

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 4, 2022

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer  
**SUBJECT:** Lawrence Livermore National Laboratory (LLNL) Report for February 2022

**Defense Nuclear Facilities Safety Board (Board) Staff Interactions:** A Board's staff review team was on site at LLNL to observe the Federal Readiness Assessment (FRA) for the startup of the Recovery Glovebox Line (RGL) in Building 332 during the week of January 31, 2022, to February 4, 2022. In addition, the Board's cognizant engineer for LLNL met with Lawrence Livermore National Security, LLC, (LLNS) and Livermore Field Office (LFO) senior management as part of his periodic oversight responsibilities during this time period.

**Building 332 – RGL FRA:** On February 9, 2022, the RGL FRA team completed their assessment and issued their final report. The FRA team completed a performance-based review that included document reviews, personnel interviews, and observation of demonstrations of simulated RGL operations, including responding to abnormal conditions and an operational drill. The FRA team used a hybrid model, allowing some team members to work remotely, while a core group of four team members, including the Team Leader, were on-site and observed the demonstrations. The FRA team conducted interviews on-site and remotely using video teleconferencing. The FRA team concluded that all objectives of the FRA Implementation Plan were met. The FRA team was satisfied with the activities performed by the facility to demonstrate readiness and concluded that the formality of operations displayed by the fissile material handlers and the Associate Program Leader for RGL operations during demonstrations was impressive. The FRA team also concluded that the RGL operations team was extremely knowledgeable of the activity and demonstrated safe working practices. The FRA team identified one pre-start finding: *As written, the RGL Startup Plan does not provide sufficient detail to start up all in-scope operations.* The finding noted that the Startup Plan requires more detailed guidance to address transitioning from simulations to working with actual nuclear materials and transitioning from single-batch operations to multiple batches simultaneously within the same glovebox. The FRA team concluded that the RGL is ready to safely start up and operate once the pre-start finding is addressed.

**Transportation Safety Document (TSD) Annual Update:** On February 2, 2022, LLNS submitted the 2022 annual update to its TSD to LFO for approval. LLNS noted that the changes include administrative changes and updates to the Radioactive and Hazardous Waste Management and Materials Management Vaults and Transportation Group onsite transfer events. LLNS updated the TSD in accordance with Department of Energy (DOE) Order 460.1D, *Hazardous Materials Packaging and Transportation Safety*, and DOE Order 461.2, *Onsite Packaging and Transfer of Materials of National Security Interest*. LFO is currently reviewing the update.

**Second Quarter Fiscal Year 2022 Startup Notification Report (SNR):** On February 3, 2022, LLNS submitted the Second Quarter Fiscal Year 2022 SNR to LFO for approval. LLNS proposed delays to the readiness schedules for Centralized Waste Processing Line (CWPL) Operations and Hydrogen Gas System (HYDEC) Operations. LLNS noted that the change to the RGL projected startup date was due to the FRA moving from early January to late-January and that the CWPL Operations readiness schedule delay was due to fire suppression system repairs. LLNS changed the status of HYDEC Operations to pre-decisional to reevaluate the project schedule.