

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 18, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending December 18, 2009

Davis was offsite this week. Also, the Board's staff held a video teleconference with LANL and NNSA site office personnel to discuss ongoing Plutonium Facility seismic analyses.

Radioactive Liquid Waste Treatment Facility (RLWTF): The NNSA site office has authorized LANL to resume transuranic liquid waste treatment operations in RLWTF's Room 60 and 60A. Reconstituting this critical processing capability, which has been unavailable since 2006, is a significant milestone. RLWTF management intends to resume transuranic processing in a highly controlled fashion, in accordance with their approved Startup Plan. Limited operations to decant and sample liquid from a transuranic sludge thickening tank are scheduled to begin next week.

Technical Area (TA)-15: On Wednesday, a containment assembly catastrophically failed during an indoor propellant-driven experiment at TA-15 involving a large bore powder gun. No radioactive material was present in this experiment and no personnel were injured, however, the failure did cause significant structural damage to the building housing the powder gun. The cause of the failure is not yet well understood and LANL is planning an investigation. This is at least the second containment failure of this powder gun, which is ultimately intended to be fielded underground at the Nevada Test Site to perform dynamic experiments involving plutonium (site rep weekly 6/13/08).

Weapons Engineering Tritium Facility (WETF): This week, WETF management declared a TSR violation based on a programmatic breakdown of the Quality Assurance Program. This violation was prompted by the discovery that important instrumentation, such as pressure and temperature sensors needed to implement TSR-level controls, had not been calibrated for many years and are not controlled through a formal measurement and test equipment calibration program. This issue was identified during an implementation verification review of multiple TSR page changes that have been submitted and approved recently to address legacy issues that have been discovered as part of WETF management's deliberate and systematic resumption process (site rep weeklies 12/4/09, 11/27/09).

As additional legacy issues have been identified and dispositioned, the schedule to restart WETF programmatic gas transfer operations has continued to slip. This week, the NNSA site office formally notified LANL that due to the length of time (more than 14 months) since gas transfer operations have been performed, a dedicated federal readiness assessment will be required prior to resumption.

Chemistry and Metallurgy Research (CMR) Building: The current CMR interim TSRs credit Mosler safes as safety class design features that protect radiological material from being impacted by facility accident scenarios (i.e. Mosler safes are credited with a damage ratio of 0). Based on this credited safety function, material inside Mosler safes at CMR did not count toward the facility's material-at-risk (MAR) inventory limit. Recent analysis performed as part of the SAFER project has concluded that Mosler safes cannot be credited to survive seismically-induced mechanical insults resulting from falling debris. The facility has instituted a compensatory measure to begin counting inventory inside Mosler safes toward the facility's MAR limit. A TSR page change is pending.