

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 25, 2019

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending October 25, 2019

DNFSB Staff Activity: The resident inspectors met with a team from the Government Accountability Office as part of their review of DOE Order 140.1 and its effect on the Board's ability to meet its statutory responsibilities.

Nuclear Criticality Safety: On Wednesday, the team leader out-briefed the preliminary results of the management assessment on the nuclear criticality safety program at the Plutonium Facility. The team, which included external membership, identified one finding concerning an inappropriate approval of a change during contract transition to the roles and responsibilities in the institutional program document. They also identified 11 opportunities for improvement, including: developing an implementation matrix; the institutional Nuclear Criticality Safety Committee is not satisfying all elements of its charter; strengthening the identification of assumptions in evaluations; and the procedures and records associated with the fissionable material holdup program either have not been developed or have not been reviewed by the Nuclear Criticality Safety Division. The team also identified six noteworthy practices including: a sound staffing plan; a commendable commitment to hands-on criticality training; and a sound vision for the criticality safety officer program.

Plutonium Facility–Safety Basis: Early in October, Triad personnel discovered five additional pipe overpack containers (POC) containing cheesecloth and greater than 10 grams of heat-source plutonium. Following a 2017 potential inadequacy of the safety analysis, POCs with cheesecloth have been limited to 10 grams of heat source plutonium (see 2/3/2017). When the evaluation of the safety of the situation was developed in 2017, there were five known POCs with greater than 10 grams. These were exempted from the limit as thermal modeling suggested POCs up to 25 grams would be acceptable, however the limit of 10 grams was chosen for conservatism and to comply with onsite transportation limits. The discovery of the five additional POCs triggered entry into a limiting condition of operation which requires that the POCs be repackaged immediately. Triad is currently working on a capability to repackage these containers in a tent, which is scheduled to be completed in late November. However, Plutonium Facility senior management is concerned about the substantial worker hazards involved with repackaging heat source plutonium without robust engineered controls. They therefore directed work on a parallel path to amend the safety basis to allow additional exempted containers for the NNSA Field Office's consideration. All of the new POCs contain well below 25 grams of heat source plutonium.

Flanged Tritium Waste Containers (FTWC): Last Friday, Triad transmitted the addendum to the packaging and transportation safety document supporting moving FTWCs from Area G to the Weapons Engineering Tritium Facility to the NNSA Field Office for approval. They also transmitted a revision to the safety basis addendum for Area G which will be reviewed by both field offices with the EM office as the final approval authority.

Area G–Readiness: N3B personnel determined that both federal and contractor readiness assessments are required for resumption of additional sort, segregate, and size-reduce activities which have not been performed since 2014. The activities to be resumed include draining liquids from drums, stabilizing free liquids, and remediating prohibited items and will be performed in a glovebag within a Perma-Con in Dome 231