

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 10, 2017

MEMORANDUM FOR: S.A. Stokes, Technical Director

FROM: J.W. Plaue

SUBJECT: Los Alamos Report for Week Ending November 10, 2017

Unremediated Nitrate Salt (UNS) Waste–Readiness Activities: On Thursday, the contractor readiness assessment (CRA) team completed their review of the UNS drum liner pulling activity at Area G. The activity involves opening and cutting away a portion of the 85 gallon drum overpack to access the inner 55 gallon drum, opening that drum, using a lifting fixture to remove the high density polyethylene liner containing the UNS waste, and placing the liner in a new 55 gallon drum. The CRA team conducted interviews, observed a demonstration of the activity, and observed an operational drill examining the response to a breach liner. During the outbrief, the CRA team noted that the operations team demonstrated elements of a strong safety culture and identified two pre-start findings associated with: (1) the critical lift plan and (2) problems regarding lighting and a ventilation fan in the Permacon.

Readiness: On Tuesday, the Joint Evaluation Team (JET) convened to determine the proposed readiness review levels for three upcoming activities. At the Plutonium Facility, the activities included the restart of a lathe associated with the Special Recovery Line and the startup of a two new gloveboxes containing coordinate measuring machines. The JET recommended management self-assessments for both activities on the basis that both were expansions of existing capabilities, since there are other lathes and measuring machines currently in operation. The expansion of capability argument has previously created debate at LANL regarding the definition of an existing capability (see 5/5/2017 weekly). The activity reviewed for the Weapons Engineering Tritium Facility involves the startup of a new process to vent the Flanged Tritium Waste Containers (FTWC) that may contain headspaces with potentially explosive mixtures of hydrogen isotopes and oxygen (see 12/16/2016 weekly). The safety basis modification to support the venting is still under development, but the process is expected to involve a critical lift to remove the FTWCs from their overpacks and installation of a custom-designed fixture to support manual venting. The JET recommended a CRA for this activity.

Emergency Management: Last week, the NNSA Field Office issued their assessment report on the technical planning basis element of LANL's emergency management program. The report notes that the overall program framework is adequate, but includes two findings concerning: (1) inadequate implementation of the chemical management program leading to inadequate identification of hazards for emergency planning and (2) Emergency Planning Hazards Analyses (EPHA) with inadequacies concerning the documentation of inputs and assumptions, sources of values used, or technical justification for input parameters. In the former case, the report cites several instances where Field Office personnel identified hazardous biological agents and chemicals within LANL facilities, including some in proximity to nuclear facilities, which were incorrectly excluded or missing from hazard surveys. In the latter case, the report provides examples of inconsistent and poorly justified atmospheric dispersion assumptions, incorrect indicators of an emergency events, and other inaccuracies in EPHAs. The Field Office requested a corrective action plan within 30 days.

Plutonium Facility–Infrastructure: In late September, craft personnel completed reinforcing the 27th roof girder with carbon-fiber. Engineering personnel subsequently decided to reinforce a 28th girder. Craft personnel expect to complete it before the end of the year. These actions strengthen the seismic safety posture of the facility.