

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 15, 2012

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending June 15, 2012

Technical Area-35 (TA-35): This week, LANL identified a number of fuel rods in TA-35 Building 27 that are not consistent with the criticality safety evaluation for the facility. Operations at this building had previously been suspended in late-May due to the discovery of three fuel rods that were not in the facility or institutional tracking systems. Operations remain suspended pending development and implementation of corrective actions, including site office approval of these actions.

TA-35 Building 27 is categorized as a radiological facility per DOE Standard 1027 and conducts detector experimental activities. In 2011, LANL responded to concerns about the hazard categorization of this building because the amount of material inventory exceeds the Standard 1027 threshold based on criticality safety concerns. LANL concluded that the “nature of the process” for activities conducted in Building 27 precludes criticality consistent DOE supplemental guidance for Standard 1027. A criticality safety evaluation and criticality safety limit approval were developed to describe facility activities related to criticality safety and capture the “nature of the process” argument.

Earlier this year, site office personnel identified concerns with the implementation and basis for these conclusions at TA-35. LANL subsequently developed a programmatic improvement plan to address criticality safety implementation for Building 27. However, these latest issues and concerns indicate the need to revisit the building mission, hazard categorization, or strengthen the “nature of the process” arguments for the building. Programmatic operations at TA-35 Building 27 will remain suspended until LANL develops a corrective action plan that is approved by the site office.

Transuranic Waste Operations: The Area G senior readiness review board reviewed closure of Management Self Assessment pre-start findings and recommended start-up of drum venting operations for less than hazard category 3 quantity drums this week. Contractor and federal readiness assessments are scheduled to be performed prior to conducting operations at greater than hazard category 3 quantities.

Radioactive Liquid Waste Treatment Facility (RLWTF): On Wednesday, LANL submitted the Evaluation of the Safety of the Situation (ESS) to the site office for the Potential Inadequacy of the Safety Analysis (PISA) associated with the configuration of the transuranic liquid waste receipt and distribution system. LANL’s evaluation concluded that this issue does not represent an Unreviewed Safety Question. The ESS notes that LANL has completed physical modification to eliminate potential interactions between the transuranic and low level waste systems. Based on submittal of the ESS, RLWTF management will remove operational restrictions that were identified as part of the PISA.

Area G – Safety Basis: This week, the site office approved a revision to the Area G Documented Safety Analysis and Technical Safety Requirements. This revision, which was submitted last week, includes clarifications for the material at risk for exposed waste in pits and shafts and overburden requirements for buried waste. The site office approval identifies a concern with the exposed radioactive waste inventory in active shafts and pits and requests LANL to evaluate using the new information process.