

DOE-STD-1104-2014

Frequently Asked Questions

Q1: Why was DOE-STD-1104 revised?

A1: The goal of this revised Standard is to provide clearer criteria and guidance to support effective and consistent review of safety basis and safety design basis documents. DOE has gained experience and lessons learned in implementing DOE-STD-1104. Further, key nuclear safety documents, including DOE Order 420.1C, *Facility Safety*, and DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, have been revised in recent years and commensurate changes were needed to DOE-STD-1104. DOE also committed to revise DOE-STD-1104 in response to DNFSB Recommendation 2010-1.

Q2: What are the major changes in DOE-STD-1104-2014?

A2: This revision:

- Establishes DOE evaluation requirements and approval levels for facility DSAs that have off-site dose consequence estimates that exceed the Evaluation Guideline of 25 rem;
- Establishes requirement that at least one member of the Safety Basis Review Team meets the requirements of DOE-STD-1183-2007 (Nuclear Safety Specialist);
- Adds requirements and bases of approval related to approval of USQ procedure, JCO and ESS, downgrades to below HC-3 facilities (for final hazard category only), and SDS.
- Removes requirement statements that duplicated 10 C.F.R. 830 or other high-level sources, and ones that were unnecessary or rhetorical;
- Additions and Clarifications to the Bullets in Section 4.3, Hazard and Accident Analyses, to reflect DOE-STD-3009-2014;
- Addition of a Defense-in-Depth Basis of Approval for DSAs; and
- Significant Changes and Clarifications to the Bases of Approval for TSRs.

Q3: Is DOE-STD-1104-2014 a required standard or a safe-harbor standard?

A3: DOE-STD-1104-2014 is a required standard, in accordance with DOE Order 420.1C, Page Change 1, which was approved by the Directives Review Board in December 2014 and is awaiting final Department approval and issuance. The following requirement is included in Section 4, Requirements, of DOE Order 420.1C, Page Change 1: “DOE must ... i. Review and approve safety basis and safety design basis documents in accordance with DOE-STD-1104-2014, Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents.”

Q4: In Section 4.4 of the revised DOE-STD-1104, it describes the approval bases for DSA review on the topic of defense-in-depth and states: “Determining the adequacy of defense-in-depth rests on being able to conclude that postulated events and accidents are controlled with appropriate levels of defense-in-depth that are applied such that several layers of protection are

used to prevent the release of radiological or hazardous materials to the environment.” Does this mean that defense-in-depth is only expected to address prevention and not mitigation of releases?

A4: No. The text of 4.4 would be better with a correction to sentence above: “...such that several layers of protection are used to prevent and mitigate the release of radiological or hazardous materials to the environment.” This correction will be made in future revisions. For a more complete description of the defense-in-depth concept, see DOE-STD-3009-2014, Appendix A, Section A.9.