[DOE LETTERHEAD]

April 3, 1996

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

Dear Mr. Chairman:

Enclosed is the progress report on implementation of Defense Nuclear Facilities Safety Board Recommendation 94-2, for the period from April 1, 1995, through December 31, 1995. Subsequent progress reports will be prepared and submitted quarterly.

As discussed in the progress report, the Department has gained an improved understanding of the actions and times necessary to implement the recommendation. To reflect this improved understanding, consistent with the Secretary's February 28, 1996, letter-to you, we are in the process of revising the Implementation Plan (IP) and plan on submitting the revision in April. We anticipate being prepared to brief you in the next few weeks prior to the formal submittal of the revised Plan. The status table in the progress report shows projected dates for completing task initiatives from the current IP that have been missed. As appropriate, completion of these tasks will be included in the IP revision.

Also enclosed with this letter are the following deliverables associated with completed or partially completed task initiatives from the 94-2 IP that were not transmitted to you when they were finalized:

- "Inclusion of Pre-1988 Source Term and Other Sources of Radioactive Contamination in Low-Level Waste Disposal Facility Performance Assessments," (IP Task VI.B.1) was transmitted by the Deputy Assistant Secretary for Waste Management to the Operations Offices on May 31, 1995.

- "Interim Policy on Regulatory Structure for Low-Level Radioactive Waste Management and Disposal," (IP Task.VI.B.2) was transmitted to the Operations Offices from the Assistant Secretaries for Environmental Management and Environment, Safety, and Health on July 21, 1995.

- The Performance Assessment for the Area 5 Radioactive Waste Management Site at the Nevada. Test Site. Nve County, Nevada, was submitted to DOE Headquarters for Peer Review Panel review on August 1, 1995.

- The Report entitled, Comparison of Selected DOE and Non-DOE Requirements, Standards, and Practices for Low-Level Radioactive Waste Disposal, December 1995, was developed as partial fulfillment of the deliverables under Task VI.B.6.

If there are any questions about the progress report or deliverables, please contact Greg Duggan

of my staff on (301) 903-7140.

Stephen P. Cowan
Deputy Assistant Secretary
for Waste Management
Environmental Management

Enclosures

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 December 31, 1995

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 Recommendation 94-2" in March 1995. This is the first report on the status of implementation of the task initiatives in the Plan that the Department is undertaking to improve its management of low-level waste (LLW). The Implementation Plan identifies initiatives in six task areas as follows:

Systems Engineering	Performance Assessments
Complex-Wide Review	Volume Projections
Regulatory Structure and Process	Research and Development

This report covers the period from the issuance of the Implementation Plan to December 1995. Subsequent reports will be issued on a quarterly basis.

2.0 OVERVIEW

2.1 General Progress

The Department of Energy has undertaken task initiatives as described in the Implementation Plan to provide a strategy and tools to improve program management of LLW, to complete performance assessments, to strengthen the regulatory process, and to undertake studies to support LLW management. In this first nine months of effort, a modicum of success has been made with the completion of 7 Implementation Plan commitments and the partial completion of 3 commitments (see section 3.0). Nonetheless, during this time, a significant number of task initiatives (17) have not been completed.

Starting in August 1995, the Department began to reevaluate how best to implement this recommendation. A number of factors made this reevaluation necessary. In June, the Defense Nuclear Facilities Safety Board (DNFSB) sent the Department its letter accepting the Implementation Plan, with conditions. These conditions affected the task initiatives that were planned in the area of performance assessments. There were also technical and regulatory issues related to including all LLW in performance assessments being discussed (see section 4.4). It had become apparent that one of the assumptions made when preparing the Implementation Plan, that a revised Order on Waste Management (Order 5820.2A revision) would be completed by the end of September 1995, was invalid. Also, as issues related to task initiatives came into focus, it was clear that more planning of resources and time to conduct studies, prepare documents, obtain reviews and resolve the issues was needed.

