

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2017

MEMORANDUM FOR: S.A. Stokes, Technical Director

FROM: J.W. Plaue

SUBJECT: Los Alamos Report for Week Ending August 4, 2017

DNFSB Staff Activity: D.J. Brown observed the Federal Operational Readiness Review (FORR) for the Transuranic Waste Facility (TWF) project discussed below.

TWF–Readiness: On Monday, the FORR team commenced their review of the facility’s equipment, personnel, and procedures to start nuclear operations. The review is scheduled to complete next Wednesday and entails numerous interviews and observations of work evolutions, including emergency and operational drills. Notably, the FORR team requested demonstrations using sets of four weighted drums, which represents the anticipated work conditions. Previously, TWF workers had used no more than two empty drums for practice and evaluation purposes.

Completion of the FORR, including any subsequent corrective actions, is the last formal hurdle for this new project since its inception in 2006. Once the TWF is operational, the facility will represent a significant improvement to the safety posture of stored transuranic waste as compared to Area G and the outdoor pads at the Plutonium Facility. However, the project has had a history of deviations from DOE requirements and expectations that have impaired the facility’s ability to support key risk reduction efforts across the laboratory and suggests there are lessons to be learned. For example, the original mission need statement identified required capabilities that included waste storage, certification, container repackaging, and TRUPACT II shipping operations. The latter two capabilities were eliminated from the project scope with a strategy to rely on existing facilities. The project has also deferred the scope to install the certification capability meaning that the TWF will temporarily be unable to fully enable shipments to the Waste Isolation Pilot Plant. From a safety systems perspective, the new safety class seismic switches do not function as intended, including inadvertent actuations from severe weather, and require execution of an 18 month plan for replacement. The project also requires changes to a previously approved exemption after the as-constructed seismic switch enclosures did not comply with the conditions of exemption. The fire suppression system will begin operation as defense-in-depth and achieve its required safety significant status by the end of February 2018. The approved fire hazards analysis lists 13 open issues, deficiencies, and recommendations, in addition to the 11 that have been remedied. NNSA has imposed compensatory measures for these conditions; however, the overall safety basis and environmental permit is such that only about a third of the accumulated transuranic waste container inventory at the Plutonium Facility is currently eligible for receipt at the TWF. Additionally, as startup nears, the project has not obtained most of the critical spares needed for the suite of credited safety systems.

Plutonium Facility–Infrastructure: Earlier this week, issues with a motor controller for a fan necessitated multiple unplanned entries into the limiting condition for operations associated with the required pressure regime for the ventilation system. Maintenance personnel resolved the issue on Tuesday night.

Emergency Management: This week, a four person team commenced a Parent Organization Functional Management Review of emergency management. The team’s scope includes review of independent and external assessments, including the Board’s draft recommendation, as well as program improvement initiatives.