

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 9, 2005

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** Michael J. Merritt, DNFSB Site Representative  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL)  
Report for Week Ending December 9, 2005

**Radiological Control Program Review - Corrective Action Plan:** On November 28, 2005, the Livermore Site Office (LSO) provided LLNL with comments on the corrective action plan (CAP) resulting from the “for-cause” review of the radiological control program conducted last January (see weekly reports dated January 7, 2005 and April 1, 2005). The review was conducted due to concerns about occurrences of radioactive contamination control barrier failures. The LLNL CAP established a number of commitments to improve the radiological assessment process and ensure that deficiencies are tracked to closure. Additionally, the CAP identified the need to increase staffing and provide clarification of technical bases supporting radiation protection procedures and equipment. The LSO response to the CAP requests that LLNL senior management ensure that the corrective actions resolve the issues at the institutional and facility level. Specific issues requiring laboratory management attention include clearly defining personnel roles and responsibilities, assuring appropriate resource allocation, and providing adequate staffing.

**Plutonium Facility Resumption:** Several more programmatic activities began operational trial periods within the past two weeks. Work stations in various laboratory rooms have been restarted following the protocol documented in the *Process for Standing-Up Workstations to Limited Operations*. From an operational perspective, LLNL has authorized resumption of approximately 25 percent of the capabilities available in the facility. When all of the “reduced activities” are resumed, the facility will be essentially in full operation<sup>1</sup> in terms of utilization. The primary operational restriction that remains is the existing 5 kilogram material-at-risk (MAR) room limit that was defined as a compensatory measure for deficiencies related to the fire protection program. In general, the impact of this MAR limit is to restrict the number of concurrent operation that can be performed in a room, not what operations can be performed. LSO understands that lifting the compensatory measure of MAR limits would in effect be tacit approval for unrestricted operations.

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<sup>1</sup> Scope of Plutonium Facility “reduced activities” - On October 10, 2005, LSO approved resumption of “reduced activities” in the Plutonium Facility. The scope of the resumption was referenced in a memorandum of understanding that linked to a LLNL memorandum (NMTP-05-031). This memorandum included an attachment (Attachment 2, Revision 1, dated May 4, 2005) that listed NMTP programmatic projects. The attachment tabulated various projects (e.g., pit surveillance, corrosion studies, thermal testing) and the LLNL proposal of what activities would be included in the resumption. Only three projects were considered to be outside the scope of reduced activities: (1) legacy item disposition; (2) legacy material packaging to meet DOE-STD-3013; and (3) inactive actinides stabilization and packaging. Within the remaining projects, some work would be deferred, and some operations would be restricted (e.g. use of plutonium in the tilt-pour furnace).

One measure of the scope of reduced activities is the amount of facility capability that can be utilized. The capability resides in the work stations within laboratory rooms and is controlled by Operational Safety Plans (OSPs) that are unique to the work station(s). Approximately 50 OSPs comprise the full suite of capabilities (e.g. casting, machining, and recovery operations) available from the facility work stations. In essence, all of the OSPs have been authorized for restart as part of reduced activities.