

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 10, 2017

**MEMORANDUM FOR:** S.A. Stokes, Technical Director  
**FROM:** R.K. Verhaagen and J.W. Plaue  
**SUBJECT:** Los Alamos Report for Week Ending February 10, 2017

**DNFSB Staff Activity:** P.J. Migliorini and M.W. Dunlevy were on site this week augmenting the site representative office. Their activities including walking down the safety systems and waste storage areas at the Plutonium Facility and observing the drill at the Waste Characterization, Reduction, and Repackaging Facility (WCRRF) for the Contractor Readiness Assessment (CRA) discussed below.

**Plutonium Facility–Infrastructure:** Last Wednesday, during conduct of a weekly Surveillance Requirement, operators observed the diesel firewater pump fail to come up to speed after starting. Facility operations personnel had entered the appropriate Limiting Condition for Operations prior to commencing the surveillance, which allows 14 days to restore the pump to service prior to having to change the facility operations to Mode 2–Standby. Maintenance personnel identified the cause of the failure to be bad bearings on the auxiliary drive that powers the fuel injector and water pumps. Facility personnel received the necessary parts and expect to complete repairs before the 14 days have expired. This is the same diesel firewater pump that operators repaired and returned to service after experiencing a series of mechanical issues last year (see 9/23/16 weekly). On a related note, on Wednesday construction workers placed concrete for one of the pads to be used for the future installation of a diesel power generator. Facility personnel plan to install a diesel power generator at each pump house in order to provide an additional power supply to the electric firewater pumps.

**Area G–Safety Basis:** Last Friday, Area G management entered the New Information process regarding the potential fire hazard of cellulose waste material containing greater than 10 g of plutonium-238. This action was taken in response to the Potential Inadequacy of the Safety Analysis declared at the Plutonium Facility (see 2/3/17 weekly). LANL’s review of the inventory indicates that there are currently three 55-gallon drums stored at Area G with records indicating the presence of cheesecloth and greater than 10 g of plutonium-238. All three of these drums are overpacked in Standard Waste Boxes.

**WCRRF–Readiness Activities:** On Friday, the CRA team out-briefed the results of their review of the personnel, equipment, and procedures needed to process the waste drums containing the inappropriately remediated nitrate salt waste. The CRA team identified five pre-starts and no post-start findings. The pre-starts dealt with the need to strengthen the startup plan, improve field validation of operating procedures, resolve two training issues, and deploy the production version of the Waste Characterization and Tracking System database.

**WCRRF–Emergency Management:** On Tuesday, WCRRF personnel conducted an emergency drill for the CRA team. Drill participation included personnel from the LANL Emergency Management, the LANL Hazardous Materials Team, and the Los Alamos Fire Department. The scenario involved a thermal runaway of an inappropriately remediated nitrate salt waste drum with a worker experiencing a concurrent incapacitating medical condition. The scenario was similar to drills conducted last month (see 1/12/17 weekly). Players and controllers identified several areas for improvement, particularly with respect to contamination control and drill conduct. Fire department personnel noted a significantly improved ability to respond and make timely rescue entry after receiving additional radiation safety information to supplement their pre-incident plans from facility personnel. Area G and Transuranic Waste Facility personnel are in the process of developing similar supplemental information for their facilities.