

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 15, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending January 15, 2021

Transuranic Waste Management: On Thursday, Triad and N3B personnel completed the first shipment of co-mingled transuranic waste from the RANT Shipping Facility to the Waste Isolation Pilot Plant. The shipment contained 24 drums of legacy waste managed by N3B along with 4 drums of newly generated waste from Triad operations. This is a significant development—preparing shipments of co-mingled wastes allows the DOE to optimize payloads thereby reducing the number of empty dunnage drums that are sent and emplaced in the Waste Isolation Pilot Plant.

Plutonium Facility—Operations: Last Monday, workers performing practice runs in preparation for the eventual restart of aqueous nitrate operations noted a cloudy solution after running water through the system. While running the solution through a filtration unit, the workers obtained an unexpected semi-solid accumulation upon which they paused and reported the discovery. Aqueous nitrate operations have been suspended since the LANL Director paused operations in 2013, and there is known holdup in some of the equipment. The work crew was operating using an integrated work control document that allowed operations with a plutonium mass limit of 50 g; however, the total estimated plutonium holdup in the tank was about 70 g. Both values are well below the criticality safety limits for the process. The precipitate will be analyzed for plutonium content which is expected to be well below 50 g. Restart of aqueous nitrate operations is currently planned for fall 2021.

Plutonium Facility—Infrastructure: Last month, Triad management transmitted the annual revision of the TA-55 Project Execution Strategy (PES) to the NNSA Field Office for information (see 1/10/2020 report). For last fiscal year, the PES reports key accomplishments including: completion of the column capital testing program; installation of 37 new fire doors and fire barriers for certain duct penetrations; commissioning of the diesel electric generators for the electric firewater pumps; completion of three fire hazard evaluations; progress with the design to resolve the cast iron fitting issue with the sprinkler piping; and completion of seismic analyses for 41 gloveboxes. For this fiscal year, the PES recommends actions including: continued seismic analysis of the instrument air system; additional fire barrier modifications; completion of the new chlorine gas delivery system; continued seismic analyses and fire hazard evaluations for gloveboxes; and completing the design for the new facility control system.

Plutonium Facility—Criticality Safety: On Tuesday, Nuclear Criticality Safety management rescinded the memo that examined the potential for solutions of fissionable liquids to leak into the basement (see 1/8/2021 report). A new approach for this evaluation is under development.

COVID-19 Impacts: On Wednesday, Triad management paused radiological work inside enclosures within the Radiological Laboratory Utility Office Building Due to a presumptive COVID-19 case that impacted staffing within the facility's operations center. Despite this case, the lab has generally experienced a decline in incidents with large numbers of close contacts. Last week, Triad commenced vaccination of the laboratory workforce in accordance with New Mexico Department of Health policy.