

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 22, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending April 22, 2016

**Area G–Inappropriately Remediated Nitrate Salts (RNS):** This week, Area G operators continued removal of the lids from the standard waste boxes containing the RNS waste as part of implementing phase 1 of revision 5 of the Evaluation of the Safety of the Situation (ESS). To-date, they have removed 35 of the 46 lids planned for this phase. Removal actions continue to proceed well—no contamination or degraded conditions have been encountered and relatively few bolts (10 of 1470) have required drilling.

Area G personnel continue to prepare for the phase 2 pressure relief device installation effort. This week's preparations included procedure refinement, which they conducted in accordance with the best practice of involving the work crews, persons in charge, industrial hygiene, radiation safety, and the Deputy Associate Director. Based on the progress toward approval of the phase 2 safety basis, they estimate starting the associated Management Self-Assessment next week.

**Area G–Safety Basis:** Several key safety basis transactions occurred on Thursday.

- The NNSA Field Office approved phase 2 of revision 5 of the ESS for the RNS waste and forwarded it on to the NNSA Cognizant Secretarial Officer for approval, given the potential for mitigated consequences to exceed the DOE Evaluation Guideline. Noting the need for additional review, the Field Office did not act on the revised aircraft crash analysis for the RNS included in this ESS.
- LANL management transmitted to the NNSA Field Office for approval revision 6 of the ESS for the RNS. Revision 6 provides the results of a postulated worst-case wildland fire model coupled to a heat transfer model in order to determine peak temperature insults to the RNS waste. The peak temperature was determined to be 32 °C, which is below the 40 °C threshold of concern established from LANL's research. Notwithstanding this result, LANL proposed a formal wildland fire management control, including the use of fire retardant, fuel mitigation, and fire blankets. Revision 6 also proposes moving forward with the installation of the pressure relief devices for the RNS waste contained within the pipe overpack containers.
- LANL management transmitted the project execution plan for the safety basis changes necessary for the final treatment of the RNS waste. The plan outlines 14 new work activities to be included among the safety basis documents for Area G, onsite transportation, and the Waste Characterization, Reduction, and Repackaging facility. The planned submittal of the first two documents is June 16, 2016, and the latter document is July, 20, 2016.
- LANL management committed to submit by May 13, 2016, a new ESS to cover all of the other open Potential Inadequacies of the Safety Analysis (PISA) at Area G with the exception of the pipe overpack, which is contingent on ongoing testing at Sandia National Laboratories.

**Plutonium Facility–Safety Basis:** Last Friday, LANL management submitted to the NNSA Field Office for review and approval an ESS to address the PISA associated with the use of cast iron and malleable iron fittings in the fire suppression system (see 2/12/16 weekly). The ESS indicates the fire suppression system may not meet its required performance category 2 seismic criteria and additional testing is required. LANL has implemented additional material-at-risk limits as a compensatory measure until the results of the analysis are complete.