

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 11, 2014

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.T. Davis, R.K. Verhaagen, and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending April 11, 2014

DNFSB Staff Activity: R.T. Davis continued monitoring the recovery associated with the radioactive material release event at the Waste Isolation Pilot Plant.

Plutonium Facility–Criticality Safety: On Tuesday, LANL transmitted to the field office for approval a combined Evaluation of the Safety of the Situation and Justification for Continued Operations (ESS/JCO) in response to the criticality concerns associated with firewater flooding (see 3/21/14 weekly). The ESS/JCO notes the potential to flood a glovebox through burned gloves during a fire and through inlet air filters or compromised windows during an actuation of the fire suppression system. The document further acknowledges that LANL has not analyzed more than 200 fissile material operations for this credible off normal event, as required by LANL and DOE requirements. The ESS/JCO proposes safe continued operations for this scenario with two compensatory control sets; one based on a 4500 g limit with some additional restriction and the other based on a 520 g limit. The ESS/JCO does not articulate how LANL will integrate these compensatory limits into their overall resumption process.

On Wednesday, program personnel completed the first movements of fissile material required as an immediate action for the Potential Inadequacy in the Safety Analysis associated with flooding. Also on Wednesday, facility operators received the timely order associated with additional immediate actions.

Chemistry and Metallurgy (CMR) Building–Safety Basis: On Monday, CMR management transmitted to the field office for approval safety basis changes required to resolve pre-start findings from the Operational Readiness Review for the Confinement Vessel Disposition project.

CMR–Exit Strategy: On Monday and Tuesday, the NNSA Associate Administrator for the Office of Acquisition and Project Management (APM) visited LANL to initiate planning activities associated with implementation of the plutonium strategy. In a memo dated March 27, 2014, the Acting NNSA Administrator tasked APM with the responsibility of managing investments in plutonium infrastructure. The memo included a reaffirmation of the commitment to cease programmatic operation in the CMR building by the end of calendar year 2019 and notes that all 3 phases of the plutonium strategy will be executed in a manner fully compliant with DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*. The memo tasks APM with providing an initial execution plan by June 30, 2014. LANL and field office personnel have begun forming integrated project teams in support of this effort. Based on discussion during the visit, NNSA expects to execute the first two steps of the strategy as new subprojects to the existing Chemistry and Metallurgy Research Replacement project line item. During the summer, NNSA plans to evaluate these steps as part of a reaffirmation of CD-1, *Approve Alternate Selection and Cost Range*. These steps are (1) equipping additional laboratory rooms in the Radiological Laboratory Utilities Office Building and (2) repurposing laboratory rooms within the Plutonium Facility.

Weapons Engineering Tritium Facility (WETF): On Wednesday, the field office formally rejected the revised ESS/JCO associated with the Oxygen Monitoring System (OMS) issues (see 3/21/14 weekly). The field office noted that the upgrade of the modules from analog to digital did not automatically resolve the issue and that post-upgrade trending was necessary to support an operability declaration. The field office directed LANL to determine the root cause of the OMS issues, demonstrate resolution through data trending, and request field office approval prior to declaring the OMS operable.