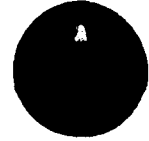




**DEPARTMENT OF ENERGY**  
National Nuclear Security Administration  
Los Alamos Site Office  
Los Alamos, New Mexico 87544



March 25, 2005

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W.  
Suite 700  
Washington, D. C. 20004-2901

Dear Mr. Chairman:

Please reference your June 15, 1995 letter to DOE on the Overview of Ventilation Systems at Selected DOE Plutonium Processing and Handling Facilities.

Enclosed please find two letters that comprise the Los Alamos National Laboratory (LANL) response identifying the status of actions completed to date, and the plan for completion of the remaining actions for the Upgrade of Emergency Power at LANL TA-55, PF-4.

At this time the Los Alamos Site Office (LASO) considers this action closed. LASO will continue to provide the local DNFSB site representative with updates as LANL completes the identified actions.

If you have any questions, please feel have your staff contact Gerald Schlapper, Senior Safety Advisor for LASO at (505) 665-7111.

Sincerely,

Edwin L. Wilmot  
Manager

OFO:1FB-012

Attachment (1)

cc:  
See Page 2

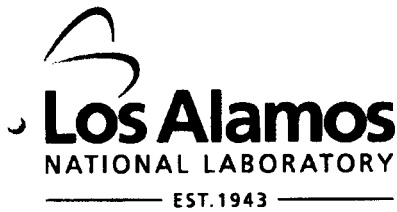
cc w/attachment:

A. Jordan, DNFSB  
625 Indiana Avenue NW, Suite 700  
Washington, DC 20004

E. Beckner, NA-10, HQ/FORS

electronic cc w/attachments:

M. Whitaker, DR-1, HQ-FORS  
X. Ascanio, NA-124, HQ/GTN  
S. Pierpoint, NA-125.2, HQ/GTN  
M. Schoenbauer, NA-12, HQ/FORS  
G. Schlapper, OOM, LASO  
F. Bell, OFO, LASO  
C. Keilers, DNFSB, LASO  
T. Burns, DNFSB, LASO  
G. P. Nanos, DIR, LANL, MS-A100  
P. Volza, PS-2, LANL, MS-C347



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Date: March 24, 2005  
Symbol #: DIR-05-119

Mr. Edwin Wilmot, Manager  
U.S. Department of Energy/NNSA  
Los Alamos Site Office  
MS A316  
Los Alamos, NM 87544

**SUBJECT: FEBRUARY 24, 2005 MEMO FROM P. NANOS TO E. WILMOT  
CONCERNING DNFSB LETTER 6/15/95, OVERVIEW OF VENTILATION  
SYSTEMS AT SELECTED DOE PLUTONIUM PROCESSING AND  
HANDLING FACILITIES**

Dear Mr. Wilmot:

**REFERENCES:**

1. Defense Nuclear Facilities Safety Board letter, John Conway to Hazel O'Leary, dated June 15, 1995
2. February 24, 2005 letter from P. Nanos to E. Wilmot (DIR-05-087), DNFSB Letter 6/15/95, Overview of Ventilation Systems at Selected DOE Plutonium Processing and Handling Facilities
3. March 16, 2005 letter from D. Cobb to E. Wilmot (DIR-05-109), TA-55 Interim TSR Controls - Follow on Commitment to February 24, 2005 Memo from P. Nanos to E. Wilmot concerning DNFSB Letter 6/15/95, Overview of Ventilation Systems at Selected DOE Plutonium Processing and Handling Facilities

During a recent DNFSB/CATS' Teleconference held on 3/17/05 with NNSA-HQ and NNSA-LASO, Los Alamos National Laboratory (LANL) was requested to provide NNSA with an update on our actions to identify funding to address concerns raised in the DNFSB letter of June 15, 1995 (Reference 1). The purpose of this letter is to provide LANL input into the NNSA response to DNFSB about the funding of the Emergency Power Upgrades at LANL TA-55, PF-4.

On February 24, 2005, LANL transmitted to LASO a correspondence (Reference 2) that discussed the status of our actions and plans to address the DNFSB letter of June 15, 1995 (Reference 1). In this correspondence, the Laboratory made known that a funding source to complete the remaining modifications to satisfy our actions in response to Reference 1 was uncertain. Since that transmittal,

P. O. Box 1663, MS A100, Los Alamos, NM 87545  
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the Laboratory and LASO have been able to identify RTBF funds to cover the completion of the electrical switchgear upgrade. Therefore, the Laboratory believes it is on course to complete all actions to address the emergency power upgrades at PF-4 consistent with DOE's response to DNFSB letter, dated June 15, 1995 (Reference 1).

