DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 28, 2005

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending January 28, 2005

Critical Experiments Facility (TA-18): Two recent reportable occurrences illustrate the continued problems at TA-18 regarding tracking and implementation of safety basis requirements. Specifically, a safety basis implementation plan milestone to characterize uranium solutions and an in-service inspection of the safety-class flood retention structure were not performed as required. The critique of the missed in-service inspection indicated that TA-18 had been inappropriately applying a 25% grace period to these activities. LANL is investigating whether the misapplication of grace periods is a lab-wide issue.

A previous non-compliance with compensatory measures has resulted in the suspension of TA-18 programmatic activities since mid-December. LASO is authorizing, on a daily basis, limited activities at TA-18 that support compliance with safety and security requirements. Commencement of programmatic activities has been contingent upon LANL's completion of an integrated and resource loaded operations plan that outlines how LANL intends to successfully execute these activities in a safe and compliant manner.

On Friday, LANL presented their operations plan for the Early Move programmatic activities. The projected completion date significantly exceeds the NNSA target date of September 2005. LASO has indicated that this plan provides sufficient information to justify resumption of Early Move activities, but that the schedule delays are unacceptable and that LANL needs to identify options to allow the NNSA target date to be met. LANL has committed to provide a revised plan by mid-March 2005. The fate of programmatic activities beyond Early Move and the degree of continued LASO involvement in work authorization for programmatic activities were not addressed.

Vital Safety Systems: LANL is pursuing standardization of its systems engineering program, applicable to both facility and programmatic work. While the contractor's program on the facility side has been moving forward, the programmatic side has evolved little and particularly needs more emphasis on adequate detachment between the systems engineering function and programmatic drivers. The NNSA safety system oversight program here is embryonic (similar to the LANL programmatic side) but has recently started to move forward.

Chemistry and Metallurgy Research Facility Replacement Project (CMRR): The CMRR project Critical Decision 1 (CD-1) package is currently being finalized for submission to the Deputy Secretary of Energy and the Energy Systems Acquisition Advisory Board. The estimated project cost is $850M and encompasses both the primary nuclear facility and a supporting radiological laboratory. The scope for these facilities will meet the baseline project requirements but provide no mission contingency capability. Projected facility start-up is in late 2012. Completion and submission of the CD-1 package is awaiting LASO approval of the Preliminary Hazard Analysis and concurrence with the proposed location of radiological support laboratory; both of which are expected to be received by the first week in February. Project personnel are striving to submit the CD-1 package prior to the end of February to avoid approval delays associated with senior management turnover at DOE headquarters.

Radio-chemistry Laboratory (TA-48): On January 10th, a 19 year-old student dropped a wrench and shorted two batteries while working on a small un-interruptible power supply. Energy released melted one lead terminal and discolored another. LANL review of the event determined that work controls and training were inadequate (e.g., no integrated work document) and that institutional guidance on identifying the hazard class for this type of battery work is not definitive. This is the second safety-related event at TA-48 involving students working alone during the last 2 months (site rep weekly 1/7/2005).