



Department of Energy

Washington, DC 20585

February 17, 1999

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

Dear Mr. Chairman:

Enclosed is a memorandum from Robert J. Spence to Daniel R. Rhoades, subject: "Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-4 - Status Report," dated December 17, 1998. This memorandum forwards copies of deliverables associated with the resumption of Phase A-2 of Enriched Uranium Operations at the Y-12 Plant. Phase A-2 was authorized to resume operations on December 16, 1998.

With the delivery of these documents, the only remaining Implementation Plan deliverables are those associated with the resumption of Phase B of Enriched Uranium Operations, expected in November 1999. Restart documents are routinely routed to the Board, as detailed in the Department's Board Interface Manual 140.1-1. Completion of Implementation Plan efforts and restart activities to date has resulted in significant improvements in criticality safety, training and qualification, and conduct of operations at the Y-12 Plant. Additionally, as a direct result of execution of the Department's Implementation Plan, process improvements and increased efficiencies have been observed, which have allowed Y-12 to meet or exceed production expectations. Therefore, the Department proposes closure of Recommendation 94-4.

If you have any questions, please contact me or have your staff contact Phil Aiken of my staff at (301) 903-4513.

Sincerely,

A handwritten signature in black ink, appearing to read "V. H. Reis".

Victor H. Reis
Assistant Secretary
for Defense Programs

Enclosure

cc w/enclosure:
M. Whitaker, S-3.1

United States Government

Department of Energy

Oak Ridge Operations Office

memorandum

DATE: December 17, 1998

REPLY TO: DP-811:Wall
ATTN OF:

SUBJECT: **DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) RECOMMENDATION
94-4 - STATUS REPORT**

TO: Daniel R. Rhoades, Director, Office of Site Operations, DP-24, GTN

Attached are the "Department of Energy Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 94-4," Quarterly Report 16 (Attachment 1); "Y-12 Site Office Assessment Enriched Uranium Operations, Phase A2, Closure Report," dated December 16, 1998 (Attachment 2); and the deliverable documents associated with the Enriched Uranium Operations (EUO) Phase A2 restart (Attachment 3).

With this transmittal, it is our recommendation that the Department of Energy (DOE) pursue closure of Recommendation 94-4 with the DNFSB. The DOE has completed all commitments related to Recommendation 94-4 Implementation Plan, with the exception of documents that will be generated by the EUO Phase B restart, and there are only a few open items remaining from the 94-4 reviews. Since the restart documents are routinely routed to the DNFSB and the significant corrective actions from the 94-4 reviews have been completed, there is, in our view, little to be gained by continuing the open status of Recommendation 94-4.

If you have any questions related to this matter, please contact David Wall of my staff at (423)576-1989.


Robert W. Spence
Y-12 Site Manager

Attachments - As Stated

cc w/attachments
P. D. Aiken, DP-24, GTN
J. A. Allard, LMES
L. C. Bryson, LMES
R. D. Dempsey, DP-80, ORO
L. A. Felton, LMES
P. A. Gubanc, DNFSB
S. E. Hartson, DP-81, ORO
M. H. McBride, SE-33, ORO
M. B. Whitaker, Jr., EH-9, FORS

QUARTERLY REPORT 16

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

OPEN ACTIONS

REPORTING PERIOD

OCTOBER 1 THROUGH DECEMBER 31, 1998

EXECUTIVE SUMMARY

This Report for the Defense Nuclear Facilities Safety Board (Board) Recommendation 94-4 Implementation Plan (Plan) covers the period from October 1 through December 31, 1998.

Operations in the Receipt, Storage, and Shipping (RSS) and Depleted Uranium Operations (DUO) mission areas were resumed at Y-12 on September 21, 1995, and September 29, 1995, respectively. Disassembly and Assembly (D&A) operations were resumed on March 22, 1996. The Readiness Assessment (RA) of the Quality Evaluation (QE) mission area was completed on December 13, 1996, and unrestricted operations were resumed on February 28, 1997, following the correction of RA pre-start findings.

The only remaining implementation plan deliverables for this recommendation are those associated with resumption of Enriched Uranium Operations (EUO), the final mission area at the Y-12 Plant that has yet to resume full operations, and quarterly reports. The implementation plan (deliverable N.4.2) requires the delivery of a Readiness to Proceed Memorandum w/ endorsements; Readiness Assessment Reports; and, Closure Validation Reports for pre-restart findings. A number of assessments conducted as part of the Department's Implementation Plan have resulted in corrective action plans, detailing actions that are being tracked to closure. Status of closure of corrective actions are reported in quarterly reports (deliverable 7.1). Approximately 92 percent of the corrective actions are complete. Many of those that remain to be completed, will be accomplished during the resumption of EUO.

TABLE I

N.1.2: CORRECTIVE ACTION PLAN FOR LMES EVALUATION OF CRITICALITY SAFETY PROGRAM AND CSA/OSRs. (LMES Report Y/NO-00002)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|-------------------------|---|-----------------|-------------|
| Y/NO-00002 SECTION 3 | CONTINUED IMPLEMENTATION OF THE UPGRADE PROGRAM (Note: Continued implementation of the upgrade programs will be influenced by the assessments and CAPs resulting from the execution of Tasks 2-5 of the 94-4 Implementation Plan.) | | |
| ACTION 3-1 | LMES management apply the programmatic corrections described in Section 2 of Y/NO-00002 throughout the resumption process for Y-12 nuclear operations. (Based on restart of EUO) | SEP 98 | |

TABLE III

N.2.4 (b): CORRECTIVE ACTION PLAN FOR ADDRESSING DP-24 LINE MANAGEMENT ISSUES ASSOCIATED WITH ITS ROLE AT Y-12.
 (D. Rhoades Memorandum dated 30 June 95)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|------------------|--|-----------------|-------------|
| SECTION A | FUNCTIONS, ASSIGNMENTS, AND RESPONSIBILITIES | | |
| ACTION A.1 | FAR compliance. DP-24 continue to monitor progress in addressing noncompliances with the FAR Manual as identified by the ongoing DP-31 assessment. | | ONGOING |
| ACTION A.2 | Monitor revisions to the Defense Programs Operations Manual (DPOM) as promulgated by DP-40. | | ONGOING |

TABLE IV

N.3.1: LMES ASSESSMENT OF THE CURRENT CONDUCT OF OPERATIONS POSTURE INCLUDING PROPOSED NEAR-TERM CORRECTIVE AND/OR COMPENSATORY ACTIONS. (LMES Report Y/NO-00003)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|----------------------|--|------------------------------------|--|
| Y/NO-00003 SECTION 3 | NEAR TERM ACTIONS THAT ADDRESS THE ROOT CAUSE | | |
| ACTION 3-6 | Properly categorize existing operating and surveillance procedures in resumption mission area and train personnel to the new definitions-of-use. (para. 3.4.2) a - RSS, b - DUO, c - D&A, d - QE, e - EUO ¹ This is complete for Phase A1. Procedures associated with Phases A2 and B are being developed per the resumption schedules. | PRIOR TO EACH MISSION AREA RESTART | a - 21 SEP 95 b - 29 SEP 95 c - 22 MAR 96 d - 31 DEC 96 ¹ e - Pending ORR |
| ACTION 3-10 | Four new positions are being established that will directly impact conduct of operations practices: Operations Manager, Shift Manager, Shift Administrative Assistant, and Shift Technical Advisor. Fill these positions. (para. 3.6.2) a - RSS, b - DUO, c - D&A, d - QE, e - EUO ¹ Three positions to be filled for shift manager; two positions have been filled for the shift administrative assistant (interview process is continuing); there are no open requisitions for the operations manager or shift technical advisor positions in EUO. | PRIOR TO EACH MISSION AREA RESTART | a - 21 SEP 95 b - 29 SEP 95 c - 22 MAR 96 d - 31 DEC 96 ¹ e - Pending ORR |
| ACTION 3-14 | For the RSS Mission Area, resumption supporting activities have been incorporated into a detailed logic driven integrated schedule. Remaining Mission Area Managers develop their integrated schedules. (para. 3.7.4) a - RSS, b - DUO, c - D&A, d - QE, e - EUO ¹ Activities scheduled for Phases A2 and B. | PRIOR TO EACH MISSION AREA RESTART | a - 21 SEP 95 b - 29 SEP 95 c - 22 MAR 96 d - 31 DEC 96 ¹ e - Pending ORR |

TABLE V

5.3: DOE 94-4 IMPLEMENTATION PLAN COMMITMENT 5.3 TRAINING PROGRAM ACTION PLAN.

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|--|---|--------------------------------------|-----------------------|
| SECTION III | OAK RIDGE, Y-12 SITE, ACTION PLAN | | |
| 1. Line management ownership and commitment to training need to be strengthened. | | | |
| T5-ORO-1d | YSO line management should formally identify training needs and hold TDD accountable for specific deliverables. This is normally accomplished by a training plan developed by the technical line management with input from TDD. | ONGOING | XXXXXXXXXX |
| 2. TDD needs to be aggressive in identifying and supporting line management needs. | | | |
| T5-ORO-2b | Develop technical training materials in support of line management needs for self-study and on-the-job training. | | XXXXXXXXXX |
| T5-ORO-2c | Develop and present formal performance-based training. | | XXXXXXXXXX |
| T5-ORO-3 | YSO, with support from TDD, needs to expedite development of site-specific training for Facility Representatives and technical support personnel. (While a more aggressive schedule is being pursued, this effort is heavily dependent on resource availability.) | MAY 98 (Based on 93-3 commitment) | XXXXXXXXXX |
| T5-ORO-6 | The Restart Team including the Facility Representatives needs to be reconfigured into an Operations Branch reporting directly to the YSO Manager following resumption of operations. | LAST RESTART | XXXXXXXXXX |

TABLE VI

2.3: CORRECTIVE ACTION PLAN FOR TASK 2 ASSESSMENT
 (LMES letter to R.J. Spence dated January 30, 1996.)
 (Revision 1a, YSO letter to D. Rhoades dated October 28, 1996)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|----------------------------------|--|---------------------|-------------|
| | OPERATIONS/NUCLEAR CRITICALITY SAFETY | | |
| F20 | LMES has not performed a CSA requirement for the Building 9215 machine shop coolant system nor has LMES properly authorized the deviation. | | |
| ACTION 5 I0028523 A0066582 | Perform a review of EUO equipment prior to restart for holdup. ¹ This action is linked directly with restart of EUO operations. Equipment review for holdup is an integral part of the PBR turnover process and CSR implementation. Holdup points are established with Criticality Safety approval, quantification of existing holdup is performed by EUO technical support personnel with evaluation of results conducted by Criticality Engineers. Cleanout of equipment is based upon results of evaluations of Criticality Engineers. Review of all equipment slated for restart will not be completed until Phase B turnover of equipment is completed, therefore this action closure should be changed to March, 1999. | ¹ MAR 99 | ██████████ |

TABLE VIII

4.3: CORRECTIVE ACTION PLAN FOR TASK 4 ASSESSMENTS OF CONDUCT OF OPERATIONS AT Y-12 (Revision 1, YSO letter to D. Rhoades dated October 28, 1996)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|---------------------|--|---|---|
| I | LMES CONDUCT OF OPERATIONS PROGRAM | | |
| I.A | CONOPS PROGRAM DOCUMENTATION (This is a "new" section that combines "Standards" and "Tools" into one section. (Revision 1)) | | |
| | DEVELOP REQUIRED REQUESTS FOR APPROVAL | | |
| I.D.3.6.b A67069 | Approve RFA # 161 (Support Organizations). a. Four of seven organizations complete. b. Fire Department c. Plant Shift Superintendent d. Utilities Revised RFA rejected | a. FEB 98 b. AUG 98 c. AUG 98 d. NOV 98 | a. MAR 98 b. APR 98 c. MAY 98 d. |
| I.C | CONOPS IMPLEMENTATION | | |
| | IMPLEMENT CONDUCT OF OPERATIONS in the organizations in accordance with the approved Requests for Approval (RFAs). (Note: "Implemented" is defined as having established programs and implementing procedures, personnel have been trained to the procedures, and the procedures are in use in the facility. "Fully implemented" is defined as having a mature CONOPS program and having completed two full cycles of conops assessments in the facility and having corrected deficiencies from the assessments.) | | |
| I.D.3.6.c A67071 | Implement RFA # 161A (Support Organizations). a. Four of seven organizations complete. b. Fire Department c. Plant Shift Superintendent (PSS) d. Utilities Implementation of RFA for Utilities and RDO will begin upon approval of revised RFA by DOE (re. A67069). | a. FEB 98 b. MAY 98 ¹ c. APR 98 ¹ d. JAN 99 ¹ | a. MAR 98 b. APR 98 c. MAY 98 d. |
| I.D.3.7.c A67077 | Implement RFA # 163A (Balance of Plant). | SEP 98 | DEC 98 |
| I.D.3.8.c A67080 | Implement RFA # 164A (Sitewide). | SEP 98 | |

TABLE VIII

4.3: CORRECTIVE ACTION PLAN FOR TASK 4 ASSESSMENTS OF CONDUCT OF OPERATIONS AT Y-12 (Revision 1, YSO letter to D. Rhoades dated October 28, 1996)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|--------------------|---|---------------------------------------|------------------|
| | PERFORM INDEPENDENT ASSESSMENTS OF THE CONOPS PROGRAM | | |
| I.E.1.e A67086 | Revise COO CAP as needed based upon the results of the independent assessments. #Assessment was completed 8/97. CAP currently being revised. | AUG 98 | |
| I.E.1.g A67088 | Revise COO CAP based upon the results of the independent assessments. | JUL 98 | |
| II | ADDITIONAL IMPROVEMENT AREAS | | |
| II.I | DOCUMENT CONTROL | | |
| II.I.3.b A67291 | Implement training on revised procedures Y10-102. ¹ Paperwork has been submitted to DOE for closure of this action. This action is being rolled into Action A69665 within Issue I002772. Expected closure of this action is July 1998. | APR 98 ¹ | |
| II.I.4.c A67294 | Implement Y10-189 in : a. remaining Nuclear Operations and EUO support areas b. Balance of Plant areas ¹ Paperwork is being submitted to DOE for closure of this action. This action is being rolled into the plant-wide document control plan. Expected closure of this action is July 1998. | a - DEC 96 b - JUN 98 ¹ | a- DEC 96 b - |

TABLE IX

5.6: CORRECTIVE ACTION PLAN FOR TECHNICAL COMPETENCE REVIEW.
 (LMES letter to R.J. Spence dated July 19, 1996.)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|---------------------|--|-----------------|-------------|
| TAT 1 (Para 4.1) | Training programs should be revised from a procedure based system to a system which emphasizes system knowledge, interactions, and relationship to safety related process. (General) | | |
| ACTION 1-2 | Training programs will then be revised, as required, as each Y-12 organization completes its biennial review and revision of their training modules. (A70002, A70010, A70012, A70013, A70204) | DEC 98 | ██████████ |
| TAT 3 (Para 4.3) | Include facility and process specific training at the appropriate level for those personnel who work in Y-12 nuclear facilities. (General) | | |
| ACTION 3-3 | Revise training programs, as required, as each Y-12 organization completes its biennial review and revision of its training modules to include facility and process specific training, at the appropriate level, for those personnel who work in nuclear facilities. Training MSAs will document progress and closure. (A70002, A70004, A70005, A70007, A70008, A70009, A70010, A70012, A70013, A70204, A70504) | DEC 98 | ██████████ |

TABLE X

3.6: CORRECTIVE ACTION PLAN IN RESPONSE TO THE DOE TASK 3 ASSESSMENT OF THE OAK RIDGE Y-12 PLANT NUCLEAR CRITICALITY SAFETY PROGRAM. (ORO R.J. Spence Memorandum dated 28 April 95)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|--------------------------|---|-----------------|-------------|
| CS-5/Y-12/002/001 I32782 | Some Operators, specifically in EUO, did not demonstrate adequate knowledge of the need to control mass and material types as handled and stored in Y-12 facilities as required by ANSI/ANS 8.20, Section 7.5.1. | | |
| A70012 | Training programs will be revised as the Analytical Services Organization completes its biennial review and revision of its training modules. Management self-assessments will document progress and completion. | DEC 98 | |
| A70013 | Training programs will be revised as the Protective Services Organization completes its biennial review and revision of its training modules. Management self-assessments will document progress and completion. | DEC 98 | |
| A70010 | Training programs will be revised as the Site Shift Operations and Emergency Preparedness Organization completes its biennial review and revision of its training modules. Management self-assessments will document progress and completion. | DEC 98 | |
| CS-3/Y-12/002/003 I32756 | The review of current CSAs, proposed ICSE/CSEs, and current authorization documents indicates the issue of double contingency relating to natural phenomena is not adequately addressed. | | |
| A72133 | Revise Y-12 Plant procedures as necessary to ensure natural phenomena related in Authorization Basis List documents are addressed in NCS criticality safety evaluations based upon assessment recommendations. | SEP 98 | |
| A72273 | Train NCS Engineers on the revised procedures and implementation methodology. | OCT 98 | |
| CS-3/Y-12/002/002 I32755 | The lack of a comprehensive authorization basis on which to perform Unreviewed Safety Question (USQ) screening and Unreviewed Safety Question Determinations (USQDs) brought into question the validity of the process. | | |
| A72360 | Reassess effectiveness following completion of the rescheduled actions of the CAP for 94-4 Task 2, Assessment Finding #9. | DEC 98 | |
| CS-1/Y-12/005 I32736 | NCS staff time is devoted to many activities that do not make the most efficient use of staff expertise and that should be carried out by other organizations. | | |

TABLE X

3.6: CORRECTIVE ACTION PLAN IN RESPONSE TO THE DOE TASK 3 ASSESSMENT OF THE OAK RIDGE Y-12 PLANT NUCLEAR CRITICALITY SAFETY PROGRAM.
(ORO R.J. Spence Memorandum dated 28 April 95)

| REFERENCE NUMBER | CORRECTIVE ACTION PLAN (CAP) ITEM | PLANNED CLOSURE | ACTUAL DATE |
|------------------|--|-----------------|-------------|
| A72357 | Assess the effectiveness of the revised responsibilities. PBR activities have prevented full implementation of STA empowerment in EUO. Some STAs have not yet qualified or have not had time to resolve problems due to PBR activities. An assessment at this time would not give a true picture of the effectiveness of STA empowerment on NCSO activities. | 1 OCT 98 | |

**U. S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS**

**Y-12 SITE OFFICE ASSESSMENT
ENRICHED URANIUM OPERATIONS,
PHASE A2,
CLOSURE REPORT**



December 16, 1998

Prepared By: Mark A. Sundie Date: 12/17/98
Mark A. Sundie, Operations Support Team

Approved By: David L. Wall Date: 12/17/98
David L. Wall, Operations Support and
Weapons QA Team Leader

**U.S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS**

**Y-12 SITE OFFICE ASSESSMENT
ENRICHED URANIUM OPERATIONS, PHASE A2,
CLOSURE REPORT**

A Department of Energy (DOE) Independent Operational Readiness Review (ORR) was performed for the resumption of Phase A2 activities of the Enriched Uranium Operations (EUO) mission area on November 9-18, 1998, as mandated by DOE Order 425.1, *Startup and Restart of Nuclear Facilities*. The ORR was necessary following a stand-down of Y-12 Plant facilities on September 22, 1994. The resumption strategy resumes the Y-12 Plant nuclear operations by mission area. The EUO, which is the last mission area to be resumed under this strategy, was split into three phases:

Phase A1: Some accountability processes and the metal-working operations (casting, rolling and forming).

Phase A2: Remainder of the accountability processes.

Phase B: All chemical processing and metal production activities.

This "Closure Report" defines the necessary actions to resume the EUO Phase A2. The DOE independent ORR Team's report, *Operational Readiness Review of the Resumption of Enriched Uranium Operations, Phase A2 at the Oak Ridge Y-12 Plant*, dated November 1998, identified one prerestart and seven postrestart findings and five observations. The DOE Y-12 Site Office (YSO) formally transmitted these findings to Lockheed Martin Energy Systems, Inc. (LMES) for corrective actions. The DOE-YSO was responsible for closure of all findings.

Prior to resumption of the EUO, the DOE-YSO verified adequate implementation of the LMES corrective actions for the prerestart findings and validated the corrective action plans for the postrestart findings. Verification of the postrestart findings will also be performed by the DOE-YSO as LMES submits findings for closure in accordance with established due dates. Regular meetings between the DOE-YSO and LMES are held to discuss the status of the corrective actions for resolution of the postrestart findings. The findings and associated corrective action plans have been entered into the LMES Energy Systems Action Management System (ESAMS). The closure packages for LMES actions, in response to the DOE ORR findings, are available in the DOE-YSO evidence files.

Areas of concern identified during the DOE Independent ORR related to 1) material control; 2) LMES issues management and the closure process; 3) maintenance backlog control; and 4) flow-down of requirements in the safety basis documents not fully implemented. The DOE ORR Team concluded that the EUO operations can be safely restarted upon correction of the DOE ORR prerestart finding as follows:

Radiological Protection (RP)

RP1-1: Tygon tubing connected to drain points in systems throughout Buildings 9212 and 9815 are not controlled, following use, to prevent the spread of contamination.

Based upon the review and verification of the corrective actions developed for this finding, there was sufficient evidence to conclude that the finding was adequately closed and that the corrective actions have been adequately implemented. The postrestart findings have been incorporated into the tracking systems both of the ESAMS and of the DOE-YSO for closure. The restart authorization requires the LMES to notify the DOE-YSO, in a timely manner, prior to conducting any work that requires continuous and periodic oversight as defined by the "YSO Postrestart Oversight Categorization Phase A2" in the attached letter, "Y-12 Site Office (YSO) Postrestart Oversight for Enriched Uranium Operations (EUO) Phase A2 Activities," dated December 3, 1998.

In summary, the DOE-YSO will continue to monitor the contractor's continuing operations in the EUO, in accordance with the LMES *Enriched Uranium Operations Startup Plan*, Y/MA 7367. As required by the DOE Order 425.1, lessons learned will be developed both by the DOE-YSO and by the contractor, and the appropriate actions for implementation will be implemented. In the subsequent resumption (Phase B), the DOE-YSO will follow up on the internal lessons learned and will ensure the contractor's incorporating lessons learned from this restart review (EUO Phase A2) as well as previous Y-12 Plant resumptions. This action will be accomplished through the established DOE-YSO assessment programs.

ATTACHMENT 3

**DEFENSE NUCLEAR FACILITIES SAFETY BOARD
RECOMMENDATION 94-4**

**DELIVERABLE DOCUMENTS
ENRICHED URANIUM OPERATIONS (EUO)
PHASE A2 RESTART**

- Y-12 Site Office Assessment Enriched Uranium Operations, Phase A2, Closure Report, dated December 16, 1998**
- Letter, Hall to Van Hook, "Authorization to Resume Operations of the Enriched Uranium Operations (EUO) Phase A2 Activities at the Y-12 Plant," dated December 16, 1998**
- Letter, Spence to Felton, "Y-12 Site Office (YSO) Postrestart Oversight for Enriched Uranium Operations (EUO) Phase A2 Activities," dated December 3, 1998**
- DOE Final Report for the Operational Readiness Review of Phase A2 Enriched Uranium Operations at the Y-12 Site, November 1998**
- DOE Y-12 Site Office Assessment of Enriched Uranium Operations Phase A2 Activities, dated November 5, 1998**
- LMES Operational Readiness Review Report for the Enriched Uranium Operations Restart Phase A2 at the Oak Ridge Y-12 Plant, October 1998**
- DOE Operational Readiness Review of the Enriched Uranium Operations, Phase A2, at the Oak Ridge Y-12 Plant, Implementation Plan, dated October 1998**
- LMES Operational Readiness Review Implementation Plan for Enriched Uranium Operations Restart Phase A-2 of the Oak Ridge Y-12 Plant, October 1998**
- LMES Operational Readiness Review (ORR) Plan of Action (POA) Supplement for Enriched Uranium Operations Restart, Phase A2, at the Oak Ridge Y-12 Plant, dated June 1998**
- DOE Operational Readiness Review Plan of Action for the Resumption of the Enriched Uranium Operations, Phase A2, at the Oak Ridge Y-12 Plant, Rev. 0, dated August 10, 1998**