A significant amount of time was spent over the ensuing months to evaluate the technical basis for and the logical relationship of the various tasks in the implementation plan. The three principal areas of this evaluation were the systems engineering for low-level waste management; the development of LLW requirements and policies (i.e., policy for applicability of 5820 to CERCLA and RCRA sites) and integration of those requirements and policies into a revised order on waste management; and the assessment of sources of radioactivity at a DOE site that add to the dose resulting from an active LLW disposal facility. As the evaluations led to decisions on the approach to be used, DOE developed schedules that integrate the task initiatives. The tasks were then planned with respect to duration and resources to support a revision to the Implementation Plan. The revised technical approach and scheduling-resource allocation will be reflected in commitments to be included in a revised Plan that will be available in late April.

2.2 Organization

After issuance of the Implementation Plan, the Department established the Low-Level Waste Management Task Group (LLWMTG) in the Office of Waste Management to manage the task initiatives in the Plan. The LLWMTG comprises a leader and five program managers that report to a senior manager in the Office of Waste Management. Technical leads have been identified to aid in the planning and execution of the tasks in each of the six task areas. The LLWMTG has been augmented by staff from the Office of Environmental Restoration to facilitate implementation of initiatives applicable across the DOE organizations.

During this reporting period, the Assistant Secretary for Environmental Management realigned the organization, resulting in a change in the management responsible for implementing recommendation 94-2. As the new Deputy Assistant Secretary for Waste Management, Steve

Cowan now has prime responsibility for recommendation 94-2. Mr. Cowan assigned Mark Frei, Director, Office of Central Operations, as his senior manager responsible for assuring the implementation of the recommendation; the LLWMTG reports to Mr. Frei in the revised organization.

The realignment also affected the implementation of the recommendation at the working level. The Implementation Plan indicated that the Complex-Wide Review would be directed by the Office of Compliance and Program Coordination to give the review some independence from the organization principally responsible for waste management. The realignment eliminated the Office of Compliance and Program Coordination. After consultation with DNFSB staff, the responsibility for the Complex-Wide Review was transferred under the auspices of the Office of Waste Management.

2.3 Meetings with the DNFSB and Staff

2.3.1 Meetings During this Reporting Period

There were no meetings with the entire DNFSB during the reporting period. There was a meeting with one Board member on September 28, 1995 to discuss the Complex-Wide Review.

In this reporting period DOE staff had a number of interactions with staff from the DNFSB to discuss implementation activities and issues as follows:

- Two meetings were held to discuss the scope of the Complex-Wide Review.
- DNFSB staff and DOE staff met on August 17, 1995 to discuss DNFSB staff concerns with and a modified approach to the LLW systems engineering effort.
- DNFSB staff attended the opening day of a meeting of the DOE Low-Level Waste Steering Committee (composed of Headquarters and field office representatives) on September 19, 1995.
- DOE management with newly-assigned responsibility for implementing DNFSB 94-2 met with DNFSB staff on November 13, 1995.
- DNFSB staff met with DOE staff and management on November 17, 1995 to discuss the overall implementation effort and activities supporting revision of the Implementation Plan.

2.3.2 Meetings in Future Reporting Periods

A number of interactions with the DNFSB and staff have or are expected to occur in the next few months. Those that have occurred at the time of this report or that are tentatively planned are as follows:

- DNFSB staff met with the DOE staff on January 16, 1996 to discuss recent revisions to the approach and schedule for conducting the Complex-Wide Review.

- DNFSB staff attended a January 30 to February 1, 1996 workshop on site-wide, all-source terms analyses and meeting on proposed revisions to the Implementation Plan.
- DNFSB staff and DOE staff met on February 9, 1996 to discuss details of the proposed revisions to the Implementation Plan in the area of performance assessments.
- DOE plans to meet with DNFSB staff on March 1, 1996 to discuss the systems engineering requirements review and functions analysis, and the scope of the study of the safety merits and demerits of privatizing LLW disposal.
- DOE plans to brief the DNFSB staff on the proposed revision to the Implementation Plan at the end of March or the first of April 1996.
- DOE plans to brief the DNFSB on the proposed revision to the Implementation Plan around the first of April 1996.

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. Two indicators are provided in the first column of table. The first correlates with the commitment as numbered in the Implementation Plan. The second number corresponds to the numbering system used by the Department's Safety Information Management System (SIMS). Dates reported in the "Status" column reflect the current estimate for completion dates that will be proposed in the revised Implementation Plan.

Status of Task Initiative Due as of December 31, 1995

IP Task # SIMS ID #	Title or Description	Due Date	Status
III.B.1.c R94-02 027	Prepare a Project Management Plan	06/30/95	Completed.
IV.B.1 R94-02 030.001	Prepare DOE LLW management system evaluation report.	06/30/95	Completed. Report transmitted to DNFSB 06/28/95.
IV.B.2 R94-02 030.002	Prepare LLW Management Program Strategic Plan	09/30/95	Deferred. Will be included as part of the Program Management Plan.
IV.B.3 R94-02 030.003	Prepare LLW management system requirements document.	12/31/95	Ongoing. Draft document reviewed internally. Comments being resolved. Completion projected for 05/01/96.
V.B.1 R94-02 001.001	Identify personnel to staff Complex-Wide Review efforts.	07/31/95	Ongoing. Assessment Working Group and Site Assessment Teams formed. Working Group Assessment Teams to be

			finalized in February.
V.B.2 R94-02 001.002	Submit site surveys to Assessment Working Group.	08/31/95	Completed. Surveys needed to support reviews were received by 11/30/95.
VI.B.1 R94-02 007	Issue directive to include pre-1988 source terms in performance assessments.	05/31/95	Completed. Directive issued to Operations Offices on 05/31/95.
VI.B.2 R94-02 008	Issue policy clarify/ strengthen LLW regulatory structure.	05/31/95	Completed. Interim policy issued 07/21/95 describing responsibilities and process for PA approval.
VI.B.3.b.1 R94-02 010	Publish guidance documents addressing critical assumptions for PAs.	08/31/95	Ongoing. The critical assumptions are being addressed through four policy papers; projected to be complete 07/31/96.
VI.B.4 R94-02 014	Issue interim guidance on applicability of 5820.2A to RCRA/CERCLA sites.	09/30/95	Ongoing. Preliminary analyses have been prepared. Project issuing decision and guidance 05/31/96.
VI.B.5.b.1 R94-02 011	Add to roster of Peer Review Panel.	09/30/95	Ongoing. Initial options paper prepared and reviewed. Project completion 07/31/96.
VI.B.6 R94-02 013.001	Issue report comparing DOE and non-DOE LLW requirements and standards.	09/30/95	Partially completed. Report comparing U.S. requirements issued 12/28/95. Comparison to selected foreign requirements projected for 06/30/96.
VI.B.7.b.1 R94-02 013.002	Issue interim implementation guidance on selected LLW functions.	09/30/95	Suspended. Guidance based on 5820.2A requirements drafted and reviewed. Propose deleting activity as part of IP revision.
VII.B.1 R94-02 022	HQ preliminarily approve Hanford Grout PA (post-88 waste only).	05/31/95	Partially completed. A memo acknowledging technical acceptability of analysis sent to Operations Office on 06/01/95.
VII.B.1 R94-02 022	HQ preliminarily approve Hanford 200-W PA (post-88 waste only).	08/31/95	Ongoing*. PRP review complete. HQ to acknowledge technical acceptability only. Projected for 05/31/96
VII.B.1 R94-02 022	Submit Hanford ERDF PA (post-88 waste only) to HQ.	08/31/95	Suspended. Draft PA prepared. Presumption that CERCLA process will be shown to be adequate substitute for PA.
VII.B.1 R94-02 022	HQ preliminarily approve INEL PA (post-88 waste only).	08/31/95	Ongoing*. PRP review suspended pending HQ resolution of groundwater compliance issue. HQ and DOE-ID working on issue resolution.
VII.B.1 R94-02	Submit NTS Area 5 PA (post-88 waste only) to HQ.	06/30/95	Completed. PA submitted for HQ review on 08/31/95.

