

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 17, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending May 17, 2024

Plutonium Facility–Emergency Response: On Tuesday, workers smelled a chlorine-like odor in a wing of the Plutonium Facility and reported respiratory irritation. Operations personnel entered the appropriate response procedures and requested support from the laboratory’s hazardous materials team. The chlorine system has not been used for several months, and responders were not able to determine a source for the odor. On Monday there was a false fire alarm in the basement caused by a bad detector. There have been four emergency responses to the Plutonium Facility since the beginning of April. The previous incidents were the inadvertent actuation of a fire alarm (see 4/5/2024 report) and the actuation of a fire alarm likely due to excess heat from furnaces (see 5/10/2024 report).

Plutonium Facility–Decontamination and Decommissioning (D&D): There were two contamination spread events involving D&D work last week. Last Wednesday, during activities with pencil tanks, workers removing piping manifolds below tanks experienced contamination of their personal protective equipment (PPE) due in part to liquid drops spilling from a waste bag. Miscommunications between radiological control technicians and the workers performing the disconnect contributed to this incident. Corrective actions under evaluation include improving verbal communications when workers are wearing respirators in rooms with loud supplemental ventilation, emphasizing the importance of pausing work, and ensuring work documentation and pre-job briefings highlight subtasks that cannot safely be interrupted. The other contamination spread occurred last Thursday in a different room where gloveboxes are undergoing D&D in a tent enclosure. The scope of this job had changed from a full removal of a furnace well from beneath a glovebox to removal of a flange associated with the well’s water jacket. This change had not been fully replanned. After the flange was placed into a bag, a radiological technician discovered contamination on the PPE gloves of the worker who was handling the flange. Follow-up surveys discovered contamination on the PPE of all workers in the enclosure. The D&D workers and radiological control technicians doffed PPE using techniques reinforced following previous contamination spreads. There was no spread of contamination beyond the tent and no skin contamination. Corrective actions under evaluation include additional work planning following scope changes and improved ventilation during high hazard disconnects.

Area G–Operations: Additional sampling of the yellow substance discovered in the corrugated metal pipe (CMP) excavation area confirmed that it was depleted uranium (see 4/5/2024 report). Personnel covered the material with additional soil per the recovery plan. This week, N3B personnel resumed CMP excavation. On Tuesday, liquid and debris leaked from the containment bag around a CMP being pulled into the Dome 375 PermaCon for size reduction. There was no personnel contamination from this material. The spill contaminated the loading dock, which had been posted as a radiological buffer area. This CMP had been identified during excavation as having damaged endcap, and this is the likely cause of the tearing of the bag and subsequent spill when the CMP was being moved. N3B personnel are performing an engineering evaluation to develop methods to safely handle future damaged CMPs.