

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 25, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: A. Boussouf and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending August 25, 2023

Staff Activity: M. Sautman gave a presentation on DNFSB activities in New Mexico to the Radioactive and Hazardous Materials Committee of the New Mexico State Legislature. Presentation materials can be found on the committee's website.

Weapons Engineering Tritium Facility (WETF)–Readiness: A federal team commenced a readiness assessment to evaluate startup of plutonium coupon studies at WETF (see 3/3/2023 report). This week, the team observed work demonstrations including an operational drill where a continuous air monitor alarmed due to plutonium, a new hazard of this activity. The review is expected to conclude next week.

Plutonium Facility–Radiological Safety: Last Tuesday, there was a contamination spread in a laboratory room. A worker requested radiological control technician (RCT) support to investigate an alarming survey monitor. The RCT confirmed contamination on the monitor and directed the large number of workers in the room to begin an orderly exit. Exit monitoring discovered several contaminated booties on workers. No workers had skin contamination in this event, and there was no evidence of airborne radioactivity. The cause of the contamination spread was traced to a breached glovebox glove. There was substantial contamination discovered around this glovebox during follow-up surveys. The room underwent decontamination and was released for work last Wednesday. The following day, in the same room, a worker performing administrative work at a computer alarmed a monitor upon exiting the room. RCTs discovered a hot particle on the skin of the individual's hand. Corrective actions in progress include an additional sharps walkdown of processes in this room, use of longer overgloves to protect the area of the glovebox glove that was damaged in the first incident, and a complete wipedown of the room.

Plutonium Facility–Safety Basis: On Monday, facility personnel entered an unplanned limiting condition for operations due to exceedance of material at risk (MAR) on a transuranic waste storage pad outside of the facility. Personnel were performing mobile loading of pipe overpack containers (POC) with high MAR that cannot be transported to the RANT Shipping Facility. While POCs have a damage ratio associated with them in the safety basis, on the waste pad, only the outermost container's damage ratio can be applied. Once the POCs were overpacked into standard waste boxes prior to being loaded into the TRUPACT, they lost their damage ratio and exceeded MAR limits on the pad. One TRUPACT was fully loaded and sealed for shipment to the Waste Isolation Pilot Plant prior to discovery of the MAR exceedance. The TRUPACT has a damage ratio of zero which exempts its MAR from the limits. The other standard waste boxes were opened and unloaded to restore compliance with the technical safety requirements. An approach to compliantly ship the remaining high MAR containers is being developed.

Transuranic Waste Facility (TWF)–Safety Basis: On Thursday, TWF personnel exited the limiting condition for operations regarding operability of one of the seismic power cutoff switches (see 8/11/2023 report). Engineering personnel completed an evaluation concluding that in the condition with the damaged fastener, the seismic switch is operable but degraded and can continue to perform its safety function. Efforts to fully repair or replace the degraded switch are in progress.