

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 3, 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 December 2019

**Defense Nuclear Facilities Safety Board Staff On-Site Activity:** On December 10–12, 2019, Board’s cognizant engineer for LLNL was on site to observe the Waste Isolation Pilot Plant (WIPP) TRUPACT-II loading operations contractor readiness assessment (CRA).

**WIPP TRUPACT-II Loading Operations CRA:** On December 9–12, 2019, LLNS staff members completed the CRA for TRUPACT-II loading operations. The CRA encompassed all aspects of the restart of TRUPACT-II loading activities performed in the Radioactive and Hazardous Waste Management (RHWM) yard using the mobile loading unit (MLU). The goal of the CRA was to demonstrate that RHWM staff can integrate the necessary controls for three distinct work groups (the WIPP MLU Team, LLNL RHWM TRU technicians, and LLNL qualified rigging and hoisting personnel) to complete one operation. The CRA team identified one pre-start and no post-start findings. The pre-start finding noted that, “The existing critical lift plan (CLP) does not comply with the LLNL Engineering Design Safety Standard.” This finding resulted from the fact that the CLP employed in the CRA did not include the steps required for the removal and replacement of the TRUPACT-II inner and outer lids. Lawrence Livermore National Security, LLC, (LLNS) modified the CLP to address this issue. LLNS is developing a corrective action plan to address the pre-start finding and the observations in the CRA report. The Livermore Field Office (LFO) plans to conduct a Federal readiness assessment in January 2020.

**Building 331 - Documented Safety Analyses (DSA) and Technical Safety Requirements (TSR) Annual Update:** On December 17, 2019, LLNS provided the LFO the Annual Update to the Building 331 DSA and TSR documents. This annual update rolls in Unreviewed Safety Question Determinations from January 1, 2018, through June 30, 2019.

**Building 332 - Implementation Plan for Department of Energy (DOE) Order 420.1 C, Facility Safety:** On December 13, 2019, the LFO approved the LLNS implementation plan for DOE Order 420.1 C, *Facility Safety*, and provided comments on a report entitled “*Assessment of Natural Phenomena Hazards for Building 332 at Lawrence Livermore National Laboratory.*” The LFO requested that LLNS resubmit any revised assessment page changes incorporating resolutions to LFO’s comments on the assessment report within 90 calendar days.

**Building 334 - Electron-Beam Welder Safety Basis Update:** On December 10, 2019, the LFO transmitted review comments on a requested safety basis amendment for the use of an electron-beam welder for welding depleted uranium items in Building 334. The LFO requested that LLNS resubmit any revised DSA and TSR page changes incorporating resolutions to the Review Comment Record comments no later than sixty (60) days from the issuance date of their letter.

**Incorporation of the LLNL Radiation Control Manual into TSRs for Super Block Buildings:** On December 6, 2019, the LFO sent correspondence to LLNS stating that they had completed their review of the proposed TSR page changes for Building 239, Building 331, Building 332 and Building 334 to incorporate the LLNL Radiation Control Manual. The LFO performed their review using Department of Energy (DOE)-Standard-1104-2016, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*. The LFO letter serves as the approval of the TSR page changes until the next annual TSR update, when all page changes must be incorporated.