation of interested DOE elements.
- (2) Designates a TSM to serve as the organization's point of contact for technical standards activities and to coordinate with the TSP by participating in the TSM Committee (TSMC).
- (3) Ensures through its TSM that technical standards identified or developed by elements of the Office of Health, Safety and Security for DOE-wide use are products of the TSP or recognized standards development organizations.
- (4) Recommends to the Secretary of Energy a Department Standards Executive in accordance with OMB A-119 to represent DOE on the Interagency Committee on Standards Policy and coordinates implementation of the policies and requirements of OMB A-119 and P.L. 104-113 within DOE.

c. Department's Central Technical Authority (CTA). Fulfills the requirements and responsibilities of Central Technical Authorities related to the directives process as established in DOE O 410.1, *Central Technical Authority Responsibilities Regarding Nuclear Safety Requirements*. Nothing in this Order should be construed as contrary to or rescinding the requirements, processes, roles and responsibilities previously published in DOE O 410.1.

d. Cognizant Secretarial Officers, Senior Program Officials, and Field Office Managers.

- (1) Manage their organizations' participation in the DOE TSP.
- (2) Designate TSMs to serve as the organizations' points of contact for technical standards activities and to coordinate with the TSP by participating in the TSMC.
- (3) Ensure, through their TSMs, that technical standards identified or developed by their elements for DOE-wide use are coordinated, to the extent appropriate, with their respective contractors, and TSMs utilize the TSP or a recognized standards development organization.
- (4) Use appropriate VCSs in lieu of developing internal DOE Technical Standards to support DOE missions and functions, except where inconsistent with law or otherwise impractical.
- (5) In partnership with their organization's TSM and the DOE TSP, maintain technical standards for which their organization has responsibility (e.g., responding to Sunset Review Reports in a timely manner).
- (6) Identify contracts to which the CRD should apply and notify the cognizant contracting officers.

e. Department Standards Executive.

- (1) Manages DOE compliance with the technical standards requirements of P.L. 104-113 and OMB A-119 on behalf of the Secretary of Energy through the TSP described in this Order.
- (2) Coordinates overall DOE Technical Standards activities.
- (3) Coordinates DOE participation in interagency technical standards policy development and voluntary consensus standards development.
- (4) Promotes the goals of OMB A-119.

f. Technical Standards Program Manager.

- (1) Serves as the overall manager of day-to-day operations and program planning and development activities of the TSP.
- (2) Manages overall DOE implementation of the technical standards requirements of P.L. 104-113 and OMB A-119 through the TSP.

- (3) In partnership with TSMs, screens all TSP projects (new draft standards, revised draft standards, and standard cancellations) to ensure that they meet the intent of a DOE technical standard and are not duplicative of existing, adequate VCSs.
- (4) Coordinates overall DOE Technical Standards development and reviews activities conducted by TSMs.
- (5) Conducts routine meetings with the DOE TSMC to help develop and utilize DOE's Technical Standards Program procedures (TSPPs) and identify TSP needs and issues.
- (6) Establishes TSPPs as needed, with concurrence from TSMs, and makes them available for DOE-wide use.

g. Technical Standards Managers.

- (1) Serve as organization points-of-contact for technical standards activities.
- (2) Coordinate organization participation in the TSP in accordance with the TSPPs.
- (3) Participate with the TSMC in cooperation with the DOE TSP Manager.
- (4) Conduct and inform the TSP Manager of any technical standards activities in accordance with the requirements of this Order.
- (5) Keep their program Secretarial Officers (PSOs) informed as to all technical standards activities that may be of concern to them.
- (6) Support implementation of P.L. 104-113 and OMB A-119 within DOE.
- (7) In partnership with the Technical Standards Program Manager, screen all TSP projects to ensure that they meet the description of a technical standard, as provided in Appendix A of this Order, and are not duplicative of existing, adequate VCSs, allowing only those projects that meet that intent to proceed past the project initiation phase.
- (8) In partnership with Cognizant Secretarial Officers, Senior Program Officials, Field Office Managers, and the DOE TSP, respond to all TSP requests, including the maintenance of technical standards for which their organization has responsibility (e.g., responding to Sunset Review Reports in a timely manner).

h. Contracting Officers. Incorporate the CRD into contracts in a timely fashion upon notification of its applicability.

