DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 14, 2011

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending January 14, 2011

Plutonium Facility: This week, the NNSA site office conducted a workshop with LANL personnel to discuss the status of Seismic Analysis of Facilities and Evaluation of Risk (SAFER) project activities related to the Plutonium Facility; details of the conceptual design for upgrading the fire suppression system to seismic performance category-3 (PC-3); and the path forward and status of Recommendation 2009-2 deliverables. LANL personnel noted that the facility seismic evaluation was behind schedule and would not be complete, including peer review, until April (previous schedule was January). To accommodate this delay, Plutonium Facility personnel plan to request an extension to the SAFER Justification for Continued Operations associated with increased seismic hazard identified in the 2007 updated probabilistic seismic hazard analysis. LANL personnel asserted that the new schedule remains adequate to support the Documented Safety Analysis update scheduled for May (identified as a Recommendation 2009-2 deliverable) that will describe the proposed laboratory strategy for addressing challenging seismic accident scenarios.

The conceptual design for the fire suppression system upgrade to PC-3 has been submitted to the site office. NNSA plans to provide comments on the design this week. LANL noted that other Recommendation 2009-2 deliverables are on schedule including the conceptual design for PC-3 upgrades to appropriate portions of the confinement ventilation system.

Transuranic Waste Operations: Technical Safety Requirements (TSRs) for the WCRR repackaging facility include Limiting Conditions for Operation (LCO) associated with combustible loading. One of these combustible loading LCOs states that no combustible liquids shall be stored or used within the WCRR repackaging facility when inventory is present except combustible liquids found inside waste drums undergoing repackaging activities. There is a daily surveillance requirement associated with this LCO to verify that no combustible liquids are stored or used in the facility when inventory is present. Last week, facility personnel recognized that drum lift devices collocated with the waste characterization glovebox contain hydraulic fluid that is combustible. In response, facility management declared a potential inadequacy of the safety analysis. NNSA site office personnel have questioned whether this issue should have been categorized as a TSR violation rather than a PISA since the facility has operated for several years without complying with a combustible loading LCO and having performed TSR-level surveillances throughout this time affirming that no combustible liquids were used or stored in the facility when in fact combustible liquids were present.

This week, LANL submitted and NNSA approved a TSR change that only prohibits combustible liquids with a flammability rating exceeding a certain threshold, which hydraulic fluids do not exceed.

Radioactive Liquid Waste Treatment Facility (RLWTF): LANL recently submitted a Basis for Interim Operations (BIO) and new TSRs to the site office for approval. This Documented Safety Analysis was developed in accordance with 10 CFR 830. These documents update the previous safety basis submitted in September 2009 that had numerous comments from the site office. RLWTF is currently operating under a safety basis that was approved in 1995. The BIO supports hazard category 3 liquid waste operations with a material-at-risk limit of 55 Am-241 equivalent Ci, one safety significant design feature (transuranic waste tanks) and 10 safety management programs.