

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 20, 2017

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending January 20, 2017

Plutonium Facility–Safety Basis: On Tuesday, LANL safety basis personnel opened a New Information (NI) screening regarding the use of cellulosic wipes (i.e., cheesecloth) in aqueous process operations. A similar NI was closed in late October (see 10/28/16 weekly). Developments since that time include the issuance of a memorandum stating that the white paper referenced in the NI closure documentation represented the issuing body’s philosophy and as such, formal resolution of peer review comments was not performed. Additionally, as briefed to the NNSA Field Office on Wednesday, LANL management recognized that the previous NI contained information from the approved safety basis that did not reflect current operational practices. Specifically, the safety basis states that cheesecloth used in aqueous processing operations for plutonium-238 would be rinsed and pyrolyzed in preparation for waste disposal. In reality, the pyrolysis unit operated briefly in the 2007 timeframe, but was suspended after disposition issues arose with the resulting homogenous waste form (see 9/21/07 weekly) and a simplified direct-discard process became viable. Similarly, the instruction to operations personnel to rinse cheesecloth had been removed from the applicable procedures.

LANL management indicated they were pursuing several actions to complete the NI processing including additional testing, calculations, and regulatory permit research. Per LANL’s procedure, they have 15 calendar days to complete processing of the NI to determine whether a Potential Inadequacy of the Safety Analysis exists; however, the procedure allows for additional time without NNSA Field Office approval.

Plutonium Facility–Emergency Management: On Wednesday, Plutonium Facility personnel conducted their annual emergency exercise. This year’s scenario involved a postulated spill of nitric acid from a delivery vehicle whose driver had a stroke. Determination that the spill from the truck was limited to about 50 gallons, allowed responders to significantly reduce the isolation zone from the bounding distance of 764 meters facilitating a simpler response.

Inappropriately Remediated Nitrate Salt (RNS) Waste–Emergency Management: On Thursday, RNS treatment personnel conducted a type 3 (evaluated) drill at the Waste Characterization Reduction and Repackaging Facility. The scenario involved a thermal runaway of an RNS drum inside the facility with an injured worker in need of extraction. RNS, LANL Emergency Managers, and Los Alamos Fire Department personnel have recently spent considerable effort touring the facility, planning responses, integrating the new video monitoring capability, and training consistent terminology. These efforts resulted in a response that was improved from the performance during the recent annual exercise (see 12/9/16 weekly).

Weapons Engineering Tritium Facility (WETF)–Safety Basis: On Friday, LANL submitted to the NNSA Field Office for validation a revision of the WETF Technical Safety Requirements (TSR). LANL submitted the change to address three directed actions the NNSA Field Office Manager provided in a letter approving the initial TSR submission. The directed actions included: (1) revise the Specific Administrative Control (SAC) for containerization, (2) provide page changes to the TSRs reflecting the SAC revision to the NNSA Field Office for validation, and (3) incorporate changes from a previously approved version of the safety basis into the 2017 annual update.