DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 3, 2009

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending July 3, 2009

Transuranic Waste Operations: This week, LANL successfully completed the campaign to retrieve sixteen remote handled transuranic waste canisters from underground storage at Area G and ship them to the Waste Isolation Pilot Plant (site rep weeklies 5/29/09, 5/15/09 and 5/1/09).

Also at Area G, operators in the Dome 231 Permacon recently began processing low-activity drums containing debris waste forms. Until several weeks ago, the Permacon had been used to remove free liquids from very low-activity (less than hazard category 3) drums containing non-dispersible solidified waste forms. The new campaign involves transferring bagged debris waste from degraded or suspect drums into new, compliant drums for disposal at WIPP. These activities do not involve any sorting or segregating of the debris waste and inventory limits remain below the hazard category 3 level. Personnel protective equipment, including a respirator, is relied on to protect workers from hazards associated with the contaminated debris waste. This new activity is the first step in the lab's plans for increased use of the Permacon to perform open-drum processing activities that will eventually include sorting operations with higher-activity debris waste to increase LANL's legacy waste disposition rate (site rep weekly 5/1/09).

Plutonium Facility: The site office approved a justification for continued operation (JCO) this week that provides the safety basis to allow movement, handling and radiography of non-safety class heat source plutonium containers. The JCO includes compensatory measures that will be implemented as specific administrative controls to limit the time non-safety class containers will be removed from the vault water bath and subject to increased temperatures due to self heating. The JCO also includes implementation of a daily surveillance of the vault water bath to ensure non-safety class containers are covered by at least one inch of water. This control was previously required by a standing order and is also included in the new Documented Safety Analysis that has yet to be implemented. The JCO now formalizes this control and ensures earlier implementation (site rep weeklies 6/12/09, 3/27/09).

There are two particularly large non-safety class containers that have been stored under water in a sink outside of the vault. The JCO retains the previously identified compensatory measure to perform a daily surveillance to ensure these containers remain covered with water. The JCO allows seven days after implementation to either open the containers in a glovebox or reconfigure the vault water bath to support storage of these containers. LANL has also successfully completed qualification activities, including drop testing, of a new robust container called the Fuel Storage Outer (FSO). The JCO approves the use of FSOs as safety class containers for overpacking and storing heat source Pu.

Chemistry and Metallurgy Research Building (CMR): This week, LANL presented the preliminary results from the recent Director's Independent Assessment of CMR facility operations. Overall, the team concluded that CMR was operated in a safe and secure manner due to the commitment and performance of CMR's facility and programmatic personnel. The review team did note staffing shortages in several areas (e.g. engineering, fire protection, emergency preparedness) that may impact the sustainability of compliant operations. The team also noted system and equipment inadequacies, with the fire protection systems in particular, and a lack of clarity and

formality for a facility SAC and some safety management programs (site rep weeklies 6/19/09, 10/24/08).