

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 13, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** B. Broderick and C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending July 13, 2007

**Federal Management and Oversight:** The new NNSA Site Office Manager started this week. Also, the DOE Office of Independent Oversight (HS-64) will be here in early August to scope their next on-site health and safety assessment, which is scheduled for October (site rep weeklies 6/29/07, 1/27/06).

**Transuranic Waste Operations:** LANL has declared readiness for the NNSA operational readiness review (ORR) of the WCRR facility's high-activity drum campaign; this ORR is now scheduled to start July 23<sup>rd</sup>. NNSA has granted the fire protection exemption for glovebox operations without automatic fire suppression and is poised to approve a WCRR safety basis change that reflects a new fire barrier, which is to be installed between the building and a nearby transformer (site rep weekly 6/29/07).

The Radioactive Liquid Waste Treatment Facility (RLWTF) can currently receive and store but not process liquid transuranic waste discharges from the Plutonium Facility (TA-55) until modifications are completed. While caustic waste receipts are within expectations, the acid waste receipt rate is nearly double planning estimates made earlier this year. The acid tank is now half-full; this may impact TA-55 aqueous operations sooner than previously expected (site rep weekly 5/11/07).

**Plutonium Facility (TA-55):** LANL has submitted a new safety basis strategy document that establishes a target resubmittal date of September 28<sup>th</sup> for a compliant TA-55 Documented Safety Analysis (DSA) and describes the approach for meeting commitments stemming from the recent round of safety basis workshops with NNSA (site rep weekly 4/6/07).

Some workshop commitments require LANL to submit prototype revisions for certain topical areas to ensure the modifications meet NNSA expectations before effort is expended to implement these changes globally throughout the document. One such prototype revision, recently submitted by LANL for review and approval, provides additional explanatory discussion of leak path factor (LPF) derivation for fires in Pu-238 lab rooms. The proposed revision identifies engineered and administrative controls and physical properties of fire phenomenology that can be credited to lower the LPF and applies them successively to demonstrate their respective contribution to reductions in calculated LPFs. Application of the full suite of identified controls yields mitigated doses ranging from 14 to 27 rem CEDE for the bounding fire depending on assumptions related to external door closure times. These values do not reflect mitigation provided by the ventilation system.

Although the supplementary LPF analysis is predicated on the existing passive confinement approach, LANL has committed to incorporate any additional controls that may result from on-going activities to address Board Recommendation 2004-2, *Active Confinement Systems*, in the next annual update to the DSA. Onsite efforts to define, fund, and implement additional cost-effective controls to improve the robustness of the Plutonium Facility's confinement posture are currently on hold awaiting feedback from the NNSA Independent Review Panel on an evaluation and options study made by the site in a November 2006 report (site rep weeklies 5/4/07 and 12/15/06).