DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 28, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 28, 2007

This week, the laboratory was closed. Broderick was off-site.

Integrated Work Management (IWM): On Nov 30th, LANL issued a revised institutional IWM Procedure, IMP 300.5, which is the first substantive revision in nearly 3 years. While work control expectations are basically unchanged, IMP 300.5 now separates activities into four categories – maintenance, operations, research and development, and subcontracted work – and references separate tailored procedures/processes for each. This may lead to departures from the integrated work document (IWD) format used for the last 4 years for moderate and high hazard work, as long as the intent is met by other means, particularly for routine operations where LANL favors strengthening operating procedures per the DOE conduct of operations order (DOE O 5480.19, Chapter16). IMP 300.5 also now suggests, rather than requires, use of the automated job hazard analysis tool.

Implementation of sound, consistent work control practices here has long been problematic; it remains to be seen if IMP 300.5 will address prior issues and bring improvement (site rep weeklies 10/31/03, 1/16/04, 5/7/04, 9/24/04, 6/3/05, 7/8/05, 11/4/05, 3/31/06, 8/18/06, 10/20/06, 3/23/07, 9/7/07, 9/14/07).

Readiness Reviews: NNSA and LANL have increased the rigor of the process for assigning the level of readiness review before startup or restart of nuclear activities. Specifically, facilities now prepare an activity description worksheet (ADW) that supplements the startup notification report (SNR) and that describes in detail each proposed new activity. The facility then formally presents the new activity to the new joint LANL-NNSA evaluation team – the JET, which meets periodically, reviews the ADWs, and formally recommends the level of review to NNSA management. The JET process, implemented in November, has begun well and has the potential to increase readiness review quality and consistency, which have been challenging here in the past (site rep weeklies 5/11/07, 12/29/06).

Nuclear Environmental Sites: In one of its first actions, the JET has proposed that NNSA and LANL conduct operational readiness reviews (ORRs) before remediation begins at TA-21 Material Disposal Area B (MDA-B). MDA-B occupies about 5.5 acres and is located on the south side of DP Road, opposite several commercial businesses. Between 1944 and 1948, LANL disposed of chemical and radioactive wastes at MDA-B in ten 40 ft wide by 12 ft deep trenches. The entire area's radioactive inventory is estimated to be about 12 Ci (i.e., about 200 g Pu-239 equivalent). LANL intends to remove the trench contents and clean up the site to meet residential requirements. Remediation is complicated by proximity of the public and the presence of small amounts of shock-sensitive chemicals. LANL expects to submit a safety basis for the remediation in January and to have an experienced subcontractor remediate MDA-B after the ORRs are conducted, expected in FY-09.

Criticality Safety: In September, due to emergent concerns with vault limits, LANL committed to reviewing criticality safety limits for 520 unit operations in the Plutonium Facility (TA-55) before the operations resumed. As of last week, per the LANL database, 218 operations have entered the review process (42 %); 188 have been accepted or have had actions approved (36 %); 64 have been recommended for release (12 %); and 32 have been released, based on criticality safety evaluations done since April 2006 (6 %). While the fraction released is low, the scope is sufficient to allow significant operations to proceed, including: sampling, staging, pyro-chemistry, casting, machining, roasting, blending, drop-box transfers, and container welding; many of these will resume next month.