

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 23, 2009

**MEMORANDUM FOR:** T. J. Dwyer, Technical Director  
**FROM:** B. Broderick and R.T. Davis  
**SUBJECT:** Los Alamos Report for Week Ending October 23, 2009

**Transuranic Waste Operations:** This week, Area G personnel discovered two unvented containers dispositioned as low level waste that should have been characterized as transuranic waste. One container was retrieved from a disposal pit and secured in a vented overpack and planning continues to retrieve the other affected container from a disposal shaft. Both affected drums originated at TA-18 and both contain actinide sources contained within lead shielding pigs. During the characterization process at TA-18 the weight of the shielding material was inappropriately applied to the calculation that determines whether an item is low level or transuranic waste. In response to this discovery, Area G management has suspended all source shipments to Area G until weaknesses in the characterization process can be addressed. An extent of condition review is also being conducted to determine if other sources previously disposed of as low level waste were affected by similar characterization errors.

**Chemistry and Metallurgy Research (CMR) Building:** LANL declared a Potential Inadequacy in the Safety Analysis this week associated with HEPA filters at CMR. During a LASO safety system oversight review of HEPA filters across the site, LANL could not verify performance of three tests at CMR (related to air distribution and mixing in the filter plenums) in accordance with ASTM F1471, *Standard Test Method for Air Cleaning Performance of a High Efficiency Particulate Air-Filter System*. This standard is specifically called out in the CMR Technical Safety Requirements. As a compensatory measure, CMR personnel are verifying fire suppression riser pressure daily (the accident scenarios that credit the HEPA filtration are certain wing fire scenarios).

**Plutonium Facility:** On Friday, facility personnel completed the corrective actions and operability determinations associated with Uninterruptible Power Supply (UPS) transient that occurred last week and returned the facility to operations mode (with the exception of one area that is impacted by the fire suppression issue discussed below). The LANL investigation into this event to date indicates that a power supply failure (associated with a data server) caused a power transient on the UPS bus sufficient to result in the event (i.e. facility control system loss of communication, criticality alarm system activation and ventilation shutdown). As a part of the corrective actions, LANL is evaluating additional diagnostics and other actions to improve the existing UPS. For the longer term, a seismically qualified safety class UPS will be installed in the facility as a part of ventilation system improvements included in the TA-55 Reinvestment Project Phase 2. Facility management also plans to pursue a procedure to manually start and maintain zone 1 (i.e., glovebox) ventilation for situations when the facility control system is not operable.

Programmatic activities at the Plutonium Facility remain suspended pending implementation of Justification for Continued Operations controls associated with flow density issues for the fire suppression system. This week, LANL began Implementation Verification Reviews, which will be done for each individual laboratory room, to review implementation of the improved combustible loading program. LANL expects to complete reviews (and corrective actions, if any) to support resumption of programmatic operations for some laboratory rooms next week.