

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 9, 2012

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending March 9, 2012

DNFSB Activity: On March 6, 2012, personnel from the Livermore Site Office (LSO) and the laboratory contractor briefed the Board via videoteleconference on actions taken in response to the Board's letter dated December 13, 2011. LSO indicated actions were underway to adjust the priorities in the Plutonium Facility's fire alarm system and to study options and feasibility for upgrading wooden enclosed HEPA filters by June 13, 2012. LSO intends to present the results of this study as part of the one-year reporting requirement covering several other safety systems.

Last week, the contractor formally entered actions associated with the letter into the institutional Issues Tracking System. Most of the issues have actions due by November 13, 2012. LSO has a single open action in its tracking system to respond to the remaining issues.

Waste Storage Facilities (WSF): On March 8, 2012, the contractor submitted to LSO a revised version of the 2011 annual update to the safety basis. This revision reflected significant rework based on issues identified by LSO concerning the statistical analysis of material-at-risk (see weekly report dated August 12, 2011). The highest consequence postulated accident scenario involves an earthquake induced collapse of a bridge crane and subsequent fire, resulting in an estimated 47.8 rem to the collocated worker and 6.67 rem to the maximally exposed offsite individual. The identified control set is similar to the existing safety basis—there are no safety class controls; the building structures and transuranic waste containers are credited as safety significant; and several Specific Administrative Controls are identified to protect material-at-risk, combustible loading, and assumed initial conditions for aspects of the facility configuration. LSO intends to consolidate their review comments by April 23, 2012.

Conduct of Engineering: On March 6, 2012, the Engineering Directorate declared a management concern (NA--LSO-LLNL-LLNL-2012-0013) after managers were informed that errors and other inconsistencies were identified in an approved mechanical engineering safety note (MESN) used for equipment in the Plutonium Facility. The errors were identified by the Board's staff, as well as facility personnel during their acceptance review of the MESN. The errors did not invalidate the conclusion of the MESN and have since been corrected. However, in response Engineering management intends to conduct an extent-of-condition review to independently assess the quality of a sampling of recent MESNs performed across the laboratory. The review will also examine whether expectations need to be strengthened for the roles of MESN reviewer and approver.

Plutonium Facility: On Friday, program personnel held the final systems level engineering design review for an upcoming classified experiment to be performed in the Plutonium Facility. One action item was identified by the facility Health Physicist concerning contamination control practices captured in the procedure used to respond to abnormal situations. Facility personnel also previewed a work permit for a test using surrogate materials in anticipation of approving the permit next week and conducting the test by the end of this month.