

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 8, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending January 8, 2016

**Area G–Nitrate Salts:** On Wednesday and Thursday, Area G management hosted a peer review team consisting of personnel from other National Laboratories to assess the state of knowledge and the path forward for the render-safe treatment of the inappropriately remediated nitrate salt (RNS) wastes. Personnel from DOE Environmental Management also observed the review, which covered the development of RNS surrogates, results of full drum surrogate testing, the proposed treatment process, environmental regulatory compliance issues, and safety basis strategy development.

**Chemistry and Metallurgy Research (CMR) Building–Safety Basis:** On December 21, 2015, LANL management transmitted a safety basis temporary modification to the NNSA Field Office for approval. The temporary modification supports a project to receive and store a package containing americium-241. LANL eventually intends to process the material to recover the isotope for beneficial use. The americium-241 dates back to 1979 and may include aqueous solutions and ion exchange resin; conditions that could result in the generation of hydrogen gas and other reactive species. The temporary modification proposes crediting an 85-gallon drum overpack as a new control for this activity, along with controls from the existing safety basis including the fire suppression system, combustible loading limits, material-at-risk limits for the loading dock, the emergency preparedness program, and the radiation protection program.

**Plutonium Facility–Seismic Safety:** On December 23, 2015, LANL submitted to the NNSA Field Office for review the fiscal year 2016 seismic project execution strategy for the Plutonium Facility. The updated strategy includes the estimated cost ranges, general scope, high level schedule, and potential funding sources for facility upgrades and maintenance activities. LANL identifies the following work scope for fiscal year 2016:

- Improve the shear capacity of the interior roof girders
- Improve anchorage of safety significant ductwork
- Complete modification of the sewer vent in the Bleed-off system to prevent the formation of ammonium nitrate on the ventilation system HEPA filters
- Seismic qualification for numerous replacement and spare components for safety systems
- Manage seismic expert panel activities and support NNSA alternative analysis as requested
- Conduct an engineering study to determine the work scope necessary to qualify the active confinement ventilation system to Performance Category 3 for seismic events

**Plutonium Facility–Restart Activities:** On December 22, 2015, the NNSA Field Office Manager approved LANL's corrective action plan and causal analysis for the Pit Flowsheet federal readiness assessment. The manager's approval letter noted that LANL's previously submitted objective evidence resolving a pre-start finding and manageable open item are verified closed and authorized restart of Pit Flowsheet operations. On December 29, 2015, the NNSA Field Office Manager approved LANL's Plan of Action for the contractor readiness assessment (CRA) for Muffle Furnace, Plutonium Casting, and Advanced Recovery and Integrated Extraction System operations. The CRA is currently scheduled to commence on February 1, 2016.