Department of Energy

Washington, DC 20585

December 13, 2005

The Honorable A. J. Eggenberger
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D. C. 20004

Dear Mr. Chairman:

Your September 14, 2005, letter to J. Clay Sell, Deputy Secretary Energy, concerning the proper interpretation and application of the Department of Energy's (DOE) nuclear safety definitions was assigned to me for response. Your letter requested a report within 90 days. Enclosed is our report on the status of DOE's actions to address and resolve these definitional and procedural concerns. This report was developed through the actions of the National Nuclear Security Administration (NNSA), Chief, Defense Nuclear Safety, and the Energy, Science, and Environment (ESE) Acting Chief of Nuclear Safety.

To address this matter in detail, a DOE working group was established to obtain relevant site information and to review site procedures. Since results of these efforts show there is considerable variation in site interpretations and implementing procedures concerning what constitutes a "new" nuclear facility or a "major modification" to an existing facility for purposes of DOE nuclear safety requirements, further time is needed to fully address and resolve the issues through interactions with your staff. The enclosed report provides DOE's actions to date and future actions to address and resolve your concerns.

If you have any questions, please call me at 202-586-6151 or Mr. Richard Stark, Director of Facility Operations Support, EH-24, at 301-903-4407.

Sincerely,

John Spitaleri Shaw
Assistant Secretary for
Environment, Safety and Health

Enclosure

cc: J. Clay Sell, S-1
J. McConnell, NA-2.1
R. Lagdon, US
M. Whitaker, DR-1
R. Shearer, EH-1

R. Hardwick, EH-2
R. Stark, EH-24

Helping the Field Succeed
with
Safe and Reliable Operations

REPORT

REPORT TO THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD REGARDING NUCLEAR SAFETY DEFINITIONS

Office of Facility Safety (EH-2)

Office of Environment, Safety and Health

DECEMBER, 2005

U.S. Department of Energy

Report to Defense Nuclear Facilities Safety Board Regarding Nuclear Safety Definitions

Purpose

This report provides the Defense Nuclear Facilities Safety Board (DNFSB) (Board) the status of the Department of Energy's (DOE) actions being taken to address and resolve the Board's issues on implementation of requirements related to nuclear facility startups, restarts, safety basis documents, and facility design. This report was developed through the actions of the National Nuclear Security Administration (NNSA), Chief, Defense Nuclear Safety, and the Energy, Science, and Environment (ESE) Acting Chief of Nuclear Safety with support from the Office of Environment, Safety, and Health (EH).

Background

In a September 14, 2005, letter to J. Clay Sell, Deputy Secretary Energy, the Defense Nuclear Facilities Safety Board noted some instances of reduced rigor in the selection of readiness review processes for defense nuclear facilities. The DNFSB further indicated that this reduced rigor also affects the application of design requirements and preparation of safety documents. They indicated one cause for this situation appears to be inconsistent interpretation and implementation of rules and orders that apply to new Hazard Category 1, 2, and 3 nuclear facilities and major modifications at existing facilities. The Board requested the Department of Energy to take prompt action to address the inconsistent implementation of Departmental requirements and requested a report within 90 days on the following issues.

- The adequacy of local DOE and contractor implementation procedures for DOE Order 420.1A, DOE Order 425.1C and 10CFR830, Subpart B, with particular focus on the definition of a "new Hazard category 1, 2, or 3 nuclear facility," and "substantial modifications."

- The actions necessary to ensure that any deficient site procedures are corrected and that site contractors appropriately apply design requirements, develop Preliminary Documented Safety Analyses, and perform Operational Readiness Reviews for new Hazard Category 1, 2, and 3 nuclear facilities as required.

- The need for revision or clarification of the definition of a "new Hazard Category 1, 2, or 3 nuclear facility" and/or "substantial modification" within the DOE directives system.

