

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 21, 2006

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director  
**FROM:** J. Plaue, Acting DNFSB Site Representative  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL)  
Report for Week Ending July 21, 2006

**DNFSB Staff Site Activity:** M. Merritt was offsite this week at the American Glovebox Society annual conference in San Antonio, Texas. Staff members C. March, R. Layton, and J. Plaue were at LLNL reviewing the Fire Protection Program. J. Plaue also provided site representative coverage.

**Tritium Contamination Occurrence:** On July 13, 2006, LLNL management issued an occurrence report (ORPS report NA-LSO-LLNL-LLNL-2006-0032) regarding the detection of tritium contamination in excess of the limit specified in Appendix D of 10 Code of Federal Regulations (CFR) 835, *Occupational Radiation Protection*. The contamination was detected during routine radiological monitoring of laboratories in two buildings—Building 298 (B298), a support facility under the National Ignition Facility program Directorate; and the Radiation Calibration Laboratory (RCL). Based on initial reports, the source of the contamination has been traced to a suspect device which was brought from the RCL to B298 on June 22, 2006, in order to function test tritium monitors. Followup surveys of additional suspect areas have identified tritium contamination in several locations and associated pieces of equipment; however, all of the positive results for surveys performed outside of the two facilities have indicated very low contamination levels. As stated in the occurrence report, bioassay results for individuals who may have come in contact with the contamination have either been below detection limits or well within the baseline levels expected for occupational tritium workers. Survey and recovery work remains ongoing.

Also on July 13, 2006, the Associate Director of Safety and Environmental Protection appointed a six-person Incident Analysis (IA) Committee. The IA is operating under procedures found in the LLNL *Environment, Safety and Health Manual*, which allow the IA to assume control of the situation and perform a detailed investigation leading the determination of root cause(s) and judgements of needs. The appointment memorandum specifies that the scope of the investigation includes all aspects of the incident and requests a final report in late August. Additionally, a human performance review was requested as part of the report. These reviews have been successful at other sites. The Livermore Site Office (LSO) has assigned a representative to observe the IA activities.

**Configuration Management:** On July 14, 2006, LSO formally requested the Nuclear Materials Technology Program (NMTP) provide an update to the resource-loaded schedule for configuration management of vital safety systems. Prior discussions between LSO and NMTP representatives indicated a need to revise the plan and schedule to reflect anticipated delays (see weekly report dated June 16, 2006). The previous schedule was transmitted to the Board in an October 26, 2005, letter from the Administrator of the National Nuclear Security Administration. That letter also stated a risk management plan and project execution plan would be developed to support the schedule. The status of these documents remains unclear.