

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 15, 2019

MEMORANDUM FOR: Christopher J. Roscetti, Technical Director
FROM: J.W. Plaue and D. Gutowski, Resident Inspectors
SUBJECT: Los Alamos Activity Report for Week Ending November 15, 2019

Transuranic Waste Management: Last week, the Central Characterization Program (CCP) suspended waste certification activities at LANL following questions concerning the accuracy of acceptable knowledge documentation. The concern involved the presence of unreacted calcium metal in salt residues from the direct oxide reduction (DOR) process. DOR uses excess amounts of calcium metal as an initial reactant meaning that some will remain after completion of the process. Under certain circumstances, calcium metal can pose a pyrophoric reactive hazard, which is prohibited by the waste acceptance criteria for the Waste Isolation Pilot Plant (WIPP). As a result, certain Triad waste generating activities in the Plutonium Facility, as well as WIPP shipments from LANL, were also curtailed.

On Tuesday and Wednesday, personnel from NNSA and EM Headquarters, the Carlsbad Field Office, CCP, Triad, N3B, and both local field offices held discussions to resolve the situation. They concluded that insufficient evidence of a reactive calcium hazard exists to warrant continued suspension of waste generating and certification activities. However, waste containers with DOR salts are being held pending additional analysis, documentation, and the completion of testing. Notably, they identified the need to update the waste database to include additional information on when and how items were generated. Overall, management developed an action plan and committed to increased teleconferences to strengthen communications. In the opinion of the resident inspectors, management missed an opportunity to identify the process and procedural deficiencies that contributed to the situation. In particular, management deferred discussions on reviewing the formal interface agreement and ensuring acceptable knowledge documents generated by Triad and CCP correctly reflect processes.

Area G: On Thursday, the situation discussed above contributed to a decision to unload two previously prepared shipments of transuranic waste destined for WIPP. In this case, N3B needs to verify the absence of DOR salts in the shipments, which could not be accomplished prior to exceeding shipping container time constraints. N3B relies on Triad to access many of the processing records and procedures necessary to review the origins of the waste at Area G.

Emergency Management: On Wednesday, Triad conducted their annual full-scale exercise. The scenario involved multiple security threats including regional and local attacks to the power grid, drone incursions into laboratory airspace, cyberattacks, an active shooter at the Radiochemistry Facility, and explosive devices on laboratory property. This was the first full scale exercise to practice activation of the Policy Group, a gathering of federal and contractor senior managers intended to provide strategic decision-making and support, but not direct management of the incident. Policy Group members noted a need to better define the roles and responsibilities of this group.

Last Wednesday, Triad transmitted their after-action report for last year's annual full-scale exercise (see 9/27/2019 report). There were no findings, six deficiencies, 23 opportunities for improvement, and one noteworthy practice. Four of the deficiencies related to fire department command and control at the TA-49 wildfire scene. They also noted a repeat issue concerning lack of reliable cell phone and radio communications in the Emergency Operations Center.