

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 16, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** B. Broderick and C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending November 16, 2007

Davis, Plaue, and Tontodonato were on site this week reviewing the status of federal oversight, the contractor assurance system, plutonium and waste operations, safety bases, and formality of operations.

**Engineering:** LANL is struggling to put in place the configuration management, maintenance, and engineering elements to demonstrably assure that vital safety systems will adequately perform their credited safety functions. A recent LANL staffing analysis indicated that laboratory engineering staffing levels are at about half the assessed need (i.e., about 90 total are needed while 50 are in place). Present budget uncertainties impede adding engineering staff, and LANL management has made only a small number of limited-term offers. This will complicate efforts to address issues related to vital safety systems on a timely basis (ref: Board letter 10/16/07, site rep weeklies 7/27/07, 7/20/07).

**Transuranic (TRU) Waste Operations:** LANL has slipped proposing an updated safety basis for Area G TRU waste storage to 2<sup>nd</sup> quarter FY-08. Under the current safety basis (2003), Area G is postulated to have some of the highest-consequence accident scenarios of any LANL nuclear facility, but Area G has few engineered controls other than drums themselves. The slip delays a much-needed improvement in defining the risks and ensuring the adequacy of controls (site rep weekly 10/5/07).

Area G waste characterization operations remain largely curtailed, pending followup actions in response to the Oct 8<sup>th</sup> worker injury. Drum movements in Area G have been largely restricted to those necessary to segregate the roughly 60 suspected high-fissile content drums to address a criticality safety concern. Segregation is almost complete (site rep weeklies 11/2/07, 10/12/07).

WCRR drum repackaging operations resumed this week following implementation of tighter controls to ensure WCRR does not receive drums with a high potential for hydrogen retention. Under current restrictions, WCRR will only be able to repackage about a dozen drums. LANL intends to propose a safety basis change shortly that would expand this set. WCRR has remediated 39 high-activity drums since that campaign began in September (site rep weeklies 11/2/07, 10/26/07, 10/12/07).

**Plutonium Facility (TA-55):** The outage and the criticality safety reviews of unit operations at TA-55 continue; the focus of the latter has shifted to resuming plutonium machining operations; reviews related to vault storage, assay, and material transfer systems are still underway.

LANL has completed formal certification of fissile material handlers, which supercedes the provisional certifications put in place in August. LANL also intends to complete in January the integrated priority list, requested by NNSA, for safety system upgrades, including confinement ventilation and other systems identified in the recently proposed safety basis. LANL intends to use this time to improve the pedigree of data supporting the prioritization of much-needed facility investment (site rep weeklies 11/2/07, 10/26/07, 10/12/07, 8/17/07).

**Chemistry and Metallurgy Research Building (CMR):** CMR has entered an outage in parallel with TA-55. LANL also has proposed a safety basis strategy for post-2010 operation and expects to propose a compliant safety basis in FY-09. LANL continues to develop a risk-mitigation plan focused on reducing operational foot-print and material-at-risk (Board letter 10/23/07).