

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 15, 2013

**MEMORANDUM FOR:** Steven Stokes, Acting Technical Director  
**FROM:** Jonathan Plaue, DNFSB Site Representative  
**SUBJECT:** LLNL Activity Report for Week Ending March 15, 2013

**Feedback and Improvement:** Today, facility management proactively executed a safety pause in reaction to a series of recent minor lapses in adherence to policies and procedures. Further, management recognized increased morale concerns with the nuclear facility workforce stemming from programmatic uncertainty and the current fiscal climate at the laboratory. During the pause, management emphasized the need to avoid complacency, discussed aspects of Human Performance Initiative, and highlighted stress management practices.

**Engineering:** On March 12, 2013, the Site Representative met with Livermore Field Office (LFO) and contractor personnel to discuss the status of the 10-year assessment of the site natural phenomena hazards (NPH) required by Department of Energy (DOE) Order 420.1b, *Facility Safety*. The contractor completed their last assessment in April 2002, began planning an update in 2011, but was unable to execute due to funding constraints. In the next few weeks, the contractor expects to solicit proposals from outside firms to conduct the analysis of the seismic component of the NPH assessment. The results of this analysis, expected by the end of the fiscal year, are likely to trigger additional analysis to determine the response of the structures, systems, and components to the revised seismic hazard. LFO is now developing their oversight approach.

**Plutonium Facility:** On March 13, 2013, facility management declared a Potential Inadequacy of the Safety Analysis (PISA) concerning the potential for the Tritium Facility stacks and some security poles to impact safety class equipment during a seismic event. The contractor believes that the stacks and poles were designed to withstand the postulated seismic event; however, this fact and associated requirements to preserve this capability are not captured in the safety basis. LFO staff identified this issue as part of their extent of condition review performed in response to the Board letter dated December 13, 2011. LFO and the contractor recently revisited their initial conclusion that the identified issues did not constitute a PISA.

**Tritium Facility:** On March 13, 2013, the contractor presented to LFO personnel the results of the recent inspections of the two facility stacks (see weekly report dated March 1, 2013). The contractor found the interior coating of Stack 1 to be in good condition with only minor surface rust; however, the interior coating of Stack 2 was significantly deteriorated with some surface rust, but no visible pitting. Overall, the contractor concluded that video evidence demonstrated no corrosion or deterioration sufficient to warrant additional structural analysis and recommended video inspections on a five-year periodicity. This information will likely contribute to resolution of the PISA discussed above.

**Transuranic Waste Management:** On March 12, 2013, LFO submitted to DOE Headquarters a request for deviations to DOE Notice 435.1, *Contact-Handled and Remote-Handled Transuranic Waste Packaging*. LFO requested the ability to: (1) utilize pipe overpack containers and the new Criticality Control Container, which are containers not currently approved in the Notice and (2) overpack existing legacy items that are less than 4 liters without opening the inner containers for videography, as required by the Notice, assuming adequate process knowledge and the use of supplemental radiography. LFO estimates that these deviations apply to about 600 legacy containers and will minimize worker risk while improving the efficiency of shipments to the Waste Isolation Pilot Plant.