

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 31, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending August 31, 2012

Brett Broderick completed his assignment as a site representative at LANL this week. DNFSB staff member Richard Verhaagen will report to LANL in September.

Los Alamos Neutron Science Center (LANSCE): On August 24th, LANL personnel identified beta-contamination on the skin and clothing of a worker in a LANSCE experimental area. Subsequent surveys conducted by radiological control technicians on August 25th identified significant contamination at multiple locations at the Lujan Center experimental area. Based on the extent of contamination, the LANSCE facility operations director requested assistance from LANL emergency management and the Radiological Assistance Program (RAP) was notified. At approximately 1630 on Saturday afternoon, the emergency management incident command declared an operational emergency and the Emergency Operations Center was activated.

Surveys performed by LANL and RAP team personnel identified beta-contamination, Technetium-99 (Tc-99), outside LANL property at multiple homes and automobiles and on the skin and clothing of personnel who had worked in these areas. Additional RAP team support was requested and deployed to complete survey and decontamination efforts in multiple offsite locations. LANL and RAP team monitoring of LANSCE personnel that may have been in the area of the contamination continued throughout the week. All affected personnel will perform a special bioassay.

Based on the type of contamination and all information available, LANL management has stated that the contamination does not pose health risks to workers or the public. A senior level investigation was initiated by the laboratory director this week. In addition, NNSA NA-1 directed establishment of an Accident Investigation Board (AIB) in accordance with DOE Order 225.1B that will investigate the event “identifying all relevant facts, determining direct, contributing, and root causes of the event, developing conclusions, and determining the judgments of need to prevent recurrence.” The AIB investigation will start on Tuesday and provide a final report to NA-1 by the end of September.

Plutonium Facility – Seismic Safety: On Wednesday, Plutonium Facility management declared a Potential Inadequacy of the Safety Analysis (PISA) based on static non-linear seismic analysis of the Plutonium Facility. The results indicate that the probability of failure for certain structural components do not meet the performance goals identified in the safety basis. LANL will evaluate this information using the Unreviewed Safety Question process to determine the safety basis impact and the need for additional controls.

Engineering: This week, the engineering services division identified that most concrete used at LANL since May 2011 did not meet the ASTM C33 specification requirements for coarse aggregate. Concrete placements were suspended pending resolution of this issue. Non-conformance reports have been issued for concrete used during this period. Notably, the drag strut repair at the Plutonium Facility was performed during this period and LANL is evaluating the potential impact.