

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 6, 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 September 6, 2019

**DNFSB Staff Activity:** On Thursday, a staff team held a teleconference with EM Field Office and N3B personnel to discuss the safety basis implications of the recent non-conformances against the Basis of Knowledge (BoK) (see 7/26/2019 report). The team examined the safety implications of two of the 24 rejected containers. The Central Characterization Program rejected these containers because their conservative review of records indicated that one potentially contained organic cat litter and neutralized nitric acid and the other an engineered organic absorbent and nitric acid. In the BoK, DOE has prohibited certain ratios of these materials without a *de minimis* threshold mass given their potential to support chemical exothermic reactions or propagating fires. EM Field Office management maintain the existing safety basis adequately analyzes the hazards posed by these containers. N3B has placed hold tags on the containers until they have the capability to remediate them in a few years.

**Management–Abnormal Event Notifications:** The resident inspectors recently discussed with Plutonium Facility senior management their observations regarding an apparent trend of decreased formal notifications for abnormal events. Event notifications are part of Triad’s Contractor Assurance System and, in our opinion represent one important tool to ensure awareness across the institution, including to the NNSA Field Office. We found that, while the overall number of fact-findings has actually increased, the number of notifications has dropped by about half compared to the first 8 months of calendar year 2018. The data show that notifications were sent for only about 20 percent of the events that management had deemed appropriate to conduct a fact-finding. For example, review of the data indicate that formal notifications of potential process deviations, the term typically used for concerns associated with complying with nuclear criticality safety requirements, no longer consistently receive an event notification. Additionally, some significant recent events are not being notified such as the recurrent leaking carboys of Pu-238 process residue solutions (see 7/26/2019 report), the furnace thermal excursion (see 7/19/2019 report), and the corroding waste drum filter (see 5/24/2019 report). Plutonium Facility management is reviewing the situation, but believes their current approach to reporting improves focus on more meaningful events.

**Plutonium Facility–Safety Systems:** Waste management personnel have identified an additional five transuranic waste containers with varying degrees of rust-like buildup around their filters (see 8/2/2019 report). All of the containers include glovebox gloves made from chlorinated polymer that were used in plutonium-238 operations. Waste management personnel continue preparations to sample the headspace gas and intrusively investigate the containers.

**Plutonium Facility–Infrastructure:** Last week, workers discovered liquid in the basement of the Plutonium Facility. The responders discovered it was from an overflowing sump (see 11/30/2018 report). Further investigation determined that the overflow was likely due to blockages in the industrial waste line and troubleshooting was hindered by the lack of clear technical drawings. Facility personnel have cleaned up the liquid and decontaminated much of the area. Areas that were not accessible by the decontamination team remain posted as a contamination area. Planned corrective actions include improving drawings and evaluating periodic testing of the drainage system.