

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 16, 2012

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending March 16, 2012

**DNFSB Staff Activity:** On March 15, 2012, the staff held a teleconference with personnel from the Livermore Site Office (LSO) and the laboratory contractor. The discussion focused on the technical basis for the respirable release fraction value used for a hazard analysis table event in the approved safety basis for the Plutonium Facility.

**Tritium Facility:** On March 17, 2010, LSO approved a justification for continued operations (JCO) intended to resolve concerns outlined in a letter from the Board dated January 27, 2010. The issues contained in that letter primarily amplified and expanded on issues originally identified during the first readiness assessment for the Tritium Processing Station (TPS) performed in August 2009. Those issues largely focused on the overall quality of the hazards analysis and the functional requirements associated with tritium gloveboxes. Since the JCO was approved, LSO and the contractor have exchanged several safety basis submittals and associated review comments, performed a second readiness assessment on the TPS following hardware changes, and the Board issued a second letter concerning weaknesses in the proposed credited control set. Despite these efforts, the facility operates largely as it did in 2009. In practice, the JCO: (1) formalized daily checks of tritium room monitors that were already being performed, (2) administratively placed operability requirements on the fire detection and alarm system to comply with existing required consensus code, and (3) implemented enhanced work control practices. With the exception of a newly installed fire door, no engineering or hardware improvements to the safety systems have occurred in the facility.

LSO is currently reviewing the latest iteration of page changes provided in January 2012 and working with the contractor to resolve outstanding comments associated with the performance criteria for the tritium gloveboxes—the very issue at the heart of the original readiness assessment finding. LSO does not have a schedule for resolving this issue and approving an updated safety basis. Once approved, the contractor is likely to need up to six months to implement the new control set.

**Emergency Management:** On March 12, 2012, the contractor performed the annual exercise required for several Emergency Planning Hazards Assessment facilities, including the Superblock nuclear facilities. This year involved an active shooter security scenario in a facility adjacent to Superblock. Incident command directed occupants in Superblock to conduct a security shelter-in-place. In the Plutonium Facility, various facility management staff responded to the shelter-in-place directive by transiting to an office and determining that personnel in the radioactive materials area were permitted to continue work. Following further direction from facility management, workers in the Tritium Facility convened in a conference room. In the Site Representative's opinion, personnel generally deferred to the roles and actions expected during a disaster self-help situation, which previously was the most commonly rehearsed emergency situation at the laboratory. The institutional drill and exercise schedule contains no other events for the remainder of the fiscal year that examine the integration of external response resources with facility or program personnel in the nuclear facilities.