

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 27, 2011

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending May 27, 2011

Management: This week, LANS announced that Charlie McMillan will replace Mike Anastasio as the Director of Los Alamos National Laboratory. McMillan had previously served as the Principal Associate Director for Weapons Programs and the Associate Director for Weapons Physics.

Plutonium Facility – Seismic Safety: LANL personnel have been aggressive in defining and pursuing necessary structural upgrades for the Plutonium Facility since discovering in late April that structural failures resulting from a seismic event are more likely than previously understood. This week, field construction activities began to install new support beams to address a high probability of failure vulnerability associated with glovebox ventilation filter plenum rooms. These upgrades are targeted for physical completion in early July. Next week, construction work is scheduled to begin to address vulnerabilities related to concrete shield walls located in the Pu-238 processing area.

Transuranic Waste Operations: This week, Area G management identified that construction work performed in support of high energy real time radiography (RTR) was conducted without electrical safety controls required by the Integrated Work Document (IWD). Because an electrical disconnect was open and locked out/tagged out, no personnel were exposed to hazardous energy during the construction activities. High energy RTR will provide LANL with the capability to adequately radiograph standard waste boxes that contain transuranic wastes in order to meet WIPP waste acceptance criteria.

The IWD that supports electrical and other construction activities identified the potential for the electrical hazard and required that a readily identifiable air-gap be in place to eliminate the hazard during this stage of construction activities. Recently, a separate LANL group was tasked with testing portions of the electrical system upstream from the tie-in to high energy RTR. In order to complete this testing, an upstream disconnect was opened and locked out/tagged out and the air gap was eliminated. However, this new configuration was not communicated to other construction personnel that were performing work under the IWD that required the air gap. Until this issue was identified earlier this week, high energy RTR construction activities were completed without the required air-gap. In addition, these construction workers did not have their own locks on the lock out/tag out that was providing hazardous energy protection as required by LANL procedures. High energy RTR construction activities are currently on hold because of this issue. Additional investigation of this event is planned to identify lessons learned and corrective actions.

Plutonium Facility – Safety Basis: LANL is currently in the process of conducting the final Implementation Verification Review (IVR) that covers Technical Safety Requirement (TSR) material-at-risk (MAR) controls. Notably, the team has questions with the configuration management and software quality assurance for the MAR tracker software that is used to perform the TSR surveillance in support of the MAR controls. The IVR team plans to outbrief the results of their review to facility and NNSA management next week.