DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 22, 2013

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.T. Davis, R.K. Verhaagen, and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending November 22, 2013

DNFSB Staff Activity: On Thursday, the Site Representatives and staff members B. Caleca, A. Hadjian, and J. Pasko held a teleconference with field office and laboratory personnel. The purpose of the teleconference was to obtain the status of efforts to analyze and upgrade safety-related systems and components (including planned upgrades for the fire suppression and confinement systems) in the Plutonium Facility consistent with the latest probabilistic seismic hazard analysis.

Governance: Three members of the *Congressional Panel on the Governance of the Nuclear Security Enterprise* visited the laboratory. The members met with the field office, laboratory management, the New Mexico Environment Department, and the Site Representatives to discuss the current NNSA governance approach, issues, and potential improvements.

Criticality Safety: This week, laboratory management briefed the field office on the resumption status in the Plutonium Facility following the Laboratory Director's pause of programmatic activities to improve performance in conduct of operations and criticality safety. The laboratory's resumption process prioritizes activities by mission importance and criticality safety risk; plutonium-238 operations and general plant procedures have been the early focus. To date, the Director has released approximately 60 operational procedures. However, LANL has been unable to resume many of these activities due to dependence on other procedures that have yet to be approved. Laboratory management noted that approximately 300 procedures require approval to accomplish the programmatic activities planned for fiscal year 2014.

In addition to the 60 procedures previously approved, this week the Director delegated authority to resume fissile material operations (FMO) involving ≤ 520 g. Currently, 46 FMOs have a material limit of ≤ 520 g of plutonium. Plutonium Facility personnel are also in the process of evaluating individual FMOs to determine the minimum amount of material required for the operation. Laboratory management expects this effort to reduce the fissile mass analyzed in the associated criticality safety evaluations (CSE) and may result in additional FMOs with ≤ 520 g. The Site Representatives note that a further benefit of this effort may be the reduction of the actual material-at-risk (MAR) present in the lab rooms and improved fidelity on the MAR required to be supported in future safety basis updates.

Confinement Vessel Disposition (CVD) Project: Chemistry and Metallurgy Research (CMR) Building personnel continue to work on corrective actions associated with the CVD Operational Readiness Review (ORR). LANL completed a causal analysis for the ORR findings and expects to transmit a comprehensive corrective action plan to the field office in the next few weeks. To help address actions identified in the field office letter transmitting the ORR report (see 11/1/13 weekly), laboratory management identified primary and secondary senior supervisory watch personnel that will initially focus on achieving sustained performance improvements in formality of operations and criticality safety. Laboratory management is also communicating lessons learned from the CVD ORR to other facilities at the laboratory.