6. REFERENCES.

- a. P.L. 104-113, National Technology Transfer and Advancement Act of 1995, dated 3-7-96.
- b. OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, dated 2-10-98.
- c. DOE O 251.1C, *Departmental Directives Program*, dated 1-15-09.
- d. DOE P 450.2A, *Identifying, Implementing and Complying with Environment, Safety and Health Requirements*, dated 5-15-96.
- e. *DOE Technical Standards Program Procedures* (TSPPs), dated 7-1-09. Note: Available on the DOE TSP website ([www.hss.energy.gov/nuclearsafety/ns/techstds/](http://www.hss.energy.gov/nuclearsafety/ns/techstds/)).
- f. Response to DNFSB Letter of March 7, 1991, Recommendations of DNFSB Regarding Standards Development, Watkins to Conway, dated 5-13-91, regarding Recommendation 91-1.
- g. DOE P 450.4, *Safety Management System Policy*, dated 10-15-96.
- h. DOE G 450.4-1B, *Integrated Safety Management System Guide*, dated 3-1-01.
- i. DOE O 410.1, *Central Technical Authority Responsibilities Regarding Nuclear Safety Requirements*, dated 8-27-07.
- j. DOE O 426.1, *Federal Technical Capability*, dated 11-19-09.
- k. DOE F 1300.2 (05-10), *Record of Non-Government Standards Activity*, Link: <http://www.cio.energy.gov/records-management/forms.htm>.

7. DEFINITIONS.

- a. Voluntary Consensus Standards: standards developed or adopted by voluntary consensus standards bodies, both domestic and international.
- b. Technical Standards Program: DOE program to promote the use of Voluntary Consensus Standards and to develop and maintain DOE Technical Standards that are necessary.



8. CONTACT. Office of Nuclear Safety, Quality Assurance and Environment,  
301-903-0471.

BY ORDER OF THE SECRETARY OF ENERGY:



DANIEL B. PONEMAN  
Deputy Secretary



## **APPENDIX A**

### **TECHNICAL STANDARD DOCUMENT TYPES**

The technical standards documents defined and managed by the Technical Standards Program (TSP) include DOE Standards, DOE Handbooks, and DOE Specifications.

1. DOE STANDARDS.

- a. Provide specific standardized approaches, methodologies, technical criteria, or other information on accomplishing a task, developing a plan, and/or performing a calculation or assessment to implement a DOE requirement.
- b. Provide a common shared approach or methodology for implementing a DOE requirement such that its implementation is consistent across DOE programs and operations.
- c. Can be made mandatory via DOE regulatory or contractual provisions.

2. DOE HANDBOOKS.

- a. Provide a compilation of good practices, lessons-learned, or reference information that serve as resources on specific topics.
- b. Provide general, textbook-type information on a variety of subjects.

3. DOE SPECIFICATIONS.

- a. Support repetitive acquisitions of products or items.
- b. Describe essential technical requirements for purchasing material.



**APPENDIX B**  
**PROCESS FOR INITIATING, DEVELOPING, COORDINATING, APPROVING, AND**  
**MAINTAINING DOE TECHNICAL STANDARDS**

1. INITIATING AND DEVELOPING TECHNICAL STANDARDS.

DOE Technical Standards (TSs) are initiated and developed as a means of implementing DOE requirements when a disciplined technical methodology or criteria are needed and appropriate Voluntary Consensus Standards (VCSs) do not exist. The process for initiating and developing DOE TSs is as follows:

- a. The Preparing Activity (PA) identifies a need for a DOE TS, prepares a Project Initiation Request to request to start a project to develop the DOE TS, and consults with the organization's Technical Standards Manager (TSM) about the project. The Project Initiation Request must identify related and potentially applicable VCSs and provide justification why these are not adequate for DOE needs. The Project Initiation Request must be approved by the PA's Senior Line Manager (SLM), who is the Cognizant Secretarial Officer, designated Senior Program Official, DOE Federal Technical Capability Panel (FTCP) Chair, in the case of FTCP Functional Area Qualification Standards (FAQS), or Field Office Manager.
- b. The Technical Standards Program Manager (TSPM) must review the Project Initiation Request for completeness and if complete, send it out for coordination to all applicable TSMs for 15 days.
- c. The PA must resolve all non-concurrences received from commenting TSMs on the Project Initiation Request before the project may be approved. Where non-concurrences cannot be resolved with TSMs, a dispute resolution process will be used where the non-concurrence issues are elevated to the responsible SLMs. All applicable organizations must concur before a DOE TS project may be initiated.
- d. If the Project Initiation Request receives support from all applicable TSMs, the TSPM will assign a project number, and notify the DOE community that a new project has been initiated.
- e. The PA must prepare the initial draft DOE TS with the help of a writing team as necessary.

