

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 23, 2007

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** B. Broderick and C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending November 23, 2007

**Management:** LANL has proposed to NNSA a plan to reduce the LANS workforce by 500 to 750 people (i.e., 6 to 9 %), first by a voluntary process and later, if needed, by involuntary selection.

**Chemistry and Metallurgy Research Building Replacement Project:** The site reps understand that the multi-contractor design team for the Hazard Category 2 (HC-2) nuclear facility may need to begin to phase down in January, given the continuing resolution and current budget projections; design and construction of the radiological facility (RLUOB) would likely continue. Such a phase-down would further delay the replacement facility and extend the period during which NNSA will likely depend on CMR, particularly if the design team dissolves and has to be reconstituted later (Board ltr 10/23/07).

**Radioactive Liquid Waste Treatment Facility (RLWTF):** LANL has chosen to accept potential mission impacts on TA-55 and concurrently resume acid and caustic waste treatment following major RLWTF upgrades, instead of pursuing quicker, less-conservative options (site rep weekly 10/12/07). Such treatment could resume in March 2008, provided NNSA accepts LANL's proposal to confirm readiness via a LANL readiness assessment (RA) instead of operational readiness reviews (ORRs).

By the DOE startup order (O 425.1C), the readiness review decision hinges on the facility's hazard categorization: ORRs are needed for HC-2; an RA may be appropriate for HC-3. RLWTF operates under a 1995 safety basis that is based on a HC-3 designation. In 2002, NNSA questioned the HC-3 designation; subsequent authorization agreements cite that correspondence as elevating the facility to HC-2. Unlike WCRR, which was recently elevated to HC-2, RLWTF never received the upgrades to the physical plant, safety basis, procedures, and training, or the ORRs commensurate with HC-2.

The nuclear safety significance of this depends on RLWTF's radioactive inventory, which is typically half or less of the HC-2 threshold but has been postulated to exceed that threshold following certain unlikely TA-55 upsets. LANL is basing the upcoming safety basis upgrade for RLWTF on HC-3 and, last week, submitted justification for HC-3; this hazard categorization decision may also apply to the RLWTF replacement facility, which is now in preliminary design, has been designated HC-2, but does not meet some HC-2 expectations (site rep weeklies 10/19/07, 8/3/07, 10/11/02).

**Plutonium Facility (TA-55):** TA-55 is in the middle of a major switchgear upgrade project. Last Tuesday (11/13), to save two days of production, project personnel deviated from their design change package and unsuccessfully attempted to switch from the primary feed to the alternate feed before work was completed on the latter; they safely stopped work when the Ops Center could not confirm both feeds were operational. LANL is addressing the communication and configuration control issues.

Earlier this year, TA-55 began to process high-ameridium residues under the Recommendation 94-1 stabilization program; processing accelerated in September in order to place operations in a safe state while criticality safety is being assessed. Although appropriate measures were taken to prevent large increases in whole-body dose during this campaign, extremity dose (i.e., to the hands) was not addressed. LANL determined this week that the extremity doses to some affected workers in the last two months are much higher than expected and, in one case, are at the highest level seen in a decade. LANL is reviewing the adequacy of radiological controls for this type and intensity of operation.