

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 12, 2016

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending August 12, 2016

Area G–Inappropriately Remediated Nitrate Salts (RNS): On Thursday, LANL management transmitted to the NNSA Field Office revision 6.1 of the Evaluation of the Safety of the Situation (ESS) concerning the safe storage of the RNS waste. Revision 6.1 includes refinements to the wildland fire calculation that considers the heat contribution from burning the as-found combustibles within Dome 375. This and other refinements derived from peer review, result in a new maximum credible waste temperature of 35 °C—an increase from the prior calculation, but still below the 40 °C threshold of concern. Revision 6.1 also includes new technical references to support installation of pressure relief devices on the 8 remaining pipe overpacks containing RNS waste and a reference to support no additional action prior to final treatment of the 4 pipe overpack containers with WasteLock waste. The project schedule anticipates federal approval of revision 6.1 by September 7, 2016, with relief device installation to be completed a week later.

Notably, revision 6.1 does not incorporate the NNSA Cognizant Secretarial Officer’s view expressed in the approval letter for ESS revision 5 that the pressure relief devices do not completely eliminate the risk of a self-initiated thermal runaway reaction (see 4/29/16 weekly). Notwithstanding this fact, the NNSA Field Office intends to submit revision 6.1 to DOE Headquarters for approval and also expects forthcoming safety basis attachments for RNS treatment to acknowledge this fact and adhere to the process for mitigated accident consequences that exceed the evaluation guideline.

On Tuesday, the EM Field Office issued contracting direction to LANL to begin work on the procurement and installation of backup electrical power for the Dome 375 Permacon. The current project schedule anticipates this capability to be ready by October 3, 2016.

Emergency Management: On Thursday, the NNSA Field Office rescinded direction from 2009 concerning the need for federal approval of certain emergency management related documents. Specifically, the direction restores federal review and approval prior to implementing Emergency Plans, Emergency Planning Zones, Emergency Readiness Assurance Plans, Emergency Planning Hazard Analyses, and site exercise packages, as required by DOE Order 151.1C, *Comprehensive Emergency Management System*.

Plutonium Facility–Safety Basis: On Thursday, the NNSA Field Office approved the ESS regarding certain sealed sources used for the High Efficiency Neutron Counter at Technical Area-55 (see 4/29/16 weekly). LANL submitted this ESS on July 8, 2016, following a declaration of a Potential Inadequacy of the Safety Analysis on April 27, 2016. In the approval letter, the NNSA Field Office determined the ESS is acceptable due to the relatively low risk associated with these sources and an additional compensatory measures that requires the sources be containerized when not in use and outside of their normal fire-rated storage safes. The approval letter concluded that based on this information, removing the initial operational restrictions of storing the sources in fire-rated safes, ensuring operations with the sources are continuously attended, and excluding nearby use of fuels is also acceptable. The related ESS for Area G remains under review by NNSA Field Office.