

**FY 1996 THIRD QUARTERLY REPORT ON
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 92-4 IMPLEMENTATION PLAN FOR THE PERIOD
APRIL 1, 1996 - JUNE 30, 1996**

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1.0 INTRODUCTION

1.1 PURPOSE

This report provides the status of activities underway between April 1, 1996, and June 30, 1996, at the Hanford Site and the Department of Energy - Headquarters that relate to *Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 92-4 Implementation Plan, Revision 1*.

1.2 SITEWIDE THREE-MONTH HIGHLIGHTS

During this quarterly period, Sitewide Systems Engineering (SWSE) continued to implement DOE Richland Operations Office (RL) Policy Directive (RLPD) 430.1 and Implementing Directive (RLID) 430.1. The site System Engineering Management Plan (SEMP) was finalized and is now being implemented at Hanford. Development of the Hanford Site Technical Baseline (HSTB) continued with improved definition of requirements, planning assumptions, and site-level project interfaces.

In June 1996, the Fiscal Year (FY) 1997 Multi-Year Work Plan (MYWP) guidance on programs and projects was formally transmitted to Hanford contractors. This guidance included specific language on adherence to RLPD/RLID 430.1 and the use of systems engineering methodologies in preparation of MYWPs.

The HSTB is being used by site projects as Section 1 of their FY 1997 MYWPs. This section contains the project's mission statement, technical objectives, requirements, waste type data (summary level/forecasting data), infrastructure, planning assumptions, and the project's life-cycle requirements.

During this quarterly reporting period, SWSE completed preparation of deliverables to satisfy Commitments 2.2.b(1), 3.7.e, and 3.7.f and held discussions on these deliverables with DNFSB Staff on June 26, 1996. Based on these discussions, these deliverables were formally transmitted to the DNFSB on July 15, 1996.

1.3 TANK WASTE REMEDIATION SYSTEM THREE-MONTH HIGHLIGHTS

A draft of a second revision to this 92-4 Implementation Plan was developed and submitted for comment this quarter. Commitment changes included in this draft were discussed with DNFSB Staff on June 26, 1996. Based on these discussions, another draft revision is planned for the fourth quarter of FY 1996.

DNFSB Staff indicated satisfaction with the Tank Waste Remediation System (TWRS) Systems Engineering Management Plan, the SEMP Implementing Procedures (IPs), and other management documents submitted to them informally.

On this basis, the SEMP and IPs will be submitted to the DNFSB formally during the fourth quarter of FY 1996 to obtain commitment completion.

Staffing analyses are being pursued by each of the TWRS divisions. Revised position descriptions are the first step in development of the staff analyses. Knowledge, skills, and ability statements will be derived to further define the qualification requirements beyond those currently stated in the Technical Program Qualification standards.

Implementation of the RL Technical Qualification Program stressed qualification and training this quarter. TWRS Staff worked towards completing their base, functional area, and facility specific qualification requirements. A number of briefings were also offered to support completing the competencies listed in the facility specific qualification standard. TWRS has completed 28.5 percent of its qualification requirements.

DOE-Headquarters staffing analysis is currently being revised to reflect the new organizational alignment and training, as identified by the Individual Development Plans, is scheduled for completion during the first quarter of FY 1997.

In a June 26, 1996, meeting, DNFSB Staff reaffirmed the Board's understanding that three commitments relating to the Multi-Function Waste Tank Facility and Aging Waste Transfer Line projects would be deleted in the revised DNFSB 92-4 Implementation Plan. It was agreed that the revised plan would include redrafted commitments relating to two other projects.

Specific details on the 92-4 Implementation Plan TWRS commitment status and progress for the fiscal year to date are provided in Sections 2.2 and 2.3.

1.4 REPORT FORMAT

This report documents progress on commitments in the 92-4 Implementation Plan. It 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 that was due or overdue during the April 1996 through June 1996 period and the next quarter (July 1996 through September 1996) is identified and followed by a description of its status.

Topics for each reported commitment include:

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

In addition to this information, a Table of Commitments lists all DNFSB commitments contained in the plan. Shaded commitments indicate those commitments that have been submitted to the DNFSB and are considered complete.

