DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 10, 2026

Los Alamos National Laboratory Resident Inspectors Activity Report for Week Ending April 10, 2026

Area G–Quality Assurance: Last week, during a repair of failed sections of liquid impediments on Pad 281 in Area G, the contractor identified that the placed concrete failed the air entrainment field test. For this application of concrete, the air entrainment should be between 5.5% and 7.5%; based on the field test, the air entrainment was only 3.9%, which could negatively impact the concrete's durability due to effects from freeze-thaw cycles. The contractor self-identified this issue and immediately removed the concrete and forms to facilitate rework. The failure of these liquid impediments to meet specifications is significant because these are among the few engineered controls incorporated into the new documented safety analysis for Area G and could impact its implementation timeline. The contractor is evaluating the root cause of this failure and is conducting an engineering analysis on the effects of low air entrainment. Furthermore, the contractor intends to change the specifications of the concrete ordered such that it has higher initial air entrainment to compensate for the loss of entrained air during transit. The contractor is also conducting an extent-of-condition review on other similar concrete placements at Area G to determine whether the proper testing was done at the time.

Safety Basis: The contractor identified four sealed sources at the Sigma facility that do not meet the performance criteria in the facility hazard categorization (FHC) document and therefore cannot be assumed to remain intact during certain accident scenarios. Management paused operations with those sources until the situation has a path forward. The contractor determined that the issue originated in 2022 when the FHC was updated to a new standard, which increased the performance requirements for survivability of the sources; however, the sources were not reevaluated for compliance with the new standard at that time. A DNFSB letter dated January 19, 2021, identified concerns with DOE Standard 1027, *Hazard Categorization of DOE Nuclear Facilities,* which is used to develop FHCs; the deficiencies identified by DNFSB in this DOE document may have contributed to the incident. The contractor and NNSA Field Office discussed several possible solutions, including reverting back to the previous standard in the FHC and performing an extent-of-condition evaluation across the laboratory.

Nuclear Material Packaging: Last week, the NNSA Field Office unconditionally approved a design life extension for the SAVY-4000 series of containers. The extension is from fifteen years to twenty-five years. NNSA based its approval on data showing there has been no significant degradation in key performance parameters over the current service life, accelerated aging studies, corrosion studies, and ongoing surveillance activities. SAVY containers are a key control to protect nuclear material from fires and drops in the Plutonium Facility.

Plutonium Facility–Readiness: On Tuesday, Triad management evaluated the appropriate type of readiness review for the repackaging and shipment of a subset of the legacy mixed-oxide fuel rods stored in the Plutonium Facility. The plan involves repackaging the rods into transfer tubes and then returning them to their storage location. These tubes will then be loaded into an approved shipping cask provided by a commercial vendor and shipped to the Nevada National Security Site. Given the similarities of this activity to other shipping and material repackaging activities already performed in the Plutonium Facility, Triad concluded no formal readiness assessment is needed. They instead recommended performing a management self-assessment with a cold demonstration of the process.