

[DOE LETTERHEAD]

July 31, 1997

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW
Suite 700
Washington, D.C. 20004

Dear Mr. Chairman:

Enclosed is the [quarterly progress report](#) on implementation of Defense Nuclear Facilities Safety Board Recommendation 94-2 for the period from April 1, 1997, to June 30, 1997.

The report shows that the Department has completed most of the task initiatives to which it committed with the exception of the longer-term commitments to complete and approve radiological assessments for low-level waste disposal sites. The Department is continuing to progress toward completion of those task initiatives that are outstanding. The Department is also continuing to make progress in developing the criteria, procedures, and protocols for the Low-Level Waste PA/CA Review Group to conduct its reviews of the performance assessment and composite analysis documents. The body of the progress report contains a status table on the task initiatives that were due during the current reporting period. A status table on all of the task initiatives is included as an appendix.

Sincerely,

Alvin L. Alm
Assistant Secretary for
Environmental Management

Enclosure

cc: Mark Whitaker, S-3.1

Quarterly Report
for
Implementation Plan
Defense Nuclear Facilities Safety Board
Recommendation 94-2

**Conformance with Safety Standards at
Department of Energy
Low-Level Nuclear Waste and Disposal Sites**

April 1 through June 30, 1997

**Quarterly Report for
Implementation Plan
Defense Nuclear Facilities Safety Board
Recommendation 94-2**

1.0 INTRODUCTION

The Department of Energy (DOE) issued the "Implementation Plan, Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-2" in March 1995. In May 1996 DOE issued a revision to the Implementation Plan that reflected enhancements to DOE's approaches to systems engineering and the radiological assessments, and better integration and coordination of both the task initiatives and the involved organizations. In August 1996, the Department received a letter from the DNFSB accepting the revised Implementation Plan, with conditions.

The revised Implementation Plan follows the same general approach as the original, identifying initiatives in six task areas:

- Systems Engineering
- Complex-Wide Review
- Regulatory Structure and Process
- Radiological Assessments
- Low-Level Waste Projections
- Research and Development

This is the seventh report on the status of task initiatives as described in the Implementation Plan that DOE is undertaking to improve its management of low-level waste (LLW). This

report covers the period from April 1, 1997 to June 30, 1997.

2.0 OVERVIEW

2.1 General Progress

During this reporting period most of the effort was dedicated to doing the ground work and follow-up work associated with commitments rather than in completing commitments. However, one commitment, the Headquarters review of a performance assessment, was completed.

In February 1997, a draft revised Order on Radioactive Waste Management, with accompanying Manual, guidance, and technical basis, was made available for review. During the current reporting period, Headquarters and Field organizations, and an external review group under contract to DOE, completed their reviews and provided comments to the Order Revision Team. The Order Revision Team initiated the process of developing resolutions to the comments and revising the documents.

In the Radiological Assessments task area DOE completed the review of the Hanford Site *Performance Assessment for the Disposal of Low-Level Waste in the 200 East Area Burial Grounds*. In addition, information was provided by Savannah River Site personnel that will allow Headquarters to complete its action on the Saltstone Disposal Facility performance assessment during the next reporting period. The recently established Federally-staffed Low-Level Waste PA/CA Review Group that is now responsible for the review of performance assessments and composite analyses met and began the work of developing the process they will use to conduct their activities. The group also initiated the review of the Los Alamos National Laboratory Material Disposal Area G performance assessment/composite analysis.

Work in the Waste Projections task area was focused on the collection and verification of data for inclusion in an updated waste disposal capacity assessment. The original assessment, issued in September 1996 assessed the volumetric capacity of DOE sites for disposing of projected low-level waste. This report is being updated to include consideration of radiological constraints in addition to the volumetric constraints originally considered. A draft analysis of the radiological capacity at the various DOE disposal sites was also developed during this reporting period.

In the Research and Development task area, work with the Site Technology Coordination Groups continued with the goal being the identification of the low-level waste research and development needs of the Department. Through interactions with the Office of Technology Development and the Site Technology Coordination Groups approaches to accomplishing the goals of the Implementation Plan commitments are being developed. The commitment due at the end of June will be addressed in a letter and report to the DNFSB during the next reporting period.

