

FISCAL YEAR 1997 SECOND QUARTER
REPORT ON
DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB)
RECOMMENDATION 92-4
IMPLEMENTATION PLAN
REVISION 1

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

FISCAL YEAR 1997 SECOND QUARTER REPORT ON
DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB)
RECOMMENDATION 92-4 IMPLEMENTATION PLAN REVISION 1
FOR THE PERIOD
JANUARY 1, 1997 - MARCH 31, 1997

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1.0 INTRODUCTION

1.1 PURPOSE

This report provides the status of activities during the period of January 1, 1997, to March 31, 1997, at the Hanford Site by the Department of Energy (DOE) Richland Operations Office (RL) and DOE Headquarters (DOE-HQ) relating to the *Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 92-4 Implementation Plan, Revision 1*. Revision 1 of the Plan has six remaining Program/Project commitments and three reporting commitments open.

1.2 SITEWIDE THREE-MONTH HIGHLIGHTS

Hanford Site-specific systems engineering commitments are complete. Implementation of Hanford Site systems engineering processes consistent with the RL Site Systems Engineering Policy Directive 430.1 and RL Site Systems Engineering Implementing Directive 430.1 requirements is continuing.

1.3 TANK WASTE REMEDIATION SYSTEM THREE-MONTH HIGHLIGHTS

A draft of DNFSB Recommendation 92-4 Implementation Plan, Revision 2 was developed and informally submitted to DOE-HQ and DNFSB staff for comment during the first quarter of Fiscal Year (FY) 1997. The revision aligned Plan commitments with current Tank Waste Remediation System (TWRS) Project direction. Each of the remaining open commitments in Revision 1 of the Plan was addressed in the draft revision. RL presented the current status of the Plan and of TWRS systems engineering to DNFSB members on February 26, 1997. Subsequently, DNFSB members requested that their staff work with DOE personnel to produce a revision of the Plan acceptable to the DNFSB members. Discussions regarding the revision commenced in March 1997 and are ongoing. The final revision will contain commitments different from those described in the revised Plan submitted to DOE-HQ and DNFSB staff in November 1996.

Discussions regarding the TWRS Mission Analysis Report (MAR) continued during the second quarter of FY 1997. The content of the TWRS functions and requirements document was incorporated into the TWRS Functions and Requirements Database (FRD). The FRD, in conjunction with the MAR, constitutes the initial portion of the TWRS technical baseline documentation. The Project Hanford Management Contractor (Contractor) is reviewing the MAR and FRD for proper integration with the Hanford Site Technical Baseline and for consistency with current TWRS Project direction. Further work is still required on the data before it meets RL acceptance criteria. During the first quarter of FY 1997, the Contractor developed a plan to accomplish this work. The plan supplied a revised MAR to RL in FY 1997. A draft of the revised MAR was informally provided to DNFSB staff during April 1997.

The TWRS MAR and FRD baseline data are used to form project Technical Requirement Specifications (TRS), which are reviewed during Technical Requirements Reviews. A plan for developing the draft TRS for Double-Shell Tank (DST) retrieval projects was established during the second quarter of FY 1997. A copy of the plan was informally provided to DNFSB staff during April 1997.

System Requirements Review (SRR) Implementation Plan closure actions are being pursued with the Contractor. Revision of the SRR Implementation Plan is scheduled for the fourth quarter of FY 1997.

RL has retained the services of contractor personnel to assist in performing the RL Final Staffing Analysis. A presentation to DNFSB staff describing details of the RL Final Staff Analysis process is planned for the third quarter of FY 1997. The DOE-HQ Final Staff Analysis Document was formally transmitted to DNFSB on March 18, 1997, and is now considered complete.

1.4 REPORT FORMAT

This Quarterly Report documents progress on commitments in the DNFSB Recommendation 92-4 Implementation Plan, Revision 1. The Report is arranged in the same order as the Implementation Plan (i.e., Sitewide Commitments, TWRS Program Commitments, TWRS Project Commitments, and Continuing Commitments). Each commitment, which was due or overdue during the second quarter FY 1997 (January 1997 to March 1997) and the third quarter FY 1997 (April 1997 to June 1997) is identified and a description of the status is provided in Sections 2.1 and 2.2.

Topics for each reported commitment include:

- Completion status of commitments due during the quarter and date the deliverable was submitted to DNFSB;
- Forecast for completion of commitments due in the subsequent quarter; and
- Additional information as required to provide the status of the commitment.

In addition to this information, Section 1.5 provides a Table of Commitments listing all DNFSB commitments contained in the Plan. Shaded commitments indicate commitments that have been submitted to DNFSB and are considered complete.

1.5 TABLE OF COMMITMENTS

SITEWIDE COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
2.2.a	(1) Draft Site Functions and Requirements (dated 01/10/94) and Addendums 1, 2, and 3 (2) Draft Architecture Synthesis Basis for the Hanford Cleanup System (3) Draft Systems Engineering Product Description Report for the Hanford Cleanup Mission	6/30/94	7/12/94	
2.2.b(1)	(1) Systems Engineering Implementation Plan based on FY 1995 Multi-Year Program Plan (MYPP) logic and planning for the site	11/15/94	7/15/96	
2.2.b(2)	(2) Letter of direction to affected site participants to include use of systems engineering in accordance with DOE policy to develop the technical baselines that will be used as the basis for MYPP updates	3/31/95	7/14/95	
3.6.a	Hanford Site Management System Directives	7/12/94	9/23/96	
3.7.d	Draft Site Systems Engineering Management Plan (SEMP)	3/31/94	7/12/94	
3.7.e	Final Site SEMP	6/30/94	7/15/96	
3.7.f	Draft Site SEMP Implementing Procedures	2/14/95	7/15/96	

TWRS PROGRAM COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
2.4.a	Initial TWRS Systems Analysis Report reflecting the systems engineering work done to 10/31/93	10/31/93	4/1/94	
2.4.b	TWRS Detailed Preliminary Functional Analysis Report	1/18/94	4/1/94	
2.4.c	TWRS Top-Level Systems Requirements Review Report	1/31/95	4/95	

TWRS PROGRAM COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
2.4.d	TWRS Technical Requirements Review Report	3/31/95		1
3.2.a	TWRS Integrated Technology Plan	6/10/94	9/28/94	2
3.3.a	DOE-RL and Hanford Contractor Staff Qualification and Training Process (Consistent with 93-3, Commitment 4.3)	10/31/94	11/17/94	
3.3.b	Hanford Performance-Based Training and Qualification Process (REF: 93-3 Commitment 4.3)	10/31/94	11/17/94	
3.3.c	DOE-RL Qualification and Training Evaluation and Assessment Process	10/31/94	11/17/94	
3.3.d	Report of Independent Assessment of RL and Contractor TWRS Qualification and Training Process	10/21/94	10/21/94	
3.4.a	DOE-HQ (EM-36) Preliminary Staff Analysis Report	3/31/94	3/31/94	
3.4.b	RL TWRS Preliminary Staff Analysis Report	8/26/94	8/26/94	
3.4.c	DOE-HQ (EM-36) Individual Development Plans	10/31/94	10/31/94	
3.4.d	RL TWRS IDPs (Training Requirements Matrix)	10/31/94	11/17/94	
3.4.e	RL TWRS Orientation Report documenting status and initiation of orientation	10/31/94	11/17/94	
3.4.f	DOE-HQ (EM-36) Orientation Report documenting status and initiation of orientation	10/31/94	11/17/94	
3.4.g	Final Staff Analysis Document	RL: 90 days after Stds Delivery	HQ: 3/18/97	3
3.4.h	Report documenting completion of required technical training identified in Individual Development Plan and Training Requirements Matrix	RL: 8/31/95 HQ: 10/31/95		3
3.5.a	Contractor TWRS Staffing Analysis and Contractor Position Qualification Standards	1/27/95	9/30/96	
3.5.b	Contractor TWRS Individual Qualification and Training Plans	2/28/95	4/25/95	

TWRS PROJECT COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
2.4.i	Initial Retrieval Demonstration Baseline Comparison Report	11/30/95		1
2.4.j	Initial Pretreatment Baseline Comparison Report	11/30/95		1
2.4.k	Scheduled dates for each Project Independent Design Review	1/31/95		1
2.4.l	Summary Report for each Standdown Review	1/13/94	4/1/94	

CONTINUING COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
4.a	Quarterly Status Reports	Quarterly		
5.a	Revised 92-4 Implementation Plan	As required		
5.b	Discussions in Quarterly Status Reports	As Required		

NOTES:

