

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 6, 2026

TO: Technical Director
FROM: Lawrence Livermore National Laboratory (LLNL) Cognizant Engineer
SUBJECT: LLNL Report for January 2026

Defense Nuclear Facilities Safety Board (Board) Staff Interactions: The Board's staff conducted no onsite activities at LLNL in January 2026.

Building 332 (Plutonium Facility) – Emergency Power System Degradation: Building 332's emergency power system is safety class. Its safety function is to supply power to other credited structures, systems, and components upon loss of normal power. Several technical safety requirements apply to the emergency power system and its subcomponents. One surveillance requirement is to test both emergency diesel generators to demonstrate they can supply power to connected loads within a specified time limit upon loss of normal power. During a monthly surveillance test on January 2, one of the emergency diesel generators (GDE-07) failed to start within the required time limit. LLNS determined that the overall emergency power system remained operable, as the technical safety requirements state the system is operable if one of the two emergency diesel generators is operable. LLNS formally reported this as a system degradation. There have been several other reportable events for this system since 2022. LLNS had planned to replace GDE-07 in FY24, and that effort continues.

Building 334 (Hardened Engineering Test Building) – Safety Basis Approval: LLNS transmitted an annual update of the Building 334 documented safety analysis and technical safety requirements. 10 CFR 830 does not require LFO approval of annual updates due to a change to the regulation in 2020. However, LFO approves cumulative changes from annual updates at least every three years per a local field office procedure. This practice addresses the potential that multiple years of informational annual updates might inadvertently result in significant changes that would have otherwise warranted LFO approval. LFO determined all changes were minor or editorial in nature and approved the documents on January 23.

Building 332 (Plutonium Facility) – Safety Basis Approval: On January 26, LFO approved changes to the documented safety analysis and technical safety requirements for Building 332 to specifically address "passive measurements," which cover measurements on small amounts of material over extended periods of time. Normally, programmatic operations must be suspended when entering certain technical safety requirement operating modes, but these changes allow continued operations that meet the criterion of the newly defined term "passive measurements." Instead, "passive measurements" may continue even when safety structures systems, or components are not operable. Notably, the fissionable, radioactive, or hazardous material must be in an engineered confinement barrier. In its approval letter, LFO issued a condition of approval for LLNS to reevaluate the unmitigated consequences of one hazard scenario and incorporate the results in the next annual update review and approval process. LFO agreed that there was "no practically meaningful change in risk" due to these changes.