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VII.B.1 R94-02 022	HQ preliminarily approve NTS Area 5 (post-88 waste only).	12/30/95	Ongoing*. PRP reviewing PA; additional information has been requested. Project completion 05/31/96.
VII.B.1 R94-02 022	HQ preliminarily approve ORNL SWSA-6 (post-88 waste only).	06/30/95	Partially completed. A memo acknowledging technical acceptability of analysis sent to Operations Office on 09/08/95.
VII.B.1 R 94-02 022	HQ preliminarily approve Saltstone PA (post-88 waste only).	05/31/95	Ongoing*. Resolving issues with EH on monitoring and maintenance.
VII.B.2.b. 1R94-02 024.001	Prepare guidance for conducting preliminary assessments.	07/31/95	Suspended. Guidance is being redirected towards composite analysis; project completion 03/31/96.
VIII.B.1 R94-02 004	Issue LLW disposal capacity survey report.	09/30/95	Ongoing. Project issuing initial draft of volumetric capacity report 05/31/96.
IX.B.1.b.1 R94-02 016.001	Issue preliminary LLW R&D activities catalog of needs from DNFSB.	06/30/95	Completed. Report transmitted to DNFSB 06/30/95.
IX.B.1.b.2 R94-02 016	Issue R&D catalog of additional LLW activities.	12/31/95	Suspended. R&D activities to be resumed in FY97. Propose making it part of other R&D tasks.
IX.B.2.b.1 R94-02 018.001	Issue initial LLW R&D needs statement.	09/30/95	Suspended. R&D activities to be resumed in FY97. Propose issuing a single R&D needs statement.
IX.B.3.b.1 R94-0. 019.001	Correlate initial needs with catalogued activities.	11/30/95	Suspended. R&D activities to be resumed in FY97. Propose a single correlation activity.

* DOE Headquarters will not "approve" the performance assessments at sites that have not accounted for radioactive sources that contribute to the dose from the active disposal facility. Nonetheless, a review of the technical aspects of the PAs is being done in order to provide feedback to the site analysts.

4.0 TASK AREA STATUS

4.1 Systems Engineering

The LLW Systems Engineering process was initiated with a Headquarters workshop that established agreement on the mission and defined preliminary top-level functions for the DOE LLW program. The results of this effort were presented in the Low-Level Waste Management Systems Engineering Evaluation Report that was transmitted to the DNFSB on June 28, 1995.

A site specific workshop was held at Idaho National Engineering Laboratory (INEL) to verify the technical functions identified at the HQ workshop, identify the DOE program-level functions,

and determine the program requirements. Agreement was achieved among the participants on the technical function definitions, the interfaces between functions (input/output), and the functional logic network (top-level process flow). The customer set and functional requirements were discussed at length with considerable divergence of opinion.

The lessons learned from the Headquarters and the INEL workshops are as follows:

- The systems engineering effort had been focused upon technical functions that are based upon "how" LLW is currently being treated, stored, and disposed.

- Programmatic functions are difficult to identify because the focus is on functions without adequate definition of requirements.

- There is considerable confusion about who the LLW customers are. As a result, the requirements of the undefined customers are not known.

- There is little consensus on what the requirements are. In general, when requirements are discussed, the focus is upon standards, regulations, and orders. The requirements based upon policy, performance, and scope are not considered and are frequently not understood.

- It was clear that the current approach was:
    - focusing on integrating existing activities rather than re-evaluating the program or meeting program mission, needs, and program/customer requirements;

    - not providing a value system to support decision making; and

    - requiring too much time to support current LLW activities and establish an integrated program.