1.5 TABLE OF COMMITMENTS

SITEWIDE COMMITMENTS

Commitment Number	Commitment/Deliverable Title	Plan Completion	Date Submitted	Status Note
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		1
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		2
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		1
3.7.f	Draft Site SEMP Implementing Procedures	2/14/95		1

TWRS PROGRAM COMMITMENTS

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

2.4.d	TWRS Technical Requirements Review Report	3/31/95		3
3.2.a	TWRS Integrated Technology Plan	6/10/94	9/28/94	4
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	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	RL: HQ:	5
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		5
3.5.a	Contractor TWRS Staffing Analysis and Contractor Position Qualification Standards	1/27/95		6

TWRS PROGRAM COMMITMENTS

3.5.b	Contractor TWRS Individual Qualification and Training Plans	2/28/95	4/25/95	
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		7
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	12/30/94		7
3.7.i	Revised TWRS Systems Engineering Management Plan	12/30/94		7
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 Number	Commitment/Deliverable Title	Plan Completion	Date Submitted	Status
2.4.e	Multi-Function Waste Tank Facility Baseline Comparison Report	9/30/95	Pending Deletion	8
2.4.f	Multi-Function Waste Tank Facility Independent Critical Design Review Report	Prior to construction	Pending Deletion	8
2.4.g	Aging Waste Transfer Line Baseline Comparison Report	11/30/95	Pending Deletion	8
2.4.h	Cross-site Transfer Line Baseline Comparison Report	11/30/95		9
2.4.i	Initial Retrieval Demonstration Baseline Comparison Report	11/30/95		10
2.4.j	Initial Pretreatment Baseline Comparison Report	11/30/95		10
2.4.k	Scheduled dates for each Project Independent Design Review	1/31/95		10
2.4.l	Summary Report for each Standdown Review	1/13/94	4/1/194	

CONTINUING COMMITMENTS

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. Deliverables to complete commitments 2.2.b(1), 3.7.e and 3.7.f were transmitted to the DNFSB on July 15, 1996.
2. Commitment 3.6.a will be completed within the fourth quarter FY 1996. Additional information on commitment 3.6.a can be found in section 2.1.2 of this report.
3. The schedule for the Technical Requirements Review depends on approval of the TWRS Systems Requirements Review (SRR) Action Plan and Implementation Plan, and the TWRS Systems Requirements. See Section 2.0 of this report for additional details.
4. Although Commitment 3.2.a is complete, DOE-RL is re-evaluating its Technology Plan with a view toward clarifying the methodology for maintaining waste processing competence.
5. Effort on Commitments 3.4.g and 3.4.h is in progress. See Section 2.0 of this report for additional details.
6. During the fourth quarter of FY 1996, the Contractor will submit their FY 1996 staffing analysis and Training Program Description to complete Commitment 3.5.a. See Section 2.0 of this report for additional details.
7. Commitment 3.6.c will be considered complete with submittal of the deliverables for Commitments 3.7.h and 3.7.i per DNFSB Staff comments June 26, 1996. See Section 2.0 of this report for additional details.
8. Commitments 2.4.e, 2.4.f, and 2.4.g were proposed for deletion in a February 1996 letter from the Secretary to the DNFSB. On June 26, 1996, the DNFSB staff acknowledged RL's plan to delete these commitments in the revised 92-4 Implementation Plan.
9. The Commitment 2.4.h report, comparing the Cross-Site Transfer Line preliminary design review document to the functional design criteria, is expected during the fourth quarter of FY 1996. See Section 2.3 for additional details.
10. Commitments 2.4.i, 2.4.j, and 2.4.k will be superseded by commitments in the revised 92-4 Implementation Plan.

2.0 STATUS: COMMITMENTS DUE/OVERDUE DURING THIRD QUARTER FY 1996 AND FORECAST FOR FOURTH QUARTER FY 1996

2.1 SITEWIDE COMMITMENTS

- 2.1.1 COMMITMENT 2.2.b(1): SYSTEMS ENGINEERING IMPLEMENTATION PLAN (SEIP) BASED ON FY 1995 MULTI-YEAR PROGRAM PLAN (MYPP) LOGIC AND PLANNING FOR SITE**
(DUE: November 15, 1994)

STATUS: OVERDUE: The SEIP was formally transmitted to the DNFSB in July 1996.

- 2.1.2 COMMITMENT 3.6.a: COMPLETE SITE MANAGEMENT SYSTEM (SMS) DIRECTIVES**
(DUE: July 12, 1994)

STATUS: OVERDUE: Commitment 3.6.a was reopened in the 1st/2nd FY 96 report to DNFSB on 92-4. RL is researching the historical record on this commitment and will submit documentation to complete this commitment in the fourth quarter of FY 1996.

