

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending January 8, 2010

Radioactive Liquid Waste Treatment Facility (RLWTF): This week, LANL resumed transuranic liquid waste operations in Room 60/60A at RLWTF. For legacy transuranic waste in the sludge thickening tank, operators decanted the supernate in preparation for sludge sampling to support drum tumbler operations. RLWTF personnel also performed simulated sampling of the transuranic liquid waste receipt tanks consistent with the startup plan. Actual sampling and transfer of acidic waste, which will free up receipt space and allow transuranic liquid waste transfers from the Plutonium Facility, are expected to commence next week.

Plutonium Facility – Seismic Safety: In December, the site office provided direction to LANL on actions to improve seismic safety at the Plutonium Facility including a request for a plan and schedule to complete the following improvements in FY-2010: 1) seismic electrical power shutoffs 2) installation and use of fire-rated nuclear material storage systems (e.g., robust safes) 3) conceptual designs for ventilation and fire suppression seismic upgrades 4) fire hazard analysis corrective actions (16 of 29 deficiencies) 5) evaluation of glovebox fire protection options 6) fire barrier assessment (including any required repairs for the main facility dividing wall, known as the H-Wall). The site office plans to identify contract incentives for completion of these activities.

Other important safety improvements at the Plutonium Facility (e.g., conceptual design for a safety class ventilation system for non-seismic accident scenarios, backfit analysis for electrical and instrument air systems, and implementation of a safety class fire suppression system for non-seismic fires) have also been incentivized for this fiscal year. For material reduction and repackaging, the site office requested that LANL provide separate goals to complete overpacking of non-safety class heat source plutonium containers (targeted for completion in June 2010) and other material-at-risk reduction activities.

Weapons Engineering Tritium Facility (WETF): In late December, WETF returned to Operations mode after a series of Technical Safety Requirement page changes were approved and verified to be implemented. The facility had been in Warm Standby mode since October 2008. This mode change allows facility personnel to handle vessels containing greater than ‘residual quantities’ of tritium. However, gas transfer and processing activities remain restricted pending successful completion of laboratory and federal readiness assessments. Return to Operations mode should remove an obstacle to overpacking roughly 70 tritium vessels in WETF that are known or suspected to exceed their maximum allowable working pressures and currently reside outside of credited containment (i.e. gloveboxes or secondary containment vessels).

Technical Area (TA)-15: LANL management has chartered a Type B-like investigation of the December 16th event at TA-15 where containment features catastrophically failed during the operation of a large bore powder gun. The failure caused extensive structural damage to the building housing the gun assembly.