

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 18, 2009

**MEMORANDUM FOR:** Timothy Dwyer, Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending September 18, 2009

Staff members J. Shackelford and J. Anderson were at the laboratory this week to observe the Livermore Site Office (LSO) readiness assessment for the Tritium Facility Modernization (TFM) project. Operations in the Plutonium Facility were also observed.

**Institutional Processes:** On September 11, 2009, the laboratory submitted a corrective action plan to LSO for the self-identified deficiencies associated with the Unreviewed Safety Question (USQ) process. Development of the corrective action plan was directed by LSO and largely focused on the existence of procedures which were previously not subjected to the USQ process (see weekly report dated August 21, 2009). The resulting effort identified a total of 551 procedures that are used in the Superblock nuclear facilities and onsite Packaging and Transportation. Within this set, 136 were newly determined to be subject to the USQ process, of which more than 60 were recently screened and dispositioned through determinations as appropriate. This effort excluded facility-specific procedures used in the Radioactive and Hazardous Waste Management nuclear facilities, pending resolution of the technical safety requirement violation associated with the lack of procedures.

The corrective action plan also included a causal analysis produced utilizing the Cause-Problem-Symptom approach. The problems identified included: (1) a pre-existing pattern of programmatic procedure generation prior to implementation of a fully functioning USQ process, (2) incomplete training on the applicability and use of the revised USQ process, (3) lack of a centralized accounting process for procedures, and (4) lack of adherence to internal USQ processes. The cause was determined to be immaturity in the laboratory's Integrated Safety Management functional area model. Specifically, the report cites ineffective discussions between the Nuclear Operations Directorate—the functional area owner for the USQ process—and the Nuclear Materials Technology Program. The corrective actions provided do not appear to directly address this cause or provide commitments relative to establishing an enduring solution to problem 3.

**Radiography Facility:** On September 11, 2009, LSO approved the annual update to the documented safety analysis and technical safety requirements document. The annual update was submitted by the laboratory on September 25, 2008. Of note, this annual update considers the hazards associated with the x-ray generating equipment to be standard industrial hazards. As a result, the five safety significant controls previously associated with the x-ray generating equipment (shield walls, daisy chain key-actuated interlock system, interlock switches and gates, emergency shutdown buttons, and radiation area monitoring system and alarm) have been downgraded to a designation of equipment important to safety. These worker safety functions are now considered to be provided by the Radiation Protection Program. The overall control set now includes the administrative control programs and six Specific Administrative Controls associated with limiting materials in the facility. The annual update was directed to be implemented within 90 days.