

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 22, 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 November 22, 2019

DNFSB Staff Activity: M.W. Dunlevy and P.J. Migliorini, supported by other staff via teleconference, conducted reviews associated with transuranic waste management in Triad and N3B nuclear facilities. They also walked down the Plutonium Facility.

Area G–Safety Basis: Last Friday, the EM Field Office unconditionally approved N3B’s strategy for upgrading the safety basis (see 10/18/2019 report). On Thursday, N3B submitted to the EM Field Office for approval a safety basis addendum to support retrieval and storage of the corrugated metal pipes. The addendum proposes new Specific Administrative Controls for the activity associated with material-at-risk, refueling, crane standoff, and elevated waste movements and critical lifts. N3B requested approval by the end of this calendar year in order to support retrievals beginning in May 2020. The field office is reviewing the addendum.

Transuranic Waste Facility (TWF): Earlier this month, TWF personnel successfully completed replacement of the safety class seismic power shutoff system. The new system remedies deficiencies with the original. Effective use of TWF is essential to improving safety at the waste generating facilities; however, personnel continue efforts to rectify several features of this new facility to enable its intended use, including: a replacement firewater pump is scheduled to be installed next year in hopes of eliminating a water flow anomaly needed to support upgrading the fire suppression system to safety significant; plans remain to convert the dry-pipe system from nitrogen to air to eliminate an asphyxiation hazard; and planning to establish the intended characterization functions after personnel determined that the assay trailer could not be used because designers did not account for spacing with the adjacent radiography trailer—the radiography trailer could not itself be used because of equipment issues and will be replaced and likely relocated to outside of the Plutonium Facility.

Confinement Vessel Disposition: Earlier this month, project personnel completed debris removal on the ninth vessel. This is the last vessel known to contain significant quantities of nuclear material, and its cleanout generated 85 drums of transuranic waste. The removal of these waste containers is currently hampered by some of the outstanding issues at TWF discussed above. The eventual removal of these waste containers from the Chemistry and Metallurgy Research building will represent a step improvement to the facility’s safety posture because of the reduction in material-at-risk.

Plutonium Facility–Safety Basis: Last Wednesday, Triad submitted to the NNSA Field Office for approval a revision to the evaluation of the safety of the situation related to heat source plutonium and cheesecloth (see 10/25/2019 report). This revision includes 55 gallon drums in addition to pipe overpack containers and increases the heat source plutonium limit in containers from 10 grams to 28 grams. The NNSA Field Office is reviewing this submittal.

On Monday, Triad submitted to the NNSA Field Office a temporary safety basis modification to support use of a crane at a non-nuclear construction site adjacent to an outdoor transuranic waste storage pad. Use of a crane was identified in the original hazard analysis for construction, but potential impacts on the waste pad were not analyzed. The temporary modification concludes that a crane impact on waste drums does not create consequences that would drive additional controls. The NNSA Field Office approved the temporary modification on Thursday.