

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 23, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending August 23, 2002

Authorization Basis (AB): DOE and LANL are increasingly concerned with the pace of Technical Safety Requirement (TSR) violations or near-violations (e.g., site rep weekly 8/9/02 discusses two). This is not a new issue. The site rep previously reported on a thorough LANL TSR performance review that resulted in sound recommendations on how to improve (site rep weekly 9/7/01). If facilities were pursuing these improvements, it is reasonable to expect that the number of violations reported would increase in the near term but the significance of the events should decrease. This does not seem to be the case here; however, reporting TSR violations should not be discouraged. Reporting leads to lessons-learned that can improve the process.

It may be appropriate for DOE and LANL to systematically review the recent events, update the previous LANL study, and pursue with vigor implementing improvements in TSR performance and formality of operations. Some of this is underway. That said, ambiguous communications, diffuse AB requirements, over-reliance on key individuals, inattention, incomplete documentation, and management level of awareness all appear to have played a role in recent events. Some problems are traceable to both DOE and LANL. The current AB upgrade effort provides an opportunity to improve the TSRs by ensuring they not only form a complete set from a safety standpoint, but also are operationally clear, correct, concise, and assembled in one place (i.e., operator-friendly). More and broader attention may be warranted on developing, implementing, and verifying these new controls.

Radiography Facility (TA-8-23): DOE has performed few readiness assessments (RAs) at LANL in the last year. Most recent RAs have been done by LANL and observed by a DOE facility representative. This week, DOE performed a readiness assessment (RA) on the Radiography Facility under its current AB – a Justification for Continued Operation. The RA team reviewed procedures and walked through radiographing a special nuclear material (SNM) item. Tentative findings and observations include the needs for documented certification of high explosive handlers; improved formality of radiological operations and TSR completion; and better preparation and drills, as well as clarified responsibilities, for responding to an SNM drop. Longer term, the facility expects to submit to DOE a new AB in September, which will require separate validation. The site rep expects the pace for this type of DOE and LANL readiness assessment, one focused on AB changes, will increase.

Infrastructure: LANL has a large number of pressure, vacuum, and cryogenic systems that pose a hazard in varying degrees. Many of these systems have little, if any, documentation indicating systematic inspection by a certified inspector. In 1999, LANL issued a Laboratory Implementation Requirement (LIR) capturing current pressure safety criteria. LANL is nearing completion of an effort to catalog these systems per the LIR, and is about to begin a multi-year screening effort. Detailed inspections are expected to be performed concurrent with screening on a risk-prioritized basis.

Decontamination and Volume Reduction System (DVRS): DOE and LANL expect to authorize DVRS startup as a radiological facility soon. Operations could begin next week (site rep weekly 7/19/02). Seismic bracing of fire protection piping has been downgraded from a pre-start finding and remains to be completed. The initial plywood boxes to be processed contain low source-term items.