

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 16, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: R.T. Davis and R.K. Verhaagen
SUBJECT: Los Alamos Report for Week Ending November 16, 2012

Area G Drum Venting System (DVS): On Tuesday morning, DVS personnel discovered burned radioactive waste tags on a transuranic waste drum in the DVS area caused by failure of a heater. The heater element failed and hot metal dropped onto the waste drum and tags, which caused the tags to smolder. Subsequent investigation by Area G management identified that manufacturer recommendations on exclusion of combustible materials below these heaters were not being followed. DVS personnel have removed combustibles from beneath the heaters and a standing order has been issued to require a combustible standoff distance. Area G personnel noted that approximately half of the ten heaters of this type used in Dome 33 (the DVS dome) fail on an annual basis. LANL plans to replace the current heaters with a safer design identified by engineering personnel. Area G personnel are completing extent of condition reviews, a lessons learned and other corrective actions for this event.

Plutonium Facility – Seismic Safety: This week, the site office forwarded an update to the TA-55 Project Execution Strategy to NNSA-HQ that addresses seismic upgrades at the Plutonium Facility in response to Board Recommendation 2009-2. This revision includes plans for seismic upgrades of eight basement captured columns in Fiscal Year (FY) 13 and roof girders in FY 14. These upgrades address issues identified in the initial static non-linear seismic analysis that resulted in the declaration of a Potential Inadequacy of the Safety Analysis in August (see 8/31/12 site rep report). For FY 13, the plan also includes developing the critical decision 1 package for the Safety Class, Performance Category-3 active confinement ventilation system and continuing seismic upgrades for the fire suppression system (planned for completion in FY 14). LANL continues additional analysis and testing to ensure the seismic results are adequately bounding as directed by NNSA.

Criticality Safety: LANL recently provided the site office with a corrective action plan to strengthen and improve the criticality safety program and to respond to findings identified by a recent NNSA Criticality Safety Support Group (CSSG) assessment. The plan includes specific actions to address the following two findings in the CSSG report: 1) ownership and monitoring of the nuclear criticality safety program is less than adequate; and 2) inability to close outstanding criticality issues in a timely manner. Actions include hiring a new criticality safety group leader, appointing the Principal Associate Director for Operations and Business (Beard) as the chairman of the nuclear criticality safety committee, strengthening line management ownership and responsibilities, establishing facility-specific and programmatic metrics, establishing responsibilities and expectations to track and close issues in a timely manner, and re-validating criticality safety work priorities.

The CSSG team also identified an opportunity for improvement associated with the loss of LANL nuclear criticality staff. Based on further attrition in this group since the CSSG review, corrective actions to address staffing issues were included in the corrective action plan. In addition, LANL identified the following near-term compensatory measures: 1) establish and communicate the highest priority for limited criticality safety resources (support floor operations); 2) identify resources outside the criticality safety group within LANL that could respond to upset conditions and issues; 3) accelerate training and qualification of contractor staff; and 4) provide an option for an extended work week for criticality safety staff.