Based upon discussions with the DNFSB staff and the results of our initial systems engineering activities, described above, DOE has determined that the LLW systems engineering approach needs to be modified. Specifically, the modified approach will identify the LLW program customers and their requirements, as well as define the requirements for policy, performance, scope, industry standards, regulations, and DOE orders.

To that end, a systems engineering workshop with Headquarters and field personnel was held in September to initiate the identification of LLW program customers and related requirements sources documents. Subsequently, a first draft of a systems requirements document was prepared and was in the review process at the end of this reporting period.

During the next reporting period, the initial review of the system requirements document and resolution of those comments will take place. Plans are to convene a video conference in late March with Operations Office representatives to discuss the resolution of the comments and the plans for finalizing the system requirements. During this time, the allocation of the system requirements to system functions will also be underway.

4.2 Complex-Wide Review (CWR)

In November, a new Task Manager was assigned to lead this effort. The major components of the organization to implement the CWR were put in place over the course of this reporting period. The Assessment Working Group (AWG) was formed to administer the review, and Site Assessment Teams (SATs) were formed and trained in conducting the Site Evaluation Survey (survey). The process of staffing the Working Group Assessment Teams (WGATs) was initiated. WGAT nominees have been identified, and the AWG is reviewing information provided by the nominees in order to make recommendations on team assignments.

Key elements of the analysis methodology for conducting the CWR were developed or initiated. This effort included developing a working definition for an "environmental, safety, and health vulnerability." The definition is intended to identify physical as well as programmatic vulnerabilities. A survey was developed for use by the SATs in gathering information to identify conditions and weaknesses that could lead to potential vulnerabilities. The survey addresses the low-level radioactive waste management system, which includes generation, treatment, storage, and disposal. The survey was conducted by the SATs. Work on the development of the Assessment Plan to review the survey responses and conduct the independent on-site assessments was initiated. This work includes the development of review approaches and the methodology to identify and prioritize vulnerabilities. The Assessment Plan will be used by the WGATs to continue the analysis initiated through implementation of the survey.

DOE has taken a graded approach to implementing the CWR. This approach entails a detailed review of disposal facilities and practices using the following functional categories: Management and Oversight, Waste Characterization and Packaging, Performance Assessment and Site Characterization, Design and Construction, and Operations and Maintenance. In keeping with the graded approach concept, the scope for treatment and storage facilities is limited to Management and Oversight and focuses on storage/holding area capacity limits, holding time limits, path forward issues, and the results of prior or ongoing assessments. The review of the results of the prior or ongoing assessments is intended to be used as a screen for determining the need for further assessment of a treatment or storage facility. The scope for generator facilities has been limited to generator waste accumulation areas with regard to capacity limits, holding time limits, and path forward issues.

The primary issue affecting progress of the CWR has been the definition of the scope of the review. During the reporting period, CWR personnel met with the DNFSB staff to discuss the scope and progress of the review. In addition, the CWR Task Manager requested the DNFSB staff to review the survey document and provide written comments. After receiving the survey, the DNFSB arranged a meeting with DOE to discuss the Board's framework for the low-level waste management system. The DNFSB's main concern is that the scope of the survey is not sufficiently comprehensive to identify vulnerabilities associated with DOE's management of low-level radioactive waste. The DNFSB believes this is especially true for waste generation, treatment, and storage. DOE will continue to work with the DNFSB and staff to resolve this concern.

Accomplishments projected for the next reporting period include the following:

- resolve the CWR scope issue;
- develop a revised CWR schedule;

- complete WGAT staffing;
- complete the Assessment Plan;
- conduct onsite reviews; and
- prepare preliminary Complex-Wide Review Report.

4.3 Regulatory Structure and Process

During the period covered by this report, significant progress was made on several of the task initiatives in the Regulatory Structure and Process area of the Implementation Plan.

