

## SUPPLEMENTAL DIRECTIVE

NNSA SD 413.3-2

Approved: 05-25-21

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# CORPORATE INTEGRATION OF SAFETY BASIS DOCUMENT REVIEWS

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**NATIONAL NUCLEAR SECURITY ADMINISTRATION**  
**Office of Safety, Infrastructure and Operations**

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**Office of Safety, Infrastructure and Operations**

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## **CORPORATE INTEGRATION OF SAFETY BASIS DOCUMENT REVIEWS**

1. **PURPOSE.** To define the requirements and expectations for the federal roles in the review of nuclear facility and project safety basis documents for National Nuclear Security Administration (NNSA) corporate Safety Basis Review Teams (SBRTs).
2. **AUTHORITY.** This directive supplements and is consistent with the information and requirements in DOE-STD-1104-2016, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents* (invoked by DOE O 413.3B and DOE O 420.1C) This Supplemental Directive (SD) is also derived from the authorities in 10 Code of Federal Regulation (CFR) 830, *Nuclear Safety Management*.
3. **CANCELLATION.** None.
4. **APPLICABILITY.**
  - a. **Federal.** Applies to all NNSA federal elements that review and approve major safety basis documents for nuclear facilities or projects for nuclear facilities.
  - b. **Contractor.** Does not apply to contractors.
  - c. **Equivalency.** In accordance with the responsibilities and authorities assigned by Executive Order 12344, codified at 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.
5. **SUMMARY OF CHANGES.** None.
6. **BACKGROUND.** This SD summarizes the processes developed and lessons learned from the SBRT project initiated in 2017 as part of the NNSA safety roadmap. The project's goal was to improve the efficiency and effectiveness of SBRT reviews by (1) completing a six-sigma review of SBRT reviews sponsored as part of the project, (2) developing a program-informed enterprise schedule, (3) using a more centralized approach to alleviate limitations by better scheduling corporate resources, (4) providing a more balanced and consistent approach for review of safety basis documents, and (5) issuing a safety basis review process. This document formalizes the results of the SBRT Project and, upon its approval and implementation, marks the end of the project.
7. **REQUIREMENTS.**
  - a. SBRTs must develop schedules for the submittal, review, and approval of major safety basis documents.

- b. SBRTs must use a comment resolution process for the reviews that categorizes comments by importance and documents the risk of outstanding comments for the Safety Basis Approval Authority (SBAA) prior to approval of the safety basis or project safety basis documents.
- c. SBRTs must use local and corporate resources to staff SBRTs.

8. RESPONSIBILITIES.

- a. Deputy Associate Administrator for Safety (NA-51).
  - (1) Develops and maintains a schedule for major NNSA safety basis deliverables to be used for scheduling resources.
  - (2) Coordinates with field office and SBAA's to provide corporate resources for SBRTs by using both headquarters and available staff from other field offices.
  - (3) Funds travel expenses for the SBRT staff that are not local to the site being reviewed.
  - (4) Incorporates the comment resolution process in Appendix B in the NA-51 safety basis review procedure.
- b. NNSA Field Office Managers.
  - (1) Provide schedule information to NA-51 in August of each fiscal year to be used in developing a corporate schedule of major NNSA safety basis documents expected to be delivered for review during the next fiscal year.
  - (2) Incorporate the comment resolution process described in Appendix B in the field office safety basis review procedure.
  - (3) Provide staff to support SBRTs being conducted within other NNSA organizations in coordination with NA-51.
- c. Safety Basis Approval Authority (SBAA).
  - (1) Ensures that necessary resources to staff SBRTs are requested from NA-51.
  - (2) Ensures that SBRT Review Plan schedules provide the most reliable projection of federal and contractor activities.

- d. Safety Basis Review Team (SBRT) Leader.
  - (1) Prepares SBRT Review Plan using best estimates of federal and contractor activities, when a review plan is required to be prepared.
  - (2) Uses field office safety basis review procedures to manage the review, process comments, prepare the safety evaluation report, and process the safety basis documents for approval.

9. DEFINITIONS.

- a. Major Safety Basis Document. New Documented Safety Analysis (DSA), project safety design basis documents (such as a Conceptual Safety Design Report or Preliminary DSA), or a significant annual update (such as a revision to meet DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*).
- b. Safety Evaluation Report. A technical report that documents the review of a safety basis document by an SBRT and the approval of the safety basis document by the SBAA.
- c. Safety Road Map. A document that outlines key elements of a redesigned oversight system for NNSA, including specific milestones for implementation and measures of effectiveness.

10. ACRONYMS/ABBREVIATIONS.

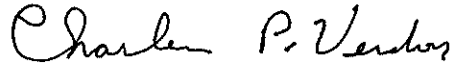
- a. COA Conditions of Approval
- b. DSA Documented Safety Analysis
- c. SB Safety Basis.
- d. SBAA Safety Basis Approval Authority
- e. SBRT Safety Basis Review Team
- f. SER Safety Evaluation Report
- g. TSR Technical Safety Requirements

11. REFERENCES.

- a. 10 CFR 830, *Nuclear Safety Management*.
- b. DOE O 413.3B Chg. 6, *Program and Project Management for the Acquisition of Capital Assets*, 01-12-2021.