Furthermore, at the DNFSB/CATS Teleconference held on March 17, 2005, it was agreed that NNSA and LANL should separate actions related to the TA-55 DSA update from those associated with PF-4 electrical switchgear upgrades. Our 2/24/05 (Reference 2) and 3/16/05 (Reference 3) letters identified DSA update actions being taken to address recently identified LPF concerns with the TA-55 DSA. The Laboratory agrees that these issues are being adequately addressed as part of the DSA update for TA-55 and should not prevent us from completing actions to upgrade the emergency power at PF-4. Therefore we agree that these two issues should be disconnected.

Should you have any questions in this matter, please contact me at 667-5101, Joel Leeman at 606-0800, or Steve Yarbrow at 667-2556.

Sincerely,



Donald D. Cobb  
Deputy Director (Acting)

DDC/LG/rfr

Enclosures (a/s)

Cy: J. Angelo, PS-DO, MS C347  
F. Tarantino, PADNWP, MS F611  
J. Leeman, PADNWP, MS F611  
D. Beck, ADWEM, MS A107  
S. Yarbrow, NMT-DO, MS E500  
T. Blum, NMT-DO, MS E509  
T. Burns, DNFSB, MS A316  
J. Fraser, FM-TA-55, MS E583  
D. Gordon, NMT-14, MS E578  
R. Janke, NNSA/LASO, MS A316  
C. Keilers, DNFSB, MS A316  
S. McKernan, NMT-DO, MS E509  
D. Satterwhite, PS-4, MS K561  
G. Schlapper, NNSA/LASO, MS A316  
A. Trujillo, NNSA/LASO, MS A316  
P. Volza, PS-2, MS C347  
L. Goen, PADNWP, MS F627  
WI Office Files, MS F611  
IM-9, MS A150



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February 24, 2005

Mr. Ed Wilmot, Manager  
U.S. Department of Energy/NNSA  
Los Alamos Site Office  
Mail Stop: A316  
Los Alamos, NM 87544

**SUBJECT: DNFSB Letter 6/15/95, Overview of Ventilation Systems at Selected DOE Plutonium Processing and Handling Facilities (DNFSB/TECH-3)**

Dear Mr. Wilmot:

Reference:

1. Defense Nuclear Facilities Safety Board letter, John Conway to Hazel O'Leary, dated June 15, 1995
2. DOE Letter regarding the transmittal of DOE Plutonium Ventilation System Study Report, Hazel O'Leary to John Conway, dated March 15, 1996
3. DOE Letter regarding the upgrade of the emergency power for the Zone 1 ventilation system in PF-4 at LANL Technical Area-55, dated May 22, 2001
4. Memo from Steve Yarbro to Chris Steele, Transmittal of TA-55 Leak Path Factor Analysis, NMT-14:04-138, December 17, 2004
5. Memo from Chris Steele to Steve Yarbro, Approval of NMT-DO Modified Compensatory Measures Concerning the Recent TA-55 Leak Path Factor Analysis Results, January 7, 2005
6. Memo RCJ020105-002 from Edwin Wilmot to Steve Yarbro, Additional Proposed Compensatory Measures for TA-55 Based On Leak Path Factor Analysis, February 1, 2005
7. Memo from Stuart McKernan to Chris Steele, Current Status of Uninterruptible Power Supply (UPS) for Zone 1 Ventilation Fans and Instrument Air Compressors, NMT-14:04-002, January 20, 2004
8. Memo from Ralph Erickson to Everet Beckner, Plutonium processing and handling Facility (TA-55-PF-4) Uninterruptible Power Supply Upgrade, SABB:LK-001, January 27, 2004.

During a recent Video Teleconference (VTC) with NNSA HQ (NA-10), NNSA-LASO and LANL committed to providing the DNFSB with a status of our actions and plans to address the DNFSB Letter of June 15, 1995 (reference 1). The purpose of this letter is to provide Laboratory input to the NNSA response to Defense Nuclear Facility Safety Board (DNFSB) concerning the Upgrade of Emergency Power at LANL TA-55, PF-4 in response to DNFSB Letter, dated June 15, 1995 (reference 1). This letter provides a brief historical summary and an interim report on actions in progress to address:

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(1) The 1995 Board Letter (reference 1) and the subsequent 3/15/96 DOE Plutonium Ventilation System Study Report (reference 2) commitments for:

- Upgrades to the Uninterruptible Power Supply (UPS) for Zone 1 Exhaust Fans, and
- New Air Compressors with a 40 minute reserve air supply and

(2) The recent TA-55 Facility Leak Path Factor (LPF) analysis and its impact on the yet approved DSA for the facility.

