DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 8, 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 December 8, 2006

Independent Oversight Inspection: This week the Department of Energy Office of Environment, Safety, and Health Evaluations, HS-64 (formerly OA-40), visited LLNL in preparation for an upcoming audit. The HS-64 team will return in January to collect data and in late February to validate the findings in its report. Two important areas of review are the corrective actions taken by LLNL and the Livermore Site Office (LSO) to address safety issues identified in the previous audit in 2004 (see weekly report dated January 14, 2005) and the functionality of essential safety systems. The performance of this audit is expected to pose some resource challenges within the Nuclear Materials Technology Program (NMTP) organization and may delay implementation of the Plutonium Facility Documented Safety Analysis (DSA).

Legacy Item Disposition: On December 5, 2006, LSO approved an increase in the "at risk" time associated with the disposition of a legacy item referred to as Object-77. Based on LSO observations of mockup training to perform the activity, the "at risk" time has been increased from one to two hours. LSO indicates that this should allow workers ample time to complete the required tasks safely.

Plutonium Facility Criticality Safety Program: On November 22, 2006, LSO provided direction to LLNL regarding criticality safety deficiencies identified by the Board. In its letter to the LLNL Deputy Director for Operations, LSO requested responses to issues identified in the Board's October 11, 2006 letter on the matter. Specifically, LSO requested a formal response from LLNL not later than January 31, 2007 on its plans to:

- clearly articulate its policy statement on nuclear criticality safety;
- more clearly define the continuing training for nuclear criticality safety engineers;
- ensure that oversight walkthroughs will include observations of actual fissile material activities to determine if procedures are being followed;
- review the roles and responsibilities of personnel with criticality safety duties to ensure proper integration;
- strengthen conduct of operations for criticality safety controls implementation;
- address concerns from recent self-assessments; and
- address the Board's concerns regarding the configuration management of the Controlled Materials Accountability and Tracking System (COMATS).

Plutonium Facility DSA Implementation Plan: In September, LLNL implemented the first group of DSA controls in the Plutonium Facility (see weekly report dated September 22, 2006). The second set of controls has now been implemented in accordance with the safety basis implementation plan. The plan defines a phased approach to field implementation (i.e., surveillance) of safety-related structures, systems, and components (SSCs) and Safety Management Programs (SMPs). The second group of controls includes three SMPs – emergency preparedness, measurement and test equipment, and hazardous material safety – and three SSCs – gloveboxes, emergency battery lighting, and TRU waste containers. Room continuous air monitors (CAMs) were originally part of this group, but implementation is delayed due to the need to install additional CAMs to meet the DSA requirements. Subsequent groups of controls are scheduled to be implemented through September 2007.