- c. DOE O 420.1C Chg. 3, *Facility Safety*, 11-14-2019.
  - d. DOE-STD-1104-2016, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*, 12-21-2016.
  - e. NNSA Supplemental Directive 450.2B, *Functions, Responsibilities and Authorities (FRA) for Safety Management*, 04-23-2021
  - f. *NNSA Safety Roadmap*, Revision 1, November 2018.
11. CONTACT. The Office of the Deputy Associate Administrator for Safety, Infrastructure and Operations (NA-51), (505) 845-4404.

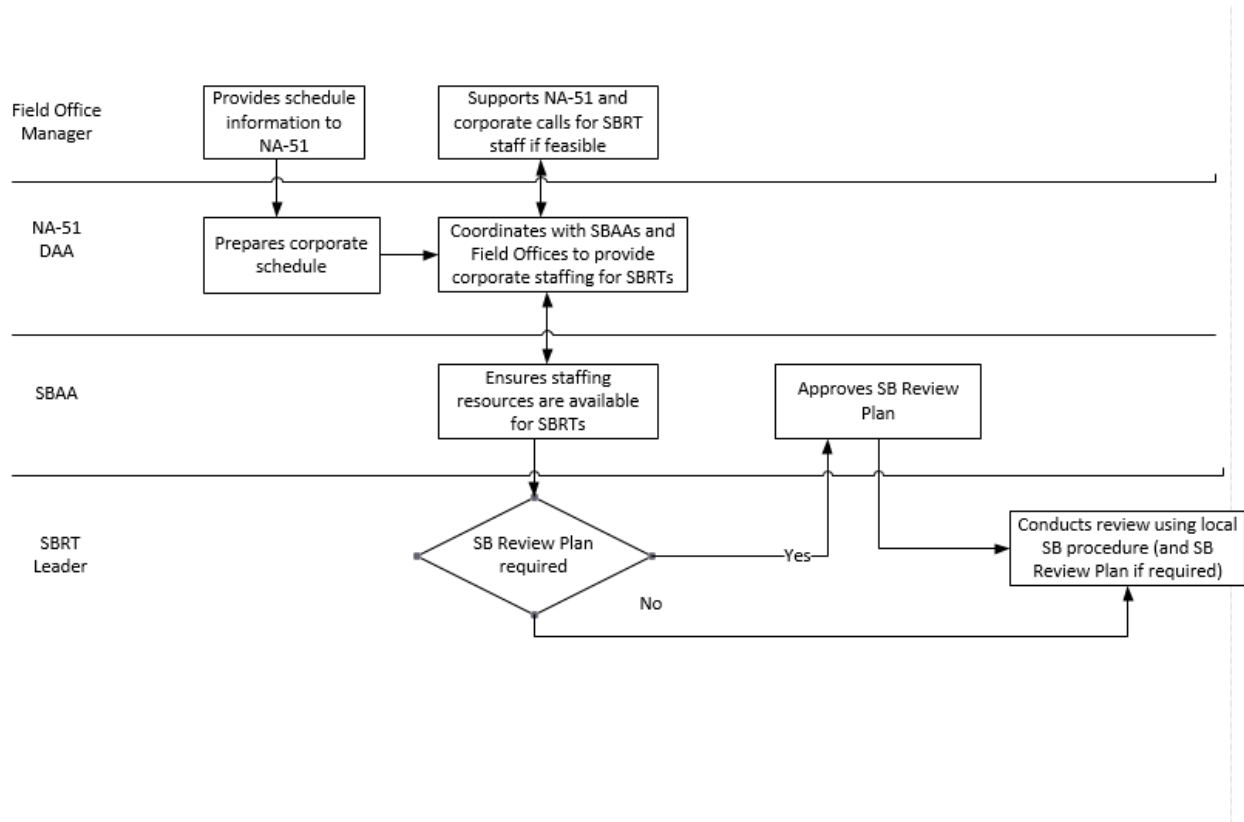
BY ORDER OF THE ADMINISTRATOR:

  
Charles P. Verdon  
Acting Administrator

Appendices:

- A: Safety Basis Documents Review Flowchart
- B: Comment Resolution Process

## APPENDIX A: SAFETY BASIS DOCUMENTS REVIEW FLOWCHART



## **APPENDIX B: COMMENT RESOLUTION PROCESS**

1. PURPOSE. To provide requirements for Safety Basis Review Team (SBRT) comment resolution processes used to review safety basis documents submitted for approval by the Safety Basis Approval Authority (SBAA).
2. COMMENT GENERATION PROCESS.
  - a. The SBRT meets with appropriate contractor personnel for orientation, introductions, and walk-down of the facility and processes that are the subject of the safety basis (SB) documents. SBRT members must review the facility and process description information in the safety basis documents before the walk-down. This step may be omitted for reviewer(s) that are already familiar with the relevant aspects of the physical facility or activity.
  - b. SBRT members review their assigned portions of the safety basis document as assigned in the review plan as well as ensure that information on controls in their assigned portions is consistent with interfacing portions of the document.
  - c. The review verifies that safety deficiencies, concerns, Conditions of Approval (COA) from previous reviews, and relevant National Nuclear Security Administration (NNSA) commitments identified in the review plan have been addressed. Reviewers ensure that previous comment resolutions have been incorporated into the review.
  - d. Issues are validated through SBRT member discussions with team members, nuclear safety staff, and contractor counterparts.
  - e. Validated significant issues are documented in accordance with the following requirements:
    - (1) Comments must provide a clear issue statement. However, the reviewers must not tell how the comment should be resolved, only the action that must be taken. For example, the action statement could state "Revise the document." Comments must be clear and concise so that an acceptable resolution can be developed.
    - (2) Comments must provide the applicable Department of Energy (DOE) directive, code, standard, or a clear logical argument providing the basis for the comment. Comments must not be based solely on the reviewer's personal preferences.
    - (3) Comments shall not be phrased as questions and will not be based on a lack of understanding by the reviewer even if the document being reviewed is unclear. The reviewer is responsible to investigate potential issues to the point that it is either determined to be an issue or is not to be an issue.

- f. SBRT members must document their comments on a comment review form. A comment prioritization scheme must be used that identifies comments that (1) must be corrected prior to approval or have an identified resolution path, or (2) are suggestions. An example of a two-level prioritization scheme follows. Other locally derived schemes are also acceptable.
    - (1) S— Issues that require changes before approval. S – A significant issue that can affect the selection of controls, such as poorly defined processes, missed hazards, hazards without effective controls, analysis that does not adequately define functional requirements for controls, controls that are not shown capable of meeting functional requirements (lacking adequate compensatory controls), and inadequate derivation of controls from the analysis through to the Technical Safety Requirements (TSRs). Any significant lack of compliance with 10 CFR 830 or the safe harbor from 10 CFR 830 being used would require correction before approval.
    - (2) N – Resolution is not required. N – A non-significant issue that has minimal effect on the risk approval basis, or that does not significantly affect the quality of the document. At the discretion of the SBRT Lead, a number of such individual comments may become the basis for a higher priority comment.
  - g. The SBRT Lead collects team members' comments and consolidates them. For larger reviews, the review plan may specify that topical leads perform this step. At the discretion of the SBRT Lead comments may be deleted or returned to the reviewer for rework if such comments do not comply with this Supplemental Directive (SD), the site procedure, or the review plan. Team members may appeal decisions of the SBRT Lead through the appropriate management chain to the SBAA or pursue the differing professional opinion process.
  - h. The SBRT must review the consolidated comment set to ensure that DOE and NNSA requirements for comment development and generation are met. As a result of this review, comments may be deleted from the set, assigned for rework, or accepted. A summary discussion will be used to determine if there are larger issues revealed when the comment set is considered as a whole.
3. SUBMITTAL AND RESOLUTION OF COMMENTS.
- a. The SBRT Lead must revise and finalize SBRT comments, as needed, to support the SBRT and review timelines.
  - b. The SBRT Lead must provide comments to the contractor for factual accuracy review at the working level. The purpose of this review is to ensure the SBRT comments are clearly stated, understood, and based on facts.
  - c. The SBRT Lead edits comments based on the results of the factual accuracy review.

- d. If SBRT comments remain after factual accuracy review, the SBRT Lead must formally provide comments to the contractor through the Contracting Officer's Representative (COR). If there are no significant comments requiring resolution prior to approval the comments may be provided with the safety evaluation report (SER).
- e. Upon formal receipt of the contractor response to formal SBRT comments the SBRT and the contractor meet to review the contractor's response to SBRT comments.
- f. The SBRT must determine the acceptability of the contractor resolution to priority S issues. All priority S issue resolutions must be resolved by either being incorporated into a subsequent SB document revision (potentially the next annual update) or through an SER condition of approval or directed change. When the SBRT Lead decides that there are no unresolved priority S issues, the SBRT Lead proceeds to finalize the SER. If an S comment remains unresolved, SBAA direction may be provided to address the issue, which will allow approval (i.e., directed change or condition of approval). (Note: The discussion in this paragraph assumes the use of the priority scheme used in Section 2.f; however, the field office is free to vary the label of comment prioritization scheme as long as the intent is met.)
- g. Minority opinions or differing professional opinions must be addressed and dispositioned using the appropriate field office processes or the procedures contained in DOE O 442.2 Chg. 1, *Differing Professional Opinions for Technical Issues Involving Environmental, Safety, and Health Technical Concerns*.

## Comment Resolution Process.

