

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 31, 2009

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending July 31, 2009

**Federal Oversight:** At the request of NNSA-Headquarters, a review of the implementation of DOE-STD-1189, *Integration of Safety into the Design Process*, for LANL projects was conducted in conjunction with the Chief of Defense Nuclear Safety review in June 2009. The results of this review were recently communicated to the site office. The review concluded that LASO is using contract performance based incentives and other mechanisms to drive implementation of DOE-STD-1189 and improvements in the integration of safety into design; however, additional elements of the LANL contractor assurance system could be better utilized. The review identified the following 3 weaknesses: 1) lack of a schedule/plan for appropriately incorporating DOE-STD-1189 into institutional processes and procedures, 2) inconsistent and ineffective performance of a gap analysis for each nuclear project and 3) incomplete use of all elements of the contractor assurance system to effectively drive implementation of the standard for all nuclear projects.

**Chemistry and Metallurgy Research (CMR) Building:** In January, LANL submitted a Documented Safety Analysis (DSA) and associated Technical Safety Requirements (TSR) for post-2010 operations in the CMR Building. Following initial site office review, the site office provided the following significant issues (partial list) to LANL: 1) the hazards analysis methodology is incomplete and may not be consistent with DOE-STD-3009, 2) control selection that does not appear consistent with DOE-STD-3009 (identification of safety management programs as controls versus engineered controls and/or specific administrative controls), 3) inadequate TSR derivation from hazard and accident analyses and 4) concerns with the fire accident modeling and consistency between the DSA and Fire Hazards Analysis (FHA). The site office requested LANL to resolve these issues and to submit an updated hazards analysis in August 2009. This week, LANL submitted a request to extend the resubmission of the CMR DSA/TSRs until December 2009. The extension notes that a revised hazard analysis is well underway and is expected to be complete by the end of September. The DSA/TSRs will then be revised based on the updated and improved hazard analysis (site rep weekly 2/13/09).

**Plutonium Facility:** This week, the site office approved TSR changes submitted by LANL that address non-safety class heat source plutonium (HS-Pu) container storage in the vault water bath. These TSR changes specifically require that water level in the vault water bath be one inch above all non-safety class HS-Pu containers with a daily surveillance and a surveillance following any container movement. In addition, the changes provide actions for conditions when the vault water bath is unable to contain water. LANL also continues actions to repackage HS-Pu into pedigreed safety class containers and to better characterize other miscellaneous containers (site rep weeklies 7/3/09, 6/12/09, 3/27/09).

The site office also approved a delay in the submittal of the TA-55 FHA to August 2009. A condition of approval in the safety evaluation report required a revised FHA to be submitted in June with subsequent DSA integration during the annual update. LANL still intends to incorporate the results of the revised FHA into the DSA during the next annual update.