

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 3, 2023

TO: Katherine R. Herrera, Acting Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Lawrence Livermore National Laboratory (LLNL) Report for January 2023

Unreviewed Safety Question Procedure and the LLNL Initial Confirmatory Process Revision: On January 11, 2023, the Livermore Field Office (LFO) approved the Environment, Safety & Health (ES&H) Manual 51.3, *Lawrence Livermore National Laboratory (LLNL) Unreviewed Safety Question (USQ) Process*, and PRO-0153, *LLNL Initial Confirmatory Process*. Lawrence Livermore National Security, LLC (LLNS) provided the updated procedures to fulfill a May 2022 corrective action plan for *Potential Inadequacies of the Safety Analysis Assessment Observations at LLNL*. LFO concluded that the changes made in ES&H Manual 51.3 and PRO-0153 are compliant with 10 Code of Federal Regulations 830.203(b) and follow the guidance given in Department of Energy Guide 424.1-1C, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*. LFO provided its Safety Evaluation Report documenting the LFO review and the basis for approval.

Building 332 – Suspect/Counterfeit Item - Ratchet Strap: On January 17, 2023, LLNS employees delivered a section of staircase to the Superblock area adjacent to the Plenum Exhaust Building (PEB) near Building 332. A ratchet strap secured the staircase to a forklift, which was left in the area by the PEB for planned installation the following day. The next day, Superblock Quality Assurance (QA) Team members discovered that the bolt securing the ratchet strap to the ratchet mechanism was missing required headmarks. QA team members determined that the ratchet strap was a suspect/counterfeit item, but it was not being used on any safety class or safety significant structures, systems, or components. LLNS staff members immediately removed the strap from service. The LLNL Maintenance Production Division initiated a search for additional deficient ratchet straps.

Second Quarter Fiscal Year 2023 (FY 2023) Startup Notification Report (SNR): On January 19, 2023, LLNS submitted the second quarter FY 2023 SNR. The SNR identified one startup/restart activity, the restart of the Hydrogen Gas System for the Hydride/Dehydride/Casting (HYDEC) process. LLNS noted that the HYDEC restart schedule was unchanged from the First Quarter FY 2023 SNR.

Building 332 – Degradation of Ventilation Fan During Annual Surveillance Test: On January 20, 2023, Building 332 staff members notified the Facility Manager of the failure of a surveillance procedure requiring annual tests to verify that room ventilation supply fans trip on indication of low exhaust flow. A fan failed to trip at the appropriate setpoint. The facility was already in maintenance mode in the appropriate Limiting Condition for Operation (LCO) when LLNS staff conducted the procedure. LLNS staff completed repairs to the fan system and performed the appropriate surveillance test to exit the maintenance mode LCO. The facility remained in a safe condition.

Building 332 – Degradation of Telephone Paging System/Fire Alarm Announcement System: On January 26, 2023, Fissile Material Handlers were performing room daily checks in the Plutonium Facility (Building 332) when they discovered that the Building 332 telephone paging system was not functioning. After further review, Building 332 staff identified that the associated breaker for the safety significant Fire Alarm Announcement system had tripped and was not operable. The Facility Manager entered the appropriate LCO and began troubleshooting the telephone paging and fire alarm announcement system. LLNS staff completed repairs to the telephone paging and fire alarm announcement system and performed the appropriate surveillance test to exit the LCO. The facility remained in a safe condition.