

**[DOE MEMORANDUM]  
OAK RIDGE OPERATIONS OFFICE**

**DATE:** November 27, 1995  
**REPLY**  
**TO**  
**ATTN OF:** DP-811:SUNDIE  
**SUBJECT:** **Y-12 SITE OFFICE RESTART TEAM (YSORT) RECEIPT, STORAGE,  
AND SHIPMENT (RSS) CLOSURE REPORT**  
**TO:** Robert J. Spence, Y-12 Site Manager, DP-81

Attached is the final Y-12 Site Office Restart Team (YSORT) Receipt, Storage, and Shipment (RSS) Closure Report," dated November 27, 1995. This report is submitted to meet the near-term deliverable N.4.2 of the 94-4 Implementation Plan, and it summarizes the activities conducted to close the DOE Readiness Assessment pre-restart findings identified during the RSS review.

If you have any questions or need additional information, please contact Mark Sundie at 1-6441 or me at 6-9854.

Thomas S. Tison  
Restart Team Manager

cc w/attachment:  
D. L. Wall, DP-81

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**Y-12 Site Office Restart Team  
Receipt, Storage, and Shipment  
Closure Report**

**November 27, 1995**

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**OAK RIDGE OPERATIONS  
Y-12 SITE OFFICE RESTART TEAM  
RECEIPT, STORAGE, AND SHIPMENT  
CLOSURE REPORT**

A DOE Independent Readiness Assessment (RA) was performed for the resumption of the Receipt, Storage, and Shipment (RSS) of Special Nuclear Materials mission area from August 28 through September 7, 1995, as mandated by *DOE Order 5480.31, Startup and Restart of Nuclear Facilities*. The RA was necessary following a stand-down of Y-12 Plant facilities on September 22, 1994. The resumption strategy resumes Y-12 nuclear operations by mission area. RSS was the first mission area to be resumed under this strategy. The DOE

independent RA team's report, "Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Materials at the Oak Ridge Y-12 Site," dated September 13, 1995, identified 11 pre- and 12 post-restart LMES findings, all of which require LMES corrective actions and were formally transmitted to LMES by the DOE Y-12 Site Office (YSO). Seven DOE findings were identified for resolution and closure by YSO. All pre-restart finding closures, and all post-restart corrective action plans were concurred on by DOE prior to restart. The closure packages for LMES actions in response to the DOE independent readiness assessment findings are available in the Y-12 Site Office Restart Team (YSORT) evidence files.

Approximately one month following RSS resumption, YSORT reviewed the implementation of the corrective actions in the RSS facilities to ensure that they remained in effect and to assess their effectiveness. As a result of these reviews, two additional findings were issued to LMES. Verification of the post-restart finding corrective actions will also be performed by DOE as LMES submits findings for closure in accordance with established due dates. Weekly meetings between DOE and LMES are held to discuss the status of the corrective actions for resolution of the post-restart findings, and the findings and corrective action plans have been entered into the LMES Energy Systems Action Management System (ESAMS).

The major issues identified during the DOE Independent RA were related to the management of the processes for administering technical procedures, insufficient closure evidence for the LMES RA pre-restart findings, and weaknesses in the safety envelop documentation. These items were corrected by the revision of the procedure review and approval procedure, supplementing the evidence files with additional documentation, and revision of the Operational Safety Requirements. Specific corrective actions to all DOE RA pre-restart findings are as follows.

Finding: CS1-1 - "Criticality safety-related documents require clarification and corrections."

Corrective Actions: The LMES Nuclear Criticality Safety Department (NCSD) and Operations personnel conducted a review of the 42 criticality safety approvals (CSAs) associated with RSS resumption. The review was conducted using a checklist to ensure consistent reviews were conducted for all CSAs. All comments, resulting from these reviews, were documented on a NCSD Clarification Review form and Operations CSA Review Checklists. Operations and NCSD met to resolve documented discrepancies. Four CSAs were revised as a result of this effort.

Finding: CS1-2 - "Review of safety-related RSS documents by the Nuclear Criticality Safety Department was inadequate."

Corrective Actions: Procedure Y70-160, "Criticality Safety Approval System, was revised to require the NCSD to perform field validations prior to approval of CSAs. In addition, the root-cause analysis determined that the use of multiple documents for procedure changes is difficult and prone to error. Thus, Procedure 10-102, "Operating Procedure Development, Revision, and Control," was revised to eliminate the use of procedure change directives for operations procedures.

Finding: MG6-1 - "Evidence files for closure of the LMES Readiness Assessment do not contain adequate evidence that the pre-start findings are closed."

