

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 13, 2011

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending May 13, 2011

DNFSB Staff Activity: The Board's staff held teleconferences this week with Livermore Site Office (LSO) and laboratory contractor personnel to discuss the HOTSPOT health physics code and the readiness determination for disassembly of a nuclear explosive like assembly (NELA).

Startup and Restart: On May 3, 2011, LSO approved the startup notification report (SNR) for the 3rd quarter. The SNR added a new waste management tent activity in the Plutonium Facility. The projected schedules for all of the existing SNR listed activities also slipped by several months—program personnel continue to struggle with effective project planning for new activities. LSO also determined that the disassembly of the NELA did not warrant inclusion on the SNR based on information from the contractor (see weekly report dated April 8, 2011).

Plutonium Facility: On May 3, 2011, LSO approved without conditions the request to downgrade the designation of the Emergency Battery Lighting System from safety significant to defense-in-depth (see weekly report dated March 25, 2011).

Tritium Facility: On May 9, 2011, contractor personnel provided a briefing to LSO regarding operational issues experienced with the Tritium Grinder System (TGS) (see weekly report dated April 8, 2011). From a safety perspective, the contractor presented the cumulative estimated worker doses for TGS operations as 5.5 mrem for 2010 and 1.7 mrem for 2011 to date. These dose assignments include a factor of 15 to account for the tritium solubility associated with the particulate grinding debris; however, the technical basis for this factor is still undergoing internal contractor review.

Operationally, the contractor has eliminated the use of metal screen baskets to hold items as they are fed into the TGS. Large metal shards resulted from these baskets and created issues with the collection bags and the chute vacuum valve. As a result, the contractor will now bundle phone dials and other TGS feedstock using aluminum foil. The contractor has also increased the frequency of rate-of-rise system leak checks to minimize the potential for future air ingress. These changes are not yet reflected in the procedure, but are being exercised through the a modification to the work permit for trial period operations. Programmatically, the contractor proposed continued use of the TGS as the best alternative to eliminate the approximately 1.75 million British phone dials that are currently stored on site. The contractor presented the current best estimate for completion of the phone dials as late 2014.

Transuranic Waste Operations: On May 5, 2011, LSO submitted to Department of Energy Headquarters a request for deviation from the *Contact-Handled Transuranic Waste Instructions* (see weekly report dated February 11, 2011). Approval of the deviation would allow the contractor to segregate sharps and utilize radiography instead of un-wrapping the sharps for the normally required narrated video. Existing waste drums will still require hands-on sorting to identify and segregate sharps. Based on observations of recently generated waste parcels, the Site Representative believes that the contractor may need to alter practices to minimize inclusion of comingled waste with sharps in order to effectively leverage the deviation for newly generated waste.