The policy entitled, "Inclusion of Pre-1988 Source Term and Other Sources of Radioactive Contamination in Low-Level Waste Disposal Facility Performance Assessments," was transmitted by the Deputy Assistant Secretary for Waste Management to the Operations Offices on May 31, 1995. This policy directs the Operations Offices with LLW disposal facilities to include LLW disposed of prior to September 26, 1988 as well as other sources of radioactive contamination in the ground in performance assessments.

The "Interim Policy on Regulatory Structure for Low-Level Radioactive Waste Management and Disposal," was transmitted to the Operations Offices from the Assistant Secretaries for Environmental Management and Environment, Safety, and Health on July 21, 1995. This interim policy establishes a formalized oversight approach for DOE headquarters review and approval of low-level waste disposal facility performance assessments. An attachment to the interim policy requests comments and feedback on the structure and process for a final policy to strengthen the oversight of LLW management in the long term. It was felt at the time the policy was written that the final policy needed to wait for the Department to complete a planned realignment, and for the Advisory Committee on External Regulation to complete its recommendations to the Secretary.

A Report entitled, "Comparison of Selected DOE and Non-DOE Requirements, Standards, and Practices for Low-Level Radioactive Waste Disposal," was finalized in December 1995. The report provides detailed discussions and tables comparing selected DOE LLW management requirements, practices, and standards with those of the Nuclear Regulatory Commission and some Agreement States and Compacts. The Implementation Plan states that this report is to include a comparison of international LLW management requirements, practices, and standards as well, and this part of the analysis will be completed in a second report.

The primary issue facing the Regulatory Structure and Process tasks throughout the reporting period was the proper interface and coordination with the revision of DOE Order 5820.2A, *Radioactive Waste Management.* When the Implementation Plan was issued in March 1995, it was assumed, based on information current at that time, that a revised Order would be issued in the Summer of 1995. Therefore, tasks in the Plan were structured around implementing this new Order, and promulgating a LLW Rule. The revised Order was not issued as planned. One key consideration in not issuing the revised Order was concerns raised by DNFSB. Thus, the tasks in the Implementation Plan were confounded by a chain of events associated with the future plans

for the revision of the Order. This issue has been clarified by recent plans and schedules established for the revision of the Order, and tasks will be described in the revised Implementation Plan that will result in a coordinated effort leading to a newly revised Order that will include the results of analysis and technical findings of the 94-2 Implementation Plan.

Accomplishments projected for the next reporting period include:

- Drafts of a "Standard Format and Content Guide for U.S. Department of Energy Low-Level Waste Performance Assessments," and outlines for the "Standard Review Plan for U.S. Department of Energy Low-Level Waste Performance Assessments" and the "Maintenance of U.S. Department of Energy Low-Level Waste Performance Assessments" will be reviewed.

4.4 Performance Assessments

During the period covered by this report, numerous staff and management discussions led to an improved understanding of the appropriate activities to include in this section of the Implementation Plan. Factors prompting the debate were the conditions in the DNFSB letter accepting the Implementation Plan, and technical and regulatory concerns.

Although no performance assessments had been approved at the time the DNFSB was conducting its evaluation of DOE LLW management, by the time the Implementation Plan was issued, six performance assessments had been submitted to Headquarters and one had been approved. The Implementation Plan described a task initiative for Headquarters to review and grant ***preliminary*** approval of performance assessments that had been developed in accordance with DOE Order 5820.2A (i.e., included only post-1988 waste). However, one of the conditions in the June 1995 DNFSB letter accepting the Plan was that no performance assessments should be approved until they do account for the composite of all LLW at a site. Accordingly, DOE has not given preliminary approval to any performance assessments since that time, although technical review of them continues. DOE Headquarters will acknowledge those performance assessments found to be "technically acceptable," recognizing that the analysis is incomplete pending consideration of the pre-1988 waste and other source terms.

