

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 29, 2010

MEMORANDUM FOR: T. J. Dwyer, Technical Director
FROM: B.P. Broderick and R.T. Davis
SUBJECT: Los Alamos Report for Week Ending January 29, 2010

Radioactive Liquid Waste Treatment Facility (RLWTF): This week, LANL attempted to perform the first transuranic sludge drum tumbling activity in Room 60A since restart. The initial steps in this activity involve slurry and transfer of sludge from TK-7A, the sludge settling tank, to TK-6 and then gravity drain of the sludge to a waste drum. The transfer to TK-6 went as expected; however, during the gravity feed to the waste drum, a blockage in the system occurred such that only a couple of gallons of sludge were transferred to the drum (22 gallons were expected). To address the blockage, RLWTF personnel developed a temporary modification to allow backflush of TK-6. During installation of the modification, a small amount of sludge was released causing contamination in the area and on the personal protective clothing of one operator. Next week, RLWTF personnel plan to resume installation of the temporary modification to address the system blockage.

RLWTF personnel have made two transuranic liquid transfers from the WM-66 acid waste receipt tank into Room 60 tanks. These transfers provide sufficient tank space for the Plutonium Facility to make a transuranic liquid waste transfer, which is currently scheduled for mid-February.

Plutonium Facility – Isotopic Fuels Impact Test (IFIT): This week, LANL began the Laboratory Readiness Assessment (LRA) for IFIT operations at the Plutonium Facility. These operations involve impact testing heat source plutonium assemblies using an inert gas launcher to obtain data that will support engineering, quality assurance and NASA mission safety analysis. The last heat source plutonium test at IFIT was performed in 2001. Field observations associated with the LRA were completed on Friday and included an inert surrogate shot and drill (simulated loss of assembly and inner containment). The LRA team plans to complete their assessment next week. An NNSA Readiness Assessment is planned for late-February to support IFIT operations beginning in April.

Plutonium Facility - Fire Suppression System: Physical modification work has begun to address deficiencies associated with fire suppression system (FSS) components in one of the primary heat source plutonium processing laboratories. These deficiencies do not allow the FSS to provide the required fire water flow density to all areas of the room. Programmatic work in this laboratory is restricted until the fire suppression system modifications are complete, which could be as early as this weekend. Addressing fire-related vulnerabilities in this room are particularly important since it contains both a large amount of material at risk and a large quantity of combustible material in the form of thick plexiglass slabs used for radiation shielding (site rep weeklies 10/30/09, 10/23/09).

Fire Protection: In the late 1990's, the NNSA site office granted several equivalencies to National Fire Protection Association (NFPA) standards that allowed LANL facilities to perform required inspection, testing and maintenance (ITM) activities for fire suppression and alarm systems less frequently than prescribed by NFPA. Last week, the site office formally cancelled these equivalencies for LANL's nuclear and high hazard facilities and directed LANL to achieve compliance with the NFPA-mandated ITM frequencies within 60 days.