1. Commitments 2.4.d, 2.4.i, 2.4.j, and 2.4.k, will be superseded by commitments more aligned with currently planned TWRS Projects in a planned revision to the DNFSB Recommendation 92-4 Implementation Plan.
2. Although Commitment 3.2.a is complete, RL re-evaluated the Integrated Technology Plan with a view toward clarifying an alternative path to privatized waste processing. A commitment associated with this alternative path is being proposed in the planned revision to the DNFSB Recommendation 92-4 Implementation Plan.
3. Effort on Commitments 3.4.g and 3.4.h is in progress. On March 18, 1997, the DOE-HQ Final Staffing Analysis was formally transmitted to DNFSB. See Section 2.0 of this report for additional details.
4. As a result of the February 8, 1996, letter from H. O'Leary to J. Conway stating DOE's intent to delete Commitments 2.4.e, 2.4.f, and 2.4.g, the Commitments are considered deleted.
5. The due dates for the deliverables were to be submitted as a part of the response to the RL-TWRS Management System Description and Policy Annexes--ref: Commitment 3.6.c. Instead, the deliverables were submitted in September 1996 without specific due dates having been established.

TWRS PROGRAM COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
3.5.c	Contractor TWRS Selection Process Report documenting status and completion	3/17/95	4/25/95	
3.6.b	TWRS Management Systems Description document and Policy Annexes	11/30/94	12/13/94	
3.6.c	Schedule for development and issuance of the Contractor TWRS Management Plan and associated documentation	12/30/94	9/30/96	
3.7.a	TWRS Industry/Government Standards Review Report	12/14/93	4/1/94	
3.7.b	A letter report summarizing the SE Comparison Analysis	10/31/94	11/10/94	
3.7.c	DOE-FM Report on DOD Systems Engineering Standard Review	3/31/95	6/19/95	
3.7.g	Draft TWRS Systems Engineering Management Plan	3/31/94	3/31/94	
3.7.h	TWRS Systems Engineering Management Plan Implementing Procedures		9/30/96	5
3.7.i	Revised TWRS Systems Engineering Management Plan		9/30/96	5
3.8.a	Draft Configuration Management Plan that describes technical configuration control within the TWRS program	1/31/94	4/1/94	
3.9.a	TWRS Multi-Year Work Plan	9/30/94	10/94	
3.10.a	TWRS Quality Management Policy Annex	11/30/94	12/13/94	
3.10.b	TWRS Health and Safety Management Policy Annex	11/30/94	12/13/94	

TWRS PROJECT COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
2.4.e	Multi-Function Waste Tank Facility Baseline Comparison Report	9/30/95	2/8/96	4
2.4.f	Multi-Function Waste Tank Facility Independent Critical Design Review Report	Prior to construction	2/8/96	4
2.4.g	Aging Waste Transfer Line Baseline Comparison Report	11/30/95	2/8/96	4
2.4.h	Cross-site Transfer Line Baseline Comparison Report	11/30/95	9/30/96	

2.0 STATUS: COMMITMENTS DUE/OVERDUE DURING SECOND QUARTER FY 1997 AND FORECAST FOR THIRD QUARTER FY 1997

2.1 TWRS PROGRAM COMMITMENTS

2.1.1 COMMITMENT 2.4.d: TWRS TECHNICAL REQUIREMENTS REVIEW REPORT
(DUE: March 31, 1995)

STATUS: OVERDUE: The TWRS functional requirements form the basis for TWRS technical requirements. The TWRS functional requirements, as defined by the MAR, FRD, and other supporting documents and data, were rejected in April 1995 as a result of the TWRS SRR. In response to the DOE-HQ SRR, RL generated an SRR Action Plan. The SRR Action Plan was approved by DOE-HQ on July 16, 1996. An SRR Implementation Plan, which responds to the SRR Action Plan, has been developed to allow tracking of resolutions to the SRR findings. RL is actively pursuing closure of the findings.

As discussed with DNFSB staff on June 26, 1996, and thereafter, RL plans to supersede this commitment in DNFSB Recommendation 92-4 Implementation Plan, Revision 2, by a related commitment for the Initial Tank Retrieval System Project (ITRS). A draft plan and schedule for developing the superseding deliverable were informally provided to DNFSB staff on April 1, 1997.

2.1.2 COMMITMENT 3.4.g: FINAL STAFF ANALYSIS DOCUMENT
(DUE: 90 days after DNFSB Recommendation 93-3 Qualification Standards Delivery)

RL STATUS: OVERDUE: The process involves the derivation of position specific knowledge, skills, and ability requirements from the TWRS mission and functions, and the identification of existing personnel knowledge, skills, and abilities. The outputs are compared and used to determine discrepancies and position-specific TWRS personnel training requirements. The training will be completed in conjunction with training required by the DNFSB Recommendation 93-3 Implementation Plan Technical Qualification Program.

