

FISCAL YEAR 1997 FIRST 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 FIRST QUARTER REPORT ON
DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB)
RECOMMENDATION 92-4 IMPLEMENTATION PLAN REVISION 1
FOR THE PERIOD
OCTOBER 1, 1996 - DECEMBER 31, 1996

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1.0 INTRODUCTION

1.1 PURPOSE

This report provides the status of activities during the period of October 1, 1996, to December 31, 1996, 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 Policy Directive 430.1 and RL 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 DNFSB staff for comment during the first quarter of Fiscal Year (FY) 1997. This revision aligns Plan commitments with current TWRS project direction. Each of the remaining open commitments in Revision 1 of the Plan are addressed in the draft Revision 2 of the Plan. Commitment changes included in Revision 2 of the Plan have been discussed with DNFSB staff and their comments addressed. The revised Plan is currently undergoing final review at DOE-HQ.

Discussions on the Tank Waste Remediation System (TWRS) Mission Analysis Report (MAR) continued during the first quarter of FY 1997. The content of the TWRS Functions & Requirements Document (FRD), in conjunction with the MAR, constitutes the initial portion of the TWRS Technical Baseline documentation. These documents are required to form project Technical Requirement Specifications, which are reviewed as Technical Requirements Reviews. The documents were reviewed for integration with the Hanford Site Technical Baseline (HSTB), internal consistency, and consistency with current project plans. Further work is still required on these documents before they meet acceptance criteria defined by RL. The plan to complete the work was being developed during first quarter of FY 1997. This plan will ensure FRD integration to the MAR and the HSTB, and determine the trade studies and tests still necessary to fully develop the FRD.

System Requirements Review (SRR) Implementation Plan closure actions are being incorporated into a Performance Agreement with the Project Hanford Management Contractor (PHMC). Most policy-related findings will be closed shortly. Revision of the Implementation Plan is scheduled for fourth quarter of FY 1997.

RL made significant progress towards retaining the services of contractors to assist in performing the RL Final Staffing Analysis. The DOE-HQ Final Staff Analysis Document was informally reviewed by DNFSB staff during the first quarter, and is currently undergoing formal review by senior DOE-HQ personnel.

1.4 REPORT FORMAT

The 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 October 1996 to December 1996 period and the second quarter FY 1997 (January 1997 to March 1997) is identified and a description of the status is provided in Section 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 those 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 SEMF	6/30/94	7/15/96	
3.7.f	Draft Site SEMF 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	90 days after Stds Delivery		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 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	
2.4.i	Initial Retrieval Demonstration Baseline Comparison Report	11/30/95		1

TWRS PROJECT COMMITMENTS

Commitment	Commitment/Deliverable Title	Due Date	Submitted	Status
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. 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 the Department's intent to delete Commitments 2.4.e, 2.4.f, and 2.4.g, these Commitments are considered deleted.
5. The due dates for these 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.

2.0 STATUS: COMMITMENTS DUE/OVERDUE DURING FIRST QUARTER FY 1997 AND FORECAST FOR SECOND 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, the FRD, and other supporting documents, were rejected in April 1995 as a result of the TWRS System Requirements Review (SRR). In response to the DOE-HQ SRR, RL generated an SRR Action Plan. This Plan was approved by DOE-HQ on July 16, 1996. An SRR Implementation Plan, which responds to the SRR Action Plan, allows tracking of resolutions to the SRR findings.

The PHMC reviewed the SRR Implementation Plan in the first quarter of FY 1997. RL personnel proposed a performance agreement related to the closure of SRR findings and recommendations. Details of the agreement are being negotiated. Attaining the agreement goals will close many of the SRR findings related to the TWRS functional requirements in FY 1997. While the agreement negotiations continue, 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 similar commitment for the Initial Tank Retrieval System Project (ITRS).

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.

RL made significant progress towards retaining the services of contractors to assist in performing many aspects of the RL Final Staff Analysis during the first quarter of FY 1997. Statements of work and requests for quotation were formed and distributed, and bidder review, evaluation, and preliminary contractor selection and contract negotiation occurred. Contracts were issued in January 1997; completion of the work is expected by July 1997, followed by RL review. The present plan is to complete the Final Staff Analysis for TWRS technical personnel in FY 1997.

DOE-HQ STATUS: OVERDUE: The DOE-HQ staffing analysis will be revisited in the spring or summer of 1997 following an anticipated DOE-HQ reorganization. The draft DOE-HQ Final Staffing Analysis Report has been reviewed by DNFSB staff and is in concurrence for formal submittal to the Board in the second quarter of FY 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: Completion of this commitment was identified as contingent upon completing the DNFSB Recommendation 93-3 Implementation Plan Technical Qualification Program (reference letter John Wagoner to Chairman John Conway, September 9, 1995). During the third quarter of FY 1996, DNFSB staff agreed that completion of 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 as specified in the DNFSB Recommendation 93-3 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 top level requirements for TWRS projects. The FRD was developed in preliminary form but required rework as a result of the TWRS SRR. 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 Program objectives.

On 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 formed in conjunction with the TWRS FRD. As discussed with the DNFSB staff on June 26, 1996, this commitment will be superseded in DNFSB Recommendation 92-4 Implementation Plan, Revision 2, by a similar commitment for the first tank modified 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 this 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 for the Hanford Federal Facility Agreement and Consent Order (also known as the Tri-Party Agreement). As a result of the Change Request, the workscope was subsequently deleted.

As discussed with DNFSB staff, this 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: As discussed with DNFSB staff on June 26, 1996, this commitment will be superseded by a commitment relating to activities that implement TWRS SEMP processes on an example project. The commitment will be identified in a planned revision to the DNFSB Recommendation 92-4 Implementation Plan.