DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 12, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending June 12, 2009

Andersen, Bamdad, Batherson, Hadjian, Kasdorf, Kimball, Pasko, and Spatz were onsite this week to review aspects of the Chemistry and Metallurgy Research Building Replacement Project.

Federal Oversight: This week, the Chief of Defense Nuclear Safety (CDNS) completed a review of LANL nuclear safety performance and NNSA site office management/oversight of nuclear safety. Initial feedback from the team was that overall performance had significantly improved since the 2007 CDNS review. However, two Management Concerns (i.e., "a significant issue, or collection of similar issues, that indicates a systemic problem") were identified. The team noted that site performance in the functional area of readiness did not meet expectations and that the site office has not executed its delegated startup authority in a manner that ensures compliant performance. The team recommends that NNSA Headquarters take immediate action to address this issue. For the maintenance functional area, the team concluded that a compliant maintenance safety management program has not been fully implemented for LANL nuclear facilities and that LASO oversight in this area is not adequately planned and executed.

Radioactive Liquid Waste Treatment Facility (RLWTF): On Monday, a filter system associated with the low-level waste processing system failed resulting in the release of approximately 500 gallons of contaminated liquid waste at RLWTF. The low-level liquid waste spill was limited to one room of the facility and collected in a sump. Low-level waste processing was suspended to address the spill and perform corrective maintenance. The failure mode appears to be cracking of a plastic connection assembly (there are over 300 of these connectors associated with this filter). This same failure mode caused a similar event in October 2008. During inspections this week, 9 additional cracked connectors were identified and replaced. LANL is pursuing corrective actions including information from the vendor and identification of appropriate preventive maintenance.

To address low-level waste processing outages (such as the one described above) and ensure adequate influent storage, LANL recently developed a graded protocol for low-level liquid waste generators that helps reduce influents when storage capacity is low. The least restrictive level of the new protocol was effected this week, requiring generators to take certain actions (e.g., limit safety shower testing and facility mopping) which aided the facility in maintaining sufficient influent storage capacity.

Plutonium Facility: This week, LANL submitted for NNSA review and approval a justification for continued operations (JCO) that would remove existing operational restrictions that prohibit removal of non-safety class heat source plutonium containers from the vault water bath. The JCO proposes a specific administrative control that limits the total time a non-safety class container may be removed from the vault water bath and placed in temporary baths to eight hours and limits the time a non-safety class container may be removed from all water cooling to one hour. An approved JCO is required to radiograph and evaluate a set of poorly characterized non-safety class containers in the near-term, and to support plans for the ultimate remediation of the entire population of non-safety class heat source plutonium containers by June 30, 2010 (site rep weeklies 5/22/09, 3/27/09).