

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 1, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 1, 2006

The Board and a staff team were here this week reviewing LANL activities.

Management Systems: Both the LANL contractor assurance system (CAS) and the NNSA Site Office (LASO) oversight pilot began on Oct 1st. Maturity of both is low and not expected for 2 to 3 years; NNSA is highly dependent on CAS being transparent and providing the necessary feedback to support sound decisions and ensure safe operations. LASO nuclear safety oversight is also limited by key management vacancies and insufficiently trained and qualified staff; LASO intends to have qualified facility reps in all the nuclear facilities by mid-2007 (site rep weeklies 11/10/06, 10/6/06).

Institutional Safety Programs: LANL safety programs, such as integrated work management (IWM), have persistent weaknesses. In recent weeks, LANL issued an integrated formality of operations plan to improve four key programs – operations, engineering, maintenance, and training. In January, LANL intends to issue facility-specific implementation plans for these, as well as a lab-wide improvement plan for IWM. LANL expects the improved IWM process to be implemented by September 2007.

Authorization Bases (ABs): LANL has had difficulties updating ABs, selecting viable controls, demonstrably implementing controls, and consistently analyzing accidents to support risk-informed decision making. LANL has committed to updating all the nuclear facility safety bases in FY-07, except CMR, which is planned for FY-08. LANL has also issued a safety basis improvement plan that emphasizes selection and implementation of demonstrably viable operational and engineered controls.

Transuranic Waste Operations: Area G risk is dominated by ~320 high-activity drums that collectively contain about 50 kCi, which is about third of the current above-ground TRU waste inventory; there are another ~300 high-activity drums below ground with about 90 kCi that LANL intends to start retrieving next year. LANL has proposed new safety bases for the key facilities needed to process and ship the above-ground high-activity drums to WIPP; however, at this point, NNSA and LANL still lack a common understanding and acceptance of the risk tradeoffs involved.

Plutonium Facility (TA-55): TA-55, so far, is on track to meet FY-07 commitments, but LANL staffing and infrastructure, both within and outside TA-55, can not clearly support and sustain the increasing tempo; LANL recognizes the needs for integrated planning and scheduling, which is underway. Pu-238 operations also receive much less support than weapons plutonium operations, although the former dominates TA-55's risk profile. For example, the Pu-238 residues in the room contaminated in August 2003 pose about a quarter of the risk due to TA-55 packaged materials. LANL has committed to addressing these residues by mid-2007, which is positive; however, NNSA and LANL have delinquent institutional commitments from that event, indicating a loss of priority.

Chemistry and Metallurgy Research Building (CMR): NNSA and LANL have not evaluated the risks associated with continued CMR operation past 2010, even though they expect the CMR replacement facility (CMRR) will not be operational until 2013 or later (site rep weekly 11/10/06). LANL is now starting to evaluate the safety implications of post-2010 operations, as well as pursue shifting people and operations out of the three most vulnerable wings during the next two years.