The Implementation Plan also included a task initiative to conduct preliminary assessments to provide near-term evaluations of the potential for unacceptable impacts to the public when all LLW is considered. Another condition of the DNFSB letter of acceptance was that these preliminary assessments should not detract from the prompt completion of the full performance assessments. Since the preliminary assessments were separate analyses that would have diluted analysts' efforts on the full performance assessments, actions to prepare preliminary assessments were halted.

It is generally accepted that a principal element of the DNFSB recommendation is that there must be an evaluation of long-term public protection from radioactive residues to be left at a DOE site. Debate ensued over whether the performance assessment is the only tool, or the best tool, for conducting this evaluation. A widely held opinion is that the performance assessment is a tool to be used in designing a disposal facility and justifying the operational constraints (e.g., waste acceptance criteria). Assessment of the impacts of other sources of radiation (past disposals, spills, etc.) may be better addressed through a separate analysis. There was also

discussion of the appropriate measures for public protection and the right location at which to evaluate protection of the public.

Long-term protection of the public from radioactivity left at a DOE site is contingent on the amount of land that remains under DOE control. Therefore, land-use planning is another consideration that affects the analysis of public protection. One proposal is that a performance assessment or the CERCLA process and the 25 mrem/yr dose limit at a location near the facility should be used to guide the design and operation of current or future disposal facilities. Then an adjunct composite analysis of sources of radioactivity that overlap with the active/planned disposal facility plume would be prepared to demonstrate that the potential dose to a person at the point of public access, the land-use boundary, would not exceed a specified limit. That limit would be less than the 100 mrem/yr public dose limit subscribed to by DOE.

The above factors will be further discussed within DOE and with the DNFSB staff during the next quarter. The objective of the discussions is to settle on the tasks initiatives that will ensure an appropriate evaluation of public protection and commit to them in the Implementation Plan.

4.5 Volume Projections

The waste volume projections tasks are intended to coordinate with other efforts to collect waste information from the DOE sites. Therefore, the plan was to draw information for LLW coming from environmental restoration sites from the Baseline Environmental Management Report (BEMR) to identify waste volumes and characteristics and planned disposal locations. Many of the BEMR data submittals were delayed until November and December. This resulted in a delay of the preparation of the report on disposal capacity committed to in the Implementation Plan. At the end of the current reporting period, data were being analyzed, the outline of the report had been prepared and writing of certain sections of the report was progressing. It is recognized that the report will not be fully developed with respect to radiological constraints on capacity until the performance assessments and composite analyses have been prepared. The plan is to add information on the radiological capacity in future revisions of the report.

During the next quarter, work will continue on the development of the disposal cell summaries. The disposal cell summaries will be combined with data received from the field in order to complete the disposal capacity report as scheduled in the revised IP.

4.6 Research and Development

The initial task in this section of the Implementation Plan, to catalog selected research and development activities, was completed in June 1995. After conducting this cataloging, it was felt that the effort could be made more efficient by waiting until the research and development needs had been defined. This avoids the cataloging of activities that may not correspond to any identified need, and therefore are not relevant to improvements to DOE management of LLW. Identifying completed or ongoing research that relates to LLW management research and development needs is proposed to become an integral part of the determination of outstanding needs, the step following the development of needs statements.

An initial effort was made to identify research and development needs. Representatives from the

DOE Performance Assessment Task Team, as well as other experts in areas related to performance assessment were interviewed to identify needs in subject areas related to performance assessment. A draft report was prepared documenting the results of the initial needs identification.

Personnel responsible for these task initiatives have determined that a number of other activities being conducted as part of the Implementation Plan (such as the Complex-Wide Review, systems engineering, and performance assessments) should be completed or further developed prior to trying to identify research and development needs and develop needs statements. This logic, and fiscal year 1996 funding constraints, have resulted in a suspension of active work in this task area until next fiscal year. Research and development activities being conducted by the Office of Technology Focus Groups, particularly the Mixed Waste and the Landfill Focus Groups, will be monitored throughout the year and factored into the identification of outstanding needs.