DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 11, 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 March 11,2005

Feldman and Massie were here this week to discuss status of LANL support for the Pit Disassembly and Conversion Facility. Shackelford was also here observing NNSA sponsored training on specific administrative controls, conducted per a DOE commitment under Recommendation 2002-3.

Operational Efficiency (OE) Project: LANL intends that the OE Project would address many of the institutional post-start findings identified during the resumption reviews. Within the last week, NNSA and LANL have agreed to a OE project execution plan, and LANL has prepared a baseline. The project includes 8 main elements: safety, quality assurance (QA), software QA, conduct of engineering, safety basis, operations, environmental risk management, and training. LANL management appears dedicated to executing this multi-year program, which could systematically reduce a broad spectrum of LANL safety risks and address several issues raised by the Board.

Radioactive Liquid Waste Treatment Facility (RLWTF): Last Thursday (3/3), two workers were exposed for an hour to unexpectedly high airborne contamination levels. This may have resulted in Pu uptakes since the respirators they were wearing do not offer protection commensurate with the high airborne levels found after the job was done; bioassay results are expected next week.

The workers were cleaning up paint chips in an underground vault, in preparation for the leaking caustic tank replacement. Respirators were being used based on previously seen conditions in the vault. The radiological controls technician (RCT) conducting the exit frisks found contamination levels an order of magnitude higher than he expected on their respirator cartridges and several orders of magnitude higher than previously seen on the fixed head air sample, which was the only air monitoring conducted in the space. NNSA and LANL are pursuing questions regarding this event, such as the cause for this unexpected increase in airborne contamination level, the future use of engineered controls to minimize and monitor airborne contamination, and the level of subject matter expert review for these types of jobs. Careful followup is in order, including careful radiological characterization of the vault to determine the cause and best path forward for recovery.

Plutonium Facility (TA-55): This week, work has commenced on the recovery of Room 201B, which was contaminated with Pu-238 in August 2003 (site rep weekly, 2/4/2005). The contamination resulted from a breached residue can and led to a Type B uptake event. The current clean-up phase includes over-packing approximately 180 Pu-238 residue cans into filtered plastic bags and completing room decontamination. To date, 38 of the residue cans have been bagged (20%). Execution of the next phase of recovery, which entails over-packing the bagged residue cans into Type A 55 gallon drums with an additional filtered plastic drum lining, is contingent on a laboratory readiness review and is expected to begin in mid-April. This progress is encouraging and completion of these activities will significantly reduce the risk-profile at TA-55.

Unfortunately, progress on related institutional corrective actions associated with the Type B contamination event, including site-wide nuclear material packaging improvements, has not kept pace. These initiatives continue to languish as necessary resources have been redirected to support the TA-18 early move project.