

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 22, 2013

MEMORANDUM FOR: S. A. Stokes, Acting Technical Director
FROM: R.T. Davis and R.K. Verhaagen
SUBJECT: Los Alamos Report for Week Ending February 22, 2013

Transuranic Waste Facility (TWF): LANL submitted a revised Safety Design Strategy (SDS) to the field office this week to resolve comments from NNSA and issues identified in the Board's June 11, 2012 letter. As part of this submittal, the TWF project team performed evaluations and calculations for material at risk (MAR), the lightning protection system, metal containers (e.g. transuranic waste drums) and the fire protection system. Based on the MAR evaluation, LANL proposes to reduce the building MAR limit from 4550 plutonium equivalent-curies (PE-Ci) to 3200 PE-Ci, which reduces the overall facility MAR by approximately 30%. The revised SDS also captures waste storage containers as safety class and calls for a safety significant dry-pipe fire suppression system with passive freeze protection. In addition, the SDS captures the use of safety class vehicle barriers to preclude impact from large vehicles. Following field office review and approval of the SDS, the TWF project is expected to receive Critical Decision-2.

Criticality Safety: Last week, LANL submitted a revision to the corrective action plan and compensatory measures to strengthen the nuclear criticality safety program. This revision updates the previous plan from November 2012 and incorporates comments from the field office. The submittal letter highlights LANL senior leadership, including the laboratory director, involvement and commitment to improving the nuclear criticality safety program. The training boot camp for criticality safety analysts discussed last week continues. LANL also provided an update on the criticality safety program metrics this week. An assessment using these metrics will be performed quarterly and communicated to LANL and field office management.

Area G Drum Venting System (DVS): Following the review and approval of the corrective action plan submitted by LANL in response to the limited scope Federal Readiness Assessment conducted in December 2012, the field office authorized startup of Hazard Category 2/3 drum venting operations in Dome 33. LANL commenced Hazard Category 2/3 drum venting operations this week, representing the first drums to be processed by the DVS for the 3706 campaign.

A spot check of Dome 33 revealed that the problematic heaters with a high failure rate and a failure mechanism that includes dropping hot metal from the failed heating elements have yet to be replaced (see 11/16/12 weekly). Additionally, combustible materials that were previously identified within the heater exclusion zones had not all been removed. Site rep discussions with Area G management revealed that the work to remove the remaining combustibles is in planning; in the meantime the heaters in this area will be de-energized and tagged out. The site reps were also informed that the cognizant system engineer has identified a safer heater design and there is a management push to get the problematic heaters replaced.

Area G – Sort, Segregate, and Size Reduction (SSSR): The field office approved the temporary safety basis modification to disposition the three sealed tanks discovered during SSSR operations in Area G (see 2/8/13 weekly). Following the implementation of safety basis requirements and a verification review, LANL vented all three tanks this week in preparation for size reduction and disposal activities.