2.2 Meetings with the DNFSB and Staff

2.2.1 Meetings During this Reporting Period

During this reporting period there were no face-to-face meetings between DOE management and the DNFSB to specifically address DNFSB Recommendation 94-2. There were, however, meetings between the staffs of the two organizations at which the activities related to the management of low-level waste were discussed:

- DOE staff met with DNFSB staff on May 9 to solicit comments on the February 28, 1997 draft of the Order on Radioactive Waste Management and the accompanying Manual, guidance documents, and technical basis document.
- On June 26, DNFSB staff met with DOE staff in Germantown to discuss the organization, function, responsibilities, and operation of the Low-Level Waste PA/CA Review Group which will be conducting future reviews of performance assessments and composite analyses.

2.2.2 Meetings in Future Reporting Periods

The following interactions with the DNFSB or staff are anticipated during the next reporting period:

- The Department staff anticipates meeting with the DNFSB staff to discuss the draft DOE Order 435.1, *Radioactive Waste Management*, which is being revised based on comments received on the February 28, 1997 draft.

3.0 SUMMARY OF COMMITMENTS DUE IN THE CURRENT REPORTING PERIOD

The following table summarizes the status of commitments that were due to be completed during the current reporting period. Appendix A provides a listing of all task initiatives committed to in the 94-2 Implementation Plan and their status, as reported in DOE's Safety Issues Management System (SIMS). Two indicators are provided in the first column of the following table. The first correlates with the commitment as numbered in the Implementation Plan. The second number corresponds to the numbering system used in SIMS.

Status of Task Initiatives Due April 1, 1997 - June 30, 1997

<u>IP Task #</u> <u>SIMS ID #</u>	Title or Description	Due Date	Status
<u>VII.B.5.b.1</u> ¹ R94-02 029- 011	Complete Headquarters Review of the Hanford 200 East Area Burial Grounds Performance Assessment	04/30/97	Completed. The performance assessment compliance evaluation was transmitted to the DNFSB on June 30, 1997.
<u>IX.B.3</u> R94-02 038	Identify Outstanding Low- Level Waste Research and Development Needs	06/30/97	Pending. A report on the LLW R&D needs and the method used to identify them is being prepared for transmittal to the DNFSB in early August.

4.0 TASK AREA STATUS

4.1 Systems Engineering

The *Low-Level Waste Program Management Plan*, outlining the programmatic strategies, policy initiatives and assumptions that form the basis for evolving to an integrated low-level waste program, was issued on March 31, 1997. This completed all of the Systems Engineering task initiatives in the Implementation Plan. The Department intends to revise the plan as necessary to provide the top-level direction for DOE in low-level waste management.

The Department prepared corrective action plans as a Systems Engineering task in response to the Complex-Wide Review. The Low-Level Waste Management Program continues to monitor implementation of the commitments made in the DOE-wide and site-specific corrective action plans.

4.2 Complex-Wide Review

The Final Complex-Wide Review Report was transmitted to the DNFSB on May 17, 1996. This completed all Complex-Wide Review task initiatives. DOE-wide and site-specific corrective actions in response to the Complex-Wide Review are being completed as part of the Systems Engineering task initiative.

4.3 Regulatory Structure and Process

The draft order, DOE O 435.1, *Radioactive Waste Management*, the accompanying manual, DOE M 435.1, *Radioactive Waste Management Manual*, guidance, and technical justification were issued for DOE and DNFSB review on February 28, 1997. The draft Order includes overarching requirements for managing radioactive waste to protect the public, workers, and the environment, and to comply with applicable laws, regulations, and DOE directives. The draft Manual addresses essential requirements for safe management of low-level waste and other waste types. The draft guidance documents include a number of products previously prepared as part of the implementation of DNFSB Recommendation 94-2 (e.g., performance assessment guidance documents, policy on management of waste generated as part of a cleanup activity), portions of existing guidance documents, and newly-developed material. In issuing the draft Order, Manual, and guidance documents for review, DOE completed the Regulatory Structure and Process task initiatives in the Implementation Plan.

During this reporting period, the Order and associated documents were reviewed and commented on by the DOE Offices and Field organizations. In addition, review comments were received from a Senior Review Panel of external experts with government, industry, and academic backgrounds.

The Order Revision Team has commenced revising the documents and developing responses to comments. The initial focus was on making revisions to the Order and Manual to achieve more consistency among the subjects and level of detail addressed for each waste type. Headquarters and Field personnel attended a May workshop at which these initial changes to the Order and Manual were presented for consideration and work on the reviewing and responding to comments was initiated.

During the next reporting period, work will continue on responding to comments and

revising the Order, Manual, guidance, and technical justification. The Department expects to have another draft of all of the documents ready for review in September.

