

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 5, 2021

TO: Christopher J. Roscetti, Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Lawrence Livermore National Laboratory (LLNL) Report for October 2021

Transuranic (TRU) Waste Shipments: LLNL shipped 70 containers of TRU waste to the Waste Isolation Pilot Plant (WIPP) for disposal. Transuranic Packaging Transporter, Model II (TRUPACT-II) loading activities began on October 4, 2021, but were paused the following day due to an out-of-service Adjustable Center-of-Gravity Lifting Fixture (ACGLF). WIPP sent a replacement ACGLF, and loading activities resumed during week of October 11, 2021. The shipments departed LLNL on October 14, 2021.

Designating Building 332 Alarms as Defense-in-Depth Equipment Important to Safety (DID-EITS): On October 14, 2021, Lawrence Livermore National Security, LLC, (LLNS) submitted evaluation criteria for designating Building 332 alarms as DID-EITS. The submittal included criteria for when facility operator, fire department, or off-shift maintenance mechanic responses are needed to verify compliance with technical safety requirements commitments or to ensure the facility is maintained in a safe condition. The Livermore Field Office (LFO) requested these criteria in a letter dated August 19, 2021.

Evaluation of Safety of the Situation (ESS) Associated with Aircraft Crashes and Fires at the Waste Storage Facilities: On October 15, 2021, the LLNL Radioactive and Hazardous Waste Management (RHWM) Facility Manager declared a potential inadequacy of the safety analysis (PISA) due to an error associated with the airborne release fraction (ARF) used for determining the source term for aircraft crashes into Building 625 and Building 696R. On October 21, 2021, LLNS prepared an unreviewed safety question determination (USQD) to evaluate the PISA. This USQD was positive. On October 25, 2021, the RHWM Facility Manager submitted an evaluation of the safety of the situation (ESS) to address the PISA associated with the error in the source term calculation. The ESS calculated radiation dose increases that did not change either the consequence bin or the control posture of the facilities and did not represent a significant risk increase. The ESS concluded that no compensatory measures were necessary to maintain the facility in a safe configuration. LLNS will revise the Building 332 Documented Safety Analyses (DSA) using the correct ARF values in the next DSA annual update due on December 22, 2021.

Fiscal Year 2022 First Quarter Startup Notification Report (SNR): On October 21, 2021, LLNS submitted a revised SNR in compliance with the Department of Energy Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*, to update information from LLNS's previous SNR submittal. LLNS noted that changes in this SNR were necessitated by delays to the Recovery Glovebox Line (RGL) operations and Centralized Waste Processing Line (CWPL) operations readiness schedules. The RGL readiness schedule delay was due to identification of issues during the management self-assessment that required additional time for completion of corrective actions. The CWPL operations readiness schedule delay was due to fire suppression system repairs. The RGL Contractor Readiness Assessment (CRA) is scheduled for November 2021, and the CWPL CRA is scheduled for January 2022.