

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 7, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending October 7, 2016

**Plutonium Facility–Operations:** This week, operators retrieved from pipe overpack containers the cheesecloth used to cleanup a spill of plutonium-238 in a nitric acid solution (see 8/19/16). The material is now stored in SAVY containers awaiting measurements to resolve an inventory discrepancy and pending development of the overall disposition. On Monday, facility management entered the New Information process to examine whether the hazard posed by cheesecloth and nitric acid is adequately covered in the safety basis. Previously, in response to NNSA Field Office questions, LANL management asserted the adequacy of the safety basis.

**Plutonium Infrastructure Strategy:** On Tuesday, the NNSA Field Office informed LANL management that it was premature to approve the safety design strategy for the upgrade of the Radiological Laboratory Utility Office Building to a hazard category 3 nuclear facility. They based their decision on funding and outstanding National Environmental Protection Act actions.

**Chemistry and Metallurgy Research Building–Safety Basis:** On Wednesday, facility management declared a Potential Inadequacy of the Safety Analysis after non-destructive assay measurements indicated the presence of about 550 g of Pu-239 equivalent holdup in Wing 7. This quantity exceeded the 200 g assumed in the safety basis. As an immediate action, management has reduced the allowed limit to account for this additional material-at-risk.

**Emergency Management:** On Wednesday, LANL issued the after action report from the August full-scale exercise (see 8/26/16 weekly). They identified that 2 of the 152 total objectives were not met. The unmet objectives involved the failure of incident command to develop and implement an action plan and the inability of the Los Alamos Medical Center to prepare for a surge of contaminated patients. There were no findings associated with these unmet objectives; however, there were 27 opportunities for improvement. Notable improvement actions involve: avoiding patching into real-world public safety radio traffic; the need to implement a formalized approach to the hotwash; several items with improving shelter-in-place actions; unfamiliarity of facility command personnel with the use of the radio system; and lack of protective actions for security personnel.

**Environmental Waste Facility Operations–Facility Evaluation:** On Thursday, a team briefed the results of their Facility Assessment. The team consisted of 24 personnel from outside of the Environmental Waste Facility Operations organization. The team performed the assessment in August, and focused on compliance with applicable Safety Management Programs and selected Occupational, Safety and Health elements for operations at Area G and the Waste Characterization, Reduction, and Repackaging Facility (WCRRF). The Associate Director for Nuclear and High Hazard Operations, with the assistance of the Quality and Performance Assurance Group, recently instituted the Facility Evaluation process as a mechanism for LANL to self-assess facility performance. The team identified a number of findings and opportunities for improvement, primarily in the areas of Conduct of Engineering, Conduct of Maintenance, Criticality Safety, Fire Protection, Quality Assurance, and Radiation Protection. Area G and WCRRF will use these results to help prepare for the upcoming readiness assessments on treatment of the inappropriately remediated nitrate salt waste currently stored in Area G.