- 2.1.3 COMMITMENT 3.7.e: FINAL SITE SYSTEMS ENGINEERING MANAGEMENT PLAN (SEMP)**
(DUE: June 30, 1994)

STATUS: OVERDUE: The final SEMP was transmitted to the DNFSB in July 1996.

- 2.1.4 COMMITMENT 3.7.f: DRAFT SITE SEMP IMPLEMENTING PROCEDURES**
(DUE: February 15, 1995)

STATUS: OVERDUE: The documentation to complete this commitment was formally transmitted to the DNFSB in July 1996.

2.2 TWRS PROGRAM COMMITMENTS

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

STATUS: OVERDUE: The TWRS systems requirements form the basis for TWRS technical requirements. The TWRS systems requirements, as defined in the Mission Analysis Report and Functions and Requirements Document, were rejected following a review report received from DOE-HQ in April 1995. Thus, this commitment became overdue. A TWRS System Requirements Review (SRR) Action Plan was developed by the Contractor, approved by RL in May 1996, and submitted to DOE-HQ for approval in

June 1996. The action plan was approved by DOE-HQ in mid-July 1996. The schedule for closing the SRR findings and recommendations and conducting the TWRS Technical Requirements Review will be established once the implementation plan and the TWRS systems requirements are approved by DOE.

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

RL STATUS: OVERDUE: This commitment was recorded as complete (reference letter from John Wagoner to Chairman John Conway dated September 9, 1995). DNFSB Staff, in mid-April, identified this commitment as still open. RL determined that another staffing analysis would be performed with the TWRS-Management Systems Division serving as a pilot for TWRS. This process is underway and involves the derivation of position roles and responsibilities from the mission, functions, and responsibilities. Position Descriptions are being revised to reflect these functions and responsibilities. Output from these activities will be position specific knowledge, skills, and ability statements which will further define the Technical Qualification Program. A total of 30 position descriptions have been drafted for TWRS. A date for completing the TWRS staffing analysis will be provided in the revised implementation plan.

HQ STATUS: OVERDUE: The HQ staffing analysis is being revised to reflect the new HQ organizational alignment and DNFSB 93-3 Implementation Plan requirements. It will be submitted to the DNFSB by October 31, 1996.

2.2.3 COMMITMENT 3.4.h: REPORT DOCUMENTING COMPLETION OF REQUIRED TECHNICAL TRAINING IDENTIFIED IN IDPs AND TRMs
(DUE: August 31, 1995)

RL STATUS: OVERDUE: A letter from John Wagoner to Chairman John Conway dated September 9, 1995, stated that commitment 3.4.h was contingent upon completion of the DNFSB 93-3 Implementation Plan Technical Qualification Program. During the third quarter of FY 1996, RL determined with DNFSB Staff that RL training requirements are being adequately identified through the RL Technical Qualification Program. Efforts are now focused on completing these requirements before May 1998 as specified in DNFSB 93-3 Implementation Plan. TWRS has completed 28.5 percent of the training currently identified in the Training Requirements Matrices (TRMs).

HQ STATUS: OVERDUE: The HQ report documenting completion of required training identified in the Individual Development Plans (IDPs) will be submitted to the DNFSB by October 31, 1996.

2.2.4 COMMITMENT 3.5.a: CONTRACTOR TWRS STAFFING ANALYSIS AND

POSITION QUALIFICATION STANDARDS
(DUE: January 27, 1995)

STATUS: OVERDUE: This commitment was recorded as complete with issuance of the initial Contractor TWRS Staffing Analysis and Position Justification Standards (reference letter from Jackson Kinzer to Chairman John Conway dated April 25, 1995). This letter established a follow-on commitment to issue a revised Contractor TWRS Staffing Analysis. In discussions with DNFSB Staff on June 26, 1996. The contractor showed that its staff analysis process has been formalized as an element of the annual planning process. During this process, qualifications are specifically identified for each of the positions required to perform work. RL will submit the contractors FY 1996 staffing analysis and Training Program Description to DNFSB during the fourth quarter of FY 1996 as evidence of the ongoing success of this process, and then consider this commitment complete.

2.2.5 COMMITMENT 3.6.c: ISSUE SCHEDULE FOR DEVELOPING/ISSUING CONTRACTOR TWRS MANAGEMENT PLAN AND ASSOCIATED DOCUMENTATION
(DUE: December 30, 1994)

STATUS: OVERDUE: This commitment was recorded as complete with issuance of the deliverable on March 30, 1995, (reference letter from Jackson Kinzer to Chairman John Conway). In mid-April 1996, DNFSB Staff notified RL that additional effort was required. The original focus of this commitment was the development of a requisite DOE systems engineering (SE) policy, and a subsequent SE management plan and implementing procedures for Contractor use. These documents have been submitted to DNFSB Staff and have been deemed acceptable. As such, this commitment will be considered complete in conjunction with completion of Commitments 3.7.h and 3.7.i, below.

