DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 20, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: E. Freeman and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for the Week Ending September 20, 2024

Plutonium Facility–Fire Protection: Last Tuesday, during a weekly surveillance of one of the safety-class diesel fire water pumps, workers saw failed pump packing, high temperatures, and smoking. They placed the pump out of service. The other diesel and electric fire water pumps are still operational, therefore personnel recognized that a limiting condition for operations did not need to be entered. This pump was commissioned last year, and the cause of the failure is uncertain. Previous surveillances identified no temperature anomalies. Facility personnel are working to restore the pump to operability and understand its failure mode.

Late last Thursday night, there was a glovebox fire alarm in a box with an active furnace running under an unattended operations permit. Responding fire department personnel found no evidence of a fire. As in previous events with this glovebox line (see 5/10/2024 report), the presumed cause is waste heat from the furnaces increasing the ambient temperature in the glovebox line until it exceeds the fire alarm setpoint. Triad personnel performed thermal testing following the earlier events but have not uncovered any conclusive reasons for why certain runs exceed temperature limits while many others are completed successfully. Fire protection engineering personnel have determined that replacing detectors in the glovebox line with higher setpoint units would be acceptable; however, testing on glovebox gloves to determine whether higher ambient temperatures cause damage or accelerate aging is still in progress.

Chemistry and Metallurgy Research Building (CMR): On 9/5/2024, workers performing a routine removal of contaminated items from a glovebox in CMR discovered contamination on their personal protective equipment. While a radiation control technician was attempting to remove the contamination within the work area, a continuous air monitor alarmed. The likely source of the contamination was from the surface of a large scale that was already bagged in the glovebox for removal. This event occurred approximately two weeks after a similar contamination event during bag-out of contaminated items from a glovebox line (see 8/30/2024 report). While the underlying cause of each event is different, contractor management is looking into this issue to determine the best ways to mitigate or reduce contamination events moving forward as more work involving contaminated material removal from gloveboxes is expected. A proposed near term corrective action is to evaluate the work control documents to determine whether additional hazard identification and analysis steps are needed, especially when removing larger items from gloveboxes.

Area G–Operations: On Tuesday, N3B personnel finished the excavation of corrugated metal pipes (CMPs) from TA-54. These pipes contain grouted radioactive material and are being cut into segments for packaging and shipment offsite to the Waste Isolation Pilot Plant (WIPP). Size reduction of the CMPs is almost two-thirds complete. N3B expects to complete size-reduction in 2025 and shipments off site to WIPP are expected to start later in 2025, after the packages go through the certification process.