

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 31, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending May 31, 2024

Plutonium Facility–Radiological Control: Last Tuesday, workers attempted to move an empty fissile material transfer cart out from between two gloveboxes in a congested laboratory room. The cart inadvertently hit a manifold gauge under one glovebox. The gauge fell to the floor, compromising the integrity of the glovebox. While scanning out of the room, a worker discovered contamination on their bootie. As radiological control personnel were assisting the workers in the room, the continuous air monitor closest to the damaged glovebox alarmed followed by the others in the room and one in an adjacent room. The damaged area has been secured to prevent further contamination spread, and the room is now released for normal operations. The damaged glovebox was already slated for removal, and a tent enclosure is now in place to support that activity. Involved personnel stated that these types of impacts to jutting components have happened in the past and that it would be prudent to ensure design for new glovebox installations minimize the potential for this type of damage.

Plutonium Facility and Radioactive Liquid Waste Treatment Facility (RLWTF): Last week, routine sampling of influents to RLWTF identified elevated tritium levels. Analysis of stack monitoring data from the Plutonium Facility showed that air emission levels of tritium, while well below regulatory limits, were also elevated from the norm. Tritium activities in the Plutonium Facility have not taken place since the October elevated tritium event (see 10/6/2023 report). The source of these emissions has not been determined. One possible source is the item involved in the October event. In case it is leaking from its current container, workers overpacked it into a more robust container. This increase in tritium was caught earlier than the October event due to a corrective action from that event. In March, RLWTF personnel started weekly sampling of low-level influent for tritium. This successfully identified the elevated tritium while concentrations in RLWTF were barely above discharge limits. RLWTF personnel are developing a path forward to compliantly process all material. A new corrective action is to enhance the communications between Plutonium Facility operations and environmental monitoring to help catch unusual activity sooner.

Plutonium Facility–Safety Basis: Last Tuesday, safety basis personnel entered the new information process to evaluate the safety basis implications of an event involving a heat source plutonium clad at a non-defense mission radiological facility. In early May, a heat source plutonium clad caused a contamination spread at the SM-40 Physics Building. The hazardous material team returned the damaged clad to the Plutonium Facility. Qualified encapsulated heat source clads are considered safety-class containers with a damage ratio of zero for fall and fire scenarios in the Plutonium Facility’s safety basis.

Federal Oversight: The NNSA Field Office continues its progress qualifying individuals for oversight positions (see 4/26/2024 report). On Thursday, a facility representative successfully completed their final oral board. They are assigned to utilities, infrastructure, and transportation.