DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2002

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending May 31, 2002

Gwal, Jordan, Martin, White, and Collier (OE) were on site last week reviewing lightning protection.

Lightning Protection: The Board staff team last week observed that LANL is making progress overall in complying with NFPA 780 requirements on facility lightning protection. However, several issues remain open. For example, the frequency of facility inspections does not always comply with either NFPA 780 requirements or the LANL Operations and Maintenance Manual. Deficiencies found in inspections do not always appear to be repaired on a timely basis. Impacts to the lightning protection systems are not always considered when changes are made to the roof structures or appurtenances. In the new authorization basis for the Weapons Engineering Tritium Facility (WETF), DOE and LANL rated the lightning protection system as safety class but that system has not been adequately inspected or maintained. Also, the new WETF Technical Safety Requirements (TSRs) list the NFPA 780 lightning protection system as a design feature requiring annual in-service inspection. Given this system is safety class, a surveillance requirement, possibly to more stringent standards than used in other facilities, may be warranted. The staff is pursuing these issues with DOE and LANL.

Dual Axis Radiographic Hydrodynamic Test Facility (DARHT): DOE and LANL have categorized DARHT as a moderate hazard non-nuclear facility that may occasionally be required to perform a nuclear activity (reference: DAHRT Final EIS, 8/95). The staff has been reviewing the additional hazards posed during such activities and the development of controls. During last week's review, the staff observed that little progress has been made toward engineered lightning protection controls that would address a future hazard at the DARHT firing point even though this hazard had been identified long ago. Other plans for this activity appear well considered. DARHT is now evaluating replacing gravel at the firing point with a concrete pad as part of beryllium remediation. It may be cost-effective and efficient to include lightning protection controls in the design of the new concrete pad. This appears to be a worthwhile opportunity to enhance safety. This condition could have been recognized sooner if DOE and LANL made more effective use of preliminary function classification to iterate early-on between safety analyses and design, as discussed in site rep weekly 2/8/02.

Decontamination and Volume Reduction System (DVRS): The management self-assessment and LANL readiness assessment (RA) are complete. The DOE RA is scheduled to begin June 24th. The site rep understands that the LANL RA had 5 pre-starts, 8 post-starts, and 37 observations. While there are several positive observations, it appears from the findings that the LANL RA may have been more of a "management-assist" than typical and that several of the post-starts and observations may involve worker safety issues and formality of preparation, process, and operations that warrant action before startup. DOE and LANL are pursuing resolution of these issues.

Recommendation 2000-2: More attention appears to be needed on jump-starting the delayed Phase II assessment of the Radiochemistry Laboratory (TA-48, RC-1) ventilation system. This assessment was put on hold in early April due to lack of assigned team leadership (site rep weekly 4/12/02). The reports for the two fire protection reviews are near completion. The institutional maintenance review is continuing, and in the site rep's opinion, is progressing slowly but satisfactorily.