

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 29, 2012

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B.P. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending June 29, 2012

Staff member R. Tontodonato was onsite this week to attend an Integrated Nuclear Planning workshop. During the workshop, personnel from NNSA and LANL discussed the progress and plans for transuranic waste operations and, in particular, the 3706 m<sup>3</sup> campaign to disposition higher risk (i.e. combustible and/or dispersible) above-ground transuranic waste at Area G.

**Chemistry and Metallurgy Research Building (CMR):** Laboratory personnel have been working for years to design, test and install equipment in Wing 9 of CMR to safely retrieve and disposition radiological material from nine large metal confinement vessels currently staged at the Plutonium Facility. Project personnel have now fielded all Confinement Vessel Disposition project hardware in Wing 9, including a Permacon enclosure equipped with fire suppression and HEPA-filtered ventilation, a seismically-qualified confinement vessel support stand, a glovebox workstation that will be mated to confinement vessels, and a robotic arm that will be used to remotely remove material and decontaminate the interior of confinement vessels.

This week, laboratory personnel issued a final report documenting the results of an Implementation Verification Review (IVR) whose primary purpose was to validate the implementation of Confinement Vessel Disposition-related Technical Safety Requirements (TSRs). The IVR identified three pre-implementation findings, all of which were addressed and closed during the review. After successful completion of the IVR, Confinement Vessel Disposition project management had intended to begin formal startup activities including a Management Self Assessment, contractor Operational Readiness Review, and federal Operational Readiness Review. However, these required startup activities appear likely to be deferred to FY13 due to funding issues.

**Safety Basis:** LANL management has submitted, for NNSA site office concurrence, a technical justification to continue using a deposition velocity of 1 cm/s for accident analysis calculations of unfiltered/unmitigated releases at LANL facilities. The LANL justification argues that non-conservatism associated with the 1 cm/s deposition velocity is offset by over-conservatism in the default values for dispersion coefficients ( $\sigma_y$  and  $\sigma_z$ ) used in the MELCOR Accident Consequence Calculation System, Version 2 (MACCS2) computer code employed to calculate  $\chi/Q$  values.

**Weapons Engineering Tritium Facility (WETF):** This week, the site office responded to the Evaluation of the Safety of the Situation (ESS) and Justification for Continued Operation (JCO) for non-conservative oxygen readings associated with the Oxygen Monitoring System (OMS). The site office approved the ESS but did not approve the JCO. The LASO letter directs LANL to revise the WETF TSR document so that the low-pressure receiver remains in warm standby until the OMS is declared operable. LANL was also directed to submit a TSR revision that clearly defines the conditions for OMS operability, which should account for pressure sensitivity. The low-pressure receiver will remain in warm standby until the TSR revision is approved and implemented at WETF.

LANL also submitted a revision to the WETF safety basis strategy this week that defines the plan for submittal of an upgraded Documented Safety Analysis and TSRs. The strategy states that the upgraded safety basis will be submitted to the site office for approval by August 15, 2012.