

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 4, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending February 4, 2005

Resumption Status: LANL has largely completed site-wide resumption: operations have been assessed; numerous issues have been identified; pre-start findings (i.e., those indicating an unanalyzed risk or condition of imminent danger) have been addressed by either a compensatory measure or permanent solution. LANL is now moving, albeit slowly, into the longer-term corrective action phase.

Waste Operations: The LANL Director has approved resumption of TA-50/54 waste operations. The startup plan includes management field walk-down of procedures, documented resolution of issues, management presence for initial operations, and safety basis training for personnel. TA-50 transuranic liquid waste operations remain on hold pending caustic receipt tank replacement, expected in May.

Critical Experiments Facility (TA-18): On Friday, the LANL Director approved TA-18 resumption but without federal concurrence. NNSA has concurred in resumption or essential status for every other moderate or higher risk activity group, nearly 4 dozen total. Furthermore, for the first time since mid-December, TA-18 conducted operations Friday without federal concurrence in the plan-of-the-day.

LANL asserts that TA-18 pre-start issues have been addressed, except for LANL submittal and NNSA acceptance of an integrated, resource-loaded plan demonstrating TA-18 can safely and securely operate and meet priorities, particularly to be below the Security Category I/II threshold in September 2005 (i.e., Early Move). This deadline appears unachievable without extreme measures; LANL is concerned that the priority assigned to Early Move is impacting continued viability of TA-18 programs including the criticality safety and experiments program. NNSA asserts that the plan is necessary to ensure that TA-18 is focused on priorities and has adequate resources, supervision, and staff to conduct more than a few complicated operations without safety, security, or compliance issues arising; such issues have recurred at TA-18 and led NNSA to direct federal concurrence in daily operations (site rep weekly 12/17/04).

The site reps understand that LANL will conduct a readiness assessment per LANL requirements before resuming critical assembly operations and that LANL will formally resolve issues raised by the Board before conducting such operations with plutonium (i.e., those with Safety Class implications).

Plutonium Facility (TA-55): LANL has proposed and NNSA has approved additional compensatory measures to address vulnerabilities identified by the recent leak path factor re-analysis (site rep weekly, 1/14/05). LANL derived the new compensatory measures from a more complete evaluation of 18 postulated accident scenarios for TA-55. This drew upon the best information available, including process hazard analyses from the safety basis upgrade proposed in April 2002 but still unapproved. In parallel, LANL is pursuing clean up of the room contaminated with Pu-238 in August 2003 and restoring capability to pyrolyze and disposition combustible Pu-238 residues.

Authorization Basis: NNSA has directed LANL to upgrade the TA-55 Technical Safety Requirements (TSRs) by consolidating the controls from the following sources: unreviewed safety questions against the currently approved 1996 safety basis; hazard analyses from the proposed 2002 safety basis upgrade; analyses from the NNSA-LANL joint review team working on the safety basis upgrade; and the recent compensatory measures related to leak path factor. This TSR upgrade would enhance safe nuclear operations in TA-55 during the interim period before the full safety basis upgrade is completed.