

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 12, 2010

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending February 12, 2010

**Radioactive and Hazardous Waste Management:** On February 4, 2010, the Livermore Site Office (LSO) transmitted its comments to the laboratory on the revised hazards analysis table for the Building 695 Segment of the Decontamination and Waste Treatment Facility. The LSO review team, which included a chemical safety analyst from the Service Center, identified a considerable number of substantive comments. In particular, the team observed that the hazard identification table was incomplete and cited several examples of missed credible chemical hazards (e.g., exothermic reactions involving sulfuric acid, incompatible mixing, and hydrogen gas buildup). Other significant comments included the lack of identified engineered preventative features, incomplete treatment of vehicle-induced hazards and programmable logic circuit failures.

In lieu of resolving the comments, LSO also provided the laboratory an option to submit a plan to downgrade the facility from its current Hazard Category 3 status to radiological. LSO requested the plan include: (1) the assumptions used to ensure sufficient waste processing capability, (2) the method to control the radiological inventory below Hazard Category 3, (3) a commitment to develop required documentation for non-nuclear facility operations, and (4) a schedule and milestones for achieving radiological status prior to the safety basis annual update due date of July 7, 2010. If pursued, the downgrade plan is to be submitted by March 12, 2010.

**Emergency Management:** On Tuesday, the first ever Emergency Planning Hazards Assessment exercise involving an incident originating in the Tritium Facility was performed. The exercise scenario involved a loud popping noise and smoke associated with a light ballast. As a result, a tritium handler was startled and dropped a target containing 10 Ci of tritium. The target breached and produced a localized release. The exercise involved full participation from facility management, fire department, environmental health and safety, security, and emergency management. The exercise appears to have been beneficial for all parties involved. The formal after-action report is expected to be issued in a few weeks.

**Institutional Processes:** On January 29, 2010, the laboratory responded to LSO direction regarding a corrective action plan for issues and deficiencies associated with the Unreviewed Safety Question (USQ) process (see weekly report dated November 13, 2009). The first deliverable in the response was identification of the universe of documents used in the nuclear facilities and categorization of these documents as a function of USQ process applicability. The laboratory proposed 19 document types of which 4 were always subject to the USQ process, 4 were partially within the process, and 11 were always outside of the process. The second deliverable provided a plan for implementing the document categories and committed to develop a schedule within three months of approval. The third deliverable provided the mechanisms for controlling the document types that are subject to the USQ process. The laboratory proposed attaching the documents to Operational Safety Plans, attaching to work permits, or individual handling using the Enterprise Configuration Management System for change control. LSO is reviewing the response.