

# memorandum

DATE: Jan 29, 2002

REPLY TO  
ATTN OF: EM-5 (W. Boyce:6-8856)

SUBJECT: Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2000-2  
Implementation Plan Commitment No. 16, Status of System Engineer Programs

TO: Distribution

In a letter dated February 20, 2001, the Secretary provided interim direction for system engineer programs related to safety systems at defense nuclear facilities. Commitment No. 16 of the Implementation Plan for DNFSB Recommendation 2000-2 reads:

*"The Office of Environment, Safety and Health will monitor the field's response to the Secretary's interim guidance and evaluate implementation progress after one year."*

The role of the Office of Environment, Safety and Health has changed since the Implementation Plan was written. Therefore, the Program Offices will be primarily responsible for completing this evaluation. A questionnaire is attached for your input. The need for field visits, if any, will be based on the results.

Submit your response to the Office of Safety, Health & Security, Attention: Hank Himpler no later than February 15, 2002. Please provide an electronic copy of your response to [henry.himpler@em.doe.gov](mailto:henry.himpler@em.doe.gov). Mr. Himpler can be reached at (202) 586-0675 if there are questions.



Beverly Cook  
Acting Director of Site Operations  
Office of Environmental Management

Attachment

Distribution:

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Rev 1, Draft  
Jan. 22, 2002

**U. S. Department of Energy**

**Establishment of Contractor System Engineer  
Programs at DOE Facilities**

**Evaluation of Implementation Progress**



**January 2002**

**Subject: Evaluation of System Engineer Program Implementation Plan under DNFSB Recommendation 2000 -2, Configuration Management Vital Safety Systems**

**Background:**

As part of the Implementation Plan for DNFSB 2000-2, Commitment 14 states that while awaiting formal requirements to be established, the Secretary will provide interim direction that will have contractors initiate actions to designate systems engineers for vital safety systems. The Secretary provided this direction of February 20, 2001. The interim direction outlined Program Elements, and System Engineer Duties and Responsibilities, and included several milestones for requested actions. Commitment 15 requires the Department to establish requirements for a system engineer concept. A change to DOE O 420.1, Facility Safety, is underway to address that commitment. Commitment 16 requires that the Office of Environment, Safety and Health monitor the field's response to the Secretary's interim guidance and evaluate implementation progress after one year. The purpose of this document is to request data that will be used to evaluate implementation progress. It is expected that for most sites the answers to these questions will provide sufficient information to evaluate implementation progress. Headquarters Program Office (PSO) will make the final decision and it may be necessary to perform field visits. In these cases it may be necessary to develop a more formal set of evaluation criteria and lines of inquiry.

The questions address the following guidance in the Secretary's 2/20/01 letter:

- Establish a program to implement contractor system engineer functions;
- Identify systems whose safety significance warrants the use of a system engineer;
- Assign contractor system engineers to systems;
- Establish minimum system engineering qualification/requalification requirements;
- Incorporate system engineering qualification/requalification requirements into training and succession programs; and
- Communicate any budget or other impacts to appropriate line management.

**Questions/Answers**

Question 1: If a fully compliant system engineer program was not already in place, did the appropriate line organization (HQ, Field or Area Office) provide written direction to the contractor to develop such a program based on the Secretary of Energy letter of February 20, 2001?
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Answer 1:
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Question 2: The initial list of Vital Safety Systems (VSSs) was developed in February 2001. What mechanism is in place to maintain and update this list of safety systems?
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Answer 2:
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Question 3: Initial assignment of systems engineers to VSSs was to be completed by March 2001. Have assignments been completed for safety systems in Appendix E facilities (see DOE Implementation Plan for 2000-2) and in other defense nuclear facilities? What mechanism is in place to track the assignment of system engineers to the list of safety systems?
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Answer 3:
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Question 4: Have initial qualification/requalification requirements for system engineers been established? When answering this question list the specific document that contains the requirements including the date of last revision. If no document exists provide the date when this will be accomplished.
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Answer 4:
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Question 5: Have the system engineering qualification/requalification requirements been incorporated into training and succession programs? When answering this question list the specific document that establishes the training and succession program. If no document exists provide the date when this will be accomplished.

Answer 5:

Question 6: Has the schedule for system engineer qualification/requalification been established? When answering this question state whether performance metrics have been developed that define implementation progress.

Answer 6:

Question 7: Have the contractor/DOE oversight personnel assessed implementation of the system engineer program? Have the duties and responsibilities for systems engineers been reviewed to determine if appropriate elements of configuration management, assessment of system status and performance, and technical support for operations and maintenance, are included? Cite a specific report if available.

Answer 7:

Question 8: Have costs and schedules for fully implementing the contractor systems engineering program been established? When answering this question focus on budget or other impacts that require the attention of DOE line management, such as new hiring. If available, estimate the initial and recurring annual costs of the system engineer program.

Answer 8:

Reference:

1. Implementation Plan for DNFSB 2000-2, Configuration Management Vital Safety Systems, dated October 31, 2000.
2. Establishment of System Engineer Programs under Implementation Plan for DNFSB 2000-2, Configuration Management, Vital Safety Systems, Memorandum from the Secretary dated February 20, 2001.
3. DOE O 420.1, Facility Safety (draft changes for system engineering program).
4. DOE O 5480.20A, Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities.