

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 20, 2016

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending May 20, 2016

**DNFSB Staff Activity:** M.W. Dunlevy and R.C. Eul met with LANL Quality Performance Assurance Group personnel to discuss the current status of LANL's Contractor Assurance System (CAS) as well as improvement initiatives underway to revitalize the CAS program.

**Area G–Inappropriately Remediated Nitrate Salts:** This week, following closure of corrective actions for the Management Self-Assessment pre-start findings, Area G personnel commenced pressure relief device assembly and installation (see 5/13/16 weekly). As of Thursday, operators had installed seven pressure relief devices and expect to install six to eight devices per day going forward. If operators maintain this pace, all pressure relief devices required by phase 2 of revision 5 of the Evaluation of the Safety of the Situation (ESS) could be installed by the end of next week.

Workers paused operations while preparing to install the first pressure relief device when thermocouples monitoring drum temperature erroneously indicated a rising temperature in both the drum being prepared and a nearby drum. Operators exited the Dome 375 Permacon upon receiving the indication of the rising drum temperatures. At a fact finding of the event, Area G managers determined the most likely cause of the erroneous readings was the operators moving one thermocouple wireless transmitter and laying a procedure on the other in preparation for pressure relief installation. Area G operators do not credit the thermocouples with providing reliable temperature indications; an infrared thermometer is used locally to determine drum temperature prior to performing work. Area G engineering personnel are currently working to commission the thermocouple system. For corrective actions, the Facility Operations Director developed a written direction to operations center personnel on how to manage the thermocouple readings during future operations and directed operators not to use adjacent drums/standard waste boxes as work stands.

**Area G–Safety Basis:** Last Friday, LANL submitted to the NNSA Field Office for review and approval, an ESS for three Potential Inadequacies of the Safety Analysis (PISA) for transuranic waste inventory discrepancies in Area G. These PISAs affect material-at-risk (MAR) quantity and form assumptions used in the safety basis, and have remained unresolved for many months. The ESS identifies a number of more stringent MAR limits as compensatory measures to ensure Area G remains in a safe condition. NNSA Field Office approval of the ESS will allow Area G to return to OPERATIONS MODE, and as such will serve as a Justification for Continued Operations as well.

**Plutonium Facility–Restart Activities:** On Wednesday, the NNSA Field Office manager approved LANL's corrective action plan for the Muffle Furnace, Casting, and Advanced Recovery and Integrated Extraction System (FCA) Federal Readiness Assessment (FRA). Additionally, the NNSA Field Office manager verified the FRA pre-start findings were closed and authorized Plutonium Facility personnel to restart FCA operations. Also on Wednesday, LANL transmitted to the NNSA Field Office for review and approval, a Plan of Action for the Contractor Readiness Assessment for Plutonium Pyrochemical Operations. Of note, the Plutonium Pyrochemical Operations are the final planned activities of the Plutonium Facility resumption project following the LANL Director's decision to pause Plutonium Facility operations in June 2013.