

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 24, 2006

MEMORANDUM FOR: J. K. Fortenberry, Technical Director
FROM: M. J. Merritt, DNFSB Site Representative
SUBJECT: Lawrence Livermore National Laboratory (LLNL)
Report for Week Ending November 24, 2006

Conduct of Operations: In August 2005, the LLNL Nuclear Materials Technology Program (NMTP) initiated a conduct of operations program in the NMTP facilities (i.e. Plutonium Facility, Tritium Facility, Hardened Engineering Test Building, and Radiography Facility). The conduct of operations program guidance was promulgated in the *NMTP Conduct of Operations Manual*. All NMTP personnel with unescorted access to the facilities were required to be trained on the contents of the manual. The manual was recently revised based on operational experience during the past year. In general, the changes are appropriate. However, one of the manual changes appears to weaken NMTP management expectations for adherence to procedural controls.

Operational Safety Plans (OSPs) contain many of the specific safety controls for performing work in NMTP facilities. In the Plutonium Facility, approximately 50 OSPs comprise the full suite of capabilities (e.g., casting, machining, recovery operations) available from the facility workstations. The *NMTP Conduct of Operations Manual* procedure compliance section was revised to state that “OSPs are not considered procedures...” and “OSPs are not assigned a level-of use and are not discussed in this section.” This change either relaxes the expectations for OSP compliance or leaves the expectations undefined. Given the fact that important safety controls (e.g., criticality safety limits) are contained in OSPs, NMTP management should revisit the manual changes to ensure that management expectations of OSP compliance are appropriately defined.

Critique Process: NMTP management is developing a critique procedure based on the critique guidance contained in the *LLNL Environment Safety and Health (ES&H) Manual, Document 4.7, ES&H Analysis Methods*. The procedure is expected to provide specific instructions similar to those used at other DOE sites. Development of the procedure is nearing completion and will include aspects of Human Performance Improvement (HPI) principles. The goal of NMTP management is to improve the process for collecting information related to undesirable events and revise the facility processes to prevent recurrence using HPI principles. Development of this implementing procedure is a positive step toward improving operations in NMTP facilities.

Legacy Item Disposition: On November 10, 2006, LLNL requested Livermore Site Office (LSO) approval to increase the “at risk” time associated with the disposition of a legacy item referred to as Object-77. The previous LLNL request to perform the final disposition of Object-77 in 2004 stated that the “at risk” time that workers would not be fully protected from potential pressure hazards would be one hour. Based on mockup training to perform the activity, LLNL has requested that the “at risk” time be increased from one to two hours. In the judgment of LLNL management, rushing the work to meet the one hour limit would increase the probability of an accident. Based on the Site Representative’s observation of mockup training evolutions, the increase in allowable time appears to be appropriate.