

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 7, 2019

TO: Christopher J. Roscetti, Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Lawrence Livermore National Laboratory (LLNL) Report for May 2019

Defense Nuclear Facilities Safety Board (Board) Staff Activity: The Board's staff provided three person-weeks of on-site safety oversight at LLNL during May 2019. On May 13–16, 2019, D.B. Bullen observed the Transuranic (TRU) Waste Characterization Federal Readiness Assessment (FRA). On May 20–23, 2019, C. Berg and D.B. Bullen reviewed weapon response technical basis documents and completed a walk down of an LLNL testing facility utilized to mimic the electrical behavior of weapon components.

Restart of TRU Waste Characterization Activities: On May 13–16, 2019, the National Nuclear Security Administration (NNSA) conducted an FRA to verify the readiness to restart TRU Waste Characterization operations at LLNL. The FRA evaluated the facilities, equipment, personnel, safety features, and operating procedures for TRU Waste Characterization operations. Lawrence Livermore National Security, LLC (LLNS) and contractor personnel conducted representative demonstrations of TRU Waste Characterization operations and related support activities. The FRA team was highly impressed with the operational excellence demonstrated by the TRU Waste Characterization operators and management. The FRA team identified no pre-start findings and one post-start finding. The post-start finding addressed the requirement to complete a causal analysis and extent of condition review on corrective actions identified to address the six pre-start findings from the Contractor Readiness Assessment. On May 24, 2019, LLNS submitted their corrective action plan to address the post-start finding from the FRA. The Livermore Field Office (LFO) reviewed and approved this corrective action plan and authorized the restart of TRU Waste Characterization operations at LLNL on May 30, 2019.

Hardened Engineering Test Building (Building 334) Safety Bases Update: On May 14, 2019, LFO provided comments to LLNS on the annual update of the Hardened Engineering Test Building Documented Safety Analyses (DSA) and Technical Safety Requirements (TSR)—see LLNL Monthly Report for February 2019. LFO requested that LLNS submit revised DSA and TSR page changes incorporating resolution to the comments within 60 calendar days.

Safety Basis Amendment (SBA) for High Z Target Fabrication and Assembly in Building 332: On May 16, 2019, LFO approved the SBA to perform high Z target fabrication and assembly operations in Building 332 with two Conditions of Approval (COA). The COAs require that the ventilated enclosures be designated Defense-in-Depth – Equipment Important to Safety (DiD-EITS), and that as part of the Building 332 DSA/TSR Annual Update, LLNS shall evaluate the DiD-EITS safety classification based on the possible impacts of any postulated accident analysis scenarios (e.g., seismic and over-pressurization events).

Periodic Issue Report (PIR): On May 15, 2019, LFO transmitted the PIR to LLNL. This report summarizes the strengths, deficiencies, and observations identified during LFO's day-to-day oversight activities. LFO made three observations regarding the effectiveness of corrective actions for contamination events in Building 151 and Building 332. The observations addressed controlled area postings, radiological buffer area training, and dressing room postings. LFO transmitted these observations to LLNL for entry into their Issues Tracking System.