

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 7, 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 September 7, 2007

**Livermore Site Office (LSO) Senior Nuclear Safety Advisor:** This week, the Senior Nuclear Safety Advisor for the LSO began his assignment at LLNL. The National Nuclear Security Administration (NNSA) posted a vacancy announcement for the position in March of 2006 and re-posted the position through March 2007. The creation of this position is consistent with advice provided to NNSA by the Board in 2005. The role of the incumbent will be to provide expert technical counsel to the LSO Manager on matters such as criticality safety, safety analyses and documentation, and systems engineering. The incumbent will also be expected to provide oversight of nuclear operations at LLNL nuclear facilities to ensure that the operations are carried out safely and in accordance with established procedures. The Site Representative met with the Senior Nuclear Safety Advisor this week to communicate areas of interest to the Board.

**Plutonium Facility Safety Basis:** On August 24, 2007, LLNL submitted Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs) page changes related to inspection of the Plutonium Facility structure. During the implementation of the new DSA and TSRs, LLNL noted a deficiency in the requirements to visually inspect the building structure. The DSA and TSRs correctly identified a surveillance requirement to inspect the safety-class portions of the structure, but did not explicitly require the inspection of the safety-significant portions of the structure. The revision to the DSA and TSRs specifically requires that the safety-significant structure be inspected annually during normal operations and promptly after a major event (e.g., fire, earthquake, aircraft crash). The scope of the safety-significant structural inspection would primarily consist of areas where safety-significant components are mounted to the building structure. LLNL has requested that LSO approve the changes within two weeks of receipt to support the DSA implementation plan schedule.

**Plutonium Facility Compensatory Measures:** The Plutonium Facility compensatory measures – put in place during the replacement of the second of two room ventilation system exhaust fans – have been removed. The compensatory measures prohibited activities involving dispersible material and activities involving welding or other hot work. LSO had approved LLNL's request to take up to 14 days to replace the fan, during which time these compensatory measures were in place. A TSR deviation was approved to allow the facility to support the accomplishment of several important programs without disruption. The fan was successfully replaced.

**Suspect/Counterfeit Parts Occurrence:** On September 6, 2007, LLNL reported the discovery of suspect/counterfeit parts in two LLNL facilities (ORPS report OAK-LLNL-LLNL-2007-0042). During a routine suspect/counterfeit parts walk-down, sections of Unistrut supports with unmarked grade 5 bolts were discovered. Building 235, which contains gloveboxes and hoods using small amounts of plutonium, was one of the facilities with the discrepant condition. Facility management has made the appropriate notifications and requested Plant Engineering replace the suspect/counterfeit parts.