

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 18, 2017

MEMORANDUM FOR: S.A. Stokes, Technical Director

FROM: J.W. Plaue

SUBJECT: Los Alamos Report for Week Ending August 18, 2017

DNFSB Staff Activity: M.R. Bradisse, R.C. Eul, and N.M. George observed conduct of operations and nuclear criticality practices at the Plutonium Facility. They also observed the criticality exercise discussed below. On Friday, R.K Verhaagen completed his service with the DNFSB.

Chemistry and Metallurgy Research (CMR) Building–Safety Basis: Last Friday, LANL transmitted to the NNSA Field Office for approval a revision to a temporary safety basis associated with the storage and processing of americium-241 materials received from an off-site location in February 2016. This revision supports removing the 55 gallon drum from its overpack and subsequent installation of a drum vent. Once a definitive path forward for the americium is determined, CMR personnel will need a further safety basis revision to support opening the inner containers and processing the materials.

Transuranic Waste Management: On Thursday, the NNSA Field Office authorized startup of the mobile loading operations for TRUPACT II containers at the Plutonium Facility (see 7/21/17 weekly). LANL anticipates completing the associated safety basis implementation actions in September 2017, but will need to complete several other hurdles, including the Generator Site Technical Review (see 4/21/17 weekly), in order to commence shipping of transuranic waste containers to the Waste Isolation Pilot Plant. LANL's latest waste accumulation forecast indicates that operation of the new Transuranic Waste Facility (TWF) is required by May 2018. This projection assumes that Plutonium Facility personnel are able to ship 14 large volume, low material-at-risk containers to Area G. The EM Field Office is currently reviewing the necessary safety basis changes to receive these containers (see 7/7/17 weekly). Without the relief afforded by shipping the large containers, the Plutonium Facility will reach storage capacity in approximately November 2017. TWF project personnel are currently planning to complete the actions required to commence limited nuclear operations in September 2017.

Plutonium Facility–Safety Basis: Earlier this month, LANL transmitted to the NNSA Field Office for approval a revision to the 2014 safety basis that addresses previous comments and conditions of approval. The 2014 version of the safety basis represents a substantial overhaul as compared to the currently implemented versions and is intended to eventually become the controlling safety basis, once approved and implemented. The NNSA Field Office is developing their review plan.

Plutonium Facility–Emergency Management: On Thursday, Plutonium Facility personnel conducted their annual nuclear criticality exercise. This year's scenario featured a simulated inadvertent criticality involving an over-batched aqueous solution system coincident with an inoperable ventilation system. Additionally, two workers were exposed with one non-viable and the other requiring rescue. Evaluators and controllers will conduct their exercise critique next week.

Weapons Engineering Tritium Facility (WETF): On Thursday, the NNSA Field Office rescinded a previous condition of approval from 2013 that prohibited the receipt of new material-at-risk into the facility. WETF management recently requested this change in order to support the facility's gas transfer stewardship mission. The material-at-risk limit remains 240 g of tritium.