

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 19, 2023

TO: Christopher J. Roscetti, Technical Director
FROM: A. Boussouf and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending May 19, 2023

Staff Activity: C. Beaty, M. Bradisse, and D. Bullen were on site to continue interactions with Triad and NNSA Field Office personnel supporting a staff review of Decontamination and Decommissioning (D&D) efforts at the Plutonium Facility and at the Chemistry and Metallurgy Research Building (CMR).

Plutonium Facility–Safety Basis: Triad submitted a temporary safety basis modification for the Plutonium Facility to the NNSA Field Office for approval. The temporary modification supports continued operation of specified gloveboxes during D&D activities. Removing gloveboxes can change the seismic performance of interconnected gloveboxes to below their requirements until new gloveboxes are installed. The temporary modification proposes identifying gloveboxes whose seismic performance will be degraded and treating them like existing gloveboxes that do not meet required seismic performance. There are no new proposed controls; the temporary modification instead identifies the existing compensatory measure of the seismic power shutdown system. Any of these gloveboxes that have criticality safety evaluations that rely on seismic performance to maintain geometry control will have to revise those evaluations.

Plutonium Facility–D&D: Last month, personnel performing a walkdown to support additional holdup measurements in a laboratory room undergoing D&D activities discovered four unlabeled metal containers in an out-of-service glovebox. An extent of condition review discovered several other containers of uncertain provenance in other gloveboxes in the room. Existing holdup measurements suggest that none of these containers contain significant quantities of nuclear material. Facility personnel plan to ensure a criticality safety evaluation is in place, change glovebox gloves, and perform other safety reviews before they can inspect and remove these containers. Meanwhile, personnel are continuing to develop processes for responding to the discovery of unexpected materials during D&D activities (see 1/20/2023 report).

Plutonium Facility–Infrastructure: The Plutonium Facility remains in standby mode to support upgrade activities (see 5/12/2023 report). The outage is expected to end at the beginning of the next work week when the facility will return to operations mode. Further testing of the new facility control system will be completed in standby mode over the next several weekends. As the new system is functional, but not fully operable per the definitions in the safety basis, the facility will enter operations mode under the conditions of the temporary modification to the safety basis that allows additional flexibility during commissioning of the new system (see 10/28/2022 report).

Chemistry and Metallurgy Research Building–D&D: Last month, the D&D subcontractor at CMR performing low-level waste removal completed their activities. Higher hazard D&D activities at CMR such as glovebox removals are still paused and are awaiting more characterization data. The current path forward is to develop a sampling and analysis plan to characterize gloveboxes in fiscal year 2024 which should support resumption of glovebox removals in fiscal year 2025 (see 12/9/2022 report).