

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 13, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending May 13, 2016

**DNFSB Staff Activity:** R.V. Kazban and R.L Jackson observed a multi-day external independent review on phase 2 of the equipment installation project for the Radiological Laboratory Utility Office Building. They also walked down portions of the Chemistry and Metallurgy Research Building and the Plutonium Facility. On Thursday, B. K. Caleca, T.J. Dwyer, and A.H. Hadjian observed a meeting of the Seismic Expert Panel to discuss the path forward for additional analysis and testing in support of the Plutonium Facility.

**Area G–Inappropriately Remediated Nitrate Salts (RNS):** This week, the Management Self-Assessment (MSA) team briefed the results of their review on the readiness to conduct phase 2 of revision 5 of the Evaluation of the Safety of the Situation for the RNS waste. The team identified six pre-start and six post-start issues. The pre-start issues involved conduct of engineering concerns regarding the design and testing for the pressure relief devices, disposal of oily rags, procedure issues, and several concerns with radiological protection and industrial hygiene practices. Notable post-start issues included inaccurate and incomplete information in emergency response documents (run sheets and pre-incident plans) and conduct of maintenance concerns regarding the fire suppression system. Area G management is actively working closure of corrective actions and expects to commence pressure relief device assembly and installation activities next week.

**Safety Basis:** LANL safety basis analysts determined that the Potential Inadequacy of the Safety Analyses declared at Area G and the Plutonium Facility regarding the potential for pressurized releases from certain sealed sources represented a positive unreviewed safety question (see 4/29/16 weekly).

**Weapons Engineering Tritium Facility (WETF)–Safety Basis:** On Tuesday, the NNSA Field Office manager signed the Safety Evaluation Report (SER) approving LANL’s submittal of the 2015 Documented Safety Analysis and Technical Safety Requirements for WETF. Once implemented, this safety basis will supersede the existing safety basis, which consists of a 2012 SER and a 2013 SER addendum. Of significance, this safety basis reduces the material-at-risk (MAR) allowed in the facility to 60 percent of the current limit. As a result of this MAR reduction, the consequences of the worst case postulated accident scenario are reduced below the DOE evaluation guideline from 26 rem to 16 rem total effective dose. The SER notes that the reduction in MAR was taken in response to vulnerabilities identified with numerous safety significant systems and their inability to survive a Performance Category 2 seismic event as required. Although this updated safety basis is a needed improvement to the WETF operating posture, the SER notes that the safety basis is still baselined to a 2002 submittal and legacy issues still exist that will require a complete rewrite of the safety basis to resolve.

**Confinement Vessel Disposition (CVD) Project:** This week, CVD project personnel removed the third processed vessel from the enclosure. In the coming weeks, project personnel will relocate the three processed vessels from the Wing 9 high bay to the yard in order to support receipt of a fourth vessel for processing.