

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 15, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending May 15, 2015

DNFSB Staff Activity: On Thursday and Friday, E.M. Gibson and R.L. Jackson conducted a review of quality assurance processes used for the construction of the new Transuranic Waste Facility. The review included observation of reinforced concrete placement activities, a walk-down of the concrete batch plant, and record reviews.

Safety Basis: This week, a three-person team from one of the corporate partners conducted a Parent Organization Functional Management Review (POFMR) of safety basis development and management. The team reviewed a number of safety basis division procedures; conducted interviews with analysts, facility and program personnel, the Field Office, and the Site Representatives; and performed a cursory review of recently submitted safety bases for the Weapons Engineering Tritium Facility (WETF) and the Plutonium Facility. The POFMR report is expected in about a month.

Area G—Conduct of Operations: On Wednesday, Area G management released for training an abnormal operating procedure (AOP) governing response to abnormal conditions associated with the remediated nitrate salt wastes stored in the Dome 375 Permacon. Upon completion of training, the AOP will cancel a standing order issued in early February 2015 intended to clarify roles, responsibilities, and actions associated with postulated abnormal events for these wastes (see 2/6/2015 weekly). The Field Office provided numerous comments and suggestions on the nine-page procedure. The Site Representatives note that neither DOE nor LANL provide guidance on the format and content of AOPs.

Area G—Safety Basis: On Thursday, LANL management transmitted to the Field Office for approval an Evaluation of the Safety of the Situation/Justification for Continued Operations (ESS/JCO) concerning the composite source term (CST) issue (see 5/8/15 weekly). The ESS/JCO identified an inadequacy in the implementation of the CST limit, which when corrected resulted in the exceedance of a safety basis limit. The lack of an executable action statement associated with the applicable Limiting Condition for Operations further exacerbated the situation. The ESS/JCO notes that the safety basis uses the CST to establish the bounding unmitigated consequences for the wildland fire and seismic events. As such, Specific Administrative Controls other than the CST limit are relied upon to mitigate consequences to acceptable levels. The ESS/JCO proposes continuing operations through exclusively receiving pipe overpack containers and assuming the contents of these containers, including those in the existing inventory, are unaffected by the wildland fire and seismic event, as supported by DOE-STD-5506. In addition, LANL proposes an extent-of-condition review to ensure proper characterization of the inventory, an effort to overpack high combustible drums, and future changes to the safety basis to derive properly a control set. While waiting on ESS/JCO approval, LANL continues to restrict receipt of transuranic (TRU) waste, but otherwise continues normal operations at Area G. The Site Representatives note that the about two thirds of the unmitigated consequences associated with the wildland fire event are associated with aboveground storage of tritium. The approved safety basis prohibits shaft disposal of this tritium, eliminating an effective risk reduction tool at Area G and hindering risk reductions efforts at WETF.

Transuranic Waste Management: On Tuesday, LANL and Field Office personnel held a meeting to discuss options to allow continued disposition of TRU waste given speculation of a prolonged resolution process for the CST issue. A functioning TRU waste disposition capability is required to continue numerous risk-reduction activities such as the Confinement Vessel Disposition project, the Accelerated Vault Cleanout, and day-to-day elimination of wastes and other combustibles from gloveboxes in the Plutonium Facility.