

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 17, 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 July 17, 2020

Plutonium Facility–Glovebox Safety: On Tuesday, the Triad investigation team for the glove breach and airborne release event briefed preliminary results to senior leadership at the NNSA Field Office (see 6/26/2020 report). They found the root cause of the event to be a less than adequate glovebox glove integrity program. Three contributing causes included: less than adequate implementation of glove inspections prior to hand removal; management’s failure to ensure compliance with existing requirements for contamination monitoring; and the use of a new type of glove with a different thickness and insufficient spare parts. The team proposed many recommendations to improve glovebox operations in the facility including: improving the glove integrity program; formalizing and training expectations for glove use including self-inspections; and evaluating engineered solutions to high hazard operations for reduce hands on work. The team is finalizing the investigation report which is expected next Friday.

Federal Oversight: On Friday, the team from the DOE Office of Environmental Management’s Chief of Nuclear Safety briefed the results of the desktop review phase of their audit on nuclear safety functions at the EM Field Office (see 6/26/2020 report). The team identified five management concerns (defined as significant issues requiring causal analyses) and five findings (defined as violations of requirements), subject to a factual accuracy review. The final report is expected next month and the schedule for the second phase, which includes onsite activities, remains uncertain. Notably, the audit was entirely executed using telework methods.

Area G–Safety Basis: Last week, N3B management declared two potential inadequacies of the safety analysis (PISA) associated with questions concerning: (1) the assumed depth of a fuel pool fire that could impact the number of waste containers impacted and (2) the presence of pipe overpack containers with greater than 80 plutonium-239 equivalent curies that are placed inside a second container—a practice known as doublepacking. EM Headquarters personnel raised the first question during the ongoing federal review of the evaluation of the safety of the situation concerning aisle spacing that was transmitted to the EM Field Office for approval on March 19, 2020. N3B personnel identified the original issue on January 7, 2020 (see 1/10/2020 report). N3B personnel discovered the second issue while conducting a field validation to respond to a Triad inquiry. As a compensatory measure for both issues, N3B management reduced the amount of liquid fuel allowed from 100 to 70 gallons. At the fact-finding, N3B personnel also discussed the need to fully characterize the inventory of pipe overpack containers for the presence of the new fusible filters and expedite replacements. The use of these filters fully protects these containers from fuel pool fires (a damage ratio of zero).

Weapons Engineering Tritium Facility: On Tuesday, subcontractor personnel supporting HVAC upgrade activities noted they had passed a hold point in their work package and reported this to facility management. Further evaluation determined that an individual performed work on an energized system because a lockout/tagout was not installed as required by the work package. Management has paused the work activity while they evaluate corrective actions.