

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 20, 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 April 20, 2018

**Plutonium Facility–Safety Systems:** On Tuesday, facility operations personnel entered the appropriate limiting condition for operation after a surveillance found the liquid level in an anion exchange column below the top of resin bed, which is an unsatisfactory condition. Program personnel promptly restored compliance with the addition of about a liter of weak nitric acid to the system. At the fact-finding, personnel were unable to determine an apparent cause for this changed condition. They reported that the last addition of solution occurred in January 2018 and recalled additions are typically made every three to four months; however, this information is not formally logged or trended. Management directed a confirmation of the valve alignment for the system. Notably, the NNSA Facility Representatives recently identified findings concerning system alignment checklists. In the case of the anion exchange system, a checklist exists for normal operations, but not for the inactive state that has existed for the past four years.

**Plutonium Facility–Conduct of Operations:** Last week, programmatic personnel opened a container from the early 1980's with database information indicating the presence of an unknown material based on the most recent measurement. They found an extra object in the container and requested a non-destructive assay that indicated the presence of plutonium. The workers confirmed that plutonium was not allowed in the glovebox and declared a potential process deviation. Fact-finding participants determined the need to use a glovebox with broader criticality safety limits for the handling of legacy items. The glovebox is posted out-of-service awaiting a recovery plan.

**Transuranic Waste Facility (TWF):** On Thursday, TWF personnel successfully received their sixth shipment, which consisted of eight waste containers. They executed the receipt using revision 10 of the procedure, which included changes to implement direction from the NNSA Field Office on the need for a new Specific Administrative Control to protect the initial condition that runaway reactions or energetic events will not occur (see 4/13/2018 report). The procedure implements this control with new steps requiring verification that the technical supervisor and waste facility management reviews are indicated as completed in the Waste Compliance and Tracking System. TWF personnel intend to seek approval to proceed with a 16 container receipt.

**Waste Characterization Reduction and Repackaging Facility:** Management decided not to pursue the planned campaign to clean residues out of unremediated nitrate salt parent drums given the limited time before the DOE Office of Environmental Management contract transition (see 3/16/2018 report). On Wednesday, workers began cleaning out the waste repackaging glovebox, removing campaign-specific equipment, and replacing glovebox filters to prepare the facility for dormancy. The parent drum campaign will be reprioritized as part of the legacy transuranic waste activities at Area G.

**Emergency Management:** On Monday, emergency response personnel responded to a bulging waste drum at the Sigma Facility. The drum primarily contained reactive metal powders, water, and machining oil; there was no radiological material. The response plan involved two robots, one of which used a new shearing tool to vent the drum at the bung. A smaller drum containing the same waste stream in Area L showed no visual evidence of bulging upon a follow-up visual examination.