

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 4, 2025

TO: Technical Director
FROM: Lawrence Livermore National Laboratory (LLNL) Cognizant Engineer
SUBJECT: LLNL Report for June 2025

Defense Nuclear Facilities Safety Board (Board) Staff Interactions: The Board's staff conducted no onsite activities in June 2025.

Building 332 (Plutonium Facility) – Furnace Operations in Inert Gloveboxes: On June 6, 2025, the Livermore Field Office (LFO) approved a request from Lawrence Livermore National Security, LLC (LLNS), to conduct overnight furnace operations in inert gloveboxes as a Type 2 standby operation (see LLNL Monthly Report for [April 2025](#)). When Type 2 standby operations are taking place, a Workstation Responsible Individual must be available on call. LFO reviewed LLNL's analysis of the 14-point key criteria for safety basis amendments and the proposed changes to the Building 332 documented safety analyses (DSA) and technical safety requirements (TSRs). These proposed changes designate high-temperature overnight furnace operations in an inert glovebox as a Type 2 standby operation, which would eliminate the need to staff operations overnight. The page changes submitted by LLNS describe the furnace operations in Chapter 2 of the DSA, add an applicable hazard event, add the specific workstations to all the applicable hazard events, and define Type 2 standby operations in the TSRs. LFO approved the request stating that the information provided, the page changes in the safety basis documents, and LLNS's responses to LFO's comments, together with the LFO safety evaluation report, are sufficient and appropriate to serve as the basis for the safe operation of the Plutonium Facility.

Building 332 – Request to Close an Evaluation of Safety of the Situation (ESS) and a Justification for Continued Operations (JCO): On June 24, 2025, LLNS submitted a request to close the ESS and JCO regarding a new failure mode for the Building 332 Increment 3 room ventilation system involving the ACU-08 split-pin linkage (see LLNL Monthly Report for [September 2023](#)). LLNS identified four actions to close the ESS and JCO, including: 1) upgrading the ACU-08 split pin linkage to safety class; 2) explaining the rationale behind the upgrade in the DSA; 3) performing weekly visual inspections and annual mechanical manipulations of the actuator; and 4) consulting a supply fan vendor to explore more robust engineering upgrades. LLNS submitted the DSA page changes associated with the first two actions and committed to complete the third action alongside implementation of the DSA page changes. LLNS also noted that the final action will be performed in the future as a separate effort. LFO is reviewing this request.

Building 331 (Tritium Facility) – ESS and JCO Related to a Potential Inadequacy of the Safety Analysis (PISA) Pertaining to Building 331 Indeterminant Quality Assurance Issues: On June 24, 2025, LLNS submitted an ESS and JCO in response to a PISA that identified safety systems, structures, and components (SSCs) with indeterminate quality assurance issues. The safety SSCs addressed by the ESS and JCO are the gloveboxes, tritium room monitors, and the fire barrier between building increments. LLNS proposed two compensatory measures to support continued operation of the safety SSCs which include: 1) requiring a walkthrough of the facility after a major seismic event to verify no degradation of the SSCs; and 2) completing a supplemental evaluation for SSCs if the quality assurance program calls into serious question the operability of a safety-class or safety-significant SSC for reasons other than seismic performance. The supplemental evaluation process is described in the Supplemental Technical Evaluation Process Flow Diagram, Rev. 1. LFO is reviewing the ESS and JCO.