Corrective Actions: This finding was based on poor closure evidence on LMES RA Findings Nos. CS1-3, LK2-1, and SL1-1. The missing evidence included no evidence of the following: Generic implications reviewed or closed, description of referenced required reading requirements, screening for lessons learned and root causes, review by senior managers, and review of similar issues that have occurred. As corrective actions, LMES reopened these RA findings to screen for root cause, lessons learned, and generic implications. A report that summarizes the results of the review of the LMES RA pre-restart findings was issued on September 15, 1995, by RSS senior management. YSORT determined that these actions met the intent of the DOE RA finding

Finding: OP1-1 - "Minimum staffing requirements for RSS operations are not adequately documented and controlled in the OSRs."

Corrective Actions: OSRs Y/TS-1314 (Building 9204-2/9204-2E), Y/TS-1316 (Building 9720-5), Y/TS-1317 (Building 9204-4), and Y/TS-1318 (Building 9215) were revised to include applicable minimum staffing requirements.

Finding: OP3-1 - "Conduct of Operations requirements involving control of safety system status, have not been adequately implemented to support the resumption of RSS activities.

Corrective Actions: The Nuclear Operations Department Manager documented items that will constitute the facility status files and the documentation that supports facility compliance with the requirements. A root-cause analysis was performed and a list of personnel who were required to be trained on Chapter 8, "Control of Equipment and System Status," of the *Nuclear Conduct of Operations Manual*, and the applicable training records, were also provided.

Finding: OP7-1 - "Some Conduct of Operations pre-start actions have not been completed, contrary to CSA 137A."

Corrective Actions: LMES revised and submitted to the YSO Request for Approval (RFA), MMES/Y-12-DOE-5480.19-CSA-137B, "Conduct of Operations Implementation Deficiencies." The revision included facility-specific applicability and documentation of their graded approach. Documentation of interface was provided in memoranda of understanding, Appendices I and II of the *Nuclear, Operations Conduct of Operations Manual* was revised to specifically define RSS facilities, a root- cause analysis was performed, a corrective action plan for post-restart RFA activities was developed, a list of personnel required to be trained on Appendices I and II changes, and applicable training records were provided.

Finding: OR3-1 - "MMES/Y-12-DOE-5480.22-CSA-80C and MMES/Y-12 DOE-5480.20-CSA-82B have not been approved in accordance with

the requirements.

Corrective Actions: LMES submitted RFAs for MMES/Y-12-DOE-5480.22-CSA-80C and MMES/Y-12-DOE 5480.20-CSA-82B for approval on August 28, 1995, and August 18, 1995, respectively. DOE approval was granted on September 5, 1995 for both CSAs.

Finding: PRI-1 - "Procedures observed in the Receipt, Storage, and Shipment (RSS) process received inadequate technical reviews, verifications, validations, approvals, and entries of changes to support safe operations."

Corrective Actions: The revised Y10-102, Technical Procedure Process Control procedure became effective on September 1, 1995. This revision includes parallel technical reviews, tabletop verification, and walkdown validation. Additional enhancements to the process includes briefings to personnel on the process prior to performance, adding a process engineer and a shift technical advisor to the review, reviewing source documents as part of the review, and providing a procedure advisor to oversee the verification and verification process. Additionally the following was provided: a list of the Sapphire technical procedures revised prior to resumption, copies of the technical procedures reviewed under the new Y10-102 Procedure process, a list of personnel required to be trained on the revised Sapphire procedures, records of personnel training, and a schedule for completing revision of the remaining RSS technical procedures prior to next use.

Finding: SEI-1 - "The Criticality Accident Alarm System (CAAS) Surveillance Requirements (SRs) and Action Statements do not include requirements described in the OSR bases. (All RSS Buildings).

Corrective Actions: LMES issued guidance on how to prepare and review OSRs/TSRs. OSR Nos. Y/TS-1314, Y/TS-1316, Y/TS-1317, and Y/TS-1318 were revised and copies were provided. A corrective action plan for updating and maintaining SAD-021, "System Analysis Document Criticality Accident Alarm System," and resolutions to individual findings were also provided.

Finding: SEI-2 - "The Criticality Accident Alarm System (CAAS) Surveillance procedure does not comply with the LCO requirements and bases or completely satisfy the Surveillance Requirements."

Corrective Actions: The CAAS surveillance procedure Y50-53-SO-005, "Testing of the Criticality Accident Alarm System," was revised to include verification of operability after testing, a list of facility lights to be checked in the surveillance areas, and a checklist of areas covered for audit ability. The revised OSRs and a copy of the technical Justification for testing in accordance with American National Standards Institute standards were also provided.

Finding: SEI-4 - "Unreviewed Safety Question (USQ) determinations are not being performed for changes to Criticality Safety Approvals."

Corrective Actions: LMES identified personnel authorized to perform USQ determinations, provided applicable training records (Module No. 13598), and issued

guidance to personnel on the relationship between CSA analysis and the USQ process and on how changes to CSAs are implemented in the USQ determination process. Evidence supporting receipt of the guidance by the affected personnel was also provided.

Finding: TR1-2 - "Required Reading Program inadequately supports the compensatory measure for conduct of operation implementation."

Corrective Actions: This finding was based on the LMES Facility Maintenance Organization (FMO) not having required reading records on file for the RA team to review on a Red Alert (R-Y12-94-001) that occurred in the preshutdown era. To address this, FMO provided a list of FMO personnel who would be subject to this Red Alert and provided all available records of personnel that were briefed on the Red Alert in June 1994; revised RFA-CSA-137B to remove the Red Alert reference as a compensatory measure; issued a Required Reading Directive on September 13, 1995, to inform personnel of the change in the Required Reading record retention requirements, canceled Procedure Y10-35-125, "Required Reading Administration," that contained a required reading record retention period of 30 days; and adopted the 2 year record retention for required reading as established in Chapter 14, "Required Reading," of the *Nuclear Operations Conduct of Operations Manual*, effective on October 23, 1995. YSORT determined a 2 year record retention period to be an adequate for FMO required reading records.

Based on review and verification of the corrective actions developed for these findings, there is sufficient evidence to conclude that the findings were closed adequately and that the corrective actions have been adequately implemented in RSS. The two additional post-restart findings have been incorporated into both ESAMS and YSO tracking systems for closure. The YSO will continue to monitor the contractor's continuing operations in RSS, in subsequent resumption areas, and in special operations to ensure that lessons learned from this restart review are incorporated. This will be accomplished through the established assessment programs of the Facility Representatives; the Environment, Safety, and Health Branch, and the YSORT.

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**[DOE MEMORANDUM]  
OAK RIDGE OPERATIONS OFFICE**

**DATE:** September 21, 1995

**REPLY**

**TO**

**ATTN OF:** DP-11:Tison

**SUBJECT: REQUEST FOR AUTHORIZATION TO RESUME OPERATIONS OF  
THE RECEIPT, STORAGE, AND SHIPMENT (RSS) FACILITIES AT  
THE Y-12 SITE**

**TO:** James C. Hall, Manager, Oak Ridge Operations Office, M-1, ORO  
Thru: R. R. Nelson, Assistant Manager for Defense Programs, DP-80, ORO

In accordance with the requirements of Department of Energy (DOE) Order 5480.31, "Startup and Restart of Nuclear Facilities," Lockheed Martin Energy Systems has completed all required actions to close the pre-restart findings from the DOE Independent Readiness Assessment, which was completed on September 8, 1995. The DOE Y-12 Site Office has validated closure of the pre-restart findings and approved closure criteria for the post-restart findings. Continuous oversight of the contractor after resumption authorization will be achieved through the execution of Y-12 Site Office Annual Assessment Plan. This plan requires monthly feedback to the contractor on issues and concerns derived from each branch in the site office. I believe this will ensure continued improvement in contractor performance, particularly in the areas of Conduct of Operations and Criticality Safety.

Based on completion of all pre-restart findings and the establishment of a continuous oversight program, I recommend you authorize restart of the RSS facilities.

If you have any questions, please contact Tom Tison of my staff at 6-9854.

Robert J. Spence  
Y-12 Site Manager

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**[DOE LETTERHEAD]**

**OAK RIDGE OPERATIONS OFFICE**

September 21, 1995

Mr. Gordon G. Fee, President  
Lockheed Martin Energy Systems, Inc.  
Post Office Box 2009  
Oak Ridge, Tennessee 37631

Dear Mr. Fee:

**AUTHORIZATION TO RESUME OPERATIONS OF THE RECEIPT, STORAGE,  
AND SHIPMENT (RSS) FACILITIES AT THE Y-12 PLANT**

In accordance with the requirements of DOE Order 5480.31, "Startup and Restart of Nuclear Facilities," all the necessary preparations have been made to ensure that all RSS facilities can be operated safely. This authorization is also based on successful validation of closure of all pre-restart findings from the various reviews conducted on RSS. Therefore, Lockheed Martin Energy Systems, Inc., is authorized to resume operations.

Sincerely,

James C. Hall  
Manager