



Department of Energy

Washington, DC 20585

July 27, 1998

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

Dear Mr. Chairman:

Enclosed is the quarterly progress report on implementation of Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-2 for the period from April 1, 1998, to June 30, 1998. The report addresses the open Recommendation 94-2 task initiatives and the Departmental activities closely related to the task initiatives committed to in response to DNFSB Recommendation 94-2 as rebaselined by the Secretary's July 9, 1998, letter.

The report demonstrates that the Department made good progress on major activities during this reporting period. The progress includes submittal to Headquarters for review of the following documents: *Hanford Immobilized Low-Activity Tank Waste Performance Assessment* and the *Idaho Radioactive Waste Management Complex Low-Level Waste Radiological Composite Analysis*. In addition, the Draft DOE Order 435.1 on *Radioactive Waste Management* and its supporting documents were completed for final review before being made available to the public. A status table appended to the report provides the status of all of the Recommendation 94-2 task initiatives.

If you have any questions concerning this information, please contact me at (202) 586-7710 or Mark Frei at (202) 586-0370.

Sincerely,

A handwritten signature in cursive script that reads "James M. Owendoff".

James M. Owendoff
Acting Assistant Secretary for
Environmental Management

Enclosure

cc:
Mark B. Whitaker, Jr., 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, 1998

**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. In transmitting the previous quarterly report (January through March 1998), the Secretary of Energy proposed revised dates for the DNFSB 94-2 commitments that had not been completed. In addition, the Department committed to reporting on a number of other activities closely related to the DNFSB 94-2 implementation tasks.

This quarterly report focuses on progress made towards completing the tasks outlined in the Secretary's July 9, 1998 letter. The attachment provided with this report provides a full report on the status of all of the DNFSB Recommendation 94-2 task initiatives.

2.0 OVERVIEW

2.1 General Progress

During this reporting period the Department continued work on the remaining commitments in the Implementation Plan and completed a number of significant interim milestones. The Richland Operations Office completed the *Hanford Immobilized Low-Activity Tank Waste Performance Assessment* and submitted it to Headquarters for review. The Idaho Operations Office completed the *Radioactive Waste Management Complex Low-Level Waste Radiological Composite Analysis* and submitted it to Headquarters for review. Both of these were deliverables in the DNFSB Recommendation 94-2 Implementation Plan. The Low-Level Waste Disposal Facilities Federal Review Group and its subordinate review teams continued review activities aimed at recommending approval actions to the Deputy Assistant Secretary for Waste Management on performance assessments and composite analyses for disposal facilities at the Los Alamos National Laboratory, Nevada Test Site, Oak Ridge Reservation, and Savannah River Site.

The Draft DOE Order 435.1 on *Radioactive Waste Management*, and its supporting documents were completed for final review before being made available to the public. The documents will

subsequently be announced in the Federal Register as being available for review. Work continued on the revision of the *Low-Level Waste Disposal Facilities Federal Review Group Guidance Manual*, the *Disposal Capacity Report, Revision 1*, and the development of a research and development strategy.

2.2 Meetings with the DNFSB and Staff

2.2.1 Meetings During this Reporting Period

During the current reporting period, the following meetings were held:

- DOE and DNFSB staff met on June 2, 1998 to discuss the progress on Recommendation 94-2 tasks and the revision of the DOE Order on Radioactive Waste Management.
- DOE management met with the DNFSB on June 4, 1998 to present the status of the Recommendation 94-2 tasks and the additional commitments being proposed in a letter from the Secretary.

2.2.2 Meetings in Future Reporting Periods

The following are proposed meetings between the Department and the DNFSB/staff:

- DOE and DNFSB staff will meet in July 1998 to address completion of Recommendation 94-2 commitments and to discuss the draft *Radioactive Waste Management Order* revision.
- DOE will brief the DNFSB on the final revision of the *Radioactive Waste Management Order* in late September 1998.

