

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 1, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: P. Migliorini, Acting Resident Inspector
SUBJECT: Los Alamos Activity Report for Week Ending October 1, 2021

DNFSB Staff Activity: P. Migliorini was onsite performing resident inspector duties. While onsite, the acting resident inspector performed walkdowns of Area G and the Plutonium Facility.

On Wednesday, a staff team held a remote interaction with Triad and NNSA Field Office personnel to discuss the ongoing upgrade to the Plutonium Facility leak path factor methodology (see 8/28/2020, 2/26/2021, and 5/28/2021 reports). The leak path factor is used to quantify the building's ability to confine radioactive materials during an accident scenario and is particularly important for the evaluation basis earthquake event that the active confinement ventilation system is not credited to survive. The upgraded leak path factor methodology is a key supporting analysis for the new DOE Standard 3009-2014 compliant safety basis that Triad plans to submit for approval in March 2022.

Plutonium Facility–Infrastructure: Last week, Triad submitted to the NNSA Field Office for concurrence a major modification determination for the Plutonium Facility Equipment Installation Phase 2 (PEI2) subproject. PEI2 will install new gloveboxes and equipment in the Plutonium Facility to provide enduring analytical chemistry and materials characterization capabilities that support plutonium pit production and other plutonium missions. Triad safety basis analysts determined that while PEI2 may introduce process changes, the changes do not generate hazards outside of the existing Plutonium Facility safety basis. Accordingly, Triad safety basis concluded that PEI2 is not a major modification to the existing facility. Triad plans to revise the project safety design strategy to reflect the negative major modification determination.

Area G: On Thursday, N3B transmitted to the Environmental Management Field Office an interim draft of a DOE Standard 3009-2014 compliant safety basis for Area G. This submittal is intended to meet one of the performance-based incentives for the fiscal year 2021 Los Alamos Legacy Cleanup Contract. The interim draft safety basis includes placeholders for important aspects that still need to be developed, such as mapping safety controls to specific hazard scenarios and finalizing performance criteria for safety controls. N3B plans to submit the final draft safety basis in February 2022. Following implementation, this modern safety basis will replace the outdated basis for interim operation.

On Thursday, the acting resident inspector walked down the domes that currently house the transuranic waste containers with potentially reactive materials that are associated with DNFSB TECH-46. The containers are protected from direct impacts by robust barriers (e.g., stacked and banded metal pallets or standard waste boxes) and from fire hazards by administrative controls. Once the approved justification for continued operation (see 9/3/21 report) is implemented, 12 containers will remain in their current location and 21 containers will be moved to Dome 33, which has a non-credited fire suppression system, until remediation or additional historical information can demonstrate that they do not contain reactive materials.