

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 23, 2022

TO: Katherine R. Herrera, Acting Technical Director
FROM: A. Boussouf and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending December 23, 2022

Waste Characterization, Reduction, and Repackaging Facility (WCRRF): Last Monday, the NNSA Field Office conditionally approved a revised safety design strategy that supports the restart of WCRRF as a hazard category 3 facility (see 8/26/2022 report). The Field Office provided eight directed changes in their approval. These changes included the following requirements: to perform a baseline functionality assessment on selected systems, submit selected codes of record for every design change, and evaluate previously approved exemptions to safety standards at the facility.

Plutonium Facility–Radiological Control: Last Wednesday, while performing maintenance on a glovebox oxygen monitoring system, a worker noticed a breach in one of their glovebox gloves. A responding radiological control technician found contamination on the worker's personal protective equipment. On Monday, a fact finding was held to discuss the incident. During the meeting, participants noted that a furnace in proximity to the oxygen monitoring system was on during this maintenance evolution. Work control documents for this activity did not include the hazards associated with working near an operating furnace, and the worker had not donned overgloves as normally required when working near a hot furnace. Facility personnel are considering several corrective actions, including updating work planning documents to include furnace hazards, limiting the scope of maintenance activities when a furnace is on, and providing additional operator aids to indicate the status of the furnace.

Criticality Safety: On Tuesday, the NNSA Field Office unconditionally approved a revision to Triad's Criticality Safety Program. The main change in this revision is a substantial increase in the de minimis values of nuclear material below which activities do not need a formal criticality safety evaluation. For example, the new program documentation has a de minimis value of 25 grams of plutonium compared to the previous value of one gram. NNSA personnel identified no concerns with the technical basis behind this change during their review.

Transuranic Waste Facility (TWF)–Safety Basis: Triad submitted a revised TWF safety basis to the NNSA Field Office for approval. One significant change in the revision is a corrective action from the violation of the technical safety requirements related to flammable gas sampling and analysis being performed in an unauthorized facility mode earlier in the year (see 9/30/2022 report). The new revision splits flammable gas sampling and analysis into two separate activities and allows the analysis of samples to be performed in all facility modes as material at risk is not present during analysis. Flammable gas sampling still must be done in warm standby or operations mode. Another significant change was to the limiting condition for operation when the electric fire pumps are inoperable. This change was due to damage caused by a lightning strike, which took significant time to repair (see 8/6, 8/27/2021 reports). The new revision proposes allowing 90 days to restore a pump to operability and adds in a fire watch and opening a valve to the domestic water supply, which should allow sprinklers to activate at reduced pressure while the pumps are inoperable. The previous time to restore operability was 7 days.