

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 10, 2004

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** Michael J. Merritt, DNFSB Site Representative  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL)  
Report for Week Ending September 10, 2004

**DNFSB Staff Site Activity:** J. Plau and W. White were at LLNL on September 7 and 8 conducting a review of inactive actinide material issues and Heavy Element Facility operations.

**Plutonium Facility Safety Basis:** The Manager of the Livermore Site Office (LSO) has directed a path forward to resolve issues with the Documented Safety Analysis (DSA) proposed by LLNL. In particular, LSO has directed LLNL to resolve issues that were identified by the Board (see weekly report dated August 20, 2004). The direction to LLNL may result in the resolution of concerns that the Board raised in a letter to the National Nuclear Security Administration (dated 4/12/04) concerning LLNL's proposal to downgrade existing safety-class systems. In making this decision, LSO cites inadequate conservatism with LLNL's leak path factor (LPF) analysis in conjunction with other factors associated with the source term calculations that support the DSA. In the judgement of LSO, LLNL did not provide sufficient technical basis for downgrading existing systems from safety-class to safety-significant status.

Specifically, LSO has directed LLNL to take the following actions:

- Revise the DSA and Technical Safety Requirements to retain the Emergency Power System and active ventilation systems at their existing safety-class levels;
- Provide resolution of outstanding DSA issues identified by LSO in February 2004; and
- Utilize the more conservative leak path factor analysis (performed by Omicron Inc.) to support the source term calculations in the DSA.

The LSO direction does not preclude downgrading safety-class systems in the future should LLNL continue to pursue this objective and circumstances dictate such a change.

**Inactive Actinide Materials Program:** In February of 2004, LLNL completed the stabilization and packaging of nuclear material covered by Board Recommendation 94-1. LLNL is continuing to stabilize and repackage additional material that is not needed for programmatic use as part of the inactive actinide program. The goal is to characterize, stabilize and repackage excess material by the end of fiscal year 2006. The excess material will eventually be packaged into long-term storage containers that meet DOE-STD-3013, *Stabilization, Packaging, and Storage of Plutonium-Bearing Materials*. It is expected that hundreds of items will be consolidated into approximately 60 DOE-STD-3013 robust welded containers. The resource requirements to complete this work have been identified, however, adequate funding for fiscal year 2005 and 2006 activities cannot be confirmed.