

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 3, 2006

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending November 3, 2006

Management: NNSA and LANL have agreed upon and issued a performance evaluation plan, which includes performance based incentives (PBIs) for implementing conduct of operations, engineering, and maintenance, as well as improving the safety bases, criticality safety, and readiness reviews.

Institutional Safety Programs: Last Friday (10/27), LANL forwarded to NNSA new institutional manuals for conduct of operations, maintenance, and engineering in accordance with the PBIs. Implementation plans are expected in January. NNSA intends to review performance quarterly. LANL has also established a conduct of operations performance index, based on occurrence reports and criticality safety infractions, that will serve as a metric for measuring improvement.

Authorization Basis (AB): Last Thursday (10/26), LANL proposed an updated on-site transportation safety document to NNSA. LANL expects to propose updated safety bases for the Plutonium Facility (TA-55) and the transuranic waste repackaging facility (WCRR) today and for the transuranic waste shipping facility (RANT) next week (site rep weekly 8/11/06). Also, NNSA has accepted a LANL re-analysis of the off-site airborne release from postulated accidents at 13 nuclear facilities; the re-analysis used current dispersion methodology and accounted for LANL shrinkage due to land transfers. The changes are within 30 % of previously approved results, except for LANSCE as discussed below.

Plutonium-238 Operations: LANL has concluded that the remaining residues in the room that was contaminated in August 2003 ought to be disposed of as transuranic waste without further processing (e.g., pyrolysis). LANL and the WIPP contractor have also converged on disposal criteria for these residues, as well as other Pu-238 solid wastes, that appear to minimize handling and operator risk while maximizing drum loading (i.e., up to the 80 Ci WIPP limit; site rep weeklies 10/20/06, 6/23/06).

Weapons Engineering Tritium Facility (WETF): WETF has addressed discrepant fire wall penetrations and is close to securing from compensatory measures imposed in August; LANL has also identified a slight overstress condition (5 %) in precast concrete ceiling beams during a fire, but asserts it is acceptable based on the assumed safety factors and the low probability of a fire concurrent with the assumed snow load. WETF is now in the midst of a major ventilation upgrade that includes installing hoods and task exhaust points, improving worker safety (site rep weekly 9/22/06).

Los Alamos Neutron Science Center (LANSCE): The current LANSCE safety basis (2000) predicts unmitigated off-site consequences of 18 rem from a postulated steam reaction with the activated 1L tungsten target; more recent studies indicate that the reaction products would deposit near the target, limiting the airborne release to the outside. In the re-analysis discussed above, LANSCE saw a factor of 5 increase above the current safety basis predictions due to proximity to East Jemez Road. NNSA has requested LANL to expeditiously reevaluate off-site consequences due to LANSCE accidents.