2. COORDINATING TECHNICAL STANDARDS.

Draft new, revised, and canceled DOE TSs are coordinated using the TSP RevCom system. They can receive either full or limited coordination, depending on the level of review required. The process for coordinating DOE TSs is as follows:

- a. The PA must send the draft DOE TS, along with a coordination memorandum approved by the SLM, in accordance with paragraph 1.a. above, to the Technical Standards Program Manager (TSPM).
- b. The TSPM must prepare the draft DOE TS for coordination in TSP RevCom and determine the proper level of review (full or limited coordination) based on how the DOE TS will be used once it is approved. Full coordination draft DOE TSs are made available for review for 60 calendar days, to TSMs throughout the DOE complex, including contractor organizations. Limited coordination draft DOE TSs are made available for review for 30 calendar days to specific organizations within DOE for which the TS will be applicable.
- c. TSMs must identify the appropriate subject matter experts (SMEs) to review the draft DOE TSs that are released for their review in TSP RevCom.
- d. The PA must respond to and resolve all essential comments submitted by SMEs (nominally within 30 days), and provide a redline strikeout version of the final draft DOE TS for release in the TSP RevCom concurrence phase (nominally within 10 days).
- e. The PA must resolve all non-concurrences received from commenting organization TSMs before the TS may be approved. Where non-concurrences cannot be resolved with TSMs, a dispute resolution process will be used where the non-concurrence issues are elevated to the responsible SLMs. All applicable organizations must concur before a DOE TS may be approved as applicable to that organization. (Note: Some technical standards require CTA concurrence per DOE Order 410.1.)

3. APPROVING DOE TECHNICAL STANDARDS.

DOE TSs are approved by the PA's SLM, or in the case of DOE FTCP FAQs, approved by the DOE FTCP Chair.

- a. The PA must send the approved DOE TS, along with the accompanying approval memorandum, signed by the SLM, or the DOE FTCP Chair in the case of DOE FTCP FAQs to the organization's TSM (in the case of DOE FTCP FAQs, the DOE FTCP TSM).
- b. The TSM must conduct a format review to make sure that the approved DOE TS is ready for posting, and send the approved DOE TS to the TSP.
- c. The TSPM must perform a final format review and then post the document on the TSP website as an approved DOE TS. The TSP will inform the DOE community of the posting through the TSP newsletter bi-monthly publication.

4. MAINTAINING DOE TECHNICAL STANDARDS.

There are several types of maintenance activities that may need to be performed for DOE TSs: revisions, change notices, reaffirmations, cancellations, reinstatements, and in-activations for new design. Anyone, including DOE TS users, may identify the need for TS maintenance activities. The following process applies to all of the above cases.

- a. The PA must periodically review assigned DOE TSs to determine if maintenance action is needed. If the PA is notified by the TSP about required maintenance through a 5-year sunset review report, the PA must perform the scheduled maintenance on the DOE TS.
- b. After the PA determines that maintenance action is needed, with approval of the SLM, or DOE FTCP Chair for DOE FTCP FAQs, and concurrence of the TSM, the PA must submit a formal memorandum to the TSPM explaining the PA's intention to perform maintenance on an assigned DOE TS.
- c. The TSPM will announce the maintenance activity in the periodic TSP publication.
- d. Development, coordination, and approval of maintenance actions (revised DOE TSs, reaffirmed DOE TSs, canceled DOE TSs, reinstated DOE TSs, or in-activations) must proceed in accordance with paragraphs 1, 2, and 3 above, except that only revisions, cancellations, and in-activations require new project numbers. Change Notices may be used to transmit non-technical changes that affect less than 25 percent of the DOE TS.

5. TECHNICAL STANDARDS PROGRAM PROCEDURES.

The TSPM may develop supporting procedures and forms for implementing this process, with the review and approval of the TSMs.





**ATTACHMENT 1**  
**CONTRACTOR REQUIREMENTS DOCUMENT**  
**ORDER 252.1A, TECHNICAL STANDARDS PROGRAM**

Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this contractor requirements document (CRD). The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements.

In the performance of this contract, the contractor, when participating in the development of Department of Energy (DOE) Technical Standards, conducting technical standards review activities, and selecting technical standards for use to support assigned DOE missions and functions, must:

1. Select, use, and adhere to appropriate voluntary consensus standards (VCSs), except where use of VCSs is inconsistent with law or impractical. (Note: VCSs are defined as standards developed or adopted by voluntary consensus standards bodies, both domestic and international.)
2. Participate as appropriate in development and review of those DOE Technical Standards where the contractor has technical or programmatic interests, or will be affected by the content of DOE Technical Standards under development, or as directed by the Contracting Officer.
3. Designate and provide support for a coordinator for technical standards activities, including identification of the appropriate Subject Matter Experts to review draft DOE Technical Standards.
4. Report participation in VCS activities conducted in support of DOE missions and functions through the designated DOE Technical Standards Manager [use Form DOE F 1300.2 (05/2010)].