3.0 SUMMARY OF COMMITMENTS DUE

The following tables summarize the status of the remaining DNFSB Recommendation 94-2 commitments and the additional low-level waste-related task initiatives on which the Department is reporting.

For those commitments that were included in the Implementation Plan, there are at least two indicators provided in the first column. Those listed in the format "VIII.B.1.b.2" are task numbers as listed in the Implementation Plan. Those in the format "R94-02 033" are identification numbers as reported in the Department's Safety Issues Management System (SIMS). A full copy of the SIMS report is included as an appendix to this report. The Status column provides a brief description of the status of the task initiative. Changes in status since the previous report are presented in bold.

Status of Remaining DNFSB Recommendation 94-2 Task Initiatives

<u>IP Task #</u> <u>SIMS ID #</u>	Title or Description	Due Date	Status
FISCAL YEAR 1998			
<u>VII.B.5.b.2</u> R94-02 030-009	Submit Hanford Site composite analysis to Headquarters for review.	06/30/98	Completed. The site submitted the composite analysis to Headquarters in March 1998. A letter notifying the DNFSB of completion is in concurrence.
<u>VII.B.5.b.2</u> R94-02 030-003	Submit Idaho Radioactive Waste Management Complex composite analysis to Headquarters for review.	06/30/98	Completed. The composite analysis was submitted to Headquarters in May; a letter of notification to the DNFSB is in concurrence.
<u>VII.B.5.b.1/2/3</u> R94-02 029-002	Complete Headquarters' review of LANL performance assessment.	08/31/98	In progress. Review team has completed its review report and briefed the Low-Level Waste Disposal Facilities Federal Review Group. The compliance evaluation and disposal authorization statement are being prepared.
R94-02 030-002	Complete Headquarters' review of LANL composite analysis.	08/31/98	
R94-02 031-001	Issue disposal authorization statement.	09/30/98	
<u>VIII.B.1.b.2</u> R94-02 033	Issue Low-Level Waste Disposal Capacity Report, Revision 1.	08/31/98	In progress. Data have been updated to be consistent with the <i>Paths to Closure</i> data; updated data have been run through the model.

Status of Remaining DNFSB Recommendation 94-2 Task Initiatives

<u>IP Task #</u> <u>SIMS ID #</u>	Title or Description	Due Date	Status
<u>IX.B.3</u> R94-02 038	Determine Outstanding LLW R&D Needs.	09/30/98	In progress. The R&D task area has been refocused to emphasize studies related to improving the confidence in the long-term performance of low-level waste disposal facilities.
<u>IX.B.4</u> R94-02 039	Prepare Strategy to Address LLW R&D Needs.	09/30/98	
<u>VII.B.5.b.2/3</u> R94-02 030-012	Complete Headquarters' review of Savannah River Site composite analysis.	09/30/98	In progress. Review team has completed a site visit and is evaluating the composite analysis.
R94-02 031-009	Issue Saltstone disposal authorization statement.	09/30/98	
<u>VII.B.5.b.2/3</u> R94-02 031-008	Issue E-Area Vaults disposal authorization statement.	09/30/98	In progress. Review team has completed a site visit and is evaluating the composite analysis.

Status of Remaining DNFSB Recommendation 94-2 Task Initiatives

<u>IP Task #</u> <u>SIMS ID #</u>	Title or Description	Due Date	Status
FISCAL YEAR 1999			
<u>VII.B.5.b.1/2/3</u> R94-02 029-008	Complete Headquarters' review of Oak Ridge Solid Waste Storage Area 6 performance assessment.	10/15/98	In progress. Review team has completed a site visit and is evaluating the performance assessment and composite analysis.
R94-02 030-008	Complete Headquarters' review of SWSA-6 composite analysis.	10/15/98	
R94-02 031-005	Issue disposal authorization statement.	10/15/98	
<u>VII.B.5.b.1/2/3</u> R94-02 029-006	Complete Headquarters' review of the Nevada Test Site Area 3 performance assessment/ composite analysis.	10/31/98	In progress. Review team has completed a site visit and is evaluating the performance assessment and composite analysis.
R94-02 031-004	Issue disposal authorization statement.	10/31/98	
<u>VII.B.5.b.2</u> R94-02 030-010	Complete Headquarters' review of Hanford composite analysis; document conclusion relative to Environmental Restoration Disposal Facility.	03/31/99	Pending. Review team leader has been selected; review will commence in August 1998.
<u>VII.B.5.b.2/3</u> R94-02 031-006	Issue 200 West Area burial grounds disposal authorization statement.	03/31/99	Pending. Review team leader has been selected; review will commence in August 1998.

