

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 11, 2016

MEMORANDUM FOR: S.A. Stokes, Technical Director
FROM: R.K. Verhaagen and J.W. Plaue
SUBJECT: Los Alamos Report for Week Ending November 11, 2016

Weapons Engineering Tritium Facility (WETF)–Safety Basis: Last Thursday, WETF management declared a Potential Inadequacy of the Safety Analysis (PISA) when they determined that three Flanged Tritium Waste Containers stored within the facility are potentially pressurized with an explosive mixture of hydrogen isotopes and oxygen. WETF personnel recognized this potential issue following the declaration of a PISA for a similar situation with waste containers from WETF stored at Area G (see 9/9/16 weekly). WETF management has limited access to the portion of the facility containing these waste drums to ensure the facility is in a safe configuration while the Unreviewed Safety Question is being determined.

Waste Characterization, Reduction, and Repackaging Facility (WCRRF)–Operations: On Tuesday, the NNSA Field Office approved LANL’s request to transfer a drum containing transuranic waste from WCRRF, while in COLD STANDBY, to the Chemistry and Metallurgy Research Building for temporary storage (see 11/4/16 weekly). On Wednesday, LANL personnel transferred the drum.

Also on Tuesday, the NNSA Field Office manager approved LANL’s Plan of Action for a Contractor Readiness Assessment for the restart of WCRRF to safely treat the inappropriately remediated nitrate salt (RNS) waste currently stored in Area G (see 10/28/16 weekly).

WCRRF and AREA G–Safety Basis: Last week, LANL issued final reports for Implementation Verification Reviews (IVR) of WCRRF and Area G safety basis changes needed for final treatment of the RNS waste. The IVR team noted that the conditions of approval (COA) and directed changes in the approving Safety Evaluation Report (see 10/14/16 weekly) have been implemented but cannot be finalized until approval of COA responses have been received from both the EM and NNSA Field Offices. The IVR team identified necessary administrative issues that must be resolved and concluded that once these changes are made the revised safety bases are adequately implemented.

Transuranic Waste Management: On Wednesday, personnel from the Sandia National Laboratories, NNSA Field Office, EM Headquarters, and LANL met to discuss the status and path forward for testing on pipe overpack containers (POC). LANL and NNSA senior management have become increasingly concerned regarding the safety basis uncertainty with POCs. Currently, the existing inventory of filled POCs at LANL is on the order of 600. Additionally, LANL management has accepted the risk of continuing to use POCs for packaging of combustible transuranic waste because of the reduction in waste container volume afforded by their use. The risk stems from the fact that the safety basis for the Waste Isolation Pilot Plant (WIPP) currently prohibits POCs with combustibles. As a result, either these POCs will need to be repackaged or EM and NNSA will need to complete adequate testing of POCs in fuel pool fire conditions—a credible accident at WIPP. This uncertainty has also prompted the NNSA Field Office into considering a prohibition of POCs in the new Transuranic Waste Storage facility, which had originally envisioned reliance on POCs to increase the material-at-risk. Overall, LANL personnel intend to review what capabilities they could apply to the testing program and the group agreed to reconvene in early December.