

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 30, 2015

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaué  
**SUBJECT:** Los Alamos Report for Week Ending January 30, 2015

**RANT Shipping Facility:** On Tuesday, LANL management transmitted to the field office for approval the positive Unreviewed Safety Question and the Evaluation of the Safety of the Situation (ESS) for an incorrect assumption in the seismic analysis for the facility structure (see weekly 12/9/2014 report). The ESS indicates that the RANT structure does not meet DOE-STD-1020-2002 criteria for an existing Performance Category 1 facility, contrary to its credited function to withstand a Performance Category 2 seismic event. The ESS notes that the operational restriction to maintain RANT in Cold Standby will continue (the Field Office has also withdrawn approval of the safety basis) and discusses several options to be studied in the next 90 days. The options include seismic bracing for the facility, seismic cutoff switches for electrical power, seismic cages to protect material-at-risk, or only performing loading operations outdoors via the mobile loading unit.

**Plutonium Facility–Configuration Management:** On Wednesday, operations personnel discovered about 3.5 L of unexpected solution in two pencil tanks. The tanks, and nearly all of the operations in the room, have been out of service since May 2013. This room has had frequent contamination issues and has been under restricted access, which resulted in the recent missed surveillance (see 1/16/15 weekly). This discovery occurred during the extent of condition review directed following the unexpected discovery of about 30 L back in November (see 11/21/14 weekly). While personnel expect both sets of liquids to be lean in nuclear material, they have yet to determine the composition of the liquid or a suspected source.

**Weapons Engineering Tritium Facility (WETF)–Formality of Operations:** In response to questions from the Facility Representative, WETF management convened a fact-finding to investigate an improperly performed maintenance activity that resulted in a facility evacuation alarm. The fact-finding revealed that in December, an operator was performing a surveillance on the tritium monitoring system when he operated an incorrect switch on the back of a tritium monitor. The fact-finding identified that switches on the back of the monitor are unlabeled and that the operator did not have visual access to the switches because he did not use a ladder. After determining the incorrect switch was functioned, the operator incorrectly repositioned the switch without stopping and informing management as required. This action also activated the facility evacuation alarm and all personnel evacuated to the control room. The operator informed control room personnel that the incorrect repositioning of the tritium monitor high voltage switch caused of the alarm. In response, control room personnel failed to complete the appropriate alarm response procedure.

Also this week, management convened two fact-findings after it was discovered that unauthorized modifications had been performed on a safety significant fire door credited as a one-hour fire barrier. In this instance, vagueness in the work instruction led maintenance personnel to believe they could add washers they had on hand to shim a strike plate on the door so it would engage a latch. Significant issues identified included: (1) the door latch had been inoperable for some time and in certain circumstances the door was being held in place with a wooden wedge, (2) the strike plate on the door was a modification made numerous years ago that was undocumented and did not appear to use appropriate materials, and (3) instructions provided by safety basis personnel in the integrated work document were not followed. LANL management has acknowledged they will need to address issues with formality of operations within WETF prior to resuming readiness activities. They plan to employ additional mentors, similar to the ones used to prepare the Plutonium Facility for its recent successful contractor readiness assessment, to assist facility operators.