

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 2, 2020

**MEMORANDUM FOR:** Christopher J. Roscetti, Technical Director  
**FROM:** J.W. Plaue and D. Gutowski, Resident Inspectors  
**SUBJECT:** Los Alamos Activity Report for Week Ending October 2, 2020

**DNFSB Staff Activity:** On Wednesday, a staff team conducted a teleconference with NNSA and Triad personnel to discuss the Phase 1 technical studies of the Plutonium Facility Seismic Performance Reassessment Project.

**Plutonium Facility–Continuous Improvement:** Last week, Triad personnel completed their causal analysis of the unexpected thermal excursion and higher than expected occupational dose during the calcination of a legacy item (see 3/6/2020 report). While the causal team was unable to determine the technical cause of the thermal excursion due to competing production priorities for sample analysis resulting from the COVID-19 pandemic, they identified the direct cause, seven contributing causes, and an overall root cause of inadequate procedural direction on the conditions necessary to engage the radiological control technician to perform dose surveys. The team further identified that no formalized instruction existed regarding the extent of research necessary for legacy feed materials despite the potential for those materials to generate an increased radiation field under certain conditions. The team recommended nine actions including: modifying procedures to ensure radiological control technician and expert engagement when appropriate and consider the use of hold points; enhancing pre-job briefings to be task specific; scheduling an independent operational review for material processing; completing sample analysis to determine the technical cause of this event; and conducting an extent-of-condition review of other legacy items in the vault. As a result of challenges with the timely completion of this causal analysis, Triad personnel will also be conducting a causal analysis of the causal process in order to inform an improvement plan.

**Plutonium Facility–Glovebox Safety:** Facility management issued a standing order on Thursday outlining the process to resume work in gloveboxes using oval ports of the type involved in the push through events that occurred last week and in July (see 9/25/2020 report). The order requires reviewing all procedures for these boxes to determine if operations can be conducted without putting stress on the oval locking ring and training in the Cold Lab for all impacted workers. The training sessions started this week and include demonstrating the range of motion in glove use for normal operations as well as having the workers make tremendous efforts to deliberately fail a glove ring.

**Plutonium Facility–Conduct of Operations:** Two Thursdays ago, workers preparing to move an item out of a glovebox checked its contents and noted it was not compliant with the criticality safety posting for the box and represented an overmass condition. There was discrepancy between the planning paperwork and the actual contents of the container which was not identified when the object was moved into this box about two weeks prior to the planned move out. Criticality safety personnel determined the current condition is safe and stable, and a plan to recover the box is in development.

**Chemistry and Metallurgy Research Building:** Last Thursday, a worker performing re-lamping activities in a room with legacy contamination had radioactive contamination transfer to his personal protective equipment. The supporting radiological control technician experienced instrument issues, but was able to detect contamination on the torso, finger tips, and COVID face mask. There was no skin contamination. At the fact finding for this event, personnel noted that pre-surveys of the area were not performed prior to opening the light fixtures, and that communication regarding the role of radiological support were less than adequate. As a correction action, facility management plans to emphasize the importance of performing radiological surveys prior to working in normally inaccessible areas.