

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 14, 2020

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending February 14, 2020

Transuranic Waste Operations–Safety Basis Inconsistencies: Last Thursday, Triad personnel determined that the potential inadequacy of the safety analysis related to covering drum vents at the Transuranic Waste Facility (TWF) during flammable gas sampling constitutes a positive unreviewed safety question (see 1/24/2020 report). The TWF safety basis requires that transuranic waste container vents be visually inspected and have no evidence of clogging as a surveillance requirement to ensure that the safety-class containers meet their functional requirement to prevent buildup of flammable or other gases. Safety basis personnel determined that the spatula-like tool used to cover the vent during sampling defeats this functional requirement. Flammable gas sampling activities remain paused at TWF; however, gas sampling activities resumed this week at the Plutonium Facility because of differences in safety basis requirements. In particular, the Plutonium Facility safety basis, which credits transuranic waste containers as safety-significant, has a functional requirement to prevent hydrogen buildup, but does not provide any requirements on filter condition or a surveillance requirement related to the adequacy of venting. Flammable gas sampling at Area G also remains paused. The Area G safety basis treats filters in a third way. While venting is not a functional requirement of compliant safety-significant drums, unvented drums are separately defined as a drum with a visibly obstructed vent path. Unvented drums are allowed at Area G, but must be kept in an isolated area with restricted access and cannot be stacked.

Federal Oversight: On Wednesday, EM Headquarters personnel performed a walk-down of Area G with site office technical support contractors. Given low federal staffing at the EM Field Office, headquarters personnel have been providing supplemental support. The team observed criticality safety postings at the high fissile-gram equivalent waste drums storage area, treatment of non-conformance reports, and use of weather protecting tarps over filtered drums.

Radiological Laboratory Utility Office Building: On Wednesday, the NNSA Field Office transmitted their formal comments on the safety basis planned to support operations as a hazard category 3 nuclear facility. Notable comments include that Triad: provide a path forward to correct known significant deficiencies and achieve compliance with applicable national consensus codes and DOE Order 420.1C, *Facility Safety*; clarify that ASME NQA-1 requirements apply to defense-in-depth systems such as fire protection and ventilation; and consider elevating controls that provide event detection (i.e., continuous air monitors) to defense-in-depth.

Continuous Improvement: During the past three years, LANL has experienced two near-miss events where workers without appropriate controls entered rooms with low oxygen alarms actively sounding. Both events were the subject of DOE Office of Enforcement investigations. Recent data indicate that recent corrective actions taken by Triad have been effective so far. For example, the LANL emergency response organization has been contacted to respond to low-oxygen alarms about 22 times in the past three months compared to a previous history of essentially zero.