

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 13, 2013

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.T. Davis, R.K. Verhaagen, and J.W. Plaué  
**SUBJECT:** Los Alamos Report for Week Ending December 13, 2013

**DNFSB Staff Activity:** On Thursday, the staff conducted a teleconference with laboratory and field office personnel. The teleconference covered the status of actions taken in response to concerns with the safety basis for Area G described in a letter from the Board dated November 19, 2012.

**Plutonium Facility–Criticality Safety:** This week, a team of operations and criticality safety personnel visited Lawrence Livermore National Laboratory to benchmark best practices for a number of open issues (e.g., container labeling and postings). R. T. Davis observed the visit. Next week, the team will travel to the Y-12 National Security Complex for a similar visit.

On Wednesday, PF-4 personnel conducted a critique for a process deviation involving the presence of a geometrically unfavorable vessel (an inverted work/step platform) located in an aqueous plutonium processing room. An observer identified the platform during a tour conducted as part of last week's criticality safety course. The observer notified a facility criticality analyst; however, no actions were taken. The observer later notified the NNSA instructor who in turn notified the field office. The next day, field office personnel walked-down the location, identified the deviation, and notified the Operations Center. During the critique, PF-4 personnel determined the following key corrective actions: (1) perform an extent-of-condition review of the facility to identify other geometrically unfavorable portable vessels, (2) establish a systematic method to control such vessels in the facility, and (3) revise training to reinforce the expectation to notify the Operations Center for any potential anomalous condition.

**Plutonium Facility–Seismic Safety:** This week, PF-4 personnel began wrapping the captured columns with a fiber-reinforced polymer to improve the structural performance during a seismic event. LANL identified these columns, along with the roof girders, as deficient during the 2012 static non-linear seismic analysis. PF-4 personnel plan to complete the captured column upgrade in early-2014. Upgrade design for the roof girders, including peer review, is ongoing with plans to begin these upgrades in 2014. NNSA also continues to pursue the alternate static non-linear seismic analysis that may identify the need for additional facility upgrades.

**Area G–Safety Basis:** LANL recently responded to four field office directed actions that were captured in the Safety Evaluation Report (SER) that approved the Area G Basis for Interim Operation (BIO) in August 2013 (see 08/2/13 weekly). During the next BIO revision, LANL committed to eliminate risk reduction credit for safety management programs and instead identify appropriate specific administrative controls or safety structures, systems, and components. LANL also requested a delay of the next BIO submittal from February 2014 to March 2014.

**RANT Shipping Facility–TRUPACT III Loading Enclosure (TTLE):** Last week, the field office responded to the LANL's safety basis strategy and concluded that the TTLE represented a major modification per DOE-STD-1189 (see 11/8/13 weekly). The field office directed submittal of a preliminary documented safety analysis and a tailoring strategy for DOE-STD-1189. The field office also requested changes to institutional procedures to ensure an early formal determination for major modifications that is readily visible to federal oversight.