

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 15, 2013

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.T. Davis, R.K. Verhaagen, and J.W. Plaué
SUBJECT: Los Alamos Report for Week Ending November 15, 2013

DNFSB Staff Activity: On Wednesday, the site representatives and staff members D. Kupferer and J. McComb participated in a video teleconference arranged by the field office to provide the status on resumption activities associated with criticality safety and conduct of operations at the Plutonium Facility.

Criticality Safety: Last week, the field office concurred with minor changes to the listing of fissile material operations (FMO) the contractor determined to have high confidence of low criticality risk (see 10/25/13 weekly). The field office added one FMO associated with plutonium-238 operations and removed two FMOs associated with plutonium chloride operations from the list. Overall, the approved list contains 228 FMOs, including all FMOs performed outside of PF-4. Within PF-4, the list includes all FMOs involving plutonium-238, operations within the basement, and certain other FMOs assessed as low risk (e.g., ≤ 520 g metal or involving essentially all plutonium oxide). The contractor expects to resume these low risk FMOs on a schedule currently in development.

Safety Basis: On November 8, 2013, the field office transmitted the results of an NNSA assessment of LANL's safety basis program (see 10/11/13 weekly). The transmittal stated that "as evident by PF-4 safety basis deliverables last year, progress has been made, but further improvement is needed, particularly in disseminating and applying lessons learned from each safety basis review to subsequent submittals." The assessment team identified that significant improvements in development, maintenance, and sustainability of safety basis documentation are needed and concluded that LANL safety basis program continues to struggle with quality and consistency of safety basis document submittals. As a result, the field office has directed LANL to: 1) self-evaluate the safety basis program; 2) determine causal factors for the findings identified in the assessment; and 3) incorporate necessary corrective actions into a resource-loaded safety basis improvement plan with milestones to be completed in fiscal year 2014.

Plutonium Facility – Safety Basis: The field office recently transmitted comments to LANL regarding a submittal of the evaluation of the safety of the situation (ESS) addressing Plutonium Facility containers that are not "watertight" as described in the criticality safety evaluation (see 9/6/13 weekly). The field office noted that the ESS is considered incomplete due to an inadequate technical justification, but agreed that there is no immediate safety concern. LANL has been directed to resolve field office comments and resubmit the ESS by December 8, 2013.

Radiochemistry Laboratory (RC-1): The field office approved a LANL request to incorporate derived hazard category-3 threshold quantities calculated for 46 radionuclides to be used in RC-1, which is a radiological facility. The field office previously approved the use of NA-1 SD G 1027, *Guidance on Using Release Fraction and Modern Dosimetric Information Consistently with DOE STD 1027-92* for RC-1 (see 9/14/12 weekly). These particular radionuclides are not identified in the guidance and as such their threshold quantities had to be derived using the methodology approved in the supplemental guidance.