

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 6, 2020

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 2020

LLNL Operating Status in Response to COVID-19: On October 9, 2020, the LLNL site transitioned to Phase 2 of their “Phased Recovery and Re-entry Plan.” Phase 2 involves a low-to-moderate return of personnel to the site, with a majority of the workforce continuing to telework.

Safety Evaluation Report (SER) on the Potential Inadequacy of the Safety Analysis (PISA) Related to Transuranic (TRU) Waste Characterization Results: On September 30, 2020, the Livermore Field Office (LFO) issued a SER concluding that the Waste Storage Facilities (WSF) can safely support an increased material-at-risk (MAR) limit for TRU waste containers. LFO developed the SER in response to a PISA that identified that the Central Characterization Program characterization results were greater than the Technical Safety Requirements (TSR) limits at the WSF for some Pipe Overpack Containers (POC) and non-POC drums. LFO noted that the SER demonstrated that the WSF can safely support the increased MAR limit with low risk and that the proposed compensatory measures are adequate to ensure that future TRU waste containers will align with the Transuranic Packaging Transporter, Model II payload loading limit. LFO agreed that no additional operational restrictions are necessary.

Building 332, Recovery Glovebox Line (RGL) Addendum to the Documented Safety Analyses (DSA) and Technical Safety Requirements (TSR): On October 1, 2020, LFO transmitted to Lawrence Livermore National Security, LLC (LLNS) its review comments on the LLNL Plutonium Facility, Building 332, Recovery Glovebox Line Addendum to the DSA and TSR. LFO noted that the submittal did not provide adequate justification for safe operations of the RGL in sufficient detail for LFO to conclude that the accident analysis is adequately bounding and the proposed control set is derived correctly as required by Department of Energy (DOE) Standard 3009-94. LFO noted a lack of new identified controls for the proposed operation as compared to the accepted practice across the National Nuclear Security Administration (NNSA) complex and as identified in DOE Handbook (HDBK) 1224-2018 and DOE-HDBK-3010-94. LFO requested that LLNS resubmit a revised RGL addendum to the DSA and TSR page changes incorporating resolutions to LFO’s comments by November 6, 2020.

First Quarter Fiscal Year 2021 Startup Notification Report (SNR): On October 15, 2020, LLNS submitted the First Quarter Fiscal Year 2021 SNR. LLNS provided this submittal in compliance with DOE Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*. LLNS noted that the only significant change in the SNR relates to the RGL readiness schedule, which has been delayed one month.

TRU Waste Shipments to the Waste Isolation Pilot Plant (WIPP): During September and October 2020, LLNL completed 18 shipments of TRU waste to WIPP. On October 30, 2020, the final shipment of this campaign departed LLNL. The shipping campaign removed a majority of the TRU waste drums and a number of standard waste boxes from the LLNL waste storage facilities. LLNL and WIPP personnel are working to certify additional TRU waste containers for another shipping campaign in early 2021.