

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 22, 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 September 22, 2023

Staff Activity: C. Beaty, M. Bradisse, D. Bullen, J. Heath, and L. Lin were on site this week as part of their review of decontamination and decommissioning activities at the Plutonium Facility (see 5/19/2023 report). During this visit, they observed the removal of a glovebox from the facility and placement into a waste container outside of the facility. They also walked down rooms with Plutonium Infrastructure personnel to observe current and planned equipment removal activities, contamination enclosure practices, and radiological control techniques. Additionally, they met with training personnel, radiological control management, waste management personnel, and work planners.

Plutonium Facility–Emergency Response: On Wednesday morning workers were performing an activity to split and dispose of legacy heat source plutonium material. The material was a process residue consisting of pyrolyzed cheesecloth with plutonium residue. It was packaged in an inner container bagged in a heavily degraded bagout bag placed in an outer container. As the workers opened the inner container in a glovebox and placed the material in a catch pan, they identified smoke, but no flames, coming from the material. The workers activated the dropbox fire alarm, exited the room, and contacted the operations center as required. The fire department responded and identified no anomalous heat signatures or other indications of an active fire and turned the scene back over to the facility. Meanwhile, other workers in the Plutonium Facility were directed to perform an orderly exit. Activities in the Plutonium Facility were restricted until Wednesday afternoon when the facility was released back to normal operations. Workers performed an observation of the material in question and identified no other anomalous behavior. They believe the smoking was caused by pieces of the degraded plastic bag falling on the thermally hot heat source plutonium residue. Work with this type of material is paused, and the glovebox where the event occurred is out of service until a recovery plan is developed. Facility personnel are developing corrective actions to help prevent future events with legacy materials. Facility and Emergency Management personnel are also developing actions to improve emergency response. One notable issue during the event was lack of attention to public address announcements.

Plutonium Facility–Infrastructure: Triad personnel recently submitted two safety basis documents supporting infrastructure upgrades to the NNSA Field Office for approval. Last Friday, they submitted a revised addendum for installation of a second seismically qualified uninterruptible power supply (UPS). The revision addressed a directed change from the Field Office to include surveillances of the criticality alarm system and site public address system following realignment of the UPS. This Wednesday, they submitted a temporary modification to the safety basis that would allow non-safety-credited process compressed air to feed the safety-significant instrument air system to provide a backup source of pressurized air while the instrument air system undergoes upgrades to improve reliability.