

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 30, 2025

TO: Technical Director
FROM: Los Alamos Site Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending May 30, 2025

Area G—Operations: On Tuesday, N3B conducted mobile loading of standard waste boxes (SWB) that contained corrugated metal pipe (CMP) segments. DNFSB resident inspectors observed the mobile loading of these SWBs at Area G. The SWBs were loaded into containers for offsite transportation and were shipped Thursday for final disposition at the Waste Isolation Pilot Plant (WIPP). Future shipments of SWBs containing CMP segments will continue throughout 2025 and beyond, as further containers receive approval for disposition at WIPP. All CMPs were successfully size-reduced and placed in SWBs in December 2024; formal characterization for their subsequent disposition at WIPP has been ongoing throughout this year and will continue to support future shipments to WIPP. A critical component of the characterization process at Area G, the High-Energy Real-Time Radiography, achieved the necessary certifications earlier this year.

Sigma Facility—Foundry: On Thursday, a DNFSB resident inspector conducted a walkdown of the Sigma facility with the NNSA Field Office Facility Representative. The walkdown focused on foundry activities and the new furnace that was being installed and tested to support ongoing research and development activities. A representative of the facility operations team also provided an overview of the machining activities for both nuclear and non-nuclear components.

Plutonium Facility—Safety Basis: Earlier this month, Triad Packaging and Transportation management rescinded the Department of Transportation special form certification for two types of radioisotope heater unit clads. These capsules contain heat source plutonium fuel in a robust clad. The certification was rescinded after the causal analysis report for an event involving contamination escaping from a clad in the SM-40 Physics Building stated that the special form certified capsules failed to perform as expected (see 5/31/2024 report). A failure analysis is in progress. Triad Safety Basis personnel entered the New Information process to determine whether the loss of special form certification has any impact on material-at-risk controls at the Plutonium Facility. Heat source clads are credited in the safety basis as safety-class controls to prevent any release of heat source plutonium. This week, the Triad Safety Basis personnel completed their evaluation and concluded that there is no potential inadequacy of the safety analysis. The reasoning behind this conclusion was that the Plutonium Facility safety basis does not rely on special form certification for heat source clads to meet their performance criteria to prevent release.

Plutonium Facility—Safety Basis: The NNSA Field Office approved a request from Triad to remove provisions in the documented safety analysis related to preventing fire protection water ingress into gloveboxes, which could potentially cause increased moderation of fissile material (see 4/11/2025 report). NNSA Field Office approval was based on completion of criticality safety evaluation documents for the gloveboxes that required them. These provisions were previously put in place until the criticality analysis could be completed.