

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 21, 2012

MEMORANDUM FOR: Timothy Dwyer, Technical Director
FROM: Jonathan Plaue, DNFSB Site Representative
SUBJECT: LLNL Activity Report for Week Ending December 21, 2012

Plutonium Facility: On December 11, 2012 the Facility Manger declared the December 2011 update to the safety basis to be implemented. Of note, the Facility Manager indicated that the Toxic Gas Control System, Hydrogen Gas Isolation System, and Hydrogen Gas System were not implemented and are not currently in service. The Implementation Verification Review (IVR) for this update is planned to begin next month. Institutional procedures provide discretion for the Facility Manager to utilize the IVR before or after officially declaring implementation.

Tritium Facility: On December 19, 2012, the Facility Manager declared the 2009 update to the safety basis to be implemented. A three person IVR team completed their review last week and identified: (1) an implementation deficiency (indicates a technical safety requirement (TSR) is not implemented) concerning the an error in the room numbering on the spreadsheet used to track compliance with credited combustible loading limits; (2) a deficiency (a non-compliance with a requirement that is not a TSR) concerning inadequate documentation supporting compliance with the limit on maximum releasable hydrogen content in certain gloveboxes; and (3) 11 observations primarily focused on issues concerning poor TSR content and format. Both deficiencies were corrected and the observations were captured to support continuous improvement—this is the second IVR to identify observations concerning TSR content. LSO representatives shadowed the IVR and noted that the lack of a completed system design description for the safety significant tritium room monitors represented less than ideal configuration management for a new safety system.

After a protracted development, approval, and implementation time frame, the 2009 update represents an improvement to the clarity and detail in the safety basis. With successful implementation, the justification for continued operations (JCO) developed in response to the Board's letter dated January 10, 2010 was discontinued resulting in the elimination of TSR-level protection for the fire detection and alarm system. Instead, the Livermore Site Office (LSO) approved a credited control strategy for fires that relies on administrative limits on combustible materials, tritium room monitors, and worker self-protective actions. The other primary element of the JCO dealt with hazards associated with exposures to workers from tritium releases from certain glovebox operations. The updated safety basis preserves the glovebox barrier as safety significant and formalizes the safety significant status afforded under the JCO to the tritium room monitors.

Waste Storage Facilities: On December 17, 2012, the LSO Manager approved with conditions the update to the safety basis initially submitted by the contractor in June 2011. The conditions of approval include a new Specific Administrative Control to prohibit storage of transuranic waste in certain tent structures and direction to correct as part of the next annual update background information related to natural gas pipelines in proximity to these nuclear facilities. Overall, the safety significant systems for these facilities include approved waste containers, the building structures for collapse avoidance and wind resistance, and a certain partition wall.