

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

May 3, 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 April 2024

Justification for Continued Operations (JCO) Related to the Loss of Building 332 Increment 3 Room-to-Corridor Differential Pressure: On April 2, 2024, the Livermore Field Office (LFO) approved the JCO related to the loss of Building 332 Increment 3 room-to-corridor differential pressure due to failure of the Air Conditioning Unit-08 (ACU-08) motor (see LLNL Monthly Reports for November 2023 and January 2024). The JCO noted that the failure of the ACU-08 motor affects the ability of the room ventilation system (RVS) to meet performance criteria in the Building 332 Documented Safety Analysis (DSA) to maintain the room pressure lower than the corridor, and the fume hoods connected to the RVS to maintain a required face velocity. Building 332 staff implemented the compensatory measures documented in the evaluation of the safety of the situation report and JCO. LFO noted the path forward in the JCO included an evaluation to consider upgrading components, replacing components, modifying the configuration of the system, or a combination of these options. LFO concluded that the compensatory measures and path forward provide sufficient evidence that the system may continue to operate with a reasonable assurance of safety, and that a permanent solution will be found with the corrective action that is implemented. LFO approved the JCO for one year, or until the technical evaluations are completed, accepted, and implemented.

Fiscal Year 2024 (FY 2024) Third Quarter Startup Notification Report (SNR): On April 15, 2024, Lawrence Livermore National Security, LLC (LLNS) submitted the third quarter FY 2024 SNR to LFO as required by Department of Energy (DOE) Order 425.1D, *Verification of Readiness to Start Up or Restart Nuclear Facilities*. LLNS noted that the only significant change in the SNR is the submittal of the Building 332 Workstation 2111 (WS2111) Ion Exchange Activities Readiness Assessment (RA) for approval. LLNS stated that this readiness review will involve the restart of the ion exchange equipment in WS2111 following a similar methodology used for the startup of the ion exchange equipment on the Recovery Glovebox Line, but on a much smaller scale. LLNS proposed a checklist RA to be completed by the contractor within the next six to twelve months.

Waste Storage Facilities (WSF) – DSA and Technical Safety Requirements (TSRs) Annual Update: On April 24, 2024, LFO acknowledged receipt of the annual update of the WSF DSA and TSRs. LFO noted that per 10 Code of Federal Regulations Part 830.202(c)(2), which allows submittal of the latest copy of safety basis documents or a letter stating that there have been no changes since the prior submittal; DOE approval is not required. LFO reviewed the DSA, TSRs, and applicable unreviewed safety question determinations as prescribed in LFO Work Instruction 421, *Review and Approval of Nuclear Safety Basis Documents and Associated Processes* and did not identify any changes that affect the approved WSF safety envelope. LFO agreed that there were no significant changes to the WSF safety basis and noted that the DSA and TSRs are acceptable for continued use. LFO required LLNS to add this correspondence to the WSF safety basis effective immediately.

Training Implementation Matrices (TIMs) for Superblock and Radioactive and Hazardous Waste Management (RHWM) Facilities: LFO approved TIMs for Superblock and RHWM facilities on April 25 and 26, 2024, respectively. Previously, LFO provided comments to LLNS resulting from its review of the TIMs submitted by LLNS in November 2023. LLNS resubmitted the TIMs on March 22, 2024, with changes that addressed all LFO's comments. LFO approved the Superblock and RHWM TIMs with these changes.