

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 13, 2010

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending August 13, 2010

**Waste Operations:** On Monday, LANL declared an Operational Emergency due to the potential release of red fuming nitric acid. Workers in Area L were in the process of over-packing three legacy containers for offsite disposition. After placing the third container into the overpack, workers noted fumes being released. The overpack container was latched closed and relocated to a spill pallet. The workers then contacted the operations center and protective actions were initiated (i.e., local evacuation and shelter in-place) along with contacting the emergency response organization. The overpack container subsequently ruptured and additional material was released. Emergency response personnel established an incident command for the event and the emergency operations center was manned. A re-entry and recovery plan was developed to stabilize the container and material. Hazardous material personnel performed multiple entries to place the area in a stable condition (the material was neutralized and repackaged into other containers). LANL plans to perform an investigation to identify opportunities for improvement and lessons learned from this event.

**Criticality Safety:** This week, Plutonium Facility personnel identified several additional criticality safety infractions where operations or activities were not consistent with criticality safety evaluations. These new discoveries were prompted by a significant effort on the part of facility management to refocus attention on criticality safety compliance in light of a string of recent issues. Senior management held a meeting with all first-line Plutonium Facility managers on Monday to discuss lessons learned from recent criticality safety infractions and to reinforce the importance of understanding and complying with criticality safety limits. The meeting also emphasized the need to pause operations if actual work activities depart from those analyzed in criticality safety evaluations or if there is ambiguity in the intent of criticality safety limits.

This week, the institutional Nuclear Criticality Safety Committee (NCSC) began a review at CMR to assess the facility's implementation of the LANL criticality safety program. The NCSC plans to conduct a similar review assessing implementation at the Plutonium Facility.

**Transuranic Waste Operations:** Operations to vent and filter sealed transuranic waste drums at Area G have been suspended since a hydrogen deflagration event occurred in November 2008. Several thousand legacy waste drums generated and stored at Area G require venting prior to offsite disposal at the Waste Isolation Pilot Plant. To improve the safety of drum venting operations required to support Area G closure, LANL has installed a new engineered drum venting system that is better equipped to mitigate the effects of a deflagration if one should occur. The NNSA site office is currently reviewing proposed revisions to the Area G TSRs to support resumption of drum venting operations using the new system. Area G personnel must also successfully complete a contractor readiness assessment prior to resuming drum venting operations (site rep weeklies 3/13/09, 11/28/08).

**Transuranic Waste Facility (TRUWF) Project:** Following an Energy Systems Acquisition Advisory Board review, the TRUWF Project received approval of Critical Decision-1, *Approve Alternative Selection and Cost Range*. LANL plans to perform value engineering studies later this month to evaluate parameters used in the safety analysis.