

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 1, 2023

**TO:** Timothy J. Dwyer, Acting Technical Director  
**FROM:** Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL) Report for August 2023

**Building 332 – Evaluation of the Safety of the Situation (ESS) Related to Room Ventilation System (RVS):** On August 25, 2023, the Building 332 Facility Manager issued an ESS pertaining to a Potential Inadequacy of the Safety Analysis (PISA) related to locked variable inlet vane (VIV) exhaust dampers for the Building 332 Increment 1 RVS. During troubleshooting, Building 332 staff discovered that under certain circumstances the dampers could be locked in position, thereby potentially interfering with the operation of the safety significant compressed air switching panels. This is contrary to the description of component operation in the Documented Safety Analyses (DSA). During performance of maintenance, Building 332 staff discovered that this feature appeared to have been inadvertently set at a pressure higher than the setpoint for the compressed air switching panels, which prevented successful completion of the maintenance activity. After lowering the lockout feature setpoint below that for the compressed air switching panels, Building 332 staff successfully completed the maintenance activity. The Facility Manager determined that the facility could continue to safely operate consistent with descriptions in the DSA with the operational restriction to visually inspect the VIV damper lockout setpoint adjustment screw on a quarterly basis. Lawrence Livermore National Security, LLC (LLNS) committed to submit a Justification for Continued Operation (JCO) within 60 calendar days that will codify the operational restriction and identify proposed changes to the DSA and/or structures, systems, and components (SSC) to resolve the positive Unreviewed Safety Question Determination associated with this PISA. LLNS noted that the JCO will have a one-year duration and can be cancelled upon implementation of the changes to the DSA and/or SSCs.

**Annual Update of the Building 332 DSA and Technical Safety Requirements (TSR):** The Livermore Field Office (LFO) approved the annual update to the Building 332 DSA and TSR on March 16, 2023, with three conditions of approval (COAs). (See LLNL Monthly Report for March 2023.) The COAs addressed door closure requirements for the passive-active neutron (PAN) drum shuffler, combustible loading in the PAN shuffler room, and the development of a new design feature or acceptable alternate TSR control to protect the PAN shuffler housing. LFO directed LLNS to implement the updated DSA and TSRs within 180 calendar days. On July 24, 2023, LLNS requested an extension for the implementation due date. LFO approved a 60-day extension on August 10, 2023.

**Annual Update of the Building 239, Radiography Facility DSA and TSR:** On August 10, 2023, LFO acknowledged receipt of the annual update of the Building 239 Radiography Facility DSA and TSR. LFO noted that the revised Title 10 Code of Federal Regulations Part 830, *Nuclear Safety Management*, does not require Department of Energy approval if there are no changes to the DSA/TSR documents. LFO reviewed the submitted documents and applicable USQDs and did not identify any changes that affect the approved Building 239 safety envelope. LFO agreed that there were no significant changes to the Building 239 safety basis and that the safety basis is acceptable for continued use. LFO directed LLNS to add its correspondence to the Building 239 safety basis within 90 days.

**LFO Concurrence on Institutional Manual MAN-2386, *Verification of Readiness to Start Up or Restart Nuclear Facilities*:** On August 8, 2023, LFO concurred on the update to Institutional Manual MAN-2386 with one required correction. The original submission of MAN-2386 referenced the position of LFO manager as a Startup Approval Authority (SAA). LFO noted that SAA is assigned to a person, not a position, so the more generic wording of “LFO” is more appropriate. LLNS provided the corrected MAN-2386 on August 23, 2023.