DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 31, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending January 31, 2003

Bamdad, Jordan, and Zavadoski were here this week reviewing overall authorization basis status, TA-55 confinement ventilation, and TA-48 confinement ventilation and inventory controls.

Authorization Basis (AB): NNSA and LANL are updating ABs to comply with the nuclear safety management rule (10 CFR 830). Most of the updated controls are operational in nature (e.g., TSRs, administrative programs), and implementation is being verified by personnel with facility/operational experience, such as readiness assessment (RA) teams. In some cases, the AB updates include new engineered controls, designated as safety class or safety significant. There does not seem to be a well-established, "back-fit" design review process here to verify that such newly designated safety systems meet appropriate functional requirements and codes and standards. Furthermore, a backfit design review is beyond the scope or capabilities of most operationally-oriented RA teams. The Board's staff is beginning to pursue this question with NNSA and LANL.

Plutonium Facility (TA-55): TA-55 shut down ventilation in a controlled manner twice last year due to the instrument air system: once for repair and once for switch calibration (site rep weeklies 8/2/02, 9/20/02). Instrument air is considered safety significant. Passive-mode operation is permitted by the AB, but it relies entirely on confinement integrity without differential pressure to prevent a release. To improve reliability, TA-55 has begun to replace the 3 instrument air compressors, which are 26 years old and problematic, and has plans to replace air dryers and the control system. LANL has also proposed to NNSA allowing instrument air to be backed up by process air, which is not safety-rated or as strictly maintained. Process air appears worth considering as a backup to improve reliability.

NNSA Technical Staffing: NNSA headquarters and the site office are currently reviewing federal staffing needs. It appears technical staffing here needs to increase, as discussed in site rep weekly 1/10/03. This week, a fire protection engineer reported aboard. He will share part-time emergency management responsibilities with the industrial hygienist. The new individual previously worked at Pantex, which the site rep understands is now without a full-time federal fire protection engineer.

Radiochemistry Laboratory (TA-48): LANL suspended the RA reviewing TA-48's implementation of a new AB for Hazard Category 3 (HC-3) nuclear facility operations. This was done by mutual agreement of the facility and the RA team. After suspending, the team continued its review to establish a baseline and help chart a course to achieve improvements. The two fundamental weaknesses were formality of operations and facility-tenant communications. Both weaknesses affect verifiable radioactive inventory control. The facility's current Justification for Continued Operation (JCO) also expires next week. LANL proposes to suspend operations – except for essential maintenance and risk/inventory reduction activities – in the two facility areas where inventory potentially could exceed the HC-3 lower threshold. The remainder of the facility would continue to operate to an agreed set of interim controls. NNSA action is forthcoming.

In parallel, the facility is conducting a wall-to-wall inventory and implementing a more-formalized inventory management/control process. TA-48 has also taken some actions in response to the Phase II confinement ventilation report and plans to respond to it in February. Overall, the site rep believes NNSA and LANL, including the facility management, understand the issues that need addressing.