DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 16, 2022

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: A. Boussouf and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending September 16, 2022

DNFSB Staff Activity: Staff members M. Bradisse, K. Deutsch, D. Grover, T. Koshy, P. Natividad, J. Plaue, and R. Wu were on site to gather information to support the Board's upcoming public hearing. They held meetings with NNSA Site Office and Triad personnel to discuss safety systems and safety management programs at the Plutonium Facility and how those will be able to support the pit production mission. They also walked down the Plutonium Facility with an emphasis on safety systems and any upgrades to said systems.

Area G: Last Thursday, which was the first day of corrugated metal pipe (CMP) retrieval activities, a worker experienced heat related illness. Other workers aided the individual, moved them from the excavation area, rehydrated them, and requested a medical response. N3B management paused CMP retrieval operations and held two fact-finding meetings related to this event. There were many factors leading to the incident. Temperature monitoring was outside, and there was none inside the much hotter excavator cab. The air conditioning in the excavator cab has been broken for some time, but this was not recognized by all individuals at the work site. There were several unexpected conditions found as the excavation commenced including additional frameworks buried with the CMPs and a damaged end cap on the first CMP. Workers appropriately paused and evaluated each of these anomalies; however, this led to an extended amount of time without any hydration breaks. On Tuesday morning, N3B paused all field activities in Area G with the exception of required safety and compliance activities while they evaluate corrective actions from this heat illness incident. The pause remains in effect.

Plutonium Facility–Radiological Control: Late last month, there was a continuous air monitor alarm during bagout activities at the Plutonium Facility. The workers were bagging out heavy glovebox door assemblies including counterweights when a bag failed. All of the workers were in respirators, and there was no evidence of an intake or any skin contaminations. Facility personnel are evaluating bagout techniques to avoid further incidents with heavy objects being removed from glovebox lines. Options under evaluation include stricter limits on the number of items in a bag, use of thicker bags, or loading to a waste drum rather than doing bagouts. There will be many more of these assemblies in the waste stream as the facility is moving towards a new type of glovebox door design. A frayed cable connecting the counterweight to the door was the culprit for an injection intake in 2018 (see 2/8/2019 report). Following that event, facility personnel replaced aging cables and placed additional crimps around their ends to reduce the puncture hazard. The new door design being installed eliminates the cables entirely.

Plutonium Facility–Criticality Safety: On Wednesday, the NNSA Field Office concurred with Triad's latest memo regarding criticality safety in the basement of the Plutonium Facility. The memo documents the basis for why leakage of fissile solutions from aqueous processing laboratories on the first floor and subsequent formation of a critical geometry in the basement is not credible during a seismic event (see 8/13/2021 report).