



**Department of Energy**  
**National Nuclear Security Administration**  
 Washington, DC 20585

May 22, 2001

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

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 DNF SAFETY BOARD

Dear Mr. Chairman:

In Secretary O'Leary's letter to the Board dated March 15, 1996, the Department committed to upgrade the emergency power for the Zone 1 (glovebox) ventilation system in PF-4 at Los Alamos National Laboratory (LANL) Technical Area-55 (TA-55). This commitment would provide an uninterruptible power supply (UPS) for Zone 1 exhaust fans and new air compressors with a 40-minute reserve air tank for controlled air supply. The upgrade was considered to be a cost-effective improvement to provide a defense in depth to the facility's safety-significant forced-ventilation system during a power outage. This work was included as part of the Capability Maintenance & Improvement Project (CMIP). However, CMIP was canceled in November 1999 without identifying alternative funding for completion of the ventilation system power upgrades.

The current safety basis does not rely on active ventilation functions for accident mitigation, taking credit only for the passive aspects of the confinement. However, the ventilation system must be operable during normal operations and generally provides a defense in depth safety function and worker protection. This requirement has been implemented through technical safety requirements (TSR). A set of effective TSR actions exists to either change the mode of operation or evacuate the personnel in case of a loss of power or any other initiators that negate the operability of the ventilation system.

Currently, LANL is upgrading the TA-55 Safety Analysis Report (SAR) to incorporate significant changes (e.g., process additions and modifications, Unresolved Safety Questions, and analytical updates) that have occurred since the 1996 approval. A new spectrum of potential accident scenarios has been developed, and the National Nuclear Security Administration is in the process of reviewing the new draft SAR (draft 90 percent complete). It is expected that the accident vulnerabilities and resultant safety system functional dependencies/capabilities will change relative to those documented in the current SAR/TSRs.

The overall risk profile and our understanding of safety system vulnerabilities in PF-4 may change significantly in the newly upgraded SAR. Given the estimated cost of the UPS upgrade project (approximately \$4 million), it will be prudent to reevaluate the need for the



proposed upgrade in the context of an overall risk management strategy. Once a new or updated spectrum of the bounding and representative accidents is analyzed (by June 30, 2001), we will request the Laboratory 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 the above actions will be documented in the Safety Evaluation Report that approves the new SAR, which we expect to complete by September 30, 2001. At that time, we will inform you of our schedule to complete the emergency power upgrade or our basis if the upgrade is no longer needed.

If you have any questions, please contact me or have your staff contact Dale Dunsworth at (301) 903-5156.

Sincerely,



THOMAS F. GIOCONDA  
Brigadier General, USAF  
Acting Deputy Administrator  
for Defense Programs

cc:  
M. Whitaker, S-3.1