

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 13, 2012

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending July 13, 2012

**DNFSB Staff Activity:** On Thursday, staff members Shackelford, Roscetti, and Cutler held a teleconference with personnel from the Livermore Site Office (LSO) to discuss the recent approval of the safety basis for the Tritium Facility.

**Work Planning and Control:** On July 5, 2012, workers rendered a safety class fire door inoperable while performing a modification to the access control system for an inactive laboratory room in the Plutonium Facility. In the facility, most laboratory room to corridor doors are credited as safety class fire barriers in order to protect the assumption in the safety analysis that a fire will be limited to a single room. In this case, workers removed the door's latch plate, preventing the door from properly closing and reliably functioning as a fire barrier. The Technical Safety Requirements (TSR) dictate actions per the Limiting Conditions for Operations (LCO) for this condition—these actions were not taken when workers rendered the door inoperable.

The condition was later discovered by a facility operator during his end of the day rounds. Upon discovery, the operator entered the LCO (to place the facility in maintenance mode), which had already occurred since it was the end of the work day. Personnel restored the door the next morning prior to the start of operations. The laboratory contractor reported this event as a degraded safety system (NA-LSO-LLNL-LLNL-2012-0030), as opposed to a TSR violation. LSO and the contractor are currently discussing the appropriateness of this conclusion and are working to better define reporting expectations for TSR violations, given the lack of definitive guidance in Department of Energy directives. The Site Representative notes that a critique was not performed to determine the facts to transparently, identify casual factors, and develop corrective actions to prevent recurrence of this significant breakdown.

**Hardened Engineering Test Building:** On Wednesday, program personnel successfully completed without incident a Jerk Test experiment involving special nuclear material. The contractor completed the readiness assessment last week, closed the three pre-start issues, and received approval from LSO on Tuesday.

During the past few weeks, the contractor submitted to LSO for approval two safety basis amendments and the annual update. Collectively, the submittals propose the existing control set is adequate to support changes including the use and storage as resident items of the following:

- 24 g of tritium in certified UC-609 Type B shipping containers
- Six certified sealed sources with < 1200 g of fuels-grade equivalent plutonium oxide
- Highly enriched uranium items under the existing mass limit of 100 kg
- Conflat/bolt can configurations containing up to 20 g fuels-grade equivalent plutonium oxide

LSO is reviewing the documents individually (there is not an integrated document) on an expedited schedule in order to support the contractor's programmatic needs.