4.4 Radiological Assessments

During the current reporting period, the Department completed one commitment in the Radiological Assessments task area. Headquarters completed the compliance evaluation of the Hanford Site's *Performance Assessment for the Disposal of Low-Level Waste in the 200 East Area Burial Grounds* (WHC-SD-WM-TI-730, Rev. 0). The Performance Assessment Peer Review Panel conducted its technical adequacy review of the performance assessment during the current and previous reporting periods. Based on the DOE staff review of the performance assessment and the report issued by the Peer Review Panel, Headquarters issued a compliance evaluation and conditionally accepted the performance assessment. A conditional acceptance memorandum and a copy of the compliance evaluation were transmitted to the DNFSB on June 30, 1997.

The Department had previously reported (July 1996) that the compliance evaluation for the Savannah River Site Saltstone Disposal Facility performance assessment was completed with the exception of an issue regarding compliance with the groundwater performance objective. During this reporting period, site personnel submitted to Headquarters the information necessary to close this issue. Headquarters will complete its action on this performance assessment during the next reporting period.

The DOE-staffed group that now has responsibility for reviewing and recommending approval of performance assessments and composite analyses (LLW PA/CA Review Group) held its initial meeting during this reporting period. One of the initial items being addressed by the group is the process by which they will discharge their responsibilities. In addition to using the guidance prepared for performance assessments and composite analyses by the Department, the group is also evaluating the Nuclear Regulatory Commission-issued NUREG-1200, *Standard Review Plan for the Review of a License Application for a Low-Level Radioactive Waste Disposal Facility*. The group also designated a subgroup to perform the task of evaluating the *Performance Assessment and Composite Analysis for Los Alamos National Laboratory Material Disposal Area G* (LA-UR-97-85) for technical adequacy. The subgroup is to report back to the entire group who will develop a compliance evaluation and disposal authorization statement, if appropriate. The disposal authorization statement constitutes approval of the performance assessment and establishes certain conditions for the continued operation of the burial ground.

During the next reporting period a number of radiological assessments are due to be submitted to Headquarters for review. Oak Ridge Operations Office is to submit a revised performance assessment for the Solid Waste Storage Area 6 at Oak Ridge National Laboratory as well as a composite analysis for the same facility. Savannah River Operations Office is to submit a composite analysis that addresses the impacts from both the E-Area Vaults and the Saltstone Disposal Facility.

4.5 Low-Level Waste Projections

Previously, DOE completed a disposal capacity analysis based on volumetric capacity and

projections of the waste. Current efforts are directed at updating this analysis to include consideration of the radiological constraints of the DOE disposal sites. During the current reporting period, the DOE Field organizations provided data on projected radiological characteristics of their wastes. These data were reviewed for completeness at Headquarters, and as of the end of the reporting period, gaps in the data had been identified and Field personnel were working to provide the additional data. An initial draft of the revised disposal capacity report was also prepared during this reporting period. The draft includes estimated radiological disposal capacity for the DOE sites.

During the next reporting period, work will continue on updating the assessment of DOE disposal site capacity by combining the Field-provided waste characteristics data with the draft estimates of radiological capacity. The assessment of low-level waste disposal capacity, including consideration of radiological characteristics, is scheduled to be completed in September 1997.

4.6 Research and Development

During this reporting period, the Idaho Operations Office Low-Level Waste Center of Excellence personnel continued their work on evaluating the research and development needs for low-level waste management. Based on a review of the research and development needs identified through earlier DNFSB 94-2 implementation efforts and through additional interfacing with the efforts of the Office of Technology Development, approaches for addressing the low-level waste research and development strategy are being developed. Rather than employing an independent gap analysis (what are the needs versus what is already done or being done), the Department will use needs already identified by the Office of Technology Development and Site Technology Coordination Groups as the point of departure for the analysis. These Site Technology Coordination Groups represent each site and function as a clearinghouse for site-specific research and technology development needs identification.

During the next reporting period, a report will be prepared describing approaches for identifying the low-level waste research and development needs. A low-level waste strategy report will be prepared to guide this portion of the Low-Level Waste Management Program and to meet the commitment in the Implementation Plan.

Appendix
Safety Issues Management System
Report for Recommendation 94-2
April 1, 1997 to June 30, 1997

(1) Completion of this item only partially completes the full commitment in the Implementation Plan which involves not only the performance assessment, but the composite analysis and the disposal authorization statement.