

Standards Actions

Technical Standards Program Newsletter

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U.S. DEPARTMENT OF
ENERGY

OFFICE OF
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TECHNICAL STANDARDS ACTIVITIES

DEPARTMENT OF ENERGY ISSUES STANDARD 3009-2014

The Department of Energy (DOE) issued DOE Standard (STD)-3009-2014 (revision of DOE-STD-3009-1994), *Preparation of Nonreactor Nuclear Facilities Documented Safety Analysis*, on November 12, 2014. DOE-STD-3009 is one of the most important standards in DOE's nuclear safety program as it is the primary safe harbor standard used for implementing Title 10 Code of Federal Regulations, Part 830, *Nuclear Safety Management*, Subpart B, *Safety Basis Requirements*, for hazard analysis, accident analysis, and safety control selection for DOE's nuclear facilities.

Many experts and practitioners from across the DOE complex contributed to this significant revision of the Standard. The main purpose of the revision was to capture experience and lessons learned over the past 20 years since its issuance. This revision also reflects changes to design and safety analysis requirements in other updated DOE directives and standards including: (1) DOE-STD-1189-2008, *Integration of Safety into the Design Process*; (2) DOE Order 420.1C, *Facility Safety* (issued 12/4/2012); (3) DOE-STD-1020-2012, *Natural Phenomena Hazards Analysis and Design Criteria for DOE Facilities*; and (4) DOE-STD-1628-2013, *Development of Probabilistic Risk Assessments for Nuclear Safety Applications*. In addition, this revision clarifies existing requirements and expectations for safety analysis, consistent with the Department's Implementation Plan in response to the Defense Nuclear Facilities Safety Board Recommendation 2010-1, *Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers*, issued September 26, 2011.

The new DOE-STD-3009-2014 will be required to be used in developing documented safety analyses (DSAs) for the following: (1) new DOE nuclear facilities; (2) major modifications to existing DOE nuclear facilities; and (3) existing DOE nuclear facilities with off-site mitigated dose estimates for postulated accidents that are over the Evaluation Guideline. Specific requirements for this are being incorporated into a Page Change to DOE Order 420.1C, *Facility Safety*, which is currently in final concurrence. All nuclear facilities will have the opportunity to

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move to the new Standard for future DSA revisions and to review the methods and lessons in the new Standard for use and application. To support accident analysis, the Standard development team is also developing an Accident Analysis Handbook that will be out for DOE review in 2015.

The Standard development team conducted an initial roll-out training session at the Energy Facility Contractors Group, Safety Analysis Working Group Workshop in October in Pleasanton, CA. This training focused on the differences between DOE-STD-3009-2014 and DOE-STD-3009-1994. A Headquarters roll-out training session was conducted in Germantown, MD in December 2014. Five more roll-out training sessions over the next six months are planned at the following sites: Savannah River, Richland, Albuquerque, Oak Ridge, and Idaho Falls. The Standard development team will be working with the Program Offices to finalize plans for these sessions and will announce them when they are finalized.

The revised Standard can be found at the following link: <http://energy.gov/ehss/downloads/doe-std-3009-2014>.

For more information or for assistance in implementing the revised Standard, please contact Garrett Smith at 301-903-7440, or garrett.smith@hq.doe.gov.

*This article was written by **Garrett Smith**, Director, Nuclear Safety Basis and Facility Design, Office of Nuclear Safety, Office of the Associate Under Secretary for Environment, Health, Safety and Security, Department of Energy; and by **David Compton**, Principal Consultant, Project Enhancement Corporation.*

UPCOMING MEETINGS & CONFERENCES

American Society of Mechanical Engineers Board on Nuclear Codes and Standards

When: February 18-19, 2015
Where: Annapolis, MD

Waste Management 2015 Conference

When: March 15-19, 2015
Where: Phoenix, AZ

Advances in Nuclear Fuel Management V

When: March 29-April 1, 2015
Where: Hilton Head, SC

International High-Level Radioactive Waste Management "Real World Solutions for Integrated Management of Used Fuel and High-Level Waste"

When: April 12-16, 2015
Where: Charleston, SC

2015 American Nuclear Society Joint International Conference on Mathematics and Computation, Supercomputing in Nuclear Applications, and the Monte Carlo Method