Status of Remaining DNFSB Recommendation 94-2 Task Initiatives

<u>IP Task #</u> <u>SIMS ID #</u>	Title or Description	Due Date	Status
<u>VII.B.5.b.2/3</u> R94-02 031-007	Issue 200 East Area burial grounds disposal authorization statement.	03/31/99	Pending. Review team leader has been selected; review will commence in August 1998.
<u>VII.B.5.b.2/3</u> R94-02 030-004	Complete Headquarters' review of Idaho composite analysis.	05/15/99	Pending. Review team and leader will be selected to support review of the document which is to be delivered in June 1998.
R94-02 031-002	Issue disposal authorization statement.	05/15/99	
<u>VII.B.5.b.2</u> R94-02 030-005	Submit Nevada Test Site Area 5 composite analysis to Headquarters for review.	09/30/99	In progress. Work has begun on defining the boundaries of the area to be included in the composite analysis.
FISCAL YEAR 2000			
<u>VII.B.5.b.2/3</u> R94-02 030-006	Complete Headquarters' review of Nevada Test Site Area 5 composite analysis.	06/30/00	Pending. Task will start upon receipt of the composite analysis.
R94-02 031-003	Issue disposal authorization statement.	06/30/00	

Status of Related Low-Level Waste Management Initiatives Not Included in Implementation Plan

Title or Description	Proposed Due Date	Status
FISCAL YEAR 1998		
Complete guidance manual for the Low-Level Waste Disposal Facilities Federal Review Group	08/31/98	In progress. A revised draft of the guidance manual incorporating comments from the Federal Review Group has been prepared and is undergoing internal review.
Complete revision of Radioactive Waste Management Order, Manual, and guidance.	09/30/98	In progress. A draft Order, Manual, Contractor Requirements Document, Guidance, and Technical Basis was completed on June 30 and distributed for concurrence as a Departmental draft.
FISCAL YEAR 1999		
Complete Headquarters' review of the Hanford LLW Glass Disposal Facility performance assessment and issue disposal authorization statement.	03/31/99	Pending. Richland Operations Office submitted the performance assessment to Headquarters for review in June. Review team leader has been selected; performance assessment review will commence in August 1998.

4.0 TASK AREA STATUS

4.1 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 basis documentation were issued for DOE and DNFSB review on February 28, 1997. Issuance of the draft documents completed the DNFSB Recommendation 94-2 commitments in this task area. For purposes of continuity, finalization of the *Radioactive Waste Management* directives, which address high-level and transuranic waste as well as low-level waste, is being tracked under this task area.

During this reporting period, the Order, Manual, related Contractors Requirements Documents, a guidance document, a technical basis document, and a cost impacts report were prepared in draft in preparation for making them available for public review. The drafts incorporate comments received to date on previous versions of the directives and on issues raised by internal and external organizations. The current draft, completed on June 30, 1998, is being provided to Headquarters and Field organizations for identification of major issues which need to be resolved prior to making the draft documents available to the public.

During the next reporting period, discussions will be held with the Headquarters and Field organizations to resolve any major issues. Upon resolution of these major issues, the documents will be revised and a notice that the documents are available for review will be published in the Federal Register. Copies of the documents will be available over the World Wide Web and in DOE reading rooms. The current plan is to make the documents available for a 30-day comment period. At the end of the comment period, the comments received will be evaluated and changes to the directives will be made as deemed appropriate. Final versions of the directives are to be issued by the end of September 1998.

