**DEFENSE NUCLEAR FACILITIES SAFETY BOARD**

January 22, 2016

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

**Area G–Fire Protection:** On Wednesday, a LANL subject matter expert team presented their preliminary results of an advanced fluid dynamic simulation of wildland fire behavior around Area G. The model, which is still undergoing refinement, utilizes the actual terrain and current information on vegetation and fuels loading. LANL experts intend to complete additional work in the coming weeks that would enable translation of model results into thermal fluxes and durations to improve the understanding of the potential impact of a wildland fire to the inventory of transuranic wastes currently stored at Area G. LANL's wildland fuels mitigation team and emergency response planners are also using the preliminary model to aid in refining their fuel treatment and fire response strategies.

**Plutonium Facility–Nuclear Criticality Safety:** Last month, the NNSA Field Office approved an extension to the Evaluation of the Safety of the Situation/Justification for Continued Operations (ESS/JCO) governing two rooms in the facility vault. The ESS/JCO specifies compensatory measures that must remain in place until a compliant nuclear criticality safety evaluation document is approved. LANL first submitted the ESS/JCO in 2012 and has since requested several extensions. This approval extends the expiration date to June 30, 2016. LANL's justification for the request was to enable continued priority of the facility restart activities.

**RANT Shipping Facility:** Last month, the NNSA Field Office concurred with LANL's determination that the planned seismic repairs do not constitute a major modification to facility. The repairs are necessary for the RANT structure to achieve a Performance Category (PC)-2 seismic capacity as required by the safety basis. A LANL calculation performed in 2009 indicated that RANT did not meet PC-1; however, LANL analysts failed to incorporate this information into the safety basis and instead continued to reference an obsolete structural calculation from 2006. Primary elements of the repairs consist of constructing four new reinforced concrete shear panels with new foundations on each wall and a new reinforced concrete roof diaphragm. LANL is currently working to obtain funding to support these repairs, which are necessary to restore operability to the facility. NNSA selected RANT as the enduring waste shipping capability for LANL when it abandoned including a new shipping capability from the Transuranic Waste Facility project in late 2008.

**Plutonium Facility–Safety Basis:** Last month, the NNSA Field Office Manager approved revision 0.1 of the 2015 Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR) for the Plutonium Facility using the 18$^{th}$ revision of the Safety Evaluation Report. The revision incorporates changes to diesel fire water tanks and deletes a specific administrative control for storage of safety-class fire rated containers. Of note, the current safety basis includes revision 1.8 of the 2011 DSA/TSRs and revision 0.4 of the 2014 DSA/TSRs implemented through a supplemental 38 page TSR control implementation matrix. The Safety Basis Document List identifies additionally implemented documents that include a safety basis addendum for exceedance of seismic performance goals, five ESS/JCOs, and two temporary modifications.