

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 26, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: R.T. Davis and R.K. Verhaagen
SUBJECT: Los Alamos Report for Week Ending October 26, 2012

Los Alamos Neutron Science Center (LANSCE): In August, LANL identified a release of contamination at the Lujan Center experimental area at LANSCE and the subsequent spread of contamination to multiple offsite locations (see 8/31/12 report). LANL and other response teams aggressively responded to the spread of contamination, retrieved contaminated items and performed decontamination as required. Although the contamination levels found offsite exceeded DOE's release criteria, NNSA and LANL management have stated that contamination did not pose health risks to the workers or public. Based on the significance of this event, NA-1 directed establishment of an Accident Investigation Board (AIB) in accordance with DOE Order 225.1B. The AIB completed their investigation in September and NA-1 recently released the report.

The AIB concluded that LANSCE personnel lost positive control of a Technetium (Tc-99) sample from January 2012 until the time of the event. The investigation indicates that the Tc-99 sample container was re-used in August 2012 (likely on August 20th), which caused the initial spread of contamination. The AIB report notes that the accident "was (and its recurrence is) completely preventable." The team identified 14 Judgments Of Need (JONs) including the following: 1) establish effective engineering and administrative controls to ensure radioactive samples are identified and controlled; 2) establish clear roles and responsibilities for controlling samples and participating in experiments; 3) establish formal processes for managing material in radiological storage cabinets; 4) ensure personnel understand and comply with management processes; 5) revise work control process to ensure that work remains consistent with the reviewed and approved scope; and 6) address inadequacies in both site office and LANL oversight activities.

LANL plans to implement phased corrective actions with the first phase focused on the Lujan Center and the second phase to include other LANSCE facility areas. For the first phase (Nov 2012 to Feb 2013), LANL will implement interim corrective actions that address the JONs identified by the AIB for a portion of the Lujan Center flight paths (experimental flight paths in the area of most significant contamination will remain shut down). The scope and implementation of these corrective actions will be assessed by an independent laboratory committee. The second phase will include permanent corrective actions at LANSCE for the 2013 run cycle (July 2013).

Area G Drum Venting System (DVS): The site office transmitted the final report for the federal readiness assessment (FRA) of Area G, Dome 33 DVS operations (see 10/5/12 weekly). The review team concluded that the project had not demonstrated readiness to commence Hazard Category 2/3 operations based on the volume and severity of the findings. The site office has requested a corrective action plan be submitted by November 1, 2012, and a report on the immediate actions taken and the performance improvement approaches selected to close the prestart findings by November 19, 2012. In response to the report, Area G management has entered the New Information process to evaluate whether: the Technical Safety Requirements (TSR) protect the drum venting material at risk limits; the DVS chamber can be credited as a blast-mitigation device; the Unreviewed Safety Question process has been effective in ensuring TSR controls are properly implemented; and certain specific administrative controls apply to unvented drums that are overpacked. Following the completion of the corrective action plan, LASO plans on conducting a limited scope FRA to evaluate closure of the prestart findings.