DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 7, 2025

TO: Technical Director
FROM: Los Alamos Site Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending March 7, 2025

Plutonium Facility–Decontamination and Decommissioning (D&D): On Monday evening, a team preparing to begin D&D activities encountered an active leak when they entered a laboratory room to begin work. In preparation for this week's activities, workers previously installed a hot tap on a water line to drain and sample the water inside, and they locked out the piping section. Workers confirmed last week that the piping section was drained and ready for work. When the team entered Monday, workers encountered water leaking from a taped section of the pipe at the hot tap. The team communicated the incident to the Operations Center, which initiated a response including the hazardous materials team. When the workers removed tape from the piping section, the water began spraying out, indicating a pressurized source. Approximately 100 gallons of water from an unknown source leaked into the room during this incident. Operations staff declared a potential criticality safety process deviation the next morning after further review and evaluation with the relevant subject matter experts. Facility personnel conducted a fact-finding meeting the next day, which identified numerous issues for follow-up, such as communication issues with the Operations Center and response personnel; the unknown provenance of the leak; judgment calls at the time of the incident that did not include all relevant subject matter expertise, such as industrial hygiene; and radiological samples not being taken during the incident. Facility management has established a team to investigate the root cause(s) and establish measures to prevent recurrence given the ongoing backshift work.

Area G–Safety Basis: On Monday, N3B personnel identified transuranic waste drums in the Dome 231 waste staging area that exceeded the material-at-risk limits established in one of the Justifications for Continued Operations, which are part of the Area G safety basis; this constitutes a violation of the technical safety requirements. Upon discovery, facility personnel entered the appropriate limiting condition for operations and restored the area to compliance by moving the waste drums. The waste management safety software, used for tracking inventory, movements, and ensuring compliance with safety basis limits, did not identify that moving these drums into the area was non-compliant. N3B will perform a formal causal analysis to determine why the software changes supporting the implementation of the Justification for Continued Operations did not appropriately account for material limits in this area.

Plutonium Facility–Infrastructure: Two Thursdays ago, workers entering a laboratory room on the backshift noticed a housekeeping filter on the floor of a heat source plutonium glovebox and reported this discovery to the Operations Center. On the day shift, plant maintenance personnel assessed the condition and discovered that a fire screen below the filter assembly was not fully secured. They attempted to repair the filter and fire screen but could not resolve the condition because of a damaged bolt stud. Glovebox system engineers had not assessed the as-found condition prior to the attempted repair, which is similar to another recent glovebox issue in which plant maintenance attempted to repair a guillotine door before system engineers were able to investigate the failure (see 12/6/2024 report). Other gloveboxes in this room have similar issues with filters and fire screens. The glovebox with the damaged filter remains out of service until repairs can be made.