When: April 19-23, 2015
Where: Nashville, TN

American Society of Mechanical Engineers 2015 Annual Meeting

When: June 5-10, 2015
Where: Jacksonville, FL

American Nuclear Society Annual Meeting Nuclear Technology: An Essential Part of the Solution

When: June 7-11, 2015
Where: San Antonio, TX

National Fire Protection Association Conference and Expo

When: June 22-25, 2015
Where: Quincy, MA

To learn more about the DOE Technical Standards Program or to view the *Standards Actions* Newsletters, visit the Web site:

<http://energy.gov/ehss/services/nuclear-safety/department-energy-technical-standards-program>

TECHNICAL STANDARDS ACTIVITIES

DOE TECHNICAL STANDARDS UPDATE

The following is an overview of recent technical standards actions. A complete list of on-going Department of Energy technical standards actions can be found on the “Monthly Status Reports” posted on the Technical Standards Program Web site: energy.gov/ehss/monthly-status-reports.

DOE Technical Standards Project Registrations

- DOE Standard (STD)-3011-2002, *Guidance for Preparation of Basis for Interim Operations Documents* (Proposed Revision)
Contact: Chris Chaves **Phone:** 301-903-5999
Office of Nuclear Safety Basis and Facility Design (AU-31)
- DOE-STD-1120-2005, *Integration of Environment, Safety, and Health into Facility Disposition Activities* (Proposed Revision)
Contact: Chris Chaves **Phone:** 301-903-5999
Office of Nuclear Safety Basis and Facility Design (AU-31)
- DOE-STD-1107-1997, *Knowledge, Skills, and Abilities for Key Radiation Protection Positions at DOE Facilities* (Proposed Revision)
Contact: Judy Foulke **Phone:** 301-903-5865
Office of Worker Safety and Health Policy (AU-11)
- DOE-STD-3025-2007, *Quality Assurance Inspection and Testing of HEPA Filters* (Proposed Revision)
Contact: Mary Haughey **Phone:** 301-903-2867
Office of Quality Assurance (AU-33)
- *Commercial Grade Dedication Application Handbook* (Proposed New Document)
Contact: Duli Agarwal **Phone:** 301-903-3919
Office of Quality Assurance (AU-33)

DOE Technical Standards Posted in RevCom

- DOE-STD-3020-2005, *Specifications for HEPA Filters Used by DOE Contractors* (Proposed Revision)
Contact: Subir Sen **Phone:** 301-903-6571
Office of Quality Assurance (AU-33)
- DOE-STD-1083-2009, *Processing Exemptions to Nuclear Safety Rules and Approval of Alternative Methods for Documented Safety Analysis* (Proposed Reaffirmation)
Contact: Mary Haughey **Phone:** 301-903-2867
Office of Quality Assurance (AU-33)
- DOE-STD-1029-1992, *Writer's Guide for Technical Procedures* (Proposed Cancellation)
Contact: Earl Hughes **Phone:** 202-586-0065
Office of Nuclear Facility Safety Programs (AU-32)

Project Justification Statement Posted in RevCom for 15-day Review

- *Clearance and Release of Personal Property from Accelerator Facilities* (Proposed New Document)
Contact: Scott Davis **Phone:** 301-903-9641
Office of Science (SC-31)
- DOE-STD-1183-2007, *Nuclear Safety Specialist Functional Area Qualification Standard* (Proposed Revision)
Contact: Carl Sykes **Phone:** 202-586-7669
National Nuclear Security Administration
Associate Administration for Safety and Health (NA-SH-80)
- *Traffic Management Functional Area Qualifications Standard* (Proposed New Document)
Contact: Timothy Marcus **Phone:** 513-246-0477
Environmental Management Consolidated Business Service Center (EMCBC)

Recently Approved Standards

- DOE Handbook (HDBK)-1215-2014, *Optimizing Radiation Protection of the Public and the Environment for use with Department of Energy Order 458.1, As Low As Reasonably Achievable Requirements*
Contact: Derek Favret **Phone:** 202-586-0250
Office of Environmental Policy and Assistance (AU-22)
- DOE-STD-1182-2014, *Civil/Structural Engineering Functional Area Qualification Standard*
Contact: Raman Venkata **Phone:** 509-376-2274
Office of River Protection
- DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*
Contact: Garrett Smith **Phone:** 301-903-7440
Office of Nuclear Safety Basis and Facility Design (AU-31)