

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 1, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending March 1, 2024

Staff Activity: On Wednesday, a staff team held a remote interaction with personnel from Triad and the NNSA Field Office to discuss maintenance of safety related batteries. This is part of a multi-site staff review that also includes Lawrence Livermore National Laboratory and the Savannah River Site.

Plutonium Facility–Readiness: The federal readiness assessment for aqueous nitrate operations continued this week (see 2/23/2024 report). The team conducted additional personnel interviews and observed simulated evolutions for oxalate precipitation, evaporator operations, and dissolution. The oxalate precipitation demonstration included an operational drill involving a line plugged with solid oxalic acid. The one major sub-process not fully demonstrated during this assessment is the cementation process which creates cemented transuranic waste drums. That was included in the contractor readiness assessment last year and three waste drums were produced in 2018 under a limited safe and stable campaign (see 11/9/2018 report).

Plutonium Facility–Glovebox Safety: Two weeks ago, workers reported unusual degradation of their glovebox gloves; the gloves appear blistered. After further investigation, it appears that the degradation was caused by soft plastic tubing from recent procurements coming into contact with the gloves. Glovebox gloves are secured outside of boxes when not in use with clamps or are tied together to reduce time spent in the more degrading glovebox environment. Short segments of tubing are placed over the arms of the clamps to reduce the possibility of the metal clamps pinching and damaging the gloves. This technique has been in widespread use for years with no identified issues. Facility personnel are ensuring that all plastic tubes from recent batches are being removed from contact with glovebox gloves. Tubing from old procurements, where no issues have been identified, is still allowed, as is tying off the gloves. Chemical analysis is in progress to better determine what is causing this degradation. Personnel are also analyzing whether there is an impact to plastic waste bags.

Waste Characterization, Reduction, and Repackaging Facility (WCRRF): Last week, facility personnel completed the removal of the lift table from the glovebox enclosure in WCRRF. This was a challenging, high-hazard activity in an airborne radioactivity area/high contamination area. Following the skin contamination event in December (see 12/15/2023 report), the outer layer of personal protective equipment was changed to a less permeable product. While this increased the heat stress challenges of the job, no other major radiological control events occurred during completion of the lift table removal. Personnel are continuing to clean the glovebox enclosure. They are also evaluating the best way to size reduce gloveboxes in the enclosure once WCRRF is restarted as a hazard category 3 facility.

PF-400: The resident inspector joined management on a routine safety walkdown of laboratory spaces in PF-400. Housekeeping and combustible control remain excellent in this facility compared to older nuclear facilities on site.