

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 5, 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 January 5, 2007

Plutonium Facility Procedure Adherence: LLNL developed a set of safety controls in order to conduct a security exercise involving the Plutonium Facility. The controls were reviewed and approved by the Livermore Site Office (LSO) on December 8, 2006. During the security exercise later in December, specific safety controls were violated (ORPS report OAK-LLNL-LLNL-2006-0067). The controls were implemented using standard facility procedures, but adherence to the procedures was not achieved. The fundamental nature of this occurrence indicates a potential problem with the implementation of procedural controls in the facility during infrequent activities.

The security exercise was approved by LSO based on a number of controls including limiting the exercise activities in the Plutonium Facility to the radioactive material area (RMA) hallways and one specific laboratory room. The room selected was considered to represent a minimal radiological risk to the participants of the exercise. The laboratory room entry restriction was generally identified in the Operational Safety Plan (OSP) and specifically defined in the work permit that identified one allowable laboratory room for the purpose of the exercise. The use of OSPs and work permits for implementing administrative controls in the facility is the normal process for identifying and implementing such controls. All participants in the activity were required to attend a pre-job briefing for the activity and acknowledge by signature to follow the work permit controls. However, during the exercise, multiple laboratory rooms in the RMA were entered without the required safety review and authorization. This occurrence represents a violation of the Plutonium Facility authorization basis. LLNL has initiated an investigation to determine the causes of the incident and identify corrective actions.

Startup and Restart of Nuclear Facilities: On December 14, 2006, the National Nuclear Security Administration (NNSA) Administrator approved the LSO procedure for compliance with DOE Order 425.1C, *Startup and Restart Of Nuclear Facilities*. Specifically, the LSO standard operating procedure for startup and restart of nuclear facilities has been reviewed by the NNSA Chief of Defense Nuclear Safety (CDNS) and approved by the Central Technical Authority. Approval of this procedure satisfies one of the corrective actions identified by LSO to NNSA last fall (see weekly report dated October 13, 2006).

Plutonium Facility Occurrence: On December 22, 2006, Plutonium Facility management issued an occurrence report (ORPS report OAK-LLNL-LLNL-2006-0069) regarding the failure to inspect transuranic (TRU) waste containers within the time frame specified in the Plutonium Facility Technical Safety Requirements (TSR). The TRU waste containers are required to be inspected quarterly, but the inspection was not properly documented within the quarter. The documentation problem was due to the transition from the old Safety Analysis Report TSRs to the new Documented Safety Analysis TSRs (see weekly report dated December 8, 2006). The inspection was subsequently performed using the new TSR procedure.