

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 6, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending July 6, 2007

Keilers was off-site this week.

Seismic Criteria: LANL has requested approval of a sitewide justification for continued operations (JCO) responding to the ten-year update to the probabilistic seismic hazards assessment (PSHA) which concludes that seismic hazards at the site are higher than previously believed (see site rep weekly 4/27/07). Within 90 days of issuance of the updated PSHA, LANL has committed to provide a draft Project Execution Plan for a multi-year effort to perform facility-specific structural analyses to fully characterize the impacts of increased seismic risk and identify any necessary modifications or compensatory measures to ensure defensible protection. Evaluations of priority nuclear and high-hazard facilities are expected to be completed within 2 years. In the interim, the sitewide JCO provides an argument for continuing normal operations through qualitative evaluations of PSHA impacts on each nuclear facility and a determination that the probability of an earthquake that exceeds the existing design basis for these facilities and their credited engineered controls during the 2 year evaluation window is small (e.g. less than 1/700 for Performance Category-3 structures, systems, and components). The only explicit compensatory measure identified in the JCO is a roughly 50% reduction in the tritium inventory limit at the Weapons Engineering Tritium Facility (WETF).

Nuclear Environmental Sites: NNSA approved an annual update for the authorization basis (AB) covering surveillance and maintenance activities for ten legacy waste sites each containing hazard category 2 or 3 quantities of material (per DOE-STD-1027) in tanks, covered shafts, covered disposal areas, disposal areas, or contaminated soil matrices. Controls for each site include design features for isolating inventory and specific administrative controls to limit opportunities for radiological release.

Authorization Basis: Counting the AB for Nuclear Environmental Sites discussed above, LANL has received approval for roughly one-third of the annual updates it committed to issuing this fiscal year in its Safety Basis Improvement Plan (SBIP). The remaining annual updates (including TA-55, Area G, Radioactive Liquid Waste Treatment Facility, and WETF) are now targeted for submission in the 4th quarter of FY-07. Lessons learned from a round of TA-55 focused AB workshops and previous interactions that resolved issues with several recently approved ABs should help clarify NNSA expectations and reduce the comment resolution period for annual updates covering the remaining facilities. However, the sheer number of documents that must be finalized, internally reviewed, and submitted in the 4th quarter, coupled with NNSA's finite review resources, could frustrate the collective goal to finish the year with the set of approved, compliant ABs envisioned by the SBIP.

Worker Protection: An updated Integrated Safety Management System (ISMS) Description Document has been approved which includes a description, implementation matrix, gap analysis, and corrective actions associated with the Worker Safety and Health Program designed to comply with the requirements of 10CFR851. The new ISMS Description Document also discusses a number of improvement initiatives intended to strengthen ISM implementation, including human performance improvement, behavior based safety and the voluntary protection program.