

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 8, 2015

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending May 8, 2015

DNFSB Staff Activity: J.W. Plaue attended offsite leadership development training on building high performance teams.

Los Alamos Neutron Science Center (LANSCE): On Wednesday, NNSA's Cognizant Secretarial Officer for Safety and the Los Alamos Field Office Manager issued a letter authorizing the establishment of a joint NNSA and Management and Operating partner Accident Investigation Board to investigate a May 3, 2015, accident that occurred at a LANSCE facility electrical sub-station. Of note, the letter indicates that the joint investigation team is modeled after a highly successful investigation conducted at Sandia National Laboratories in 2014. Accident Investigation Board personnel arrived on site and commenced their investigation on Wednesday.

Plutonium Facility–Criticality Safety: On Wednesday, the field office transmitted to LANL a letter outlining concerns with criticality safety infraction management in the Plutonium Facility. The field office notes that there are currently more than 60 unresolved infractions, many of which have been resident for months, or even years. Of greatest concern are the multiple infractions involving unknown liquids discovered in process equipment that have not been properly characterized or addressed (see 4/3/2015 and 1/30/2015 weekly reports), and present an inherently higher criticality risk than non-aqueous operations. In light of these issues, the field office directed LANL to: (1) characterize and ensure the safe stabilization of the unknown liquids, (2) categorize and prioritize identified emergent conditions, and (3) develop a risk-based plan to resolve outstanding infringed conditions. The field office requested a brief on resolution of the unknown liquids in two weeks and a brief on a revised prioritization and recovery plan by May 31, 2015.

Weapons Engineering Tritium Facility (WETF)–Comprehensive Causal Analysis: On Friday, the Associate Director of Nuclear and High Hazard Operation's appointed team issued their report on the comprehensive causal analysis and extent of condition review performed for the missed in-service inspection on a tritium containment vessel (see 4/10/2015 weekly). This comprehensive review identified a number of findings within six functional components, including: (1) effective management oversight, (2) knowledgeable, trained and qualified personnel, (3) formality of operations, (4) nuclear safety culture, (5) System, Structure, and Components performing credited functions, and (6) cross-functional operational planning. Eighteen of the findings are considered pre-start findings to WETF readiness for operations and are being tracked and corrected as part of the WETF resumption plan.

Area G–Safety Basis: LANL safety basis personnel determined that the Potential Inadequacy of the Safety Analysis declared for the remediated nitrate salt waste composite source term (CST) resulted in a positive Unreviewed Safety Question (see 4/24/2015 weekly). Specifically, after recoding the remediated nitrate salt wastes as combustible, the recalculated CST material-at-risk (MAR) value for the existing inventory exceeded the safety basis limits. Facility personnel entered one Limiting Condition for Operation action statement by restricting receipt of all waste and are working on completing the second applicable action statement by revising the safety basis to allow the application of damage ratio for certain containers to lower the calculated CST MAR to below the allowable limits.