

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 10, 2010

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending September 10, 2010

**Emergency Management:** On September 9, 2010, the Laboratory performed the annual lab-wide earthquake response exercise (SHAKER). The nuclear facilities participated and performed an accountability muster along with the rest of the Laboratory. In the Plutonium Facility, personnel were cleared from the radioactive materials area prior to the exercise, as is typical practice for these exercises. In the nuclear facilities, the SHAKER exercises have historically focused on accountability and the scenarios have not involved post-seismic events (e.g., fires, material releases, injuries, etc.). In the Plutonium Facility, the Facility Safety Plan directs that the response to an earthquake is not automatic evacuation. Instead, a rapid or general evacuation (essentially, an expedited normal exit) may be directed by Facility Operations using the building paging system. The expectation for workers in the other nuclear facilities is to either await instructions provided using the site wide announcement system or evacuate to the designated assembly point.

**Configuration Management:** On August 30, 2010, the Nuclear Operations Directorate declared that implementation of Department of Energy Standard 1073-2003, *Configuration Management*, was complete. Nuclear Operations defined implementation to include: revision of the institutional configuration management procedure and development of associated briefing notes, revision of the Nuclear Materials Technology Program configuration management plan, revision of the Packaging and Transportation Safety configuration management procedure, assignment of configuration item owners and completion of data sheets for equipment important to safety, evaluation of the Radioactive and Hazardous Waste Management database, and issuance of letters stating the adequacy of configuration management in the nuclear facilities. The Livermore Site Office (LSO) is confirming the status of implementation.

**Safety Basis:** On September 2, 2010, LSO approved without conditions the safety basis amendment to support deployment of hydrogen powered shuttle buses (see weekly report dated July 30, 2010). The approval noted that the compliant methodology utilized for calculating dose consequences in the transportation safety document—which analyzes an onsite transportation accident involving transuranic waste—was inconsistent with Department of Energy Standard 5506-2007, *Preparation of Safety Basis Documents for Transuranic Waste Facilities*. LSO compared the consequences between the methodologies and observed that utilization of Standard 5506 would result in consequences that increased by a factor of 10 and 5 for the worker and public, respectively. While the resulting consequences remained low (3.0 and 1.57 rem, respectively), LSO stated an expectation that future submittals adhere to the methodology in Standard 5506.

**Plutonium Facility:** On September 8, 2010, facility management performed a critique on the unexpected exothermic reaction experienced while processing an item containing uranium and lithium (see weekly report dated July 16, 2010). Facility and program personnel continue to plan the process to complete ultimate stabilization of the material.