

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 10, 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 August 10, 2007

Nuclear Material Packaging: In late-July, the Livermore Site Office (LSO) provided NNSA with a response supporting LLNL implementation of Board Recommendation 2005-1, *Nuclear Material Packaging*. The LSO letter forwarded the June 14, 2007, LLNL letter that provided LSO with a cost and schedule estimate to implement the draft DOE M 441.1-1, *Nuclear Material Packaging Manual*. Due to time constraints on the response date, LLNL did not conduct a thorough evaluation of its stored nuclear material against the requirements of the draft manual, but claimed to have a relatively good understanding of the requirements as they relate to the material stored at LLNL. Only one of the packaging configurations being considered was able to survive the drop test requirements—the DOE-STD-3013-compliant package. The Hagan can and the food pack can failed the drop test requirements. Based on the results of the drop tests, LLNL stated in its response that the cost to implement the packaging requirements would be approximately \$57 million over 11 years. Additionally, LLNL was unable to provide a resource-loaded schedule. LSO states that until the manual is finalized, a realistic resource-loaded schedule and funding requirements cannot be provided. LSO plans to continue to work with LLNL to refine the technical basis for the manual.

Independent Oversight Inspection: LSO has provided a corrective action plan (CAP) to NNSA to address issues identified by an inspection team from the Department of Energy Office of Environment, Safety and Health (ES&H) Evaluations, HS-64. In June, HS-64 released its final report, *Inspection of Environment, Safety and Health Programs at the Lawrence Livermore National Laboratory, May 2007*. The purpose of the inspection was to assess the effectiveness of ES&H programs at LLNL. Some specific areas of review were the corrective actions taken by LLNL and LSO to address safety issues identified during the previous inspection in 2004 (see weekly report dated January 14, 2005) and the functionality of the Plutonium Facility glovebox ventilation system and fire suppression system. The review of these systems was intended to evaluate the effectiveness of LLNL programs and processes for configuration management, surveillance, testing, maintenance, operations, and feedback and improvement. The CAP provides specific actions necessary to address weaknesses identified in the report including some deficiencies in maintenance and procurement of safety system components, and the effectiveness of feedback and improvement for both LLNL and LSO.

Active Confinement Review Scope: LSO directed LLNL to exclude Building 612 (waste storage building) from reviews of confinement ventilation systems prompted by Board Recommendation 2004-2, *Active Confinement Systems*. LSO states that since Building 612 is not authorized for transuranic waste storage per the approved documented safety analysis, it is effectively operated as a Category 3 nuclear facility and the Recommendation 2004-2 review process does not apply.

Nuclear Weapons Council (NWC) Visit: This week, the NWC visited LLNL. The NWC received briefings from LLNL and LSO. Additionally, the NWC toured the National Ignition Facility, the National Security Vault, and the Superblock—including a tour of the Plutonium Facility.