

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 6, 2022

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: D. Gutowski and J. Plaue, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending May 6, 2022

Plutonium Facility–Infrastructure: Last week, an NNSA team conducted a technical independent project review of the Los Alamos Plutonium Pit Production Project (LAP4). At the exit brief, the review team provided an overall conclusion that nuclear safety is being successfully integrated into the design, and qualified personnel are engaged in the project. They provided 9 recommendations, which are concerns that, in the team’s opinion, need to be addressed. Of particular note, the team recommended that LANL demonstrate that the confinement approach results in a “very high assurance” of the confinement of radioactive material and consistency with facility safety basis documents by December 2, 2022.

On Friday, Triad transmitted to the NNSA Field Office for approval an update to the safety design strategy for LAP4. This update reflects the elimination of the goal to achieve a safety class active confinement system for the facility (see 4/1/2022 report). The strategy discusses meeting confinement requirements through the safety significant ventilation system and the safety class passive confinement identified in the safety basis. The strategy asserts that the leak path factor calculations supporting the passive confinement approach have withstood “a tremendous number of technical evaluations...” Contrary to this assertion, the Board provided extensive critique of the leak path factor calculations in November 2019 via Tech Report 44, *Los Alamos National Laboratory Plutonium Facility Leak Path Factor Methodology*. In response, NNSA and Triad committed to develop a new calculation; however, Triad has experienced delays developing the new calculation and the schedule for completion is uncertain.

Transuranic Waste Management: On Wednesday, the NNSA Field Office noted its concurrence with Triad’s proposed impacts for implementing DOE Standard 5506-2021, *Preparation of Safety Basis Documents for Transuranic (TRU) Waste Facilities*, for the safety bases for the Transuranic Waste Facility and the RANT Shipping Facility. Triad concluded that some types of additional safety controls would have lesser programmatic impacts, but there would be costs associated with development and implementation of new controls. They noted completion of the analysis would allow for a better understanding of the programmatic impacts.

Wildland Fire: The Cerro Pelado Fire continues burning in land west of the laboratory and has impacted more than 32,000 acres. Much of the fire is currently active in the blackened region from the 2011 Las Conchas Fire. On Monday, the LANL Emergency Operations Center entered monitoring mode as the fire moved closer to the site boundary. Triad Emergency Management personnel and the NNSA Field Office have established criteria for moving the laboratory to a maximum telework status and for suspending onsite operations. The fire is currently approximately 5 miles from the site boundary. Fire crews have been performing tactical backburn operations to limit fire spread toward the laboratory. Additionally, Triad personnel have aggressively pursued fuel mitigation efforts near the Weapons Engineering Tritium Facility, which is the closest nuclear facility to the fire. N3B requested Triad perform additional mitigation on the south side of Technical Area 54 to increase defensible space around the storage of transuranic waste drums in the domes at Area G.