

**[DOE LETTERHEAD]**

April 28, 1995

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

Dear Mr. Conway:

The April 1995 deliverables called for in the Department's Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 94-4 are enclosed.

Deliverables include: N.1.1, the Martin Marietta Energy Systems, Inc, (MMES) evaluation of the nuclear criticality safety program and Criticality Safety Approvals/Operational Safety Requirements supporting the first resumption area and Special Operations to date; N.2.2, the Department of Energy Oak Ridge Operations Office (DOE/OR) Corrective Action Plan (CAP) developed from the corrective actions recommended in the DOE/OR assessment report of October 13,1994; and 7.1, the Interim Report containing an update of activities occurring between February 24 and March 31,1995.

The remaining two April deliverables: N.2.4(a), the Defense Programs evaluation of the Deputy Assistant Secretary for Military Application and Stockpile Support line management and its role in Y-12 safety issues; and N.2.5(a), the Office of Environment, Safety and Health assessment of its role in oversight of Y-12 safety issues will be forwarded separately. Also included is a page change to the Implementation Plan.

If you have any questions, please contact me or have your staff contact Stan Puchalla of my staff at (301) 903-5227.

Sincerely,

Charles J. Beers, Jr.  
Rear Admiral, U.S. Navy  
Deputy Assistant Secretary for  
Military Application and  
Stockpile Support  
Defense Programs

Enclosures

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INTERIM REPORT  
DEPARTMENT OF ENERGY  
IMPLEMENTATION PLAN  
FOR  
DEFENSE NUCLEAR FACILITIES SAFETY BOARD

RECOMMENDATION 94-4

DEFICIENCIES IN CRITICALITY SAFETY

AT THE OAK RIDGE Y-12 PLANT

REPORTING PERIOD

FEBRUARY 24 THROUGH MARCH 31, 1995

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**EXECUTIVE SUMMARY**

This Interim Report for the Defense Nuclear Facilities Safety Board (Board) Recommendation 94-4 Implementation Plan (Plan) covers the period from February 24 through March 31, 1995.

All activities scheduled for completion during the reporting period were completed as planned. For the quarter ending March 31, 1995, all tasks are proceeding on schedule and all commitments have been met. During this period, two deliverables were completed on or before the due date.

Activities completed during the first quarter calendar year (CY) 1995 are as follows:

Commitment Description

N 1.4 Martin Marietta Energy Systems, Inc. (MMES) revised their criticality safety approval process such that the resulting criticality safety documents clearly state all criticality safety requirements for a specific proposed activity. The MMES reported that the necessary revisions and associated training had been completed and provided copies of the revised procedure.

N 4.1 The MMES/Y-12/Oak Ridge Operations Office (OR) completed the development of implementing procedures for Department of Energy (DOE) Order 5480.31. Copies of those procedures were provided to the Board March 27, 1995.

Activities scheduled for the second quarter of calendar year 1995 are as follows:

Commitment Description

N 1.1 The MMES shall conduct an evaluation of the nuclear criticality safety program and Criticality Safety

Approvals (CSAs)/Operational Safety Requirements (OSRs) supporting the first resumption area and Special Operations to date. This evaluation will identify specific deficiencies, including their potential application to other areas, root cause(s), training deficiencies, and lessons learned.

- N 1.2 The MMES shall provide a Corrective Action Plan (CAP) which addresses the corrective actions for the deficiencies identified in their evaluation report of N 1.1 above. This CAP will include the requirement to continue the implementation of an upgrade program through the resumption process.
- N 2.2 The DOE/OR shall provide a CAP addressing the deficiencies outlined in their investigation assessment report of October 13, 1994.
- N 2.4 Defense Programs (DP) shall evaluate the Deputy Assistant Secretary for Military Application and Stockpile Support (DP-20) line management and its role in Y-12 safety issues. This evaluation shall be conducted by a team of facility operations experts outside of the DP-20 line organization. Defense Programs will provide a report which identifies line management weaknesses and recommends corrective actions. Defense Programs (DP-20) line organization will then develop a CAP.
- N 2.5 The Office of Environment, Safety and Health (EH) shall assess its role in oversight of Y-12 safety issues and provide appropriate recommendations and a CAP.
- N 3.1 The MMES will prepare an assessment of the current Conduct of Operations (COOP) Performance posture including proposed near-term corrective and/or compensatory actions. Identified actions will include those which are necessary to insure satisfactory formality of operations in both facilities undergoing upgrade for near-term resumption, as well as those facilities which continue to carry on a limited degree of activity, such as Special Operations. The review should consider the following (1) investigations and action plans prepared as a result of the September 22, 1994, event; (2) lessons learned from Special Operations; (3) feedback and observations from mentors; and (4) implications of occurrences and other events illustrating COOP weaknesses.
- 5.1 The Training Assistance Team will develop a program to implement the evaluation of key Federal personnel involved with safety-related activities at defense nuclear facilities at the Y-12 Plant.
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## **TASK 1, ORGANIZATION**

Task 1 established the leadership and management structure for the development and execution of the Plan.

