

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 23, 2018

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending March 23, 2018

DNFSB Staff Activity: P. Foster was at Los Alamos for resident inspector training for a detail at another DOE site.

Area G–Safety Basis: Last week, a subcontractor to the EM Field Office submitted a draft safety basis for review and approval. This new Documented Safety Analysis (DSA) will eventually be given to the operating contractor to replace the existing Basis for Interim Operations reflecting the acknowledgement that operations are likely to continue for more than five years. The new DSA also represents the first safety basis at LANL developed in compliance with DOE-STD-3009-2014. Notably, the draft DSA includes several proposed engineered controls that are not currently credited in the existing safety basis, including storage structures, enclosures, ventilation systems, and fire suppression systems.

Nuclear Criticality Safety: On Wednesday, the division leader briefed the NNSA Field Office on ongoing program improvements. He indicated that since October 2016, the division staff has remedied deficient technical basis documents for 54 fissionable material operations, leaving 236 in the backlog with a goal to remedy 60 this fiscal year. He also noted that the division has reduced the number of infractions that have been open longer than a year to eight with a plan to resolve them by the end of the fiscal year. Of particular interest, he stated that staffing of criticality safety analysts is at an all-time high with 11 analysts fully qualified and 10 in qualification. He also noted better than expected progress establishing an analyst pipeline program with several universities and issuing standard criticality safety requirement evaluations that should expedite remedy of the technical basis document backlog.

Plutonium Facility–Conduct of Operations: Plutonium facility personnel moved a pit into a glovebox that is not authorized to contain that material form in the criticality safety posting. There was no other fissile material in the box. Introducing a disallowed item is an analyzed credible upset condition in the criticality safety evaluation for the box. Facility personnel have restricted access to the box and are developing a recovery plan and other corrective actions.

Plutonium Facility–Transuranic Waste Operations: On Tuesday, the NNSA Field Office approved a safety basis change that allows use of standard waste boxes as an acceptable waste container. Once fully implemented, this should provide program and maintenance workers with an alternative that minimizes the need for size reduction of contaminated equipment.

Chemistry and Metallurgy Research Building: An exit monitor discovered contamination on the fingers of a worker who had been performing decontamination and decommissioning activities. The worker was decontaminated, nasal smears had no detectable activity, and a bioassay will be performed. At the fact-finding meeting, participants noted that work continued as radiological surveys detected increasing levels of contamination which exceeded limits in the radiological work permit. Management suspended this job pending replanning and is developing lessons learned to reinforce the importance of checking the condition of personal protective equipment and staying within the bounds of one's radiological work permit.