

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 5, 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 June 2024

**Justification for Continued Operations (JCO) Related to Soot Buildup on Building 332 Increments 1 and 3 Final Stage High Efficiency Particulate Air (HEPA) Filters:** On June 24, 2024, the Livermore Field Office (LFO) approved a JCO addressing soot build-up on the Increments 1 and 3 glovebox exhaust system and room ventilation system final stage HEPA filters. (See LLNL Monthly Report for May 2024). In support of the approval, LFO completed a safety evaluation report (SER) noting three compensatory measures were put in place following the declaration of the potential inadequacy of the safety analysis. The SER also stated the existing controls identified in the safety basis provide coverage for the fire accident scenarios include the gloveboxes, glovebox argon supply system, glovebox nitrogen system, fire suppression system, fire detection and alarm systems, and combustible loading limits. LFO concluded these existing controls, combined with the three compensatory measures, provide a reasonable assurance of safety for continued operations. LFO required LLNS to add the approval letter and SER for the Building 332 Safety Basis, effective immediately, and noted that the approval is for one year, or until closure of the JCO.

**Removal of Madruga Ironworks from Building 332 JCO Addendum:** On June 19, 2024, LLNS requested removal of Madruga Ironworks from the addendum to the JCO pertaining to quality assurance issues with primarily potential seismic performance ramifications, which was approved by LFO on May 28, 2024. (See LLNL Monthly Reports for October 2023 and February 2024). Lawrence Livermore National Security, LLC (LLNS) completed an evaluation of the Madruga Ironworks components that was documented in the *Acceptance Report for Items Associated with Madruga Iron Works Nonconformances*. This report states that reasonable assurance exists to conclude that the installed Madruga components conform to intended designs and will perform the safety functions required for continued use. LFO is evaluating the request.

**LLNL Radiography Facility, Building 239, Documented Safety Analyses (DSA) and Technical Safety Requirements (TSR):** On June 21, 2024, LLNS provided the 2024 Annual Update of the LLNL Radiography Facility, Building 239, DSA and TSR. The Radiography Facility was constructed in the early 1970s and was designed to house high-energy x-ray machines for the purpose of performing nondestructive evaluations primarily of components containing fissionable materials. LLNS stated that the DSA and TSR transmittal was provided for informational use in accordance with 10 CFR Part 830.202(c)(2). LLNS further noted that the annual update included unreviewed safety question determinations from February 1, 2023, through January 31, 2024, which resulted in no changes to the Building 239 DSA and TSR.

**Transportation Safety Document (TSD) Review Comment Record (RCR):** On June 21, 2024, LFO provided comments to LLNS on the *Lawrence Livermore National Laboratory Transportation Safety Document, (Rev-10)*. LFO requested that LLNS resolve the comments and resubmit the TSD incorporating resolution to the comments within 60 days.