

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 4, 2025

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

LLNL Unreviewed Safety Question Procedure: On February 28, 2025, the Livermore Field Office (LFO) approved the LLNL Institutional Manual (MAN)-2384, Rev 0, *Unreviewed Safety Question (USQ) Procedure*, with one condition of approval (COA). (See [LLNL Monthly Report for November 2024](#)). The COA directed Lawrence Livermore National Security, LLC, (LLNS) to revise the manual to convey the urgency to declare a Potential Inadequacy in the Safety Analysis (PISA) and reflect guidance from Department of Energy Guide 424.1-1C *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*. The Guide notes that a timely declaration of a PISA is needed to trigger an Operability Determination and designation of appropriate compensatory measures while the USQ Determination is being performed. LFO required LLNS to revise the manual to address the COA within 120 calendar days.

Evaluation of Safety of the Situation (ESS) and Justification for Continued Operations (JCO) - Emergency Diesel Generator Fuel Tanks: On March 7, 2025, LLNS submitted the Building 332 (Plutonium Facility) manager's ESS and JCO related to a PISA for the Plutonium Facility emergency diesel generators fuel tanks. On October 1, 2024, the Plutonium Facility manager declared a PISA associated with the emergency power system (EPS) fuel tanks for diesel generators GDE04 and GDE07 noting an inadequate technical basis for a limiting condition of operation (LCO) on minimum fuel in the tank and response time. The LCO was based on volume and not the minimum fuel level needed to adequately supply the gravity-fed fuel pump in the generator to ensure it will run for 24 hours. In addition, the LCO noted that the critical characteristics of the fuel tank and the transport piping to the generator were not clearly described in the existing design documentation. The ESS cited two calculations being developed to determine the generator run time hours at full load with 1,000 gallons of fuel for GDE04 and GDE07, respectively. The preliminary results of these draft calculations indicate that GDE04 and GDE07 will be able to run for 23 and 27.7 hours, respectively. The facility manager indicated confidence that the EPS will be operational for a significant amount of time in the event of loss of normal power. The JCO cited a compensatory measure that the 1,000-gal fuel volume of each tank shall be verified each operational day.

Declaration of LFO Implementation of Integrated Safety Management (ISM) Program: On March 11, 2025, LFO submitted a memorandum to the National Nuclear Security Administration Associate Administrator for Environment, Safety and Health (NA-ESH) declaring implementation of ISM for LFO. LFO noted that the declaration is based upon a May 2024 self-assessment of the LFO ISM Program led by the LFO Senior Technical Safety Advisor. No issues were identified by the assessment, which also verified that the one ISM related Weakness from the 2022 Chief of Defense Nuclear Safety Biennial Review (BR) was closed. One of two corrective actions for the 2022 BR Opportunity for Improvement remains open, which is to conduct a safety culture survey of LFO. The LFO Manager noted that the self-assessment verified effective implementation of the LFO ISM Program.