

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 16, 2024

TO: Katherine R. Herrera, Acting Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending February 16, 2024

Staff Activity: M. Bradisse was on site providing resident inspector support. E. McCullough was on site for familiarization with transuranic waste activities to support her role as the Board's cognizant engineer for the Waste Isolation Pilot Plant. This included visits to Area G, the RANT Shipping Facility, and the Plutonium Facility.

Plutonium Facility–Radiological Control: Last Wednesday, two workers were cleaning out containers used for ball-milled heat source plutonium. The process involves emptying the bulk contents into a catch pan and then using a wire brush to scrub out the remaining material from the inside. The first worker entered the gloves to demonstrate an action (without manipulating actual objects in the box) and then exited the gloves. That worker then performed a routine glove examination to check for damage and surveyed their hands for contamination on a nearby monitor. The second worker then entered the gloves and performed cleaning actions. When finished, they also performed the routine glove examination, did not note any issues, and exited. This time, however, the worker alarmed the hand monitor at the glovebox and called for radiological control personnel. The worker had contamination on the personal protective equipment on both hands and forearms but was successfully decontaminated. There was no skin contamination. Radiological control personnel later determined that the breach was due to cracking on the tip of the right thumb, which was the hand the employee used to hold the wire brush during cleaning. The glove will be sent for forensic analysis to help determine the cause of the breach. Photographs of the glove breach shared at the fact-finding meeting showed significant blackening, embrittlement, and some visible cracking, despite the glove being installed last November and having not been used for work until last week.

Plutonium Facility–Safety Basis: On Monday, the NNSA field office transmitted a letter to Triad that did not approve the revised safety basis addendum supporting receipt and repackaging of large quantities of heat source plutonium (see 10/6/2023 report). The field office provided a set of comments on the addendum and requested that Triad resubmit the addendum within 30 calendar days to address these comments. One key comment from NNSA stated that Triad should refine its safety analysis to better demonstrate the efficacy of its safety control strategy for glovebox fires.

Area G–Emergency Response: Last Friday, a worker in Dome 375 at Area G smelled and then saw smoke coming from an electrical outlet. They immediately notified the operations center who called the fire department and the Emergency Operations Support Center. The worker used a dry chemical extinguisher on the outlet before evacuating with other personnel to the assembly area. The fire department confirmed that there were no active heat sources. The cause of the event was a single circuit with two space heaters plugged in. The breaker did trip. N3B personnel are performing an extent of condition on space heater usage in domes. Heaters are used in winter to protect fire protection systems from freezing and to provide warming stations for workers.