

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 17, 2009

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending July 17, 2009

Board member Bader and staff members Anderson and Moury were onsite this week to observe an Integrated Nuclear Planning workshop. Key topics discussed during this workshop included the projects and plans to support current and long-term solid and liquid transuranic waste missions.

**Plutonium Facility:** This week, LANL successfully completed the implementation verification review for the controls identified in the Justification for Continued Operations (JCO) that support the movement, handling and radiography of non-safety class heat source plutonium containers. Following implementation and consistent with the requirements in the JCO, LANL relocated the two particularly large non-safety class containers that have been stored in a laboratory room sink to a facility glovebox. These containers were then opened, eliminating any over-pressurization hazard they could have posed. LANL also began overpacking other non-safety class containers into the DOE Nuclear Material Packaging Manual (DOE M 441.1-1)-compliant Fuel Storage Outer containers that were approved as safety class by the recent JCO. The approved JCO also allows other miscellaneous non-safety class container types to be radiographed to provide information needed to determine their ability to survive internal pressurization challenges when not afforded water cooling (site rep weeklies 7/3/09, 6/12/09).

**Radioactive Liquid Waste Treatment Facility Replacement (RLWTF-R) Project:** LANL is approximately 60% complete with the design effort for this project and has revised the Preliminary Documented Safety Analysis. These products are currently being reviewed by the federal project team with a Technical Independent Project Review planned for October and Critical Decision-2 targeted for May 2010. One important unresolved decision affecting this project is how to provide 100,000 gallons of low-level liquid waste influent storage capacity, which is not included in the current design.

**Waste Management Risk Mitigation (WMRM) Project:** The WMRM Project was intended to establish a 300,000 gallon low-level liquid waste storage capability in TA-50 that could be used under emergency conditions, like those encountered during the Cerro Grande fire. Work on a Hazard Category 2 tank farm facility proceeded until April 2007, when the WMRM project was halted at the 75% construction completion phase due to significant project management and quality assurance issues. A re-design of the liquid waste receipt tie-in point precluded the introduction of transuranic liquid waste into the tank farm facility. Subsequent approval was granted to complete the WMRM project as a radiological facility that would include only very rudimentary facility systems and could be used only in emergency situations, primarily to receive and store low-level liquid waste. Last month, the project identified enough remaining funds to add scope to install fire suppression, fire alarm, emergency lighting, lightning protection and mechanical ventilation systems. Additionally, in May NNSA approved an equivalency allowing the installed WMRM receipt tanks to be used for liquid storage at the radiological level, although they are constructed of a combustible fiberglass reinforced plastic material. Given these developments, a portion of the installed WMRM tank space is now being strongly considered as a way to provide the low-level influent storage capacity needed by the RLWTF-R, as discussed above. Changing the RLWTF-R project baseline to reflect a reliance on WMRM for low-level influent storage will require formal approval by NNSA, which has not yet

been requested by LANL (site rep weeklies 8/15/08, 3/14/08).