

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 4, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending June 4, 2010

Weapons Engineering Tritium Facility (WETF): LANL began the contractor Operational Readiness Review (ORR) to confirm readiness to resume tritium gas transfer operations on Thursday following line management declaration of readiness. All but two pre-start findings identified during the management self assessment have been closed and closure plans and schedules are in place for the two remaining findings. The NNSA ORR is scheduled to begin the week of June 21st.

Plutonium Facility: The Plutonium Facility Documented Safety Analysis (DSA) that was approved by NNSA in 2008 and is currently being implemented by LANL identified a suite of planned safety improvements that include seismic upgrades to a population of 'high risk' gloveboxes. The DSA criteria for high risk included gloveboxes that contain ignition sources or greater than 10 kg of material at risk. Because these glovebox upgrades play a key role in the facility's existing seismic safety strategy, the NNSA Safety Evaluation Report (SER) that approved the 2008 DSA included a Condition of Approval to accelerate the schedule for glovebox seismic upgrades such that all high risk gloveboxes meet performance category 3 seismic requirements by the end of 2011. LANL uses this commitment for future glovebox seismic upgrades to reduce the mitigated dose consequence for a seismically-induced spill scenario by a factor of 10 (i.e. a damage ratio of 0.1 is credited).

LANL intended to use Phase 2 of the line item TA-55 Reinvestment Project (TRP2) to complete seismic upgrades for all high risk gloveboxes. However, the expected cost of seismic upgrades to individual gloveboxes has risen from an original estimate of about \$80,000 per glovebox to a current estimate of approximately \$850,000. Concurrent with this order of magnitude cost increase, LANL personnel completed a comprehensive facility survey and identified 157 high risk gloveboxes, roughly twice as many as originally expected. The current scope of TRP2 would upgrade a total of 40 gloveboxes through 2014. LANL has not yet clearly defined the strategy and schedule for performing required seismic upgrades for the large population of remaining high risk gloveboxes that will not be addressed by TRP2.

Chemistry and Metallurgy Research Building (CMR): This week, the NNSA site office issued a SER approving the CMR DSA that supports continued facility operations after the current Basis for Interim Operations expires at the end of 2010. This new safety basis must be implemented by the end of the calendar year. The newly approved DSA includes a seismically-induced fire scenario with final mitigated consequences that exceed the DOE Evaluation Guideline by approximately 45%. In the SER, the NNSA site office accepts the risk associated with this scenario based on the low likelihood of the event and the limited life and needed mission of the facility.

Also this week, LANL recommended to the site office that an ORR be performed to confirm readiness for confinement vessel disposition (also known as Bolas Grande) operations in Wing 9 of CMR. Although the Joint Evaluation Team, which evaluates startup activities and recommends the level of readiness review, concluded that a readiness assessment be performed, LANL management determined that an ORR is a better vehicle for confirming readiness for this activity. Construction activities to support confinement vessel disposition are ongoing with startup planned for late-2011.