

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 16, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending December 16, 2016

**DNFSB Staff Activity:** J.W. Plaue conducted oversight activities at the Lawrence Livermore National Laboratory. On Wednesday, B.K. Caleca, M.W. Dunlevy, and T.J. Dwyer participated in the monthly video teleconference with NNSA and LANL contractor personnel to discuss details of planned seismic analyses and testing for the Plutonium Facility. On Thursday, a staff team conducted a teleconference with NNSA, EM, and LANL personnel to discuss staff questions regarding the hazards associated with the cheesecloth used to clean up a spill of plutonium-238 in a nitric acid solution (see 10/28/16 weekly).

**Radioactive Liquid Waste Treatment Facility–Emergency Management:** Earlier this month, LANL issued the after action report for the annual exercise held on October 26, 2016. This year's scenario involved the simulated spill of 200 gallons of sodium hydroxide during a transfer from a delivery truck that splashed and chemically burned the involved worker. The report notes that 42 of 45 objectives were met with the remainder not applicable. Seven opportunities for improvement were identified, including the following of note: (1) a recommendation to use a real tanker truck, since the simulation of the presence of a tanker truck and associated spill confused some players and complicated injects; (2) an employee who was monitoring the transfer was not assisted or evacuated from the 25 meter isolation zone and the facility procedures were not specific enough to clarify the correct action for this situation; (3) only one person in the facility command knew how to use the video monitor system; and (4) communication challenges existed between two operations centers, facility command, and incident command all in geographically distinct locations.

**Safety Basis–Flanged Tritium Waste Containers (FTWC):** LANL management recently stood up an integrated project team to develop a path forward to disposition all 12 of the FTWCs currently stored at Area G and the Weapons Engineering Tritium Facility. Calculations indicate that eight of these containers may be pressurized with a potentially explosive headspace mixture of oxygen and hydrogen isotopes. The team is in the early stages of options analysis and is considering such decisions as in-situ versus alternate locations for processing; mechanical versus dynamic approaches to relieving the pressure; and disposal at Area G or offsite facilities. In parallel, they are also investigating the feasibility from a regulatory perspective of direct disposal for some of the containers. The team has set mid-summer 2017 as their target for completion to avoid the additional complications once the new contractor takes over Area G in October 2017.

**Inappropriately Remediated Nitrate Salt (RNS) Waste Treatment–Startup Activities:** On Wednesday, the Management Self-Assessment team briefed the results of their review of readiness for the RNS waste processing campaign (see 10/28/16 weekly), including the restart of the Waste Characterization Reduction and Repackaging Facility (WCRRF). The team identified eighteen pre-start findings relating to WCRRF restart, the most significant of which related to emergency management, conduct of engineering, and conduct of training. Facility management intends to resolve these pre-start findings in time to support a Contractor Readiness Assessment currently scheduled for January 2017.