

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 30, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: D. Gutowski, Resident Inspector
SUBJECT: Los Alamos Activity Report for Week Ending July 30, 2021

DNFSB Staff Activity: On Thursday, members of the DNFSB staff held a call with NNSA Field Office and Headquarters personnel to discuss the response to DNFSB-TECH-46. On Tuesday, staff members held a call with NNSA Field Office personnel to support a review of DOE directives in NNSA's management and operation contract for the laboratory.

Plutonium Facility: On Wednesday, Triad personnel concluded that the water overflow in the Plutonium Facility last week (see 7/23/2021 report) represents an unanalyzed water ingress mechanism for criticality scenarios in gloveboxes and therefore constitutes a potential inadequacy of the safety analysis (PISA). The PISA is currently specific to the criticality hazard from water interaction. The resident inspector notes that a steam pressurization event is another potential hazard from unintended ingress of water. The existing Plutonium Facility safety basis includes a steam over-pressurization event from cooling water entering furnaces or calciners in gloveboxes. Water ingress from the ventilation system could be another mechanism for this event which may need different controls than the existing scenario.

Facility personnel are continuing recovery from the overflow event. Two of the impacted rooms have been decontaminated and released back to operations. The others remain in progress.

Last Tuesday, the NNSA Field Office approved a safety basis addendum supporting changes to storage of heat source plutonium items in fire rated safes. There is a new material-at-risk limit for the safes, which are now specifically credited as safety class. In their approval, NNSA directed Triad to resolve several comments in a future revision of the safety basis. The comments included a request to revise one of the hazards analysis events and to clarify language regarding maximum internal temperatures.

Emergency Management: On Tuesday, Triad conducted an operations-based emergency drill in Technical Area 11, a high explosives area. The scenario involved a wildland fire initiated by a lightning strike. Field play included deployment of Los Alamos Fire Department wildland division resources. The NNSA Field Office recently requested that Triad resume in-person emergency drills and exercises (see 7/16/2021 report).

RANT Shipping Facility: Last Wednesday, the NNSA Field Office unconditionally approved a page change to the safety basis for the RANT Shipping Facility. The change modifies the term "outer drums" to the more generic "outer TRU waste container." This will allow the RANT Shipping Facility to compliantly handle Ten Drum Overpacks and Standard Waste Boxes in addition to drums.