

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 28, 2018

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director

FROM: J.W. Plaue and D. Gutowski, Resident Inspectors

SUBJECT: Los Alamos Activity Report for Week Ending December 28, 2018

The Year on a Page: A summary of the key developments of 2018.

- N3B and Triad assumed operational responsibility for their respective EM and NNSA mission scopes at LANL. Both companies have begun executing actions to strengthen formality and organizational learning within their operations.
- For the first time since 2014, Area G personnel were able to reduce their aboveground nuclear material inventory by mobile loading transuranic waste for disposition at the Waste Isolation Pilot Plant. Plutonium Facility personnel also executed a mobile loading shipment in order to maintain proficiency. Both organizations hope to increase the frequency and reliability of transuranic waste shipments through the restart early next year of indoor loading operations at the RANT Shipping Facility.
- The Transuranic Waste Facility received about 370 waste containers alleviating storage locations that were approaching capacity at the Plutonium Facility and Chemistry and Metallurgy Research building. Facility personnel continue into their second year of efforts to replace the seismic switches, upgrade the fire suppression system to safety significant, and convert the dry pipe system from nitrogen to air. They also plan to complete installation and achieve authorization for the waste characterization capabilities that were previously removed from the project's scope.
- A Plutonium Facility worker received an uptake of plutonium-238 after a wire cable strand punctured a worker's glovebox glove and embedded plutonium into the hand. Although the accident investigation report awaits final approval, management has taken action to strengthen sharps safety. Additionally, they have instituted new training on contaminated systems and glovebox safety as part of previously planned corrective actions from multiple radiological contamination events.
- After nearly three years of planning, NNSA awarded a contract to an outside vendor to conduct a three-year program of column capital testing and commenced a separate, but related, initiative to perform a non-linear dynamic analysis of the Plutonium Facility. Per the Board's letter dated December 17, 2014, these efforts are essential to make sound technical determinations regarding the necessity for any additional structural modifications.
- Weapons Engineering Tritium Facility (WETF) personnel successfully loaded tritium onto a hydride transport vessel for the first time in approximately a decade. This process is essential to support risk-reduction by removing significant quantities of legacy tritium from the facility that are no longer needed for programmatic purposes.
- After two years of development, WETF personnel received approval of a safety basis addendum to support safely venting the Flanged Tritium Waste Containers that may be pressurized with an explosive mixture of oxygen and hydrogen isotopes. They plan to complete readiness activities and execute the campaign early next year. NNSA and Triad will then need to coordinate with EM and N3B in order to address similar containers currently stored in a shed at Area G.