### **Background**

On June 15, 1995, the Board issued a reporting requirement to the Secretary (reference 1), based on DNFSB Tech 3, for a report that evaluates the design, construction operation, and maintenance of ventilation safety systems at DOE's plutonium processing and handling facilities in terms of applicable DOE and consensus standards and details any corrective actions deemed necessary. On March 15, 1996, DOE responded with a Plutonium Ventilation System Study Report (reference 2). This report had various commitments including one to perform safety analyses to support passive confinement approaches for PF-4. Another commitment was to provide an Uninterruptible Power Supply (UPS) for Zone 1 exhaust fans and new air compressors with 40-minute reserve air tanks for the control air supply at PF-4. On May 22, 2001, DOE provided an update to the Board (reference 3) that the program that was to provide funding for the UPS was cancelled. In this update, DOE committed to:

1. Assess the need for an active safety class ventilation system:
2. Perform a cost-benefit analysis for improving the current confinement requirements, considering alternatives such as passive shutdown, partial safe shutdown (UPS power Zone 1), or power maintained by an emergency diesel generator; and
3. Determine if there are more urgent needs for upgrade of other safety systems such as the fire suppression system, based on the updated accident/risk profile.

The results of these actions were to be documented in the SER that approves the new SAR for the facility. On April 2002, a new DSA was issued by LANL but is yet to be approved by NNSA.

### **Status**

The original UPS project design at PF-4 was to provide a traditional battery based UPS system to power the fans and compressors continuously following the loss of site power until the load could be transferred to the Diesel Generator. As previously indicated, the project was shelved as a result of not being able to identify a stable funding source. Subsequently, the Los Alamos Site Office (LASO) Safety Authorization Basis Team (SABT) asked NMT Division to develop a position paper based on a cost versus risk reduction for the UPS upgrade. This position paper was delivered to SABT on January 20, 2004 (reference 7) and concluded that the same risk reduction to both the public and worker could be achieved at considerably less cost. The alternative to the UPS upgrade included installation of a new diesel generator (already funded) and upgrades to the electrical switchgear allowing auto-start of the diesel generator and automatic assumption of key electrical loads including Zone 1 exhaust fans and instrument air compressors.

LASO supports LANL's recommendation to upgrade the TA-55 electrical switchgear to allow for auto-start and assumption of key electrical loads at TA-55 in lieu of the more expensive UPS upgrade alternative based on preliminary review of the TA-55 2002 DSA submittal (Reference 8). Accordingly, the status of actions is:

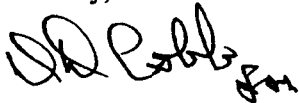
February 24, 2005

- Installation of new Air Compressors is complete and they are in operation
- The new Diesel Generator-Load Bank installation project is underway and on-schedule. The subcontractor submitted procurement of the Generator on 01/07/05 with a 14 week fabrication and delivery schedule. The target installation completion date is 05/05/05 with a project completion date of 06/03/05.
- The TA-55 Electrical Switchgear Modification project is currently in CD-0/1 development. Target completion dates for final design and construction estimate are 04/08/05 and 04/29/05 respectively.
- Funding for executing the TA-55 Electrical Switchgear Modification project beyond design has not yet been secured

Related to the DSA update, the TA-55 LPF analysis (reference 4) was delivered to the Los Alamos Site Office (LASO) on December 17, 2004 and the results indicated that the Facility LPF was larger than presented in the draft FSAR currently under review by LASO. References 5 and 6 outline the LASO approved set of TA-55 Compensatory Measures as TSR-level controls. Nuclear Materials Technology (NMT) Division has proposed to LASO that the TSRs are not current and need to be revised based on the new LPF information. Revised TSRs that incorporate Conditions-of-Approval and LPF driven Compensatory Actions, significant comments from the TA-55 Safety Basis Integrated Review Team, any identified controls resulting from any new hazards analysis not currently approved by NNSA, and any new controls resulting from USQs since 1997 are expected to be delivered to LASO by March 14, 2005.

If you have any questions in this matter, please contact me or Steve Yarbro at 667-2556.

Sincerely,



G. Peter Nanos  
Director

Cy: J. Angelo, PS-DO, MS C347  
F. Tarantino, PADNWP, MS F611  
J. Leeman, PADNWP, MS F611  
D. Beck, ADWEM, MS A107  
T. Blum, NMT-DO, MS E509  
T. Burns, DNFSB, MS A316  
D. Cobb, DO, MS C401  
J. Fraser, FM-TA-55, MS E583  
D. Gordon, NMT-14, MS E578  
R. Janke, NNSA/LASO, MS A316  
C. Keilers, DNFSB, MS A316  
S. Mckernan, NMT-DO, MS E509  
D. Satterwhite, PS-4, MS K561  
G. Schlapper, DOE-LA-AO, MS A316  
A. Trujillo, NNSA/LASO, MS A316  
P. Volza, PS-2, MS C347  
IM-9, MS A150  
NMT-DO File  
DIR-05-087 File