A related effort is the development of a guidance manual for the DOE review of performance assessments and composite analyses. The Department has established a Low-Level Waste Disposal Facilities Federal Review Group and charged it with reviewing low-level waste disposal facility performance assessments and composite analyses for technical adequacy and projections of compliance, and recommending action (approval, approval with conditions, disapproval) to the Environmental Management Deputy Assistant Secretaries.

During this reporting period, the *Low-Level Waste Disposal Facilities Federal Review Group Guidance Manual* was revised based on comments received from the Group.

During the next reporting period, the document will be reviewed to ensure that comments were addressed in an acceptable manner, with the intention of completing the document by the end of August 1998.

4.2 Radiological Assessments

During the current reporting period two radiological assessments were completed and submitted to Headquarters for review. The Richland Operations Office submitted the *Hanford Immobilized Low-Activity Tank Waste Performance Assessment* and the Idaho Operations Office submitted the *Radioactive Waste Management Complex Low-Level Waste Radiological Composite Analysis*.

Reviews of radiological assessments previously submitted for four of the six DOE sites with low-level waste disposal facilities continued. The review team for the Los Alamos National Laboratory performance assessment and composite analysis presented its draft report to the Federal Review Group in April 1998. The Group accepted the report and is developing a compliance evaluation and a draft disposal authorization statement for action by the Deputy Assistant Secretary for Waste Management. The team reviewing the Savannah River Site composite analysis submitted its report to the Federal Review Group in June 1998. The Oak Ridge Solid Waste Storage Area 6 and Nevada Test Site Area 3 review teams are continuing to work on the reviews of their respective sites. Both teams have conducted site visits and are in the process of reviewing the respective radiological assessments.

During the next reporting period DOE expects to issue the disposal authorization statement for the Los Alamos disposal facility. The Federal Review Group will meet in July 1998 to conduct site visits of the Oak Ridge Solid Waste Storage Area 6, the Savannah River Site Saltstone Disposal Facility and the E-Area Vault. The Group is holding a meeting in conjunction with the site visits to discuss the results of the review teams and decide on actions to be taken relative to approving the sites' radiological assessments and issuing a disposal authorization statement. The Department expects to take action regarding approval of radiological assessments and issuance of disposal authorization statements for the Los Alamos and Savannah River disposal facilities by the end of September 1998. Headquarters action on the other Oak Ridge and Nevada Test Site radiological assessments will occur in October 1998.

4.3 Low-Level Waste Projections

The draft of the *Disposal Capacity Report, Revision 1* was originally prepared using data on the volumes of low-level waste that were available during the same time that the Department was developing the data set used in *Accelerated Cleanup: Paths to Closure*. During this reporting period, the data on expected disposal volumes used in the *Disposal Capacity Report* was updated to be consistent with the data in *Accelerated Cleanup: Paths to Closure*. Previously developed radionuclide distributions were applied to the revised waste volumes and the radiological impacts at the DOE sites were recalculated.

During the next reporting period, the results of the revised calculations will be evaluated and the results incorporated into the draft *Disposal Capacity Report, Revision 1*. The report will be distributed to Headquarters personnel and the DOE field organizations managing low-level waste site for a final review in July. Comments will be incorporated and the report will be finalized by the end of August 1998.

4.4 Research and Development

During the current reporting period, the Low-Level Waste and Mixed Low-Level Waste Center of Excellence developed a scope and approach that relates research and development needs to improvements in and maintenance of radiological assessments of disposed low-level waste.

During the next reporting period, the Center will convene a working group to include experts in radiological assessments to compile data from completed radiological assessments on additional work needed and to develop the framework for the research and development/maintenance strategy. A draft of the strategy is expected in the middle of the reporting period, and a final is to be completed by the end of September, 1998.

Appendix

Safety Issues Management System

Report for Recommendation 94-2

April 1 to June 30, 1998