

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 10, 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 10, 2020

COVID-19 Impacts: There were nine new positive test results for the laboratory workforce this week for a total of 23, 11 of whom have recovered. Three of the new cases are workers associated with the Plutonium Facility.

Plutonium Facility–Radiological Safety: On Monday, the first of two workers preparing to exit the facility alarmed the contamination monitor. Radiological control technicians (RCT) released that worker, but identified contamination on the second worker, including about 200 dpm of alpha on the left and right sides of the face. RCTs successfully decontaminated the worker. The worker had been adjusting equipment underneath and above a glovebox used to process plutonium-238. During the fact-finding, participants discussed several key points of the event including: (1) integrated work documents for the activity identified the use of the 73 page facility radiation protection program document as a control for contamination hazards without further specificity; (2) the document requires RCT support for entry into non-routinely entered spaces—RCT management understood this to be locations like underneath and the top of gloveboxes, but the operations group did not appreciate this distinction since they accessed these spaces several times a week; (3) during the equipment adjustments, the worker identified contamination on his gloves and changed them, but did not contact an RCT in accordance with the document; (4) the worker also alarmed a hand and foot monitor when attempting to depart the laboratory room, but responding RCTs did not perform a whole body survey as expected; (5) discussion as to whether a whole body survey included the face and head; and (6) the work team expressed concerns that the face covering worn for COVID-19 reasons created the need to instinctually adjust the covering and eye protection without surveying gloved hands.

On Wednesday, Weapons Production management convened an unscheduled management review board (MRB) after considering the event described above, the plutonium-238 release event (see 6/12/2020 report), and the unexpected radiation exposure of a worker (see 7/3/2020 report). The MRB heard details of these events, as well as the results of a causal analysis associated with an uptick in the number of skin contamination events. They identified a number of corrective actions associated with radiological protection requirements and training, as well as strengthening behavioral based safety practices across the directorate.

Legacy Facilities–Safety Basis: On Tuesday, N3B sent a letter to the EM Field Office requesting a variance to their approved unreviewed safety question (USQ) procedure. The variance seeks to use the USQ procedure, which only applies to hazard category 2 and 3 nuclear facilities as currently written, for the TA-21-257 radioactive liquid waste facility and the adjacent inactive underground industrial waste lines (see 6/5/2020 report). These locations are currently considered less than hazard category 3 nuclear facilities. If the variance is approved, N3B would then enter their USQ process to address recent radiological characterization data that was higher than expected.

Area G–Operations: N3B and Central Characterization Project personnel successfully completed two shipments of transuranic waste to the Waste Isolation Pilot Plant using the mobile loading unit. The last mobile loading shipment from Area G was in October 2019.