

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 9, 2022

**MEMORANDUM FOR:** Christopher J. Roscetti, Technical Director  
**FROM:** A. Boussouf and D. Gutowski, Resident Inspectors  
**SUBJECT:** Los Alamos Activity Report for Week Ending September 9, 2022

**Plutonium Facility–Infrastructure:** Last Wednesday shortly after midnight, the ventilation in the Plutonium Facility experienced a loss of differential pressure. Facility personnel entered the appropriate limiting condition for operation, restricted access to the facility, and began troubleshooting efforts. They were able to restore the pressures through manual control and allowed normal access to the south half of the facility by late morning. The northern wings remained restricted as personnel continued troubleshooting efforts. This failure had many similarities to an event at the end of March (see 4/1/2022 report). In that case, damper actuators failed. In this case, the problem was with the positioners that control the damper actuators. The probable cause of the failure was water accumulation in the Instrument Air System. Personnel replaced the broken positioners with components that were installed in the plant but are no longer in use. Full access to the facility was restored by Wednesday evening. The Instrument Air System has a drying train to ensure only dry air is present. However, there were multiple issues with the drying system. One of the heat exchangers that condenses and removes water had its chilled water supply shut off for an indeterminate period. The valve for that system is normally not readily accessible; however, there is currently substantial scaffolding in the area allowing access. A moisture analyzer on the system was also out of commission. Now that ventilation is restored, facility personnel are working on an extent of condition review to evaluate water accumulation and potential component damage in other areas. They are also working to restore the drying system for instrument air and reinforce training to assure valves are not repositioned inappropriately.

On Thursday, Triad transmitted an exemption request related to seismic qualification for portions of the ventilation system to the NNSA Field Office for approval. The request specifically notes that not all components in the safety-significant system meet performance category 2 requirements for seismic hazards. The request states that these portions of the ventilation system were not upgraded during past efforts due to high cost and low safety benefit. This ductwork provides a worker safety function and is not part of the confinement boundary that is intended to protect the public during a larger performance category 3 event.

**Flanged Tritium Waste Containers (FTWC):** This week, Triad personnel demonstrated FTWC venting and handling activities for federal assessors per a 2020 federal readiness assessment recommendation (see 11/13/2020 report). Environmental Management personnel were present throughout the evolution and will provide their observations to the startup authorization authority. The demonstration included the use of a new, four-legged, canine-inspired robot replacing a human spotter during the lifting and moving of FTWC containers with the remote vehicle.

**Area G:** On Thursday, N3B personnel commenced retrieval of corrugated metal pipes (CMP) from their burial pit. Following retrieval of the CMPs, they will be sheared into segments that can fit into standard waste boxes for shipment to the Waste Isolation Pilot Plant for disposal. This week, N3B personnel also completed a management self-assessment to prepare for upcoming formal readiness reviews to support the startup of this size reduction activity.