DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 12, 2003

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 12, 2003

Contardi, Kasdorf, Leary (OE), Rosen, and Tontodonato were here this week reviewing LANL nuclear material management and stabilization, including 94-1 progress and the TA-55 Type B investigation.

Recommendations 94-1/00-1: It's been nearly 10 years since the Board's initial recommendations on nuclear material stabilization. LANL is the last remaining DOE site without an implementation plan accepted by the Board. Since 1995, LANL has stabilized about two-thirds of the excess and programmatic inventory identified by LANL as 94-1. LANL has also made progress this year in processing and in designating more material for WIPP; however, a sense of urgency has been lacking – from both NNSA and LANL. Due to the Type B and increased recognition of worker safety issues, LANL is now engaged in a comprehensive evaluation of the inventory, packaging, storage, and management of nuclear materials. Three example areas that could accelerate progress are: (1) reevaluation of the economic discard limit (EDL) - currently residues with little value are being processed to meet an outdated EDL; (2) expediting design, installation, and startup of a dedicated line for processing non-weapons grade plutonium (i.e., the exposure reduction line) – while the gloveboxes are there, the line is not scheduled to startup until the 2007 time-frame; (3) development and application of institutional standards. Considering both safety and mission implications (i.e., vault space, Type Bs), higher priority on closely managing, stabilizing, and disposing of residues is overdue.

Federal Oversight: LANL has made progress during the last year in self-assessment and performance assurance, but both the issues that have occurred and the extent of progress that has taken place indicate a continuing need here for strong federal oversight. The NNSA Los Alamos Site Office (LASO) has played a pivotal role in LANL making progress; particularly in operations, subject matter expert (SME) reviews, and increasingly program liaison (e.g., lab support of Pantex). Recent examples include the strong federal roles in the initiation and development of the interim work control improvements and in the TA-55 type B investigation. For example, the NNSA Type B team identified safety issues that led LANL to suspend Pu-238 operations that generate waste or residues. Recent LASO efforts to help define scope and resource requirements for lab support of Pantex are noteworthy.

While these are encouraging, LASO appears to have technical staffing issues that constrain it from meeting its current responsibilities – much less meeting expanded responsibilities under the NNSA re-engineering. For example, NNSA has performed few readiness assessments (RAs) or comparable verifications at LANL during the last 2 years, relying mostly on the NNSA facility reps (FRs) to monitor LANL verifications. That said, the number of FRs has dropped nearly in half during that period (from 18 in late 2001 to 11 now), and collateral duties impact their in-facility time. Currently, only 4 FRs are deployed in their assigned facilities. The rest are on temporary assignment providing technical assistance to LANL in implementing the interim work control improvements. For a few weeks now, major facilities (i.e., CMR, solid/liquid waste operations, DARHT, radiography facility) have lacked day-to-day FR oversight (site rep weekly 11/21/03). This "tech-assist" is expected to end soon, but illustrates a common practice, increasingly used, that dilutes FR oversight.

LASO has increased the number of local SMEs from 2 to 4 in the last year. Recent hires are for maintenance and fire protection, but there still are weaknesses in SME support – such as sufficient qualified support for vital safety systems. The NNSA Albuquerque Service Center (100 miles away) has supported some verifications, but NNSA appears only marginally effective in using this resource.