DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 3, 2007

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: B. Broderick and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending August 3, 2007

Federal Oversight: This week a team from the office of the Chief of Defense Nuclear Safety began their biennial review of the NNSA site office. The office of Health, Safety, and Security was also on-site this week performing scoping activities for a review tentatively scheduled for later this year.

Transuranic (TRU) Waste Operations: The federal operational readiness review (ORR) for the WCRR repackaging facility concluded this week. The review resulted in 10 pre-start and roughly 20 post-start findings. Of the pre-starts, 3 were newly identified issues and the balance stemmed from inadequately closed findings from previous reviews and contractor-identified open issues.

The review team noted the importance of facility-implemented compensatory measures, particularly the provision of a senior supervisory watch, in ensuring safe and sustainable high activity waste operations. These compensatory measures were put in place to address institutional deficiencies in key areas such as conduct of operations and engineering and in recognition that facility personnel and operators had to come to grips with a new safety basis, significant facility upgrades, approximately 100 new procedures and wholesale retraining and requalification all in the compressed time span of 7 months (site rep weeklies 6/8/07, 4/20/07, 3/16/07, 2/2/07). The ORR team lead will recommend that NNSA and LANL formalize the existing compensatory measures. This would include the development of formal criteria to be met prior to compensatory measure removal and the explicit identification of who is authorized to approve such removal.

Chemistry and Metallurgy Research Building (CMR): Pit manufacturing depends on CMR providing analytical chemistry; however, CMR is five-decades-old, is over-sized for the mission, has not been adequately maintained, and is operating to a nearly decade old safety basis. CMR's credited safety systems suffer from material condition issues, poorly understood and controlled system boundaries, and a weak technical baseline. Until about one year ago, CMR was managed jointly with the Plutonium Facility (TA-55) and was able to share TA-55 practices and procedures. CMR is now managed separately and, among its many challenges, is now having to create and maintain separate practices and procedures. Resource and staffing shortfalls, particularly in the area of engineering support, appear to be exacerbating these problems and impeding progress.

Seismic Criteria: NNSA approved the sitewide justification for continued operations resulting from the ten year update to the LANL seismic hazards assessment that concluded the site's seismic hazard is higher than previously believed (site rep weeklies 7/6/07, 4/27/07). The NNSA approval requires the laboratory to submit, by September 21st, a funded and resource-loaded project plan for completing detailed seismic analyses for nuclear and high hazard facilities by June 2009. NNSA also directed LANL to formalize and implement compensatory measures identified in the JCO for the Weapons Engineering Tritium Facility (inventory limit reductions) and the Radioactive Liquid Waste Treatment Facility (operator training for emergency response to a seismic event).

Criticality Safety: After a significant hiatus, the Nuclear Criticality Safety Committee has been formally re-chartered and held their first meeting this week. This is a positive development that could help strengthen lab-wide criticality safety by providing independent institutional oversight.