

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 23, 2005

**MEMORANDUM FOR:** J. Kent Fortenberry, Technical Director  
**FROM:** C. H. Keilers, Jr.  
**SUBJECT:** Los Alamos Report for Week Ending December 23, 2005

Martin and Rauch were on site Tuesday augmenting site rep coverage.

**LANL Contract:** On Wednesday (12/21), DOE announced that Los Alamos National Security LLC (LANS) has been selected as the next management and operations contractor for LANL, effective June 1<sup>st</sup>, 2006. The LANS partnership includes University of California, Bechtel, Washington Group Intl, and BWX Technologies. Initial contract term is 7 years, with potential for extensions to 20 years.

**Waste Operations:** NNSA and LANL continue to have difficulty in achieving efficient transuranic waste operations, although efficient waste operations and shipment are key to addressing the lab's highest consequence nuclear accident postulated in approved safety analyses (site rep weekly 9/23/05). NNSA and LANL anticipate increasing to 2 shipments per week in early January and to 4 shipments per week in the Spring and thereby finish shipment of the -2,000 higher activity waste drums in the Quick-to-WIPP set by June 30<sup>th</sup>, 2006. There are challenges: for example, this schedule likely requires LANL to go to multi-shift (24/7) characterization, which increases worker risks if incorrectly done. NNSA has directed LANL to provide in January specific recommendations to improve efficiency.

**Am-241 Contamination Event:** NNSA now plans in mid-January to release the report and to brief the site on findings from its Type B investigation into the July 2005 release (site rep weekly 12/9/05). LANL has been taking actions based on what it knows of the issues. The NNSA briefing and report are needed to ensure that proper corrective actions are being taken with appropriate priority.

**Plutonium Facility (TA-55):** Monday morning, nine workers promptly evacuated the TA-55 vault following a continuous air monitor (CAM) alarm; appropriate immediate actions were taken, including securing the scene. The release was predominantly Pu-239. Five workers had positive nasal smears (-90 dpm max); three workers had contamination on gloves or booties consistent with later floor surveys (20k dpm max). Initial dose estimates should be available in January.

The workers were inventorying containers. Due to this event, TA-55 has secured material movements outside glove-boxes, and LANL has started an investigation, which is proceeding deliberately. TA-55 identified and triple-bagged a suspect container and another nearby similar container on Wednesday and radiographed these containers on Thursday. Further investigation and recovery will occur after Jan 1<sup>st</sup>

**Pu-238 Operations:** The readiness assessment (RA) for the bench-scale aqueous recovery operation has two open pre-start findings: (1) show compliance with quality requirements for safety-class ball-mill jars, and (2) resolve a material discrepancy on the as-delivered jar lids - the lids are aluminum instead of stainless steel, which is the material specified in the safety basis.

NNSA approved interim bench-scale operations in May 2004 based on several controls, including stainless-steel jar lids, and bench-scale operated briefly with the discrepant lids before the July 2004 lab stand-down. In July 2005, NNSA approved designating the jars and lids as safety-class in the interim technical safety requirements (iTSRs); this is one of the compensatory measures for the passive confinement strategy issue. TA-55 recently found the discrepancy while verifying the iTSRs applicable to bench-scale. Based on this and other issues, TA-55 management has put a hold on bench-scale startup, pending an independent formal causal analysis of the RA findings.