

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 10, 2017

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending March 10, 2017

**DNFSB Activity:** Chairman Sullivan and Vice Chairman Hamilton visited the laboratory on Monday through Wednesday. They walked down wings 5, 7, and 9 at the Chemistry and Metallurgy Research Building; rooms in each of the processing areas, the basement, the vault, and some of the outdoor areas at the Plutonium Facility; the Weapons Engineering Tritium Facility; and observed federal readiness assessment (FRA) activities at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF). In addition, they held discussions with the NNSA Field Office Manager and the LANL Deputy Director.

**WCRRF–Readiness Activities:** On Monday, the FRA team commenced their review of the WCRRF facility and personnel to safely accomplish the treatment of the inappropriately remediated nitrate salt wastes. The team, which is composed of DOE Environmental Management personnel, conducted interviews and observed demonstrations of the waste receipt process and the drum bag-on and bag-off process. For the latter, the team noted stellar command and control practices by the operations crew. On Thursday, operations personnel were preparing to commence an evolution to demonstrate the glovebox-based treatment process when an unplanned loss of electrical power occurred. Facility personnel responded appropriately and have begun troubleshooting the issue. At this point, the impact on the FRA schedule is unknown.

**Area G–Safety Basis:** On Thursday, the NNSA Field Office Manager unconditionally approved the Evaluation of the Safety of the Situation (ESS) that LANL submitted on May 13, 2016, related to discrepancies in the transuranic waste inventory (see 5/20/16 weekly). This ESS addressed three open Potential Inadequacy of the Safety Analyses—the first of which was declared on December 3, 2014, subsequent to questions raised by the Board’s staff (see 12/5/14 weekly). The primary issue addressed by the ESS were errors in the assumed composition of the waste and its related dispersal properties in a fire. The ESS corrected these errors based on a comprehensive review of the as-found waste inventory, which resulted in changes in consequences for 14 postulated accident scenarios and changes in the details associated with 16 Specific Administrative Controls. The changes in controls primarily involve inventory limits and spacing distances associated with each of the various processes and storage areas with the overall aboveground transuranic waste inventory reduced from 57k to 39k plutonium-239 equivalent curies. Notably, implementation of this ESS is expected to eliminate the postulated aircraft crash accident that results in public consequence in excess of the DOE Evaluation Guideline. LANL previously proposed a 90 day implementation schedule, subject to additional refinement, needed to implement this ESS, primarily due to the need to move about 500 waste containers.

**Unremediated Nitrate Salt (UNS) Waste–Safety Basis Strategy:** Last Friday, the NNSA Field Office Manager transmitted a letter concurring with LANL’s proposed safety basis strategy and treatment plan for the 29 UNS waste containers currently stored in Area G (see 1/27/17 weekly). In the concurrence letter, the manager also approved LANL’s request to commence preliminary activities necessary to support the UNS treatment campaign.