DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 26, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending November 26, 2004

Resumption Status: Most LANL nuclear operations have resumed to some degree, based on LANL verifying that pre-start findings are either corrected or have an adequate compensatory measure in place. On October 1st, LANL proposed and NNSA approved removing Unreviewed Safety Question (USQ) issues from the scope of the lab readiness review process based on the fact that problems with the USQ process were already well-known and corrective actions were underway (site rep weekly 10/8/04). As part of the corrective actions, NNSA directed LANL to establish a USQ review team that would mentor facilities and review new and existing USQs for adequacy. LANL and NNSA agreed to capture these issues as institutional pre-start findings for all nuclear facilities and cite the on-going corrective actions in the Operational Efficiency project as accepted compensatory measures.

In a November 19th memo, NNSA indicated that the current protracted schedule and uncertain funding for on-going corrective actions would place the USQ issue back as a local pre-start finding for every nuclear facility. While timely resolution of the USQ-related corrective actions is important, this new course does not reflect a balanced perspective of the relative safety risks, such as those discussed in the Board's letter of September 13th. NNSA and LANL need to carefully balance safety priorities and reach a sound consensus on the immediate actions, if any, for operating nuclear facilities and on the schedule and funding for the longer term corrective actions.

Critical Experiments Facility (TA-18): Two recent occurrences are indicative of TA-18 safety basis issues. First, LANL has self-identified that the CASA 3 combustible limits in the NNSA-approved Basis of Interim Operation (BIO) and the Technical Safety Requirements (TSRs) are five times higher than assumed in the safety analysis, as documented in a BIO appendix. LANL has taken action to reduce the CASA 3 combustible inventory to below the more conservative limit. Second, LANL has missed implementation plan milestones for transition to use of approved robust storage containers for non-metallic material-at-risk. LANL has also missed the annual in-service-inspection of such containers. LANL is placing these materials into TA-55 standard cans as a compensatory measure.

Conduct of Engineering: NNSA and LANL are overdue in responding to the Board's January 27th letter on LANL lack of implementation of DOE Order 420.1A, *Facility Safety*. LANL has included implementation within the scope of the institutional Operational Efficiency Project, which has increased its visibility but also delayed development of a resource-loaded schedule. LANL has made some progress within the last year, such as updating the engineering standards manual, a requirements document (site rep weekly 3/12/04). The NNSA Site Office has also issued a review procedure covering the interface between design and safety basis through conceptual design. However, LANL still lacks an institutionally-consistent systems engineering program, as well as institutional engineering procedures that standardizes practices to meet requirements. These would support safety system design and evaluation for both existing and new facilities (e.g., the CMR Replacement).

Also, for more than a year, NNSA and LANL have iterated on what constitutes a major modification that requires a preliminary documented safety analysis (PDSA). This has impacted several projects with safety implications, such as the RLWTF tank replacement discussed last week (14 month delay) and the CMR large vessel clean-out installation (11 month delay, site rep weekly 2/6/04). The latter will likely impact DOE meeting commitments to the Board under Recommendations 94-1/00-1.