

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 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 August 4, 2006

Startup and Restart of Nuclear Facilities: On July 31, 2006, the Livermore Site Office (LSO) submitted a corrective action plan to the National Nuclear Security Administration (NNSA) to address previously identified deficiencies in the LLNL and LSO procedures used to comply with DOE Order 425.1, *Startup and Restart Of Nuclear Facilities*. The LSO Standard Operating Procedure (SOP) is being revised to be consistent with the order requirements and address other deficiencies. The LLNL Environment, Safety and Health (ES&H) Manual is also being revised to ensure consistency with the order requirements. The LSO actions are scheduled to be complete by October 15, 2006. The LLNL actions are scheduled to be codified in the ES&H Manual by January 31, 2007.

Legacy Item Disposition: LLNL has submitted a Readiness Plan to disposition a legacy item referred to as Object-77. The disposition of the item presents potential hazards not routinely encountered in Plutonium Facility operations. Preparations to perform this activity will include integrated dry runs that are intended to demonstrate procedural adequacy, operator proficiency, and equipment operability. LSO has formed a team to observe the LLNL readiness assessment. The readiness assessment is currently scheduled for mid-August.

LSO Senior Nuclear Safety Advisor: NNSA completed interviews in an effort to fill a Senior Nuclear Safety Advisor vacancy at LSO. However, no selection was made to fill the vacancy. The position has been re-posted with a closing date of August 11, 2006. 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.

Nuclear Criticality Safety Training: This week, the first session of nuclear criticality safety training was successfully conducted in the Plutonium Facility. Students from other DOE sites assembled the Training Assembly for Criticality Safety (TACS) under the supervision of senior certified fissile material handlers. The TACS assembly, consisting of enriched uranium parts, was used to perform approach to critical, inverse multiplication plots in the "hands-on" portion of the course. The course also included classroom instruction on criticality safety fundamentals, regulatory requirements, hand calculations, and criticality safety evaluations. The establishment of the course provides the level of training needed to qualify contractor and DOE criticality safety engineers to DOE-STD-1135-99, *Guidance for Nuclear Criticality Safety Engineer Training and Qualification*.

Plutonium Facility Resumption Status: Approximately 80 percent of the work stations in the Plutonium Facility are either in operation or in trial operational periods. The work stations are controlled by Operational Safety Plans (OSPs) that are unique to the work station(s). Currently, about 40 OSPs are in operation or trial operation, and approximately 10 OSPs are in various stages of the resumption process. Included in the 40 operational OSPs are six OSPs that continued to be used through the stand-down. The six OSPs are currently going through a graded review as part of the resumption process. In addition, a few new OSPs have been established and utilized for new activities such as the nuclear criticality safety training.