

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 9, 2010

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending April 9, 2010

Rosen and Spatz attended the training for the W84 Nuclear Explosives Safety Study.

**Tritium Facility:** On April 1, 2010, the Facility Manager issued a memorandum to facility personnel defining Deliberate Operations. Deliberate Operations was one of the compensatory measures the Laboratory proposed as part of the Justification for Continued Operations associated with the identified safety basis and conduct of operations weaknesses (see weekly report dated March 5, 2010). In general, Deliberate Operations increases management attention associated with the operations of the Tritium Process Station (TPS), Tritium Science Station (TSS), Tritium Grinder System, and legacy waste activities. Of note, programmatic management approval is also required to ensure flow paths and boundaries for TSS and TPS operations are appropriate and maintain tritium confinement. Deliberate Operations also reiterates the Work Control Manual requirement that personnel attend the Weekly Activities List meeting to request work and adds a daily release of work activities by facility management.

This week, Laboratory personnel performed Hazard and Operability (HAZOP) studies for the TPS and TSS in support of the safety basis amendment to re-baseline the hazards analysis and subsequent control flowdown (see weekly report dated February 26, 2010). The HAZOP was primarily performed by a team of three safety analysts with consultations from programmatic, operations, and facility personnel. Given the characteristics of the operations, the team elected to utilize an activity-based approach to the HAZOP rather than a node-by-node structure.

**Radioactive and Hazardous Waste Management:** On April 7, 2010, the Livermore Site Office (LSO) approved the Laboratory's proposal to downgrade the B695 Segment from a hazard category 3 nuclear facility to a radiological facility. As conditions of approval, LSO requested the Laboratory: (1) submit documentation supporting revised hazard categorization, (2) submit the procedures and technical justification governing the segmentation between the safety basis for the Waste Storage Facilities and the approved, non-nuclear safety bases for B696S and B695 by May 3, 2010, (3) consider the LSO comments on the hazards analysis in development of the non-nuclear safety basis, and (4) confirm the downgrade plan is completed by June 7, 2010. A method to determine confirmation of the downgrade was not specified.

**Plutonium Facility:** On April 6, 2010, the Laboratory issued the critique report from the inadvertent activation of a facility safety alarm (see weekly report dated April 2, 2010). The report described the issues as (1) two unknown leads caused the alarm when touched, (2) a sound was through the paging system, and (3) a non-operable building page system. The apparent cause for these issues was identified as "poor documentation and legacy wires." The human performance analysis identified error-precursors associated with planning and scheduling of the work, lack of accurate drawings, and improper worker response to an unknown configuration. The overall conclusion was that this was a system-induced error and the corrective actions are to restore the page system, prepare red line drawings, and remove legacy components. The critique further commended the Acting Facility Manager and the Administrator for the Facility Manager for their conduct during the facility response to the inadvertent alarm.