

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 2003

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. Keilers  
**SUBJECT:** Los Alamos Report for Week Ending April 4, 2003

Keilers was off site this week. Anderson, Burnfield, Jordan, Volgenau (OE), and Von Holle were on site reviewing safety aspects of work planning and work performance.

**Plutonium Facility (TA-55):** The TA-55 authorization basis (AB) considers the fire suppression system to be safety significant because it protects workers and provides defense in depth for safety class systems. However, there are long-standing questions on the adequacy of flow to hydraulically remote sprinkler heads in PF-4 (site rep weeklies 11/2/01, 12/7/01, 12/23/01). LANL has asserted previously that the original design requirements were not based on actual risk factors, such as combustible content. These design requirements are included in the current AB. In December 2001, NNSA agreed with LANL that this condition did not constitute an imminent safety concern. Further action was postponed to allow key personnel to focus on site-wide AB upgrades during the last year in order to comply with the Nuclear Safety Management rule (10 CFR 830). The AB upgrades are now nearly complete.

Recently, LANL informed the staff that 40 of the approximately 970 PF-4 sprinkler heads would not deliver the minimum flow density specified in both the original design and the AB (i.e., NFPA-13, Ordinary Hazard Group II), and 10 of these would not meet a less stringent standard typically specified for chemical laboratories (Ordinary Hazard Group I). The site rep understands that the affected sprinkler heads are spread among several laboratory rooms and tend to be a small fraction (e.g., 10 %) in any particular room. LANL appears now to be considering facility modifications to address this condition. Since these issues have been long-standing and involve the AB, it appears that timely progress toward closure would be appropriate.

**Lighting Protection:** NNSA approved last month a LANL corrective action plan that is intended to address lightning protection issues raised in a Board letter dated August 6, 2002. Since last September, NNSA and LANL have improved the formality of issue transmittal, tracking, and closure on these and other lightning protection issues identified during the last 2 years (site rep weekly 9/20/02).