



The Secretary of Energy  
Washington, DC 20585

September 30, 2005

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DEFENSE SAFETY BOARD

The Honorable A. J. Eggenberger  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, DC 20004-2901

Dear Mr. Chairman:

The purpose of this letter is to establish a new due date for Deliverable 8.5.1, PF-4 Safety Related Ventilation System Evaluation Report, of the Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2004-2, *Active Confinement Systems*. This change will permit us more time to respond to the issues identified in your letter of September 1, 2005, to the National Nuclear Security Administration Administrator regarding the ongoing evaluation of the confinement approach credited by the safety basis for the Plutonium Facility at Los Alamos National Laboratory (LANL). This evaluation will address the issues raised in your letter of May 31, 2005.

It was our original intent to utilize the ventilation system evaluation results from the LANL Plutonium Facility as input to develop our Safety Related Ventilation System Evaluation Guidance (Deliverable 8.5.4, due December 16, 2005). Given your initial concerns with the preliminary analysis developed by LANL, we agree with you that it is now preferable to apply the guidance being developed as part of Deliverable 8.5.4 to evaluate LANL's Plutonium Facility (i.e., Deliverable 8.5.1). Based on these considerations, we have established a new due date for Deliverable 8.5.1 as March 15, 2006.

We also enclose a status report on actions to address your May 31, 2005, letter. We recognize it is important to address the identified weaknesses with the current passive confinement strategy for the Plutonium Facility, and we will continue to take any actions necessary to ensure that the facility operates safely. Our report for the LANL Plutonium Facility that outlines NNSA's plan and schedule for implementation of an effective safety-class system will also be provided by March 15, 2006.



The Lead Responsibility for Deliverable 8.5.1 is the NNSA Chief of Defense Nuclear Safety, Mr. James J. McConnell. Mr. McConnell can be reached on (202) 586-4379 to answer any questions that might arise regarding details of these efforts underway.

Sincerely,

A handwritten signature in black ink that reads "Samuel W. Bodman". The signature is written in a cursive style with a large, prominent initial "S".

Samuel. W. Bodman

Enclosure

cc:

L. Brooks, NA-1

J. Shaw, EH-1

M. Whitaker, Jr., DR-1

SEPARATION

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UNITED STATES GOVERNMENT

DEPARTMENT OF ENERGY

# memorandum

National Nuclear Security Administration  
Los Alamos Site Office  
Los Alamos, New Mexico 87544

DATE: SEP 22 2005  
REPLY TO: SABL: LK-05-019  
ATTN OF:  
SUBJECT: Further Corrective Actions on an Open Unreviewed Safety Question (USQ) Involving Leak Path Factor Issues for the Plutonium Processing Facility, TA-55

TO: Steve Yarbro, NMT-DO, LANL, MS-E500

**Reference 1:** Memo C. Steele to S. Yarbro, *Approval of Interim Technical Safety Requirements (ITSRs) for the TA-55 Facility*, Janke/Knoell/Steele: ITSR APPROVAL, dated July 28, 2005.

**Reference 2:** Memo S. Yarbro to C. Steele, *LASO Condition of Approval #9 - TA-55 HVAC Cost-Benefit Analysis*, NMT-14: 05-074, dated August 25, 2005.

**Reference 3:** Memo S. Yarbro to C. Steele, *LASO Condition of Approval #10 - Long Term Fixes at TA-55 to Address Leak Path Factor Issues*, NMT-14: 05-077, dated August 29, 2005.

**Reference 4:** Memo S. Yarbro to C. Steele, *LASO Condition of Approval #11 - Prioritized List of Glovebox Upgrades*, NMT-14: 05-079, dated September 2, 2005.

**Reference 5:** Memo S. Yarbro to C. Steele, *LASO Condition of Approval #13 - TA-55 Fire Suppression System Cost-Benefit Analysis*, NMT-14-05-083, dated September 16, 2005.

The Los Alamos Site Office (LASO) of the National Nuclear Security Administration (NNSA) acknowledges receipt of References 2, 3, 4, and 5. References 2, 3, 4, and 5 were submitted in response to conditions of approval (COA) listed in Reference 1, *Approval of Interim Technical Safety Requirements (ITSRs) for the TA-55 Facility*. After an initial review of References 2, 3, and 4, LASO has the following corrective measures with conditions of approval.

### Corrective Measures

Reference 4 provided a list of prioritized gloveboxes proposed for seismic upgrades. From a risk reducing perspective, it is correct strategy to reduce the Material-at-Risk (MAR) involved in spill scenarios and design basis earthquake (DBE) scenarios by providing gloveboxes that meet Performance Category (PC)-3 requirements from a seismic perspective thereby reducing the damage ratio (DR) for the accident scenarios.

**COA Statement 39:** LASO accepts the list of prioritized gloveboxes provided in Reference 4 and expects the Nuclear Materials Technology (NMT) division to proceed

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with the proposed glovebox seismic upgrades. LASO also expects the upgrades to be completed in an efficient and cost effective manner, and the seismically upgraded gloveboxes will be considered safety class (SC) design features from this point forward.

**COA Basis/Background 39:** Seismically upgrading gloveboxes in TA-55 not only reduces the DR applied to MAR in the facility, but it also complies with at least five of the seven prioritized items for a facility safety strategy outlined in Section 2.1.1 of DOE-Guide-420.1-1, *NONREACTOR NUCLEAR SAFETY DESIGN CRITERIA AND EXPLOSIVES SAFETY CRITERIA GUIDE for use with DOE O 420.1, FACILITY SAFETY*, and as stated in Reference 1 for guidance.

Reference 3 provided a list of possible solutions to address the problems associated with the recent leak path factor (LPF) analyses completed for TA-55. Among the top listed solutions were a reduction in the MAR limits for the facility and containerization of MAR in robust SC containers for storage. However, NMT did not provide any procurement specifications for the SC containers proposed. While Reference 3 provided a list of possible long-term solutions to the LPF issues, it did not provide a proposed final solution to the LPF problems. LASO accepts these two recommendations in a cost effective manner to reduce the risk to the public and workers based on the following COAs.

**COA Statement 40:** NMT will provide to LASO a plan and schedule for the reduction of MAR limits for TA-55, Building PF-4 by December 22, 2005.

**COA Basis/Background 40:** The reduction of MAR limits within the facility is the number one prioritized item for a facility safety strategy outlined in Section 2.1.1 of DOE-G-420.1-1. By reducing the MAR limits, the amount of material available to be acted upon by accident stressors is reduced, which leads to a reduction in the consequences to the public and workers.

**COA Statement 41:** NMT will provide performance criteria for the design, procurement, and testing of the SC containers by November 22, 2005. The criteria shall include data for fire, explosion, puncture and crushing stressors.

**COA Basis/Background 41:** By providing SC containers for storage of MAR in the work environment, the control will reduce the amount of MAR available for accident scenarios by reducing the DR and consequently reduce the risk to the public and the workers. This proposed control also satisfies five of the seven prioritized items for a facility safety strategy outlined in Section 2.1.1 of DOE-G-420.1-1.

**COA Statement 42:** NMT will provide to LASO its final proposed solution to deal with the LPF issues by January 31, 2006.

**COA Basis/Background 42:** It is LASO's understanding that you currently have three full-time employees and one part-time employee engaged in completing the analysis necessary to decide on a final solution for the TA-55 LPF issues, and that it will take

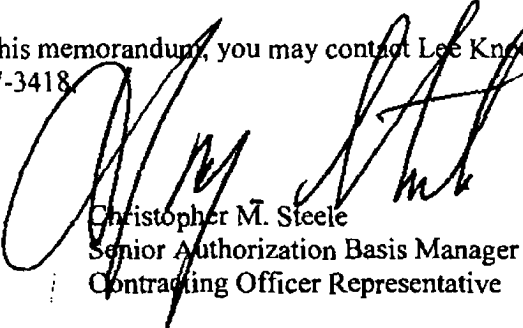
until January 31, 2006 to complete the required analyses. Based on negotiations via a telephone conference call September 20, 2005 between the Chief of Defense Nuclear Safety's (CDNS's) office, the NNSA Program Office for TA-55 and LASO, the date of January 31, 2006 is acceptable to LASO, and it will provide the NNSA Headquarters (HQ) Core Team preparing the implementation plan for Defense Nuclear Facility Safety Board's (DNFSB's) Recommendation 2004-2, *Active Confinement Systems*, an opportunity to provide useful guidance to LASO and NMT Division.

**COA Statement 43:** Before startup under this safety basis approval, LANL SHALL verify implementation of all required safety controls (including TSR-level controls) in the Safety Basis and provide adequate evidence of implementation to LASO Office of Facility Operations (OFO) for NNSA review. The level of verification review SHALL be formally established by OFO. Violation of this verification requirement SHALL constitute operations outside of the approved safety basis and therefore constitute a violation of the Safety Basis and may also, for TSR-level controls, constitute a violation of the TSRs as well.

**COA Basis/Background 43:** Verification of controls are required by DOE-O-425.1C and are an important factor in ensuring that controls are properly implemented.

**NOTE:** IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS LANL SHALL NOT PERFORM ANY WORK ORDERED UNDER THIS APPROVAL THAT CHANGES COST, SCOPE, OR WORK PRIORITY UNDER THE STATEMENT OF WORK IN THE LANL CONTRACT. LANL SHALL ENSURE THAT IF THIS IS AN ISSUE THAT IT IS CALLED TO THE COR AND COs IMMEDIATE ATTENTION PRIOR TO INITIATING ANY WORK THAT COULD CAUSE THIS TO OCCUR.

If you have any questions regarding this memorandum, you may contact Lee Knoll of my staff at 665-3161 or myself at 667-3418.



Christopher M. Steele  
Senior Authorization Basis Manager  
Contracting Officer Representative

cc:  
E. Wilmot, Manager, LASO  
X. Ascanio, NA-124, HQ/GTN  
S. Pierpoint, NA-124.1, HQ/GTN  
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C. Steele, SABM, LASO  
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