Actions Taken

On September 26, 2005 DOE clarified the DNFSB issues listed above in a teleconference with the Board staff. On September 28, 2005 DOE prepared and sent to the Board staff a plan to address the issues noted in the September 14, 2005, letter. The DOE plan identified the following five actions:

1. DOE would prepare and issue a data request to DOE field offices requesting relevant procedures, policies, and directions regarding the use of definitions when dealing with authorization basis issues, facility design issues, and startup and restart issues.

2. EH would review the data with a DOE headquarters team including personnel from NNSA and the Office of Environmental Management (EM). The team would use this data as input in developing revised definitions.

3. The draft revised definitions would be available in November and will form the basis for discussions with the Board staff.

4. DOE would discuss the draft revised definitions with the Board staff.

5. The finalized revised definitions will then be incorporated into appropriate Departmental orders and guides.

On September 30, 2005 a data request memorandum was issued by the Chief, Defense Nuclear Safety (CDNS) and the Acting Chief of Nuclear Safety (CNS) to all DOE nuclear operations offices and to all field and site offices. The DOE offices were requested to provide relevant procedures, policies, and directions that are used internally or by contractors at their respective sites which reference or implement the definitions for "new Hazard Category 1, 2, or 3 nuclear facility" and "substantial modifications" when dealing with authorization basis issues (10CFR830, Subpart B), facility design issues (DOE Order 420.1A) and startup and restart issues (DOE Order 425.1C). The information was requested by October 19, 2005.

A DOE working group was established to review the data received from the operation, field and site offices and to propose a Departmental response and actions necessary to fully address the DNFSB issues. The DOE working group is composed of nuclear safety experts and includes the two Chiefs of Nuclear Safety, NNSA safety analysts, EM safety analysts, and EH nuclear safety policy developers. This group met on November 8, 2005, to initially discuss the results of the data request. The working group concluded that there is considerable variation in the definitions being used throughout the Department. Some field definitions were more conservative, some were vague, and some were un-conservative. The working group initiated actions to develop proposed wording of the definitions that will remove this variation and achieve acceptable consistency and conservative use of the definitions. The group met again on November 18, 2005, and agreed on the proposed safety definitions revisions. In a November 22, 2005,

memorandum, the two Chiefs of Nuclear Safety distributed these proposed safety definitions revisions to the DOE operations, field, and site offices for their review and comment. A copy of this memorandum was also provided to the Board staff for their information. The memorandum requested comments to be provided by November 29, 2005. Because of the short comment time period many offices requested additional time so that their staff could more carefully consider the proposed safety definitions revision implications before providing comments. Comments that have been received offer many differing views of what changes are need to the proposed safety definitions and will require additional time for the working group to carefully consider and disposition the comments. (The Office of Science and Nuclear Energy are also reviewing the proposed definitions.)

Actions Remaining

DOE will continue to follow the September 28, 2005 plan discussed previously and will complete the actions. The DOE working group will review operations, field, and site office comments and revise the proposed safety definitions as needed. DOE will also meet with the Board staff to review the proposed definition changes and resolve their comments as appropriate. Safety definition revisions will then be incorporated in the appropriate DOE Orders and guides consistent with the DOE directives process. While we will work to complete these remaining actions expeditiously, our anticipated schedule for completing the actions remaining is as follows.

Action	Date
1. Incorporate operations, field, and site office comments in the proposed safety definitions (Working Group)	March, 2006
2. Discuss revised safety definitions with Board staff (Working Group)	April, 2006
3. Input revised DOE directives into the DOE Directives System for review and approval (EH)	May, 2006
4. Issue letter to operations, field, and site offices directing them to develop a schedule for updating the affected submitted procedures based on revised DOE directives in review and approval process (CDNS, CNS)	1 week after RevCom posting
5. Each operations, field and site office issue schedule for updating its affected procedures to CDNS, CNS, and EH	90 days after receiving letter
6. Compile DOE-wide schedule for upgrading all affected field and site office procedures (EH)	60 days after receiving schedules