

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 17, 2007

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** M. J. Merritt, DNFSB Site Representative  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL)  
Report for Week Ending August 17, 2007

**Plutonium Facility Documented Safety Analysis (DSA) Implementation:** LLNL has implemented the third set of controls in accordance with the safety basis implementation plan and is accelerating the schedule for full implementation of the DSA. The third group of controls includes three safety-related structures, systems, and components (SSCs)—fire suppression, fire detection and alarm, and room ventilation—and four administrative safety management programs—fire protection, radioactive and hazardous material shipping, record keeping, and industrial safety and hygiene. Implementation ensures that SSCs are configured to perform the required function. Implementation of the room continuous air monitors—a holdover from the second group—has also been accomplished following approval by the Livermore Site Office (LSO) of page changes to the safety basis. These page changes provide clarification for the conditions necessary to enter the action statements defined in the technical safety requirements. Work has also begun on implementing the fourth and fifth groups. The fourth group includes the emergency power system, glovebox exhaust system, and programs for training and audits. This group will likely be completed by the end of August. The fifth group includes HEPA filters and programs for quality assurance, maintenance, and procedures.

The blue sheeting process being performed as part of contract transition will likely accelerate the completion of DSA implementation. If the facility is operating under both the DSA and the old safety analysis report at the end of the contract transition (September 30, 2007), then both sets of procedures would require blue sheeting. This process involves the review of many sub-tier documents. However, if the DSA was fully implemented by the end of transition, then only the DSA would be subjected to the blue sheeting process. This opportunity to avoid unnecessary reviews of outdated documents is expected to provide incentive for LLNL to attain full DSA implementation by September 30, vice the current deadline of November 15, 2007.

**Radiography Facility Operations and Critique:** On August 13, 2007, a critique was conducted to review deficiencies identified in Radiography Facility operations last week. The conduct of this critique represented the initial use of the new Nuclear Material Technology Program (NMTP) *Event Critiques* procedure in this facility. Weaknesses in the critique process were inadequate representation by key personnel, lack of formality, and lack of training for the critique leader. At the time of the critique, the facility manager had mandated that radiography operations were not permitted until the issues were addressed. Based on the critique, new work permits were developed and additional conduct of operations training was required for personnel responsible for directing work. Three days later, operations were authorized to perform radiography of a plutonium pit. The acting LSO facility representative identified weaknesses in the operation that were very similar to the weaknesses that necessitated the critique. The weaknesses were addressed during the pre-job briefing and the activity was performed in accordance with the controls identified in the work permit.