

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 18, 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 18, 2022

DNFSB Staff Activity: Staff members M. Dunlevy and P. Migliorini were on site for a review of the current safety posture of Area G under multiple Justifications for Continued Operations developed to address the 23 potential inadequacies of the safety analysis (PISA) identified against the Area G safety basis in 2020 and early 2021. M. Sautman was on site for familiarization and to evaluate resident inspector performance. M. Randby was on site for familiarization.

Area G–Safety Basis: Last week, N3B personnel declared a PISA against the Area G safety basis following questions raised by the federal team assessing readiness of drill and drain and glovebag operations. The PISA concluded that a safety basis reference did not support a conclusion regarding hydrogen accumulation in closed plastic containers with lids. This PISA further determined that the technical basis was incorrect for two exemptions from a technical safety requirement specific administrative control for Sort, Segregate, Size Reduction, and Repackaging activities. N3B is generating a shift order to communicate any compensatory measures and has determined that this is an unreviewed safety question.

Plutonium Facility–Infrastructure: On Tuesday, the NNSA Administrator responded to the reporting requirement from the Board’s letter dated November 24, 2021. The Board requested a written report that describes DOE’s strategy for the Plutonium Facility confinement ventilation system, the planned end-state of the ventilation system, the schedule for achieving that end-state, and how the system will be credited in the facility safety basis. NNSA’s response states that it will pursue upgrades to achieve a more robust ventilation system but will not achieve a safety class active confinement ventilation system at the Plutonium Facility. This path forward represents a change in strategy from what NNSA personnel briefed the Board in February 2020, where they described the future control strategy as including safety class active confinement ventilation.

Plutonium Facility–Materials Processing: There were two events last week involving processing of materials stored at the Plutonium Facility. In the first event, a portable continuous air monitor alarmed during introduction of a legacy item into a glovebox line through an open front hood for eventual disposal as waste. Responding radiological control technicians found no contamination on the workers or evidence of any uptake. They discovered contamination on the floor in front of the hood which has been cleaned. Facility personnel are evaluating other containers in this feed stream to determine if additional planning is needed to prevent issues during future processing of similar containers.

The other event involved materials to be processed to plutonium oxide in a muffle furnace. Upon opening the can workers discovered an oily sludge of questionable provenance. The work crew paused and reported the event. During the response, the workers placed the solid items into a water-resistant container per direction from criticality safety personnel. Further recovery actions are in progress for the container with sludge residue.