

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 12, 2021

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending March 12, 2021

DNFSB Staff Activity: Members of the Board's staff observed a briefing from Triad to DOE Headquarters and NNSA Field Office personnel covering planned changes to site specific atmospheric dispersion parameters used in safety analyses (see 2/26/2021 report).

Transuranic Waste Management: Triad personnel continued their efforts to identify waste containers with contents similar to those involved in the incident that occurred two weeks ago (see 3/5/2021 report). They identified potential containers at the Plutonium Facility, Transuranic Waste Facility (TWF), and the Waste Isolation Pilot Plant. They shipped the suspect containers from TWF back to the Plutonium Facility despite the ongoing issue with the transportation safety document concerning the lack of analysis for pyrophoric materials (see 2/12/2021 report). Triad personnel are finalizing calculations to determine the maximum potential mass of pyrophoric metal fines in these containers, the resultant impact on the waste container from an oxidation reaction with these metals, and the time required for these metal fines to passivate with oxygen diffusing through a plastic bag. NNSA and Triad leadership are determining an appropriate course of action for a formal investigation.

Area G: On Monday, N3B management notified the EM Field Office that they were immediately restricting operations at the facility to essential activities as a result of the large number of simultaneous safety basis issues (see 2/19/2021 report). These restrictions limit activities to those associated with surveillances required by the safety basis, environmental compliance, life safety, maintenance, and minimal essential movements of material-at-risk (MAR) needed to execute operational restrictions or other compensatory measures to support safety and compliance activities. In general, the most significant changes against the previous operational posture include suspension of MAR activities associated with planned open container remediation activities and container certification activities. The restrictions do not impact N3B's ability to mine and transport containers to the RANT Shipping Facility for offsite shipment. N3B also noted they will be providing a schedule for resolution of the safety basis issues to the EM Field Office by March 25, 2021.

Plutonium Facility–Infrastructure: On Wednesday, the NNSA Field Office approved the revised Safety Design Strategy for the Los Alamos Plutonium Pit Production Project (see 2/26/2021 report). There were no conditions of approval; however, the field office directed Triad to pursue an exemption for the vulnerabilities to the ventilation system per DOE O 420.1C, *Facility Safety*, as described in one of the options presented in the design upgrade analysis for the ventilation system.

Continuous Improvement: On Wednesday and Thursday, the Weapons Production Directorate held a safety stand-down for organizational learning, overlapping with a laboratory-wide re-emphasis on COVID controls. Senior management provided briefings on COVID controls and current operational concerns regarding radiological control, special nuclear material movement, waste management, and housekeeping, especially as related to combustible loading. Management is collecting input from small group breakout sessions where the workforce will discuss these concerns and methods for improving operations.

Weapons Engineering Tritium Facility–Readiness: On Thursday, Triad's Joint Evaluation Team recommended that a new operation involving testing plutonium coupons undergo contractor and federal readiness assessments. Safety basis changes analyzing the impact of adding plutonium to the facility are in progress.