

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 24, 2012

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B.P. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending August 24, 2012

**Chemistry and Metallurgy Research (CMR) Building:** On Tuesday morning, CMR personnel identified a significant amount of liquid on the floor in the basement of Wing 5. Appropriate actions were taken to contact the operations center. CMR Industrial Hygiene and Radiation Protection personnel responded to isolate the area and evaluate the situation. Based on the size of spill, the facility incident command was established and LANL Emergency Response personnel were called to respond. CMR management also suspended all activities involving liquids in Wing 5 laboratories. Hazmat and facility personnel were able to contain the spill area and confirmed that actions to cease liquid activities stopped the source of the leak. No personnel contamination occurred during this event and spread of contamination outside of controlled areas has not been identified. Cleanup activities commenced on Tuesday and have continued throughout the week.

CMR uses acid drain lines that transfer low-level radioactive liquid waste from individual laboratory rooms to a collection system in the basement that then routes the liquid waste to the Radioactive Liquid Waste Treatment Facility in TA-50. The acid drain line system is known to have significant material condition issues that have resulted in leaks and contamination of basement areas in the past. Although investigation continues, CMR personnel believe that a backup of liquids in a portion of this system caused the leak into the basement. In 2009, facility personnel systematically wrapped and bagged all system flanges because of leak and contamination issues. In addition, CMR management planned to perform periodic surveillances on the bagged flanges. Based on discussion with CMR personnel, these periodic inspections have not been performed as was intended; however, facility management noted this week that they plan to re-evaluate the need to inspect the wrapped flanges (see site rep weekly 2/27/09).

**Plutonium Facility:** This week, the site office provided additional direction to LANL on the performance of seismic static non-linear analysis for the Plutonium Facility. The letter identifies that additional seismic evaluation is required to address 1) the impact if the service chase roof joints are released and 2) the effect of modal-based loading versus common direction loading currently being used. LANL is directed to perform additional sensitivity runs at the next opportunity that does not delay current efforts and to obtain LASO concurrence with any work-scope that extends into FY 2013. The laboratory is also directed to include longer-term analytical and upgrade work-scope in the Project Execution Plan associated with Recommendation 2009-2, which is scheduled to be updated in November. The Board's staff will continue to review modeling and analysis work to ensure that technically defensible seismic analysis is completed and used for safety basis evaluations and potential upgrade decisions.

**Transuranic Waste Operations:** This week, the contractor readiness assessment team reported the results of their review of the Drum Venting System in Area G. The team identified three pre-start items in the areas of operations, engineering and safety basis and two post-start findings for Environmental, Safety and Health. Area G personnel are developing corrective action plans for these issues. The federal readiness assessment that was to start next week has now been delayed to late-September.