

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 12, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director

FROM: C. H. Keilers, Jr.

SUBJECT: Los Alamos Report for Week Ending September 12, 2003

Integrated Safety Management (ISM): As a result of recent events, the LANL Director on Tuesday bluntly explained to LANL personnel and contractors his expectations and standards on safety, security, and compliance. These include continuously improving safety, demonstrated senior management involvement in all aspects of safety, a culture that does not accept poor safety practices, and workers that will not gloss over safety problems. He listed common causes of recent accidents - poor hazard identification; lack of focus on procedures; failure to manage work changes; failure to stop work when necessary; overall lack of accountability; failure to extrapolate lessons learned across all LANL organizations; poor management of subcontractor work; lack of formality "when it counts"; and not looking after one another's safety.

LANL is planning training and a series of mentored management walk-arounds during the next 3 months to pursue this initiative. LANL is also initiating Division-level self-assessments to determine whether hazard control plans are current and approved and required training has been completed. The site rep views these as a positive start and responsive to events such as those reported last week.

Plutonium Facility (TA-55): The NNSA Type B investigation continues. LANL resumed Pu-238 operations on or around August 13th but, on Thursday, curtailed Pu-238 operations that generate residues and waste. LANL took this action based on issues that the NNSA accident investigation (AI) team identified that day with the residue/waste storage containers being used (i.e., the slip-lid cans).

On Monday, AI team and LANL personnel entered the affected room. The AI team noted that 2 of the 4 movable cages are not restrained in a manner that would meet Authorization Basis (AB) seismic requirements. One had a single restraint. The other was unrestrained. LANL restrained the cages, but questions remain on whether the restraints would withstand the evaluation basis earthquake. The Technical Safety Requirements (TSRs) list the cages as a design feature but are silent on the seismic requirement and do not require inspections. The Dec 1996 NNSA AB approval letter imposes the seismic requirement. Furthermore, it states that, until the cages are upgraded, LANL is required to put degraded containers in racks that are seismically qualified. The reference to degradation is puzzling.

Based on this, the NNSA facility reps and TA-55 management have identified that several design features in the current AB (1996) and subsequent NNSA approval letters do not have adequate flowdown into the TSRs. TA-55 is pursuing this issue. NNSA approved the AB in 1996, approved TSR rev 1 in 1999, and has modified the AB in various approval letters. LANL submitted an AB revision in Apr 2002 and several months later resubmitted the TSRs. The needs are clear and longstanding for a TSR revision that is complete, effective, and user-friendly and for a complete and verified implementation (e.g., site rep weekly 8/23/02, 10/25/02, 1/3/03). Several other Board questions (e.g., passive ventilation) also are suppose to be addressed by this next TA-55 AB revision.

Weapons Engineering Tritium Facility (WETF): The site rep understands that personnel recently observed lightning above WETF and, near simultaneously, a blue glow or flash in a WETF processing room. No injuries or damage occurred. Roof air terminals, part of the NFPA 780 lightning protection system, were also not damaged. This may indicate that, if there was a strike, it bypassed the Safety Class lightning protection system and found entry into the building. This alternate path to ground would be consistent with that described by a lightning protection expert in Apr 2003. NNSA owes the Board a response to its questions on the effectiveness of this system as a Safety Class control.