

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 6, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director

FROM: D. Gutowski, Resident Inspector

SUBJECT: Los Alamos Activity Report for Week Ending August 6, 2021

DNFSB Staff Activity: On Thursday, DNFSB staff members held a closeout call with Triad and NNSA Field Office personnel to review the staff's observations from their review of the Critical Decision 1 (Approve Alternative Selection and Cost Range) of the Los Alamos Plutonium Pit Production Project (LAP4).

Transuranic Waste Facility (TWF): On Wednesday, a lightning strike damaged the fire protection system at TWF. Following the storm, Triad personnel evaluated the system due to alarms that actuated. They discovered that the control panels for both fire water pumps were damaged by the strike. Implementation of the new safety basis that elevates the fire suppression system to safety-significant is in progress but not complete. Therefore, the new limiting condition of operation associated with the fire pumps is not yet applicable (see 7/16/2021 report). Facility personnel placed TWF into warm standby and instituted a fire watch. They are beginning procurements to replace the damaged components since spares were not on hand. Implementation of the new safety basis will be delayed due to this event.

Plutonium Facility–Safety Basis: Triad personnel concluded that the recent potential inadequacy of the safety analysis (PISA) associated with the water overflow in the Plutonium Facility constituted a positive unreviewed safety question (USQ) (see 7/30/2021 report). While the PISA was specific to unanalyzed criticality safety scenarios, the USQ is more expansive and also notes that this previously unanalyzed source of water may also be a new initiator for other hazard scenarios including steam overpressurization and contamination spreads.

Area G–Safety Basis: Last Friday, N3B submitted to the Environmental Management Field Office and Headquarters for approval the Justification for Continued Operations (JCO) for the PISA related to DNFSB TECH-46 and potentially energetic drums (see 7/23/2021 report). The JCO notes that upon further evaluation, 27 of the 60 containers identified as potentially reactive do not pose a reactivity hazard and no longer need supplemental controls. For the remaining containers of concern, the JCO removes the previous prohibition on operations with these containers and would allow limited doublepacking and movement under new controls such as vehicle spotting, lift plans, restriction of other activities, and combustible control. DOE personnel are evaluating the submittal.

Weapons Engineering Tritium Facility (WETF): On Friday, Triad submitted to the NNSA Field Office for approval a safety basis addendum to support upcoming plutonium coupon studies at WETF (see 3/12/2021 report). The amount of plutonium handled in WETF will be limited to protect the calculated low consequences and ensure that criticality is not credible. The submittal also identifies several defense in depth controls including a robust container. Last Thursday, Triad submitted to the NNSA Field Office for approval another safety basis addendum that changes the limiting oxidant concentration for the safety-significant oxygen monitoring system from 5.0% to 4.6% to match the current national consensus code (see 11/27/2020 report).