

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2011

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B.P. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending November 4, 2011

**Plutonium Facility – Seismic Safety:** In October, LANL personnel installed a large strengthening member on the Plutonium Facility roof. This upgrade was significant because it was designed to address the one known structural vulnerability whose failure could have caused the facility to collapse in a large earthquake. A key aspect of post installation testing for this important upgrade involved destructively evaluating concrete samples to ensure they met strength specifications. Although the 28 days of cure time required by the code have not yet elapsed, recent tests of the still curing concrete indicate that it already meets the acceptance criteria for compressive strength.

**Readiness:** This week, LANL provided a set of corrective actions to the site office in response to the recent NNSA annual assessment of the laboratory readiness review program. The assessment was completed in September with a final report issued on October 3<sup>rd</sup>. Overall, the review concluded that the LANL readiness program met the requirements identified in DOE Order 425.1D. Seven findings and six observations were identified by the review team.

A notable finding identified during the NNSA review was the lack of “consistent performance demonstrating Line Management’s capability to achieve readiness to operate preceding Readiness Reviews.” This issue has been identified as a lesson learned for a number of LANL startup and restart activities. The laboratory corrective action notes that the site has issued procedure P119.0, *Process for Management Self-Assessment (MSA) of Startup and Restart of LANL Nuclear Facilities*. This procedure describes the actions that are required prior to declaring readiness to begin a formal readiness review. This procedure also provides guidance for the execution of systematic self-assessment activities that will assist line management in confirming that nuclear activities are ready to safely begin operations. Poor performance by line management in readiness preparation before commencing the formal readiness review and verification process has been a recurring problem at the laboratory.

**Integrated Work Management:** In September, the laboratory declared that Integrated Safety Management (ISM) and Integrated Work Management (IWM) are adequately implemented for research and development (R&D) and programmatic work at LANL. This week, the NNSA site office concurred with this declaration based on the results of a recently completed LANL assessment. The laboratory assessment was extensively shadowed by NNSA personnel and the federal shadow team concluded that this review was sufficient to demonstrate that ISM and IWM are adequately implemented for the types of R&D and programmatic activities that have resulted in safety problems in the past. Notwithstanding the overall conclusion, a number of weaknesses were identified during the assessment including the need for better application of conduct of operations principles in some detailed operating procedures, a need for improvement in computerized job hazard analyses and the need to ensure that all relevant hazards and controls are incorporated into technical procedures when these documents are used in lieu of Integrated Work Documents.