

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 21, 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 July 21, 2023

Staff Activity: D. Brown was on site to observe personnel from the Waste Isolation Pilot Plant perform a generator site technical review on transuranic waste practices at the Plutonium Facility. The review was focused on corrective actions from the titanium sparking event (see 3/5/2021 report).

Plutonium Facility–Safety Basis: Safety Basis personnel concluded that the material-at-risk limit discrepancy identified during the readiness assessments for receipt of large heat-source plutonium shipments constitutes a potential inadequacy of the safety analysis (see 7/7/2023 report). As the process has not started yet, there are no needed actions to place the facility in a safe condition. If the activity is authorized, the more conservative of the discrepant mass limits will be used pending further analysis.

Plutonium Facility–Construction: Last Wednesday on the swing shift, construction personnel tied in a new glovebox to ventilation and the dry vacuum system. The next morning, dayshift personnel noticed that the glovebox had too much negative ventilation on it resulting in grossly distended glovebox gloves sucked into the box. The valves to the dry vacuum system were open while the damper to ventilation was closed. New glovebox tie-ins are currently an infrequent activity but will become more frequent as the facility continues construction efforts to support the pit production mission. The work documentation for the installation did not include hold points, and the workforce does not have much experience with this type of work. The valve alignment has been corrected, and activities in this box are paused until facility management confirms that the conditions are safe and stable. The glovebox gloves are degraded and will need to be replaced as will filters that were damaged by oil migration. Moving forward, facility and construction personnel plan to improve their work documentation for installation to better integrate with the glovebox installation checklist from glovebox installation engineering specifications.

Chemistry and Metallurgy Research Building (CMR): CMR personnel did not complete an annual in-service inspection of a passive safety-class design feature within the required periodicity and did not enter the grace period process to extend the allowable time to completion. The inspection was due last Wednesday. It consists of verifying that the vertical rise of walls providing credited fire protection separation between wings 3, 5, 7 and 9 are not degraded and have no new penetrations or modifications. Personnel realized the error last Friday and completed the inspection successfully this Monday. There are several existing practices at CMR to track required technical safety requirement surveillances including discussions of the status board during shift turnover, however these were not successfully used. Facility management is evaluating approaches to improve their tracking practices and ensure compliance with them.

Wildfire Hazards: On Wednesday, there were several lightning induced wildfire starts on land near the laboratory. Emergency operations personnel do not believe current conditions are likely to result in substantial fire growth or impact to laboratory facilities.