

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 14, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: R.T. Davis
SUBJECT: Los Alamos Report for Week Ending September 14, 2012

Electrical Safety: In the last week, there have been three separate electrical safety issues at LANL. First, a Physical Chemistry and Applied Spectroscopy post-doctorate employee received two minor shocks from a metal mounting rod last Friday. The employee was evaluated by occupational medicine and released with no restrictions. Subsequent investigation identified a mixer located on the same mounting rod with an intermittent line voltage short that caused the issue. LANL also determined that the mixer was not listed by a Nationally Recognized Testing Laboratory or approved for use as required by LANL procedures. As part of the extent of condition review, other chemistry division electrical equipment is being reviewed to ensure they are either listed or approved per LANL procedures.

Second, during installation of an oven at Technical Area-55 last weekend, two LANL employees received a minor shock. The two employees were evaluated by occupational medicine and released with no restrictions. The electrical safety officer subsequently identified that one of the three phases from the 480 volt line connection had shorted to the oven during the installation process. Finally, a LANL worker in Technical Area-16 opened a 480 volt disconnect and verified zero energy without the required Lock-Out/Tag-Out and personnel protective equipment. No personnel were injured during this activity; however, these activities were not covered by a work package and were not consistent with LANL hazardous energy control requirements. These three events highlight the need to maintain NNSA and LANL focus on work control and electrical safety.

Weapons Engineering Tritium Facility (WETF): On Tuesday, WETF management declared a Technical Safety Requirement (TSR) violation based on the expiration of a pressure safety variance in December 2011. In January 2012, the variance in question was replaced by three separate variances that effectively resolved the issue at that time. The expiration of the variance was identified by WETF engineering as part of the extent of condition review for previously identified TSR violations due to variance expirations. The extent of condition review for these type issues is now complete at WETF.

Radioactive Liquid Waste Treatment Facility (RLWTF): In 2009, LANL completed a low level liquid waste connection to the Waste Management Risk Mitigation (WMRM) tanks to provide 250,000 gallons of emergency storage capacity. Earlier this year, LANL decided to use a portion of this storage capacity for low level liquid waste influent storage to replace ageing RLWTF tanks that do not meet regulatory requirements. Physical modifications to support this configuration are expected to be complete later this month. RLWTF management plans to conduct appropriate readiness activities and begin using the WMRM tanks later this year.

Facility Hazard Categorization: This week, the site office approved a LANL request to use NA-1 SD G 1027, *Guidance on Using Release Fraction and Modern Dosimetric Information Consistently with DOE STD 1027-92* for the Technical Area-48 RC-1 building. The approval is contingent on validated implementation of key facility controls in the hazard analysis. The site office also directed LANL to obtain site office concurrence for use of this guidance for other LANL radiological facilities.