

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 25, 2005

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** T. D. Burns Jr. and C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending March 25, 2005

Burns was in Albuquerque at the Pantex Focus Meeting on Thursday and at Sandia on Friday.

**Waste Operations:** NNSA and LANL believe they are on track to resume WIPP shipments in mid-April. By resuming these shipments (suspended in Oct 2003), LANL would begin to reduce the risks due to the highest consequence nuclear accident postulated at LANL in approved safety analyses.

**Authorization Basis (AB):** NNSA and LANL have approved a new set of authorization agreements (AAs) that lists the applicable AB documents for nuclear facilities. LANL has committed to updating AAs within 30 days of AB changes. Management intends to annually approve a consolidated update, next due on 1/31/06. This addresses an issue in the Board letter and staff report of 5/27/04.

**Conduct of Engineering:** The LANL Engineering Practices Council (EPC) held its first meeting this week and is intended to serve as the institutional authority for establishing and maintaining consistent engineering processes, policies, and procedures. FY-05 goals include interim qualification of system engineers for all LANL vital safety systems (~90), and issuance of approved institutional engineering procedures in the following key areas: screening for engineering work, design change packages, management level determinations, engineering equivalency, design information development, post-modification testing, independent external design reviews, and design adequacy and back-fit analyses. An effective EPC could help LANL resolve issues in the Board letter and staff report of 1/27/04.

**Chemistry and Metallurgy Research Replacement Facility Project (CMRR):** NNSA has approved the CMRR Preliminary Hazards Assessment (PHA) in support of Critical Decision-1. Nine conditions of approval (COAs) were imposed, covering issues such as little evaluation of chemical hazards, non-conservative assumptions (e.g., airborne release fractions) for certain scenarios, questionable criteria for determining the significance of potential worker exposures, and defensibility of the proposed safety-class passive confinement strategy. NNSA agreed with LANL pursuing active ventilation as safety-significant at this stage, which is counter to Board Recommendation 04-2.

NNSA tasked the project to perform a detailed cost-benefit analysis between active and passive confinement and other control options, such as fire suppression. While NNSA acknowledged the difficulty in technically defending a passive confinement strategy, NNSA expressed concerns that active confinement may exacerbate certain scenarios resulting in unintended hazards and incurring excessive life-cycle costs. Citing a preference for preventive over mitigative and passive over active controls, NNSA indicated that a combination of fire barriers and fire suppression needs to be explored as an alternative safety-class control. The merits and significance of these concerns are unestablished.

**Plutonium Facility (TA-55):** NNSA has extended the interim AB approval for rm 201B cleanup, which would have expired next week (site rep weekly 11/12/04). Impact of new conditions of approval are unknown. These include NNSA approval of interim Technical Safety Requirements (TSRs) to address the leak path issue and LANL implementation of those interim TSRs applicable to the cleanup.

NNSA has released LANL to design and construct trailer storage pads and a weather cover to support TA-18 Early Move. NNSA designated the pads and trailer anchor system as safety-class, the trailer shelving system as safety-significant (seismic/wind performance category: PC-3), and the weather cover lightning protection system as defense-in-depth. NNSA plans to act on a LANL proposed interim safety basis for this operation after additional safety analyses are submitted.