

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending October 26, 2007

The staff held a video-teleconference with NNSA and LANL on fire protection this week.

Criticality Safety: This week, LANL submitted the required evaluation of the safety of the situation (EOSS) related to the criticality safety issues in four TA-55 vault rooms and a basement storage location. The EOSS concluded that, given their current inventories, the locations of concern had adequate safety margin under current and credible upset conditions. Material movements in these locations remain secured, and new bounding criticality safety evaluations are being prepared. In the interim, the lab may pursue a justification for continued operations (JCO) to begin removing material from these locations (site rep weeklies 10/19/07, 10/5/07, 9/28/07, 9/21/07).

The following were important developments this week in the effort to evaluate and resume other fissile material unit operations at TA-55: • LANL reaffirmed its commitment to executing the screening process essentially as originally envisioned, rather than pursuing changes that could have expedited resumption but potentially decreased the breadth and rigor of the screening process. • An individual has been assigned to perform a crucial project management role and is spearheading the development of a project plan and prioritized schedule. • Increased attention was observed on the part of NNSA and LANL management and LANL's institutional Nuclear Criticality Safety Committee.

Plutonium Facility (TA-55): Since few operations have completed the criticality screening and resumption process, the facility will extend the first phase of its planned outage through at least next week to maximize beneficial use of the programmatic downtime (site rep weekly 10/12/07).

Transuranic Waste Operations: NNSA has approved closure of 2 longstanding potential inadequacies of safety analysis (PISAs) related to Area G dome fabric and waste drum banding; NNSA withheld approval of a related Area G seismic analysis, pending near-term submittal and review of an updated Area G safety basis. The 2003 safety basis credits drum banding and waste storage domes, including structural members and fabric, as safety-class controls. LANL used guidance in the new DOE standard on safety analysis for transuranic waste facilities to justify reclassifying these two engineered controls as defense-in-depth. The new standard, DOE STD-5506, specifies damage ratios that are approved for use under various postulated accident scenarios, including those for which storage domes and drum banding were previously credited. Using the new damage ratios, the level of consequence mitigation provided by these controls was much lower than previously considered (site rep weekly 7/21/06).

Last week, LANL also submitted a JCO to address the handling and staging of the 53 existing unvented drums at Area G, as well as any that may be discovered in the future. The JCO identifies new safety-significant controls for addressing unvented drums including engineered restraints for drum lids, administrative requirements for drum isolation and segregation, and associated controls for forklift operations. Per NNSA direction, this JCO also prescribes controls to prevent prohibited container types from being shipped to the WCRR repackaging facility (site rep weekly 10/12/07).

Packaging and Transportation (P&T): This week, Department of Transportation conducted an unannounced compliance audit of LANL radioactive material P&T operations, including transuranic waste shipments to WIPP, and low specific activity and Type A shipments at LANL. No violations against LANL P&T were issued, but concerns related to subcontractor P&T operations were identified.