DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 23, 2025

TO: Technical Director
FROM: Los Alamos Site Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending May 23, 2025

Plutonium Facility–Operations: Triad personnel recently started processing the first shipment of heat source plutonium material from Idaho National Laboratory. This activity is being performed under additional safety basis controls contained in a documented safety analysis addendum that required approval by NNSA headquarters, as potential mitigated accident consequences could exceed the evaluation guideline for a public receptor (see 9/6/2024 report). The safety basis addendum supporting this activity temporarily allows for higher material-at-risk limits for heat-source plutonium in certain areas of the facility. The controls in this addendum apply to the limited duration between opening the outer shipping container and repackaging the material into new containers, which protect the material from design basis accidents. One of the controls is a limited condition for operation (LCO) with associated surveillances, ensuring the material is placed in robust containers when not being actively processed or packaged. Facility personnel had to enter this LCO when there was a continuous air monitor (CAM) alarm unrelated to this activity that required workers to evacuate the area and leave the material unattended for a short amount of time. The alarm turned out to be false.

Plutonium Facility–Radiological Protection: Facility management and workers met to review lessons learned from three recent contamination spread events that exceeded the alarm threshold of local CAMs. The work was related to decontamination and decommissioning activities occurring in the facility. Two events involved waste bagging. Post-event analysis of fixed air monitors and CAM records determined that the airborne contamination level for the first event exceeded the protection factor of the personal protective equipment for a brief period. The second event was below the limit of concern for the level of respiratory protection being worn. The third event involved a worker kneeling on a glovebag, causing the radiological control tape seal to fail and resulting in airborne contamination. For all three events, the surface and airborne contamination were limited to the associated rooms, and no skin contamination occurred. The team did not identify any issues with event response or the subsequent decontamination work. The team also discussed several process improvement actions, including better training, developing a waste bagging operator aid, and using filtered waste bags.

Chemistry and Metallurgy Research Building (CMR)–Emergency Preparedness: On Tuesday, Triad personnel conducted an emergency preparedness drill at CMR. The scenario involved a furnace overheating and starting a fire that affected material-at-risk in Wing 5. Facility personnel evacuated Wing 5, and responding fire department personnel later directed a full facility evacuation. To account for the known lack of coverage of the public address system in this facility, drill participants effectively used runners to communicate key announcements.

Area G–Federal Oversight: A resident inspector walked down Area G with two newly assigned NNSA Field Office personnel assisting the Environmental Management Field Office as facility representatives. During the visit, the group observed preparations for high-energy, real-time radiography of a standard waste box containing a corrugated metal pipe segment and discussed current and future safety basis controls.