

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 8, 2022

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: A. Boussouf and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending July 8, 2022

Transuranic Waste Management: In response to the titanium powder flash event of 2020 and DNFSB-TECH-46, *Potential Energetic Chemical Reaction Events Involving Transuranic Waste at Los Alamos National Laboratory*, Triad developed a new procedure for developing and using chemical compatibility evaluations (CCE) for processes that generate transuranic waste. Using this procedure, Triad's acceptable knowledge specialists have started systematically reevaluating the approximately 50 processes that have the potential to generate transuranic waste at the Chemistry and Metallurgy Research Building (CMR) and the Plutonium Facility. A key new feature of the process is integration with the safety basis organization to inform them of any changes to CCEs. So far, Triad has evaluated four waste generating processes and entered the new information process to evaluate safety basis impacts of these processes for CMR, the Transuranic Waste Facility, and the Plutonium Facility. On Tuesday, Triad briefed the NNSA Field Office on its progress implementing this approach.

Legacy Facilities: Last Thursday, the Environmental Management Field Office unconditionally approved N3B's revised Justification for Continued Operations (JCO) that allows characterization work for Building 21-257 and the industrial waste lines in TA-21 (see 7/2/2021 report). The previous JCO had reached its termination date, and EM approved this revision to extend the JCO to the end of September. This will provide additional time to support closure of the potential inadequacy of the safety analysis pertaining to the potential for exceedance of hazard category 3 material quantities (see 8/14/2020 report).

Plutonium Facility–Readiness: The NNSA Field Office approved Triad's quarterly startup notification report. In their approval they noted that the planned campaign to harvest large quantities of heat source plutonium material was screened out of the readiness process (see 5/20/2022 report). Triad considers the activity sufficiently similar to current activities. However, the field office determined this should be considered a new activity and directed that Triad include the activity in the next startup notification report with the requirement to conduct a limited scope checklist federal readiness assessment concurrent with a contractor readiness assessment.

Plutonium Facility–Infrastructure: Last Thursday, Triad submitted to the NNSA Field Office for approval a revised draft Preliminary Documented Safety Analysis (PDSA) for facility modifications associated with a subproject for the Los Alamos Plutonium Pit Production Project (LAP4). This revision is intended to address the majority of the field office's comments on the previous submittal. Triad proposed to resolve the remaining items, including completion of fire hazards evaluations for new gloveboxes, in the final PDSA.

Plutonium Facility–Radiological Control: Last Wednesday, a contamination monitor detected a small particle of contamination on the hand of a Plutonium Facility worker. The particle was not detected on exit surveys from the immediate work location and upon exiting the basement, but was caught at the hand and foot monitors at the facility exit similar to another recent contamination event (see 6/24/2022 report). Facility personnel later held a fact-finding meeting to discuss the incident and the response. They noted that a re-evaluation of personal protective equipment and monitoring practices would be performed. This incident again reinforces the importance of having multiple layers of monitoring prior to exiting the facility.