DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 4, 2025

TO: Technical Director
FROM: Los Alamos Site Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending July 4, 2025

Plutonium Facility–Glovebox Safety: On Monday, a Triad employee experienced a glove puncture and a wound while working in a heat source plutonium glovebox. The employee was closing a container when a small, thin item pierced their glove and punctured a finger. Personnel notified radiological control technicians (RCTs) who attempted decontamination at the Plutonium Facility. The initial reading on the finger was approximately 50,000 dpm alpha, but RCTs at the Plutonium Facility were unable to remove any contamination. The worker was transported to Occupational Medicine where medical staff continued decontamination efforts. The final wound count was approximately 4,000 dpm alpha. The worker received a bioassay kit and will have weekly wound counts for the next three weeks. Triad has initiated an independent internal investigation, and the NNSA field office will shadow the investigation. Programmatic staff are currently working to place the glovebox into a safe and stable condition prior to the holiday weekend and preserve any materials needed for the investigation.

Plutonium Facility–Fire Protection: Last Wednesday, Triad staff were performing an annual flow test and surveillance of the safety-class electric fire water pump in PF-11. During the test, workers identified that some electrical conductors were too hot. They stopped the test, and operations personnel declared the fire water pump inoperable. Conductor overheating is a known potential issue given the same condition was observed at a similar pump in PF-10 in April (see 04/11/2025 report). Facility personnel have already made repairs, and testing is scheduled for next week to allow the fire water pump to be brought online again. The other three safety-class pumps and the fire suppression system supporting the Plutonium Facility remain operable.

Plutonium Facility–Operations: Last Wednesday, Triad staff identified an anomalous condition during aqueous nitrate operations. While processing plutonium-bearing materials, the sodium hydroxide supply line stopped providing reagent. During troubleshooting, the overall level of the plutonium solution dropped without any apparent leaks, indicating a potential backflow into the hydroxide supply. Criticality safety personnel determined this was not a criticality safety infraction; however, there is still plutonium-bearing solution trapped in the hydroxide supply line. At the fact-finding meeting, participants concluded the most likely cause was a clog in the hydroxide supply line, which had not been used in seven years. Facility personnel are working on a recovery plan.

Area G–Criticality Safety: Last Wednesday, N3B staff discovered that a standard waste box (SWB) that exceeded fissile grams equivalent (FGE) limits was located outside of a high FGE storage area, which is not consistent with criticality safety controls. N3B staff took the appropriate actions to pause work, secure the area, and follow the appropriate procedures for criticality safety infractions. The reason the SWB was outside of a high FGE storage area is because the initial assay data did not exceed any limits, but after technicians applied a density correction later in the process, the FGE value more than doubled. Criticality safety staff confirmed this was a criticality safety infraction and are evaluating how to proceed. Further, given that this is the second anomalous SWB with a corrugated metal pipe segment, N3B will now treat high FGE or material-at-risk following assay as an expected rather than an anomalous condition and is pursuing an appropriate administrative solution for future instances.