

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 26, 2013

MEMORANDUM FOR: S.A. Stokes, Acting Technical Director
FROM: R.T. Davis and R.K. Verhaagen
SUBJECT: Los Alamos Report for Week Ending July 26, 2013

Staff member L. Lin was on site this week to walkdown LANL defense nuclear facilities.

Plutonium Facility – Criticality Safety: Plutonium Facility personnel identified several criticality safety issues associated with a recent construction activity in the 400 area.

- Work Release – the Associate Director for Plutonium Science and Manufacturing provided guidance on the facility pause that requires Laboratory Director approval to conduct construction activities with the potential to affect the configuration of nuclear materials (see 7/5/13 weekly). The release of this activity was approved by the Facility Operations Director (FOD) as having no potential to affect the configuration of nuclear materials despite the Integrated Work Document (IWD) identifying interface with systems potentially containing 300 gram per liter fissile material solutions. Subsequently, the FOD provided additional guidance on the pause of construction and maintenance activities that could potentially interface with piping and systems that contain fissile material solutions.
- Criticality Safety Evaluation (CSE) – during the critique, facility personnel identified that no CSE was performed for this activity as required by LANL procedures. The IWD for the construction activity was reviewed and approved by the criticality safety group in January 2013; however, the need for completing a CSE was not recognized.
- Criticality Control Implementation – the IWD for this activity required engaging criticality safety for the catch bag design and use of a catch bag with a volume of less than 1 gallon to contain solutions encountered. The actual catch bag being used was approximately 1.4 gallons.

Chemistry and Metallurgy Research Building – Confinement Vessel Disposition (CVD) Project: LANL submitted a corrective action plan for the previously completed CVD contractor Operational Readiness Review (ORR) to the field office for review and approval (see 5/10/13 weekly). The request identified that actions taken to correct the 15 pre-start findings from the contractor ORR have been completed and all other findings have been entered in LANL's performance feedback improvement and tracking system. Actions that must be completed prior to conducting a federal ORR and subsequent startup include: 1) field office approval of a recently submitted safety basis page change; 2) contractor Independent Verification Review of the approved page change; and 3) resolution of technical issues identified by a field office ancillary review (see 6/14/13 weekly). The federal ORR was recently delayed and is now scheduled for September 9, 2013.

Fire Protection: The field office directed LANL to perform a review and develop corrective actions for two recent instances of the Los Alamos Fire Department (LAFD) having difficulty accessing lab facilities to respond to alarms. In one instance, a lightning strike caused a loss of power at the Los Alamos Neutron Science Center which resulted in hot alarms being received by LAFD prompting their response. Upon arrival at the facility, responders were unable to open the access gate due to the loss of power and the absence of manual instructions for opening the gate. In a second instance, a hot alarm was received from a facility in Technical Area-3 that required LAFD response; however, the crew had to wait for the FOD to arrive with the facility keys in order to gain access. The field office has requested the report to be submitted within 14 days.