

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 4, 2022

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: D. Gutowski and J. Plaue, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending March 4, 2022

DNFSB Staff Activity: A. Hutain was onsite to observe activities by the NNSA team reviewing conduct of operations at the Plutonium Facility.

Weapons Engineering Tritium Facility: On Tuesday, facility management was notified that an operator made various unapproved deviations from a use every time procedure while loading a Hydride Transport Vessel. The operator could not follow the approved procedure as written because of the configuration of the system following last month's actuation of a safety significant rupture disk (see 1/28/2022 report) and believed he had verbal permission to make the changes. Facility management confirmed the safety of the tritium gas handling system and the loaded vessel. Given this was the second conduct of operations even in about six weeks, they also plan several other corrective actions including conducting a causal analysis and holding a conduct of operations refresher session.

Engineering: Last week, Triad submitted to the NNSA Field Office for awareness its plan to update the site's probabilistic seismic hazards assessment (PSHA). DOE Order 420.1C, *Facility Safety*, requires contractors to review natural phenomena hazards (NPH) at least every 10 years. In 2014, the previous LANL contractor completed a review of NPH and set a milestone to complete a revision of the PSHA by September 1, 2019. The current PSHA for the LANL site was completed in 2009. Since then, LANL contractors have completed a number of studies to reduce uncertainties in the seismic model, most notably they have obtained additional valuable geotechnical data associated with the LANL site. As a result, Triad concluded a PSHA update is necessary and noted that their current schedule calls for completion by the end of fiscal year 2025.

Plutonium Facility–Glovebox Safety: Last Thursday, while an operator was lifting a vessel out of a furnace well, the lifting tool disengaged from the vessel and impacted the inside of the glovebox window causing a crack. Operators responded to the event as if it was a glovebreach as there is no specific training for responding to a cracked window. There was no evidence of any contamination spread from the cracked window and engineers consider the glovebox fully operable. The window is currently taped up awaiting replacement. One planned corrective action is to develop and train to a response procedure for cracked windows. This and several similar activities involve challenging ergonomics of hand lifting a heavy vessel in glovebox gloves. Attempts to introduce mechanical lifting aids for similar activities have not been met with success.

Area G–Readiness: A nine-member federal team commenced a readiness assessment for resumption of drill and drain and glovebag operations in the Dome 231 Permacon.

PF-400–Readiness: The contractor's operational readiness review team issued their final report for the upgrade of the Radiological Laboratory Utility Office Building to a hazard category 3 nuclear facility to be known as PF-400. The four prestart findings include the need to identify the full scope of needed maintenance activities and the need to include the full set of necessary activities in the startup plan. The three post-start findings include an unprotected material-at-risk assumption in the safety basis and the need to fully implement vital safety system and system health reporting processes.