

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 1, 2024

**TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL) Report for October 2024

**Defense Nuclear Facilities Safety Board (Board) Staff Interactions:** On October 29–31, 2024, the Board’s cognizant engineer for LLNL and a Board’s staff member visited LLNL to observe the annual criticality safety operational drill in the Super Block. In addition, the Board’s staff team completed walkdowns of the Tritium Facility (Building 331) and Plutonium Facility (Building 332), and met with Lawrence Livermore National Security, LLC, (LLNS) and Livermore Field Office (LFO) managers and staff. The staff team also met with LLNS managers to discuss the status of the sitewide lock out/tag out corrective action plan.

**Building 332 – Evaluation of the Safety of the Situation (ESS) Related to Doghouse Exit Doors from Laboratory Rooms in Increment 1:** On October 7, 2024, LFO concurred on the ESS related to the doghouse exit doors from laboratory rooms in Increment 1 of Building 332. (See LLNL Monthly Report for August 2024). LLNS previously determined that the unreviewed safety question determination (USQD) was negative. The doghouse exit doors, which are covered with a thick steel plate and welded shut, continue to meet their safety function. LFO noted that the ESS provided sufficient evidence to support the negative USQD and the closure of the potential inadequacy of the safety analysis. LFO required LLNS to submit appropriate page changes to the Building 332 Documented Safety Analysis (DSA) identifying the doghouse doors as safety class components within 90 days.

**Waste Storage Facilities (WSF) – DSA and Technical Safety Requirements (TSRs) 2024 Annual Update:** On October 10, 2024, LFO approved the revised Waste Storage Facilities DSA and TSRs. (See LLNL Monthly Report for September 2024). As a condition of approval, LFO directed LLNS to provide a reevaluation of the seismic fire event to update the current commitment to install seismic electrical shutoff-switches for Building 625 and Building 696R and to revise relevant sections of the WSF DSA accordingly. (See LLNL Monthly Report for January 2022). LFO required LLNS to submit this reevaluation for review and approval no later than the next annual update to these safety basis documents. In addition, LFO required LLNS to add the correspondence and the attached DSA and TSRs to the WSF safety basis effective immediately and to implement the updated DSA and TSRs within 90 days.

**Building 332 – DSA Amendment to Support Programmatic Work:** On October 23, 2024, LFO approved page changes to the Building 332 DSA to support the Naiad Project. This project will involve bringing a Cryo-XNBS assembly into a Building 332 glovebox for disassembly and assessment after being exposed to a yield shot by the National Ignition Facility. The assembly will contain plutonium and potentially up to one millicurie of tritium contamination. The tritium contamination is the new hazard in this amendment. The plutonium hazard is bounded by existing Building 332 DSA analyses. LFO concluded that the submittal provided sufficient evidence to support the approval of the page changes to the DSA. LFO directed LLNS to implement the page changes within 180 days.