

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 12, 2024

TO: Timothy J. Dwyer, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for the Week Ending July 12, 2024

Area G–Operations: On Monday, N3B personnel stopped work on corrugated metal pipe (CMP) size reduction activities in the Dome 375 Perma-Con due to concerns with the ventilation system. The ventilation system is not credited in the current safety-basis but provides an important contamination control function during cutting of CMPs. Over the past few weeks, there have been several unexpected shutdowns of the ventilation system. Engineering personnel have not conclusively determined the cause, but there appears to be a connection to electrical storms. While there has been no contamination spread outside of the Perma-Con or worker contamination, there has been unexpected contamination migration within radiologically controlled areas. Radiological control personnel performed smoke testing inside the Perma-Con this week to gather data on contamination migration. Engineering personnel are troubleshooting the ventilation system to develop potential fixes. Once the CMP project is completed, the entire Perma-Con and its ventilation system is expected to be fully refurbished to support future missions.

Plutonium Facility–Radiological Control: Last Monday, workers exited a decontamination and decommissioning area to move several bags of low-level waste to the basement. Upon exit monitoring back on the first floor, one of the workers alarmed monitoring equipment with contamination on their personal protective equipment. Access to the Plutonium Facility and movement within the facility was restricted while radiological control personnel assessed the extent of contamination spread. Follow-up surveys along the workers' path identified multiple locations with floor contamination. These have been decontaminated. A second event involving a skin contamination occurred last Tuesday. A radiological control technician performing routine surveys alarmed a contamination monitor when exiting the room due to a hot particle on their hand. The likely source of the contamination was touching a step ladder without gloves in a laboratory room. The individual was successfully decontaminated, and there was no other contamination spread. Management is developing several corrective actions based on these events including: reinforcing requirements for self-monitoring, refresher training on what tasks may be performed with given personal protective equipment, and the importance of using hard sided carts to move bags of waste.

Nuclear Criticality Safety: Triad personnel recently completed a new revision to the procedure describing the criticality safety program for Weapons Production facilities. This revision is expected to be implemented in less than six months. This week, there were multiple training sessions covering changes to the document and the bases behind those changes, many of which were formal corrective actions from previous events.

Weapons Engineering Tritium Facility (WETF)–Safety Basis: On Thursday, Triad submitted to the NNSA Field Office for information a major re-baseline of the project execution plan for upgrading the WETF safety basis to a modern document compliant with DOE-STD-3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*. The new schedule anticipates a documented safety analysis submittal in the second quarter of calendar year 2025 and a technical safety requirements submittal in the third quarter.