

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 4, 2019

**TO:** Christopher J. Roscetti, Technical Director

**FROM:** Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer

**SUBJECT:** Lawrence Livermore National Laboratory (LLNL) Report for December 2018

**Defense Nuclear Facilities Safety Board (Board) Staff Activity:** The Board's staff provided one person-week of on-site safety oversight at LLNL during December 2018. On December 10-14, 2018, the Board's cognizant engineer for LLNL conducted walkdowns of the Super Block and Waste Storage Facilities with the Facility Representatives, met with Livermore Field Office (LFO) and Lawrence Livermore National Security, LLC, (LLNS) managers to discuss current items of interest to the Board, and completed required LLNL training to maintain unescorted access to the LLNL site and the Super Block.

**LLNS Fiscal Year 2019 Safety Performance Objectives, Measures and Commitments (SPOMC):** On December 3, 2018, LFO approved an amendment to the LLNS Fiscal Year 2019 SPOMC, which was submitted to LFO on October 1, 2018. The amendment added the Nuclear Operations Action Plan to the fiscal year 2019 SPOMC. Additionