

John T. Conway, Chairman
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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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98-0002159



June 12, 1998

The Honorable Victor H. Reis
Assistant Secretary for Defense Programs
Department of Energy
Washington, D.C. 20585-0104

Dear Dr. Reis:

In assessing activities leading up to the restart of the first phase of Enriched Uranium Operations (EUO) at the Y-12 Plant, the Defense Nuclear Facilities Safety Board (Board) has conducted a limited review of pertinent Unusual Occurrence Reports (UORs). This limited review reveals numerous events that (taken in their totality) indicate the existence of an important underlying safety issue, which is probably characteristic of operations generally at the Y-12 Plant. That is, that facility managers and operations managers are not always fully cognizant of the condition of safety systems in their facilities and of maintenance actions that take place affecting those systems. Without correction, this lack of understanding and awareness of the status of systems could lead to degradation of the safety basis of facilities and activities to include those for EUO.

Among the various events of this kind that have occurred, two may be cited as representative of the problem (see enclosed copies of the UORs). In one example, a test burn was conducted on the new Destructive Distillation Units without the knowledge and approval of operations management and without several safety related requirements in place. As noted in the occurrence report, (1) the shift manager was not notified of the scope of work, (2) test procedures were not followed, (3) fire protection engineering was not consulted, (4) test prerequisites were not established, and (5) management did not provide the proper level of oversight.

In the other (more recent) example, maintenance personnel detached a speaker of an Emergency Notification System (ENS) while performing work in Building 9206. The system was not reattached properly afterward and the area was not served by the ENS until the defect was noticed by a shift technical advisor five days later. The UOR cited failure of the maintenance personnel to obtain proper approval to remove the speaker from service as a contributing cause of the event.

The Board regards these events as symptomatic of a fundamental problem: adequate control of maintenance activities at the Y-12 Plant, which should actually be recognized as the most basic root cause of the events. Specifically, maintenance and construction activities take place without adequate knowledge, control or oversight by operations management. The activities thus do not have the necessary input from individuals who are familiar with the need for and the operability of safety related systems.

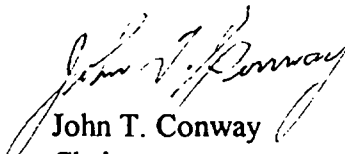
Unless this weakness is removed by a practice that consistently places all maintenance and construction activities within a nuclear facility under the oversight and control of operations and facilities management, it is almost certain that such events will continue to occur. Under such circumstances it is likely that maintenance or construction personnel will eventually perform a series of actions that so undermine the safety basis that severe consequences could follow.

The Board notes that corrective action plans have been developed and issued for each of these occurrences. But it is not at all clear that the underlying systemic cause has been identified and addressed. Therefore, pursuant to 42 U.S.C. § 2286b(d), the Board requests that DOE provide a report which identifies:

- all occurrences and near misses in the past year which are related to the issue of operations management cognizance of the status of maintenance activities and/or the safety basis of their facility,
- root causes of the underlying systemic problems and,
- a comprehensive correction plan.

This report should be provided to the Board within sixty days of the date of this correspondence.

Sincerely,



John T. Conway
Chairman

c: Mr. Mark B. Whitaker, Jr.
Mr. James C. Hall

Enclosure

SEPARATION

PAGE

ORO--LMES-Y12NUCLEAR-1998-0009

Final Report

OCCURRENCE REPORT

Y12 Nuclear Operations

(Name of Facility)

Uranium Conversion/Processing and Handling

(Facility Function)

Oak Ridge Y-12 Site

Lockheed Martin Energy Systems, Inc.

(Name of Laboratory, Site or Organization)

Name: NICK JESSEN

Title: MANAGER EUO

Telephone No.: (423) 574-2495

(Facility Manager/Designee)

Name: SCHABOT, ROBERT E

Title: QUALITY ASSURANCE SPECIALIST

Telephone No.: (423) 576-8012

(Originator/Transmitter)

Name: R E Schabot, Jr.

Date: 05/05/1998

(Authorized Classifier (AC))

1. Occurrence Report Number: ORO--LMES-Y12NUCLEAR-1998-0009

Inadequate Combustion Control Testing - Violation of the Basis for Interim
Operation (BIO) - #Y/MA-7254

2. Report Type and Date: Final

	Date	Time
Notification:	01/29/1998	14:13 (MTZ)
Initial Update:	03/24/1998	07:34 (MTZ)
Latest Update:	05/05/1998	05:38 (MTZ)
Final:	05/28/1998	15:15 (MTZ)

3. Occurrence Category: Unusual

4. Number of Occurrences: 1 Original OR:

5. Division or Project: Enriched Uranium Op.

6. Secretarial Office: DP - Defense Programs

7. System, Bldg., or Equipment:

9212

8. UCNI?: No

9. Plant Area: Protected Area

10. Date and Time Discovered: 01/28/1998 17:33 (ETZ)

11. Date and Time Categorized: 01/28/1998 19:30 (ETZ)

12. DOE Notification:

Date	Time	Person or Organization	Mail Stop
01/28/1998	21:26 (ETZ)	TED DUNCAN	DOE

13. Other Notifications:

Date	Time	Person or Organization	Mail Stop
01/28/1998	21:26 (ETZ)	D CHAMBERS	DOE
01/28/1998	18:45 (ETZ)	BRENDA HAWKS	DOE

14. Subject or Title of Occurrence:

Inadequate Combustion Control Testing - Violation of the Basis for Interim
Operation (BIO) - #Y/MA-7254

15. Nature of Occurrence:

01) FACILITY CONDITION
C. Safety Status Degradation

16. Description of Occurrence:

On 1/28/98, at 17:33 hours, the 9212 Operations Manager was notified that a

test burn had been conducted on the new Destructive Distillation Units (DDUs) in Building 9212. These units were undergoing pre-operational testing in preparation for scheduled restart activities. Testing procedures had been developed and approved in support of this planned activity; however, those procedures required operations Shift Manager approval prior to testing. The Operations Manager notified the Y-12 Plant Shift Superintendent's Office (PSS) at 17:53 hours indicating the test burn had not received all required approvals prior to being conducted.

Upon notification, the Operations Manager issued "Stop Work Authority" for construction activities pending a management review for Authorization Basis (AB) compliance.

A fact-finding meeting was immediately convened at the Y-12 Technical Safety Center (TSC), the event was categorized, and it was discovered that:

No documentation existed indicating Fire Protection Engineering review and approval of the Testing Procedure TP-PBR-DDU-P-01, "DDU Test Procedure." However, Y-12 Plant procedure TRI-QC-409 requires an initial inspection of furnaces and ovens utilizing natural gas be performed by trained and qualified ET&I personnel upon installation of the equipment.

No documentation existed to indicate Equipment Testing and Inspection (ET&I) certification of installed interlocks and other safety-related equipment. A factory representative had adjusted the units in November 1997, ensuring interlocks were functional; however, Y-12 Plant procedures require ET&I certification prior to the introduction of natural gas into these units.

The DDUs had not been released to facility operations management and were still under construction and engineering purview.

Upon discovery of the fact that the DDUs were operating, the Shift Manager ordered the testing stopped and notified the Operations Manager. The Operations Manager subsequently ordered the gas valves be closed and administratively tagged out

The Operations Manager ordered the gas valves closed and administratively tagged out, and the units began cooling.

The Facility Manager categorized the event as an Unusual Occurrence based upon the discovery that the facility was not in compliance with the Authorization Basis requirements relative to flame management at the time the DDUs were operated. In Table 6.1, Control #11 of Y/MA-7254, Basis for Interim Operation for Building 9212 Enriched Uranium Operation Complex (U),

the Fire Protection Program and Initial Testing and In-Service Surveillance Program are credited with preventing a natural gas explosion. Section 5.8.4 of Y/MA-7255 (Building 9212 OSR) requires oversight and subject matter expertise for NFPA codes concerning flame management systems for process operations using natural gas. Neither of these controls were in place at the time the hazard (natural gas) was introduced and the DDU's were operated.

There was no adverse impact on worker safety and health or the environment as a result of this event. Additional significant information will be provided in Updates or the Final Report.

17. Operating Conditions of Facility at Time of Occurrence:

Activities related to facility restart

18. Activity Category:

06 - Facility/System/Equipment Testing

19. Immediate Actions Taken and Results:

Following discovery of the unauthorized test burn:

- The Operations Manager notified the Facility Manager.

- The Operations Manager issued "Stop Work Authority" for construction activities, pending review for ABL compliance

- The units were placed in a safe condition by closing and administratively controlling the natural gas supply to them.

- The units were cooled to ambient room temperature.

- The Operations Manager issued "Stop Work Authority" for construction activities pending a management review for Authorization Basis (AB) compliance.

- Fire Protection Engineering, Central Engineering, and Operations personnel convened to verify proper controls were in place to ensure a safe shut-down configuration.

- The cognizant Department of Energy (DOE) Facility Representative (FR) was notified.

- The DOE-Headquarters (HQ) Emergency Operations Center (EOC) was notified.

- An investigation was initiated to determine causal factors and identify corrective actions to prevent recurrence.

20. Direct Cause:

- 3) PERSONNEL ERROR
 - B. Procedure Not Used or Used Incorrectly

21. Contributing Cause(s):

- 2) PROCEDURE PROBLEM

A. Defective or Inadequate Procedure

22. Root Cause:

6) MANAGEMENT PROBLEM

E. Policy Not Adequately Defined, Disseminated, or Enforced

23. Description of Cause:

Direct Cause: Personnel Error - Procedure Not Used or Used Incorrectly

The direct cause associated with this violation has been attributed to Personnel Error - Procedure Not Used or Used Incorrectly. Procedure TP-PBR-DDU-P-01, DDU Test Procedure was not performed in accordance with requirements of the Nuclear Operations Conduct of Operations Manual or Y/MA-7248, Enriched Uranium Operations Processed-Based Restart Test and Checkout Guide. The test procedure was written in a step by step sequence, with initial (sign-off) and date requirements on the action steps. The test procedure included requirements for ensuring that the test was scheduled on the POD and that Shift Manager approval was obtained prior to initiating testing activities. However, the Central Engineering Services (CES) engineer directing the test failed to perform or document the completion of required action steps in the procedure with initials and dates. Approval from the Shift Manager was not obtained prior to initiation of testing; and consequently, the Shift Manager was not aware of the start up of the DDUs. Failure to follow the specified requirements of procedure TP-PBR-DDU-P-01 was the initiating factor leading to this event.

Contributing Cause: Procedure Problem - Defective or Inadequate Procedure

The contributing cause associated with this occurrence has been attributed to Procedure Problem - Defective or Inadequate Procedure. The test procedure for the DDUs was approved on 7/31/97 but was not assigned an effective date. An Unreviewed Safety Question Determination (USQD) was performed for the test procedure against the existing Authorization Basis (AB) Documentation and it was determined at that time that the test did not result in a USQ. The test procedure involved operations with the flame management system; however, neither the Building 9212 Operations Manager

nor others reviewing/approving the procedure requested a review of the procedure by ET&I or Fire Protection Engineering. In December 1997, Revision 1 of the 9212 BIO and Rev. 0 of the Building 9212 OSR were approved. Operations Management were cognizant that there were requirements in the new AB documents that needed to be implemented; and, the intent of Operations Management was not to operate the processes and equipment involving Flame Management systems until the requirements of the new AB were fully implemented. However, the implementation plan for the revised BIO and new OSR did not specifically call for a review of the previously approved test procedure even though it related to one of the systems directly impacted by the revised AB documents.

The investigation also revealed that the approved test procedure did not include applicable inspections by ET&I personnel as required by procedure TRI-QC-409, Inspection of Furnaces and Ovens. This procedural deficiency was unrelated to the revision of the AB documents.

Root Cause: Management Problem - Policy Not Adequately Defined,
Disseminated,
or Enforced

The root cause of this event associated with the unauthorized operation of the DDU afterburner has been attributed to Management Problem- Policy Not Adequately Defined, Disseminated, or Enforced. The investigation of this event determined that the POD work control process lacked rigor and formality and was not defined in sufficient detail to ensure that the scope of proposed/requested activities was clearly understood by administrators of the POD and that the scope of authorized work was clearly understood by the engineer directing the tests. The official POD was not maintained to an appropriate level of detail. At the time of the event, actual job status during the course of the day was informally maintained with annotations on the master POD and heavy reliance on the memory of the cognizant Shift Manager. The POD request form required a variety of signatures, the meaning of which was not clear to the user. The governing procedure, Y10-37-035, Plan of the Day did not clearly explain the responsibilities of all parties involved with a POD request.

The investigation of this event also indicated a lack of formal management oversight during testing activities to ensure only approved activities are conducted by qualified personnel in accordance with approved documents. Interviews with the CES engineer conducting the DDU test indicated he did not fully understand the principals of conduct of operations. The use of

test procedures developed per the guidelines of Y/MA-7248 was accepted by DOE for PBR activities as a time saving alternative to requiring that test procedures be developed and issued in accordance with Y10-102. This approval was based on the premise that such procedures would be performed under the auspices of a trained, qualified Test and Checkout Engineer. The CES engineer performing the DDU tests did not meet these qualifications and lacked proper CONOPS training in procedure use. Management failure to adequately define, disseminate, and enforce policies, practices, and procedures concerning the POD process, testing, and procedure use was the major factor leading to this event.

24. Evaluation (by Facility Manager/Designee):

There are four (4) DDUs located in Room 106 of Building 9212. They are electronically heated tube furnaces, each with an inside diameter of approximately ten (10) inches and a length of approximately one hundred and six (106) inches. The off gas from the DDUs is routed through a natural gas fired afterburner to ensure complete oxidation of volatile off-gasses. The exhaust for the DDUs and Carbon Burners is routed through the Headhouse Basement area and exhausted through Stack 33. The DDUs are used first to distill and then to oxidize material, such as rubber hoses, gloves and other materials containing plastics or organics which are not suitable for direct incineration.

The unauthorized DDU equipment start-up testing activities performed on 1/29/98 resulted in this unusual event for the Building 9212 facility. Specifically, a formalized initial testing and in-service surveillance program had not been implemented for the natural gas flame management system associated with the DDU afterburners in Building 9212 prior to this event.

The investigation of this event determined that due to a lack of clear, precise communications between the facility owner and the construction test participants, administrative and technical procedure requirements were not met. The CES personnel conducting the test and checkout were not aware that the OSR for the flame management system applied to the subject equipment,

since it was still under construction and had not yet been turned over to facility operations. Furthermore, the CES personnel were not qualified to be using the procedure TP-PBR-DDU-P-01. A request to perform testing of the DDU's was originally submitted to the Shift Administrative Assistant (SAA) along with a request to test the Carbon Burners which are located in the same room, and are essentially the same type furnace except they lack the afterburner/distiller. The Carbon Burners are associated with Phase A restart and the DDU's are associated with Phase B. The SAA placed the test of the Carbon Burners on the POD but intentionally did not place the DDU test on the POD because it was not being discussed in the POD meetings. The personnel representing the testing team from CES had been in the habit of referring to the testing of both Carbon Burners and DDU's as testing of Carbon Burners during the POD meetings. Thus, the CES personnel believed they had authorization to perform both tests while, in fact, the SAA and Shift Manager believed they were only authorizing testing of the carbon burners. Investigation of the actual testing evolution revealed that the test procedures were not being performed properly and no physical controls were in place to prevent introduction of the hazard (natural gas) to the equipment. The investigation also revealed that testing documentation and testing personnel qualification were also not in accordance with Y/MA-7248, Enriched Uranium Operations Process-Based Restart Test and Checkout Guide.

The investigation revealed Conduct of Operations deficiencies. Personnel performing activities in the facility were not fully aware of the facility owners expectations regarding their actions when conducting test and checkout of equipment. The facility owner expected strict adherence to test procedures by support groups as he would for operations personnel performing daily operations in the facility. This expectation was not formally communicated to the CES engineer and no assessment of performance against this expectation had been made.

In an effort to address the root cause identified during the investigation, a standing order was issued to provide instructions for Work control in the 9212 Complex and various changes were subsequently made to the POD process to strengthen identified weaknesses. The POD meeting was moved from 1300 hours to 0615 hours to prevent other daily activities from interfering with active participation by key personnel and to facilitate a more accurate description of planned activities to be performed during the day. On 2/14/98, the Building 9212 Operations Manager held a four (4) hour session with all personnel assigned to the 9212 Shift Managers Office (Shift Managers, Shift Technical Advisors, and Shift Administrative Assistants) to re-emphasize the importance of understanding the full scope of activities prior to approving them for inclusion on the POD. Also addressed in this session were system status file information requirements, ready-access information requirements to have available in the Shift Managers Office,

the method for controlling compensatory measures, and additional operational limitations (ie., who can do what in the way of test and checkout activities). To strengthen the Shift Managers Office cognizance of ongoing activities in the facility, the Operations Manager requested that the Shift Manager and Shift Technical Advisors each spend a minimum of one hour on the floor each shift. To better emphasize the importance of having a clear understanding of the exact scope of all proposed activities and to determine the possible impact of these activities on the authorization basis, the Operations Manager has become an active participant in the daily POD meetings and has mandated that he alone can approve late additions (ie., those not discussed in the previous POD meeting) to the POD schedule.

In an effort to address the direct cause, the CES engineer associated with the unauthorized work received positive discipline and was provided training on the CONOPS aspects of procedure use. He was also counseled by the Operations Manager concerning the limitations of work activities that could be performed under the auspices of CES during test and checkout. An enhancement was made to the POD Schedule form to distinguish and segregate Construction Test and Checkout Activities from PBR Testing activities performed under the auspices of the PBR Test Engineer.

In an effort to address the contributing cause, the DDU Test procedure TP-PBR-DDU-P-01 will be reviewed and revised, as necessary to ensure it can be performed under full compliance with current Authorization Basis documents. Additionally, more formal implementation planning has been mandated and put to use to better identify documents that would be potentially impacted by AB document revisions.

25. Is Further Evaluation Required?: No

26. Corrective Actions

(* = Date added/revised since final report was signed off.)

1. Provide Conduct of Operations Training to the Central Engineering Services (CES) personell associated with the unauthorized work.

Note: This is a pre-start action. The actual completion date for this corrective action was 2/2/98.

Target Completion Date: 05/15/1998 Completion Date:

2. Revise the POD Administrative Procedure Y10-37-035 to clearly define the POD Request Form requirements and the user/approver responsibilities.

This is a post start action

Target Completion Date: 05/22/1998 Completion Date:

3. Provide additional training to personnel involved in administering POD activities to enhance their understanding of their responsibilities in administering the POD and in maintaining cognizance of activities in the work area.

Note: This is a pre-start action.

Target Completion Date: 05/15/1998 Completion Date:

4. Make changes to the POD process as needed to strengthen identified weaknesses.

Note: The actual completion date for this corrective action was 3/15/98.

Target Completion Date: 05/15/1998 Completion Date:

5. Review and revise, as necessary the TP-PBR-DDU-P-01 prior to resuming testing to ensure full compliance with the current Authorization Basis.

This is a post start action.

Target Completion Date: 08/30/1998 Completion Date:

6. Identify and implement a method for ensuring controlled documents are evaluated for potential impact when Authorization Basis documents are revised.

This is a pre start action.

Target Completion Date: 05/15/1998 Completion Date:

7. Identify and implement a method to ensure future test and checkout activities are conducted in accordance with approved documents and CONOPS requirements by trained and qualified personnel.

Note: This is a pre start action

Target Completion Date: 05/15/1998 Completion Date:

8. Review training records of all EUO support personnel, as identified in the Y-12 TIM/R6, for training in EUO facility training Module 14711, "EUO MAA Access Indoctrination," and ensure that any training deficiencies are immediately corrected.

This is a pre start action

Target Completion Date: 05/04/1998 Completion Date:

9. Administer positive discipline to personnel involved in this event in accordance with plant procedures.

Note: The actual completion date for this action was 4/1/98.

This action is a pre-restart action.

Target Completion Date: 05/01/1998 Completion Date: 05/01/1998

10. Issue Standing Order providing further guidance to personnel on work control in the facility.

Note: The actual completion date for this action was 4/1/98.

This is a pre-restart action.

Target Completion Date: 05/15/1998 Completion Date:

27. Impact on Environment, Safety and Health:

There were no adverse impacts to the environment nor to the safety and health of facility personnel as a result of this event.

28. Programmatic Impact:

None

29. Impact on Codes and Standards:

None

30. Lessons Learned:

This event is indicative of a lack of rigor and formality associated with established principals of conduct of operations. This is revealed by the following actions prior to and leading to the unauthorized work described in this report; 1) the test engineer did not ensure that the testing of the DDU's was approved on the POD and did not adequately inform the Shift Manager of the scope of work to be performed on 1/28/98, 2) the test engineer did not follow the test procedure in a step by step manner and did not complete the signatures following completion of the action steps, 3) During preparation of the test procedure, Fire Protection Engineering was not consulted even though the testing included the operation of the Flame Management System, 4) Building 9212 Operations did not have positive control of the Natural Gas System. Natural gas was not valved out to Room 1006 following the vendor testing of the afterburner thus, allowing unauthorized operation, and 5) management's lack of oversight to ensure only authorized work activities were being performed.

The corrective actions addressed in this report will prevent or greatly reduce the possibility of recurrence by establishing rigor and formality associated with proper implementation of conduct of operations.

31. Similar Occurrence Report Numbers:

1. None identified

32. User Field #1:

Energy Systems Action Management Systems Reference ID I0035034
Keywords: Fire Protection, DDU, Safety-Related System, Flame

33. User Field #2:

34. DOE Facility Representative Input:

This occurrence report is being accepted with comment. The training module in corrective action number 8 in section 26 contents cover notification of the Shift Manager of any activity to be performed, the requirement to be on the Plan Of The Day prior to initiation of work, and the basic Conduct of Operations requirements for performance of work control within the facility. EUO has Memorandums of Understanding with support organizations which specify the requirements for conducting operations within EUO, training requirements, and any specific agreements between the organizations. Overall the corrective actions if properly implemented should reduce the potential for a similar event. Tighter control of testing of equipment and the Plan of the Day are good starting points for corrective actions.

Entered by: HAWKS, BRENDA L

Date: 05/13/1998

35. DOE Program Manager Input:

36. Signatures:

Approved by: NICK JESSEN, Facility Manager/Designee

Date: 05/05/1998

Telephone No.: (423) 574-2495

Approved by: HAWKS, BRENDA L, Facility Representative/Designee

Date: 05/13/1998

Telephone No.: (423) 241-6572

Approved by: AIKEN, PHILLIP D, Program Manager/Designee

Date: 05/28/1998
Telephone No.: (301) 903-4513

SEPARATION

PAGE

ORO--LMES-Y12NUCLEAR-1998-0040

Notification Report

OCCURRENCE REPORT

Y12 Nuclear Operations

(Name of Facility)

Uranium Conversion/Processing and Handling

(Facility Function)

Oak Ridge Y-12 Site

Lockheed Martin Energy Systems, Inc.

(Name of Laboratory, Site or Organization)

Name: NICK JESSEN

Title: MANAGER EUO

Telephone No.: (423) 574-2495

(Facility Manager/Designee)

Name: JONES, CARLA M

Title: SR. REPORTS & DATA ASSISTANT

Telephone No.: (423) 576-3949

(Originator/Transmitter)

Name: B E SCHABOT

Date: 05/12/1998

(Authorized Classifier (AC))

1. Occurrence Report Number: ORO--LMES-Y12NUCLEAR-1998-0040

Unauthorized Work on Emergency Notification System Speakers Results in a
Violation of the Operational Safety Requirement (OSR)

2. Report Type and Date: Notification

	Date	Time
Notification:	05/13/1998	08:26 (MTZ)
Initial Update:		
Latest Update:		
Final:		

3. Occurrence Category: Unusual

4. Number of Occurrences: 1 Original OR:

5. Division or Project: Enriched Uranium Op.

6. Secretarial Office: DP - Defense Programs

7. System, Bldg., or Equipment:

9206

8. UCNI?: No

9. Plant Area: Protected

10. Date and Time Discovered: 05/12/1998 07:40 (ETZ)

11. Date and Time Categorized: 05/12/1998 13:09 (ETZ)

12. DOE Notification:

Date	Time	Person or Organization	Mail Stop
05/12/1998	15:27 (ETZ)	Mike Wyatt	DOE-HQ

13. Other Notifications:

Date	Time	Person or Organization	Mail Stop
05/12/1998	15:09 (ETZ)	Don Lane	DOE-ORO
05/12/1998	15:27 (ETZ)	Steve Buntman	DOE-HQ

14. Subject or Title of Occurrence:

Unauthorized Work on Emergency Notification System Speakers Results in a Violation of the Operational Safety Requirement (OSR)

15. Nature of Occurrence:

01) FACILITY CONDITION
C. Safety Status Degradation

16. Description of Occurrence:

On May 12, 1998, a Shift Technical Advisor discovered a disconnected

Emergency Notification System (ENS) speaker in Room 9, of Building 9206. The speaker was removed in support of a ceiling tile replacement job taking place in Rooms 1, 2, and 9. However, proper approval and authority to remove the speaker from service was not obtained prior to the removal. The Facility Manager initially categorized this event as an Off-Normal Occurrence based upon DOE Manual 232.1-1, Group 1.F.(ON)3, "Unauthorized maintenance on Safety Significant Structures, Systems, or Components (SSC)." Upon further review of the authorization basis documents by the Facility Manager, this event was upgraded to an Operational Safety Requirement (OSR) violation.

The OSR violation occurred as a result of the failure to enter the required Limiting Condition of Operations (LCO) Action Steps as specified within the required timeframe. The applicable OSR is Y/TS-852 (Rev. 3), "Operational Safety Requirements for the Building 9206 Recovery Furnace Operations in Building 9206."

Following a review conducted at the Y-12 Technical Support Center (TSC) it was determined that work had been conducted on 05/07/98 in Room 1, Building 9206, when the carpenters asked building electricians to disconnect an ENS speaker so that they could install a ceiling tile. Maintenance electricians unplugged the ENS speaker, and stood by while the carpenters installed the ceiling tile. They then re-installed the ENS speaker. However, the Criticality Accident Alarm System (CAAS), which is comprised of ENS Speakers and Horns, Magenta Lights, and Public Address System (PAS) speakers, was not tested following the speaker outage.

Upon discovery of this condition, Rooms 1 and 9 were placed under administrative control (posted) as having deficient CAAS coverage, pending performance of a modified quarterly CAAS surveillance. Notifications were made to the DOE Facility Representative, and LMES management. An investigation has begun to determine causes and make corrective actions recommendations.

17. Operating Conditions of Facility at Time of Occurrence:

Replacement of ceiling tiles was underway, when workers disconnected a ENS speaker.

18. Activity Category:

19. Immediate Actions Taken and Results:

1. Following discovery of the speaker being removed from service, the affected areas were administratively controlled (0740 hours).

2. The Y-12 Plant Shift Superintendent's office (PSS) was notified (0745 hours).

3. A fact-finding meeting was conducted at the Y-12 TSC and the event was categorized as an Off-Normal Occurrence (0917 hours).

4. The meeting was attended with representatives from the maintenance, Enriched Uranium Operations (EUO), Nuclear Safety, and the DOE.

5. Further review by the Facility Manager determined the event to constitute a violation of the OSR (1309 hours), and the Occurrence was upgraded to an Unusual.

6. Oral Notification was made to the DOE Facility Representative of the

upgraded Occurrence.

20. Direct Cause:

21. Contributing Cause(s):

22. Root Cause:

23. Description of Cause:

24. Evaluation (by Facility Manager/Designee):

25. Is Further Evaluation Required?: Yes

If YES - Before Further Operation? No

By whom?

By when?

26. Corrective Actions

(* = Date added/revised since final report was signed off.)

27. Impact on Environment, Safety and Health:

28. Programmatic Impact:

29. Impact on Codes and Standards:

30. Lessons Learned:

31. Similar Occurrence Report Numbers:

32. User Field #1:

Energy Systems Action Management Systems Reference ID I0035982

33. User Field #2:
