DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 22, 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 July 22, 2005

Jordan and Shackelford were on-site this week to review training and qualification programs at both LANL and LASO. Keilers was off-site Wednesday and Thursday to attend the NNSA workshop on activity-level work planning and control with Burnfield.

Critical Experiments Facility (TA-18): LANL has revised their path forward for resuming uranium-based critical experiments on the Planet machine in response to shifting NNSA priorities and lessons-learned from the recent readiness verification failure for the TA-55 safeguarded trailer pad. Resolution of outstanding safety-basis issues (e.g. impacts of local control station removal, uncertain structural capacity of Planet's upper fissile material holding plate, and approval of new material-at-risk limits) will now be obtained prior to recommencing any readiness verification reviews. Once these issues are closed, LANL intends to perform a second management self-assessment and an independent lab readiness assessment to verify readiness. LANL intends to perform sub-critical prerequisite activities (e.g. hand-stacking measurements) to minimize the time needed to complete the planned uranium-based experiments. These prerequisite activities are scheduled to begin next week.

Radioactive Liquid Waste Treatment Facility (RLWTF): NNSA and LANL recently convened an independent technical review of the RLWTF replacement project. The review team's report identified several potential improvements, including robust segmentation of certain facility operations to isolate potentially higher source-term materials from lower source term materials. Specifically, the review team suggested that higher source term materials be removed using simple settling and filtration techniques in a robust below-grade cell upstream of the main purification facility and that only lower source-term supernate be forwarded on for more complex processing in the purification facility. This recommendation appears sensible from both a safety and economic perspective; the higher hazard materials would be localized in a simple and robust enclosure with minimal manipulation and the more complex purification facility would only be required to process lower hazard materials. Further exploration of this approach appears warranted.

Readiness Assessments (RA): In response to the failed readiness verification process for the TA-55 safeguarded trailer pads (site rep weekly, 7/8/2005) and the NNSA operational readiness review finding that adequate LASO safety oversight was not evident, the LASO Manager convened an independent review by personnel from the NNSA Albuquerque Service Center. This review found the following issues at LASO contributed to failed process: approval of the level of readiness review required was not coordinated between the assistant managers for safety and operations, and no formal site office procedures are in place to ensure future coordination; integration of safety, security, and program imperatives occurred below the site office manager level and was not well balanced; and inadequate resources were provided to support a successful readiness process in the time allotted by the aggressive schedule. These findings appear to be specific manifestations of more general problems associated with informal site office processes, poor coordination between assistant managers, integration of competing imperatives at too low a level in the organization, and inadequate resources. Timely resolution of these problems is necessary to ensure that LASO is capable of providing effective safety oversight.