2.2.6 COMMITMENT 3.7.h: TWRS SEMP IMPLEMENTING PROCEDURES
(DUE: December 30, 1994)

STATUS: OVERDUE: Draft TWRS Systems Engineering Implementing Procedures (IPs) were issued in 1994 and revised drafts were issued in 1995. Final drafts of the TWRS Systems Engineering Management Plan (SEMP) IPs were issued in May 1996 to support review and comment by DNFSB Staff, and to support the transition activities associated with the Project Hanford Management Contract. These procedures have been informally deemed acceptable by DNFSB Staff, and will be formally submitted to the Board during the fourth quarter of FY 1996.

2.2.7 COMMITMENT 3.7.i: REVISED TWRS SEMP
(DUE: December 30, 1994)

STATUS: OVERDUE: The contractor issued a TWRS SEMP in 1994. The

final draft of the TWRS SEMP, incorporating the DOE-RL Systems Engineering Policy from the DOE-RL TWRS Program Management System Description (PMSD) document, was issued in February 1996. This document has been informally deemed acceptable by DNFSB Staff and will be formally submitted to the Board during the fourth quarter of FY 1996.

2.3 TWRS PROJECT COMMITMENTS

2.3.1 COMMITMENT 2.4.h: CROSS-SITE TRANSFER LINE BASELINE COMPARISON REPORT (DUE: November 30, 1995)

STATUS: OVERDUE: The TWRS Systems Requirements specify development of a TWRS Functions and Requirements (F&R) document to provide top level requirements for TWRS projects. The F&R was developed in preliminary form but required rework as a result of the TWRS Systems Requirements Review (SRR). Since the SRR Action Plan, which lays out the path for approval of the F&R, was just approved in July 1996, selected TWRS projects are proceeding on the basis of updated F&R documents in order to support critical TWRS Program objectives. The latest versions of the F&R are being used as the starting point for development of the ongoing projects' preliminary Design Requirements Documents.

For the Cross-Site Transfer Line project, a baseline comparison between the Functional Design Criteria and a preliminary Design Requirements Document (based on the August 1995 version of the F&R) has been completed, and reaffirmed the need for this project. This Baseline Comparison Report (BCR) was transmitted to DOE-HQ on December 1, 1995. Comments were received by RL in April 1996 and the revised BCR was submitted to DOE-HQ on May 16, 1996. DOE-HQ subsequently requested that an expanded discussion on risk assessment be included in this report and details are being worked out currently. An updated BCR will be transmitted to DOE-HQ for approval during the fourth quarter of FY 1996. A commitment for submittal of this report to the DNFSB will be included in the revised 92-4 Implementation Plan. Construction of the Cross-Site Transfer Line is proceeding.

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

STATUS: OVERDUE: Refer to Commitment 2.4.h for a discussion of the status of the TWRS Systems Requirements and TWRS Functions and Requirements documents. On the Initial Retrieval Demonstration Project, design work is proceeding on the basis of the January 1996 version of the F&R. Based on discussion with the DNFSB Staff on June 26, 1996, this commitment will be superseded in the revised 92-4 Implementation Plan.

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

STATUS: OVERDUE: All work on this project was suspended July 1, 1995, per DOE-RL directive. Funding is not allocated to the project in FY 1996 and work will not be resumed in the near-term. An Alternative Acquisition Strategy using privatization is planned to provide for pretreatment of tank waste. Negotiations between Department of Energy and Washington State Department of Ecology on changes to the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestones M-50-00 and M-60-00, consistent with the Alternative Acquisition Strategy, were completed on December 15, 1995. Tri-Party Agreement Change Request M-50-95-01 was subsequently prepared to delete this workscope and is currently in the review and approval process. Based on discussion with the DNFSB Staff on June 26, 1996, this commitment will be superseded in the revised 92-4 Implementation Plan.

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

STATUS: OVERDUE: Based on the use of the standard SEMP processes and procedures, independent design reviews will not be required on future projects. As discussed with the DNFSB Staff on June 26, 1996, this commitment will be superseded by some commitment associated with implementing the TWRS SEMP processes. These commitments will be identified in the revised 92-4 Implementation Plan.

QTR-RPT.3R