

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 16, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 16, 2005

Plaue was on site this week augmenting site rep coverage.

Emergency Response: The NNSA emergency operations office (NA-43) observed the NNSA Site Office (LASO) and LANL emergency exercise last month and has issued a report. It indicates that, while some areas need more work, overall performance was substantially improved compared to that observed in the exercise a year ago (site rep weeklies 11/18/05, 12/3/04).

Criticality Safety: Per LANL request, NNSA (NA-117) recently performed at LANL one of its first formal criticality safety program reviews in the complex (site rep weekly 10/28/05). The NNSA team's report states that they observed no ongoing unsafe operations from a criticality safety perspective; however, their observations indicate that the LANL program is expert-based, under-staffed, incompletely documented, infrequently assessed, and managed informally and at too low a level; overall, the program is not demonstrably compliant with applicable national consensus standards.

The NNSA team made several specific recommendations that it suggested should be implemented within 3 months to provide a formal basis for continuing operations. These recommendations center on reviewing all ongoing fissile material operations and ensuring that an explicit criticality safety analysis exists for each, that the controls developed are implemented in postings and procedures, and that appropriate configuration management is in place for all explicit and assumed engineered controls. The team asserted that, while it seems unlikely that an undiscovered hazard exists, these recommendations should be implemented expeditiously. LANL is evaluating the team's report and recommendations.

Nuclear Safety Oversight: LANL and LASO seem to be at-odds on federal access to day-to-day observations by the new LANL oversight team, but urgent discoveries would probably be quickly reported. The LANL team is still coming up to speed and has been focused on facility-entry training and introductions to operations management, such as the RDLs - several of which are also new to their positions under the new ops management structure (site rep weekly 11/11/05). Overall, the federally imposed "LANL oversight team strategy" appears to be a force-fit solution that still is developmental and that still incompletely compensates for reduced federal oversight during the LASO stand-down..

Plutonium-238 Operations: LANL is still waiting on LASO action on a process hazard analysis for residue pyrolysis, which is a key risk reduction step (site rep weekly 12/2/05); action appears delayed by the LASO stand-down. Also, LANL has finished a readiness assessment of the bench-scale aqueous recovery operation. Pre-start findings included addressing glove-box housekeeping and demonstrating safety-related component quality-level; post-start findings included improving operator knowledge of the chemical processes so that they can recognize and respond to abnormal conditions.

Critical Experiments Facility (TA-18): LANL is waiting on LASO action on a Nov 10^h proposal to decommission the 4 critical assemblies that are to move to Nevada; this appears perhaps delayed by the LASO stand-down. Decommissioning disables certain safety features required by the TA- 18 safety basis, but this looks acceptable since these machines have been de-fueled and will no longer operate at TA-18. Timely action is needed to support the Nevada Critical Assembly Facility (CEF) project, which is the key element to sustaining the national criticality safety training and experimentation program.