

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 13, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for Week Ending August 13, 2021

DNFSB Staff Activity: On Tuesday, staff members held a call with Environmental Management Field Office personnel to support a review of DOE directives in the Legacy Cleanup Contract.

Plutonium Facility–Criticality Safety: Last Friday, the NNSA Field Office responded to Triad’s memo regarding the potential for fissile solutions to leak into the basement of the Plutonium Facility (see 6/11/2021 report). NNSA concurred with the memo’s conclusion that it is not credible for a criticality event to result from the leakage scenario. However, they noted that the analysis supporting this conclusion was incomplete and requested it be revised to better support the overall conclusion. For example, the current analysis only addresses fixed collection points in the basement and does not include other potential collection points such as buckets. NNSA personnel performed a walkdown of aqueous processing rooms and vertically adjacent basement locations with Triad engineering and criticality safety personnel three weeks ago as part of their evaluation of Triad’s conclusions.

Area G: Following completion of an implementation verification review, N3B and Central Characterization Project personnel have resumed flammable gas measurements to support certifying transuranic waste drums for shipment to the Waste Isolation Pilot Plant. The measurements must be performed compliant with the recently approved Justification for Continued Operations for the activity (see 6/18/2021 report) and all other current restrictions at Area G in place from the numerous safety basis issues. This activity had been paused since the beginning of 2020 (see 1/31/2020 report).

Chemistry and Metallurgy Research Building (CMR)–Deactivation and Decommissioning: Last week during a walkdown, facility industrial hygiene personnel discovered that a subcontractor removed a chemical hood from Wing 3 that had not been sampled for perchlorates. Perchlorate sampling is part of a specific administrative control (SAC) to prevent explosions of residual perchlorates in the ventilation system. The subcontractor removed the hood two weeks ago as part of their equipment removal scope. They did use wet methods during the removal which the SAC would have required for sampling results above a threshold level. Facility management determined that this event constituted a violation of the Technical Safety Requirements. They also noted other issues surrounding this event including inappropriate work release, a lack of clarity in the language of the SAC and its implementing procedure, and informal tracking of sampling activities and results. Invasive work by the subcontractor is currently paused while corrective actions are developed and implemented. Planned actions include additional rigor in documenting locations where perchlorate sampling has been completed, development of a labeling system for simple visual identification of sampled locations, and inclusion of a hold point in the subcontractor work documents to verify perchlorate sampling has been completed and is within specified limits.