During the second quarter of FY 1997, RL retained the services of contractor personnel to assist in performing many aspects of the RL Final Staff Analysis. Contracts were issued in January 1997. The work is expected to be complete by July 1997, followed by RL review and incorporation. The schedule is to complete the RL Final Staff Analysis for TWRS technical personnel in FY 1997. Presentations have been provided to DNFSB staff on the schedule, the progress on the work completed during the second quarter, and the work planned for the third quarter of FY 1997.

DOE-HQ STATUS: COMPLETE: A Draft DOE-HQ Final Staffing Analysis Report was by DNFSB staff during the first quarter of FY 1997. The Final DOE-HQ Staffing Analysis Report was formally transmitted to DNFSB on March 18, 1997.

- 2.1.3 COMMITMENT 3.4.h: REPORT DOCUMENTING COMPLETION OF REQUIRED TECHNICAL TRAINING IDENTIFIED IN INDIVIDUAL DEVELOPMENT PLANS AND TRAINING REQUIREMENT MATRICES
(DUE: RL - August 31, 1995; DOE-HQ - October 31, 1995)

RL STATUS: OVERDUE: Completing the commitment was identified as contingent upon completing the DNFSB Recommendation 93-3 Implementation Plan Technical Qualification Program (Reference: John Wagoner letter to Chairman John Conway, September 9, 1995). During the third quarter of FY 1996, DNFSB staff agreed that completing the DNFSB Recommendation 92-4 Implementation Plan training requirements may be consolidated with the RL Technical Qualification Program required by the DNFSB Recommendation 93-3 Implementation Plan. Effort is now focused on completing the requirements specified in the DNFSB Recommendation 93-3 Implementation Plan and will be reflected in revision to the DNFSB Recommendation 92-4 Implementation Plan.

DOE-HQ STATUS: OVERDUE: DOE-HQ is focused on completing the TWRS training requirements, as identified in the Individual Development Plans (IDPs) and specified in the DNFSB Recommendation 93-3 Implementation Plan.

2.2 TWRS PROJECT COMMITMENTS

- 2.2.1 COMMITMENT 2.4.i: INITIAL RETRIEVAL DEMONSTRATION BASELINE COMPARISON REPORT
(DUE: November 30, 1995)

STATUS: OVERDUE: TWRS systems requirements specify development of a TWRS FRD to provide technical requirements for TWRS projects. The FRD was developed in preliminary form but required rework as a result of the TWRS SRR. (Reference: Status of Commitment 2.4.d.) Since many items in the SRR Implementation Plan, which identifies the actions needed to approve the FRD have not yet been completed, selected TWRS projects have proceeded on the basis of an updated, but not yet final, FRD in order to support critical TWRS objectives.

The ITRS Project design work is proceeding on the basis of the Functional Design Criteria Document, WHC-SD-W211-FDC-001 Revision 2, dated February 20, 1996. The document was prepared in conjunction with the TWRS FRD. As discussed with the DNFSB staff on and after June 26, 1996, the commitment will be superseded in a planned revision to the DNFSB Recommendation 92-4 Implementation Plan by a similar commitment for the first tank in the ITRS Project.

2.2.2 COMMITMENT 2.4.j: INITIAL PRETREATMENT BASELINE COMPARISON REPORT
(DUE: November 30,1995)

STATUS: OVERDUE: All work on the Initial Pretreatment Module Project was suspended in July 1995, and funding was not allocated to the project in FY 1996. On July 24, 1996, DOE and the Washington State Department of Ecology approved Change Request M-50-95-01 to the Hanford Federal Facility Agreement and Consent Order (also known as the Tri-Party Agreement). As a result of the Change Request, the Project workscope was subsequently deleted.

As discussed with DNFSB staff, the commitment will be superseded in a planned revision to the DNFSB Recommendation 92-4 Implementation Plan with a commitment clarifying an alternative path to privatized waste processing.

2.2.3 COMMITMENT 2.4.k: SCHEDULED DATES FOR EACH PROJECT INDEPENDENT DESIGN REVIEW
(DUE: January 31, 1995)

STATUS: OVERDUE: Independent Design Reviews occurred on two projects, were canceled on two other projects after the projects were canceled, and are now scheduled in accordance with the guidelines published in the TWRS Systems Engineering Management Plan (SEMP) and the DOE Order 430.1 Life Cycle Asset Management Guides.

As discussed with DNFSB staff on June 26, 1996, and thereafter, the commitment will be superseded by a commitment describing the use of TWRS SEMP processes in a TWRS project. The commitment will be identified in a planned revision to the DNFSB Recommendation 92-4 Implementation Plan.