

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 5, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending March 5, 2010

This week, Board members J. Bader, L. Brown, J. Mansfield and P. Winokur along with staff members T. Dwyer, M. Moury and J. Pasko were onsite to meet with NNSA site office and LANL personnel to discuss Recommendation 2009-2 and activities at LANL defense nuclear facilities.

Plutonium Facility – Seismic Safety: LANL described the plans and progress on risk reduction activities at the Plutonium Facility that will be captured in a seismic safety strategy, which is expected to be issued this month. Near-term actions to be completed by the end of calendar year 2010 are expected to further reduce the potential offsite dose consequence for the bounding seismically-induced fire scenario. The plan will also include longer term actions to evaluate and potentially upgrade key safety systems (fire suppression and ventilation systems).

Transuranic Waste Facility Project: This week, LANL submitted the Safety Design Strategy, developed in accordance with DOE-STD-1189, for the Transuranic Waste Facility (TRUWF) to the site office for review. The scope of the TRUWF includes waste storage and characterization functions only (i.e., no open-drum waste processing or size reduction). The safety strategy currently does not anticipate the need for safety class structures, systems or components. Safety significant control functions identified are the facility structure, fire suppression system (in storage buildings), transuranic waste containers, and controlled separation distance between storage buildings to prevent fire propagation. The safety strategy asserts that because of the confinement provided by containers, no safety related building confinement or exhaust ventilation will be necessary. The seismic design criteria (SDC) for the storage buildings and associated fire suppression systems are expected to be SDC-2. A LANL safety design integration team, as recommended by DOE-STD-1189, has been chartered for this project.

Work Control: In February, the LANL Principal Associate Directors for Science, Technology and Engineering; Weapons Programs; and Global Security issued a joint response to a January NNSA site office letter that highlighted recent safety incidents involving research and programmatic operations and requested corrective action. The LANL response identified areas, including hazard definition and evaluation, where the implementation of institutional work control processes were inconsistently applied across the laboratory.

In their response letter, LANL senior management outlines a plan to address the areas of inconsistency and improve the safety of research and development (R&D) activities. Steps in the improvement plan include developing common approaches for defining the safety envelope for moderate hazard R&D work, improving the training and supervision of students and post-docs, and identifying communities of expertise in elevated risk areas that can be drawn upon to peer review proposed experiments to strengthen subject matter expert review. The LANL Principal Associate Directors also commit in the letter to meet with site office personnel quarterly to provide progress reports (site rep weekly 1/22/10).