Task 1 first created a Senior Steering Committee responsible for achieving DOE-wide consensus on the concepts and methodologies called for in the Plan. The Senior Steering Committee is comprised of senior management (Deputy Assistant Secretary level or higher) representation from DP, EH, Facility Management (FM) Human Resources (HR), and Oak Ridge.

Task I then chartered the Senior Working Group with the responsibility to oversee the daily activities in assembling and implementing the Plan. The Working Group coordinates with the Task Leaders in reviewing and managing deliverables through the Department to the Board.

Deliverables 1.1 and 1.2, which provided a strawman Plan and identified Steering Committee and Working Group members and Task Leaders, were forwarded to the Board on February 24, 1995.

Unless changes occur in the leadership and/or management structure identified here and in the Task 1 deliverables, no further reporting will occur under this Task.

## **TASKs 2 & 3, CSA/OSR IMPLEMENTATION and CRITICALITY SAFETY PROGRAM**

The following summarizes progress made on Tasks 2 and 3 and Near-Term Initiatives concerning criticality safety. Task efforts have steadily progressed since February 1995 on upcoming deliverables by MMES and

DOE Headquarters. Near-Term initiative N.1.1, an evaluation report by MMES on the criticality safety program and CSAs/OSRs supporting the first resumption area, was forwarded this month. In March 1995, Near-Term Initiative N.1.4 was forwarded to the DNFSB detailing MMES revised criticality safety approval process, including any necessary training and revised procedures.

The projected deliverables through July 1995 include the Assessment Plans for each of the three assessments contained in Tasks 2 and 3. Also, Near-Term Initiative N.1.2, the Corrective Action Plan for N.1.1, will be completed in May. Other Near-Term Initiatives, N.1.3 and N.1.5, will be delivered dependent upon the progress made in the first resumption area. The next quarterly report will contain a firm schedule for the Task 2 assessment by DOE Headquarters and the Task 3 assessment by MMES. A tentative schedule for the Task 3 DOE Headquarters assessment should also be available.

The DOE Headquarters assessments for Tasks 2 and 3 will each be co-led by Jim Winter (the Office of Engineering, Operations, Security and Transition Support, DP-31) and Milton Haas (the Office of Engineering Assistance and Site Interface, EH-34). Presently, prospective team members are identified and a separate peer review group has been established to assist in the finalization of the assessment plans. The draft criteria for Task 3 has been developed and criteria for Task 2 plus draft plans for both tasks are in development to support a peer review in May 1995. Prospective team members will assemble at Y-12 in late May or June to finalize the assessment plans and also determine the respective assessment team rosters.

The MMES has tentatively identified the team leader and team members for their assessment in Task 3. A first cut at the assessment criteria has been drafted with finalization of the criteria expected soon after the team leader has been formally chartered. Task 3 efforts by MMES are being coordinated by Rick Stachowiak. All three assessment plans for Tasks 2 and 3 will be transmitted by July 1995.

#### **TASK 4, CONDUCT OF OPERATIONS**

The Assessment Team Leaders and potential assessment team members have been identified. Final assessment dates are being worked with team members and the Y-12 Site Office. When the actual dates for the assessments are finalized, the final team compositions will be chosen.

A strawman Assessment Program draft has been developed. The proposed Program is modeled after successful Conduct of Operations assessments conducted at other

DOE sites, notably the Pantex Plant. Assessment Programs are projected to be finalized and forwarded by July 1995.

Near-Term Initiative N.3.1, Conduct of Operations Assessment, will be provided in May, and N.3.2, compensatory measures for Conduct of Operations, will be provided together with other line management resumption documents.

#### **TASK 5, TECHNICAL COMPETENCE REVIEW**

During the interim period ending March 31, 1995, the following items were accomplished. The Training Assistance Team Handbook was revised and updated for use in completing the Technical Competence Review for Y-12. The Training Assistance Team Handbook provides an outline to perform an assistance team review. It contains guidance on:

- Responsibilities,
- Selecting the Training Assist Team and Team Leader,
- Developing the Training Assistance Plan,
- Preparation and Conduct of assistance activities, and

## Submitting the Final Report.

The HR 1.5 (Board Recommendation 93-3) staff is reviewing materials in preparation for the upcoming reviews. They are as follows:

Defense Programs Staffing Review,  
Critical Safety Elements from 93-1,  
Y-12 Draft Training Implementation Matrix (TIM), and  
Y-12 Organizational Charts (Federal and Contractor).

During the next quarter, the following activities will take place: (1) the Technical Personnel Program Coordinator (TPPC) will identify and recommend a Team Leader to the Deputy Assistant Secretary for Military Application and Stockpile Support who will approve the assignment; and (2) the composition of the Assistance Team will be determined by the Team Leader with support from the Office of the TPPC.

The TPPC will visit Oak Ridge in early May and have a draft Training Assistance Team Program prepared by his staff. The Training Assistance Team is responsible for the review, comment, and approval of the Training Assistance Team Program. The Team Leader will obtain concurrence on the Training Assistance Program from the requesting organization (Senior Steering Committee) and submit the Program to the TPPC for final approval. The Program Plan will be completed by June 30, 1995, and be used to conduct the review of Federal employees supporting Y-12. The window for conducting the review will also be determined by June 1995.

## ATTACHMENT A: COMMITMENT STATUS

### COMMITMENT PLAN ACTUAL COMMENTS

	DATE	DATE	COMMENTS
N 1.1	APR 95		
N 1.2	MAY 95		
N 1.3	1st START		Submit with MMES Certification
N 1.4	MAR 95	27 MAR 95	Completed
N 1.5	1st START		Part of MMES Line Management Certification Letter
N 2.1	NOV 94	18 NOV 94	Completed
N 2.2(a)	OCT 94	13 OCT 94	Completed

N 2.2(b)	APR 95		
N 2.3	1st START		
N 2.4(a)	APR 95		
N 2.4(b)	JUN 95		
N 2.5(a)	APR 95		
N 2.5(b)	MAY 95		
N 3.1	MAY 95		
N 3.2	1st START	Submit with MMES Certification Letter	
N 4.1	MAR 95 27 MAR 95	Completed	
N 4.2(a)	1st START		
N 4.2(b)	TBD	Follow-on Resumptions	
1.1	DEC 94 2 DEC 94	Completed	
1.2	JAN 95 JAN 95	Completed	
2.1	JUL 95		
2.2	DEC 95	Or within 60 days of 2nd resumption; whichever is earlier	
2.3	FEB 95		

3.1	JUL 95	
3.2	DEC 95	Or within 60 days of 2nd resumption; whichever is earlier
3.3	FEB 96	
3.4	JUL 95	
3.5	MAR 96	Within 30 days of MMES CAP (commitment 3.3)
3.6	MAY 96	Within 60 days of report from commitment 3.5
4.1	JUL 95	Two programs, one each from DOE and MMES teams
4.2	AUG 95	60 days following second resumption or August 95 whichever is earlier. DOE and MMES teams each report
4.3	OCT 95	
5.1	JUN 95	
5.2	OCT 95	
5.3	DEC 95	
5.4	SEP 95	
5.5	FEB 96	
5.6	APR 96	
6.1	QTRLY	Submit with Quarterly Report of Commitment 7.1
7.1(a)	APR 95	Interim report

7.1(b)	QTRLY	Submit quarterly commencing in July 95
8.1	AS REQ'D	

**ATTACHMENT B: MONTHLY SCHEDULE OF DELIVERABLES**

\* = Target Date

<b>Mo/Yr</b>	<b>Near Term Initiatives</b>	<b>Tasks</b>
Mar 95	1.4*, 4.1*	
Apr	1.1*, 2.2, 2.4(a), 2.5(a)	7.1
May	1.2*, 2.5(b), 3.1*	
June	2.4(b)	5.1
July	1.3*, 1.5, 2.3*, 3.2*, 4.2	2.1, 3.1, 3.4, 4.1, 7.1
August		4.2
Sept		5.4
Oct		4.3, 5.2, 7.1
Nov		
Dec		2.2, 3.2, 5.3
Jan 96		7.1
Feb		2.3, 3.3, 5.5
March		3.5
Apr		5.6, 7.1
May		3.6
June		
July		7.1

**CHANGE 1 to Rev. 0 of the 94-4 IMPLEMENTATION PLAN**

Purpose of Change: To clarify the full list of deliverables for Commitment N.4.2.

Instructions: Replace page 11 with page 11, Ch. 1

Distribution: Senior Steering Committee  
 Senior Working Group  
 Task Leaders  
 Defense Nuclear Facilities Safety Board

4 Readiness Assessments

N.4.1 The MMES/Y-12/OR shall complete the development of implementing procedures for DOE Order 5480.31.

Deliverable: Procedures

Action: MMES/Y-12/OR

Target: March 1995 (Based upon resumption schedule for first resumption area)



N.4.2 The MMES/OR shall demonstrate the successful planning and execution of Readiness Assessment per DOE Order 5480.31 and the above procedures.

Deliverable: For the First Resumption Area:

- MMES/DOE Plans of Action and Implementation Plan
- MMES Line-Management Certification of Readiness to Commence the MMES Readiness Assessment
- MMES Readiness to Proceed Memorandum w/Endorsements
- MMES/DOE Readiness Assessment Reports
- MMES/DOE Closure Validation Reports

Action: MMES/OR

Due: As required during resumption

Deliverables: For Follow-on Resumption Areas:

- MMES Readiness to Proceed Memorandum w/Endorsements
- Readiness Assessments Reports (for Readiness Assessments performed)
- MMES/DOE Closure Validation Reports