

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 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 4, 2014

DNFSB Staff Activity: R.T. Davis and R.K. Verhaagen continued monitoring the recovery associated with the radioactive material release event at the Waste Isolation Pilot Plant (WIPP).

Area G–Operations: Area G completed five shipments of transuranic waste packages to Waste Control Specialists in Andrews, Texas for interim storage until the WIPP can resume accepting waste. Area G personnel also completed the last offsite shipment of low-level waste associated with 3706 Campaign.

Plutonium Facility–Criticality Safety: Facility and program personnel continued planning for additional immediate actions associated with achieving a safe and stable configuration (i.e., removing excess fissile material from about eight locations) required by the Potential Inadequacy in the Safety Analysis (PISA) declared on March 18, 2014. Personnel expect the material movements to require at least another week resulting from difficulties finding movement paths and receipt locations caused by locations filled to their limits.

Weapons Engineering Tritium Facility (WETF): On Thursday, WETF management declared a PISA resulting from errors discovered by the field office in the hydraulic calculations supporting the safety significant fire protection system (see 3/28/14 weekly). The PISA indicates that the minimum riser pressure required by the Technical Safety Requirements may not be sufficient to support the most limiting demand. WETF personnel declared the system inoperable and entered the Limiting Condition of Operation, which requires a 24-hour fire watch performed on an hourly basis. During the critique required for the PISA, WETF personnel identified that: (1) calculations require update, (2) drawings require verification of as-built pipe sizes and lengths to support accurate revised calculations, (3) trending of water supply data indicates degradation and the need to investigate, and (4) upstream water supply valve lineups needed an expedited annual verification and an improperly sized component in the line requires analysis.

WETF personnel observed greater than expected electronic noise in the system associated with the newly installed digital modules for the Oxygen Monitoring System (OMS). For some modules, the magnitude of the noise was sufficient to result in spurious alarms. WETF personnel consulted with the manufacturer and determined that modifications to the electronics are necessary. The impact of this situation on the schedule for the contractor readiness assessment is unclear as the submitted plan of action does not list operability of the OMS as a prerequisite.

Conduct of Engineering: On Thursday, field office management concurred with LANL's declaration of implementation of the core elements of Conduct of Engineering at WETF. This action completes the final nuclear facility to achieve this status under the *Integrated Formality of Operations at LANL Project Plan* issued in November 2006.

Radiological Facilities: Last month, LANL personnel completed a study of the 124 previously identified radiological facilities across the laboratory. Conclusions of note include: (1) the listing was inaccurate, (2) more than half of the facilities could be delisted if surveys were performed to confirm that no legacy radioactive materials remained, (3) a need to establish a *de minimus* threshold for Radiological facility status, and (4) an additional 30 percent could be delisted by applying the *de minimus* threshold, creating a temporary Radiological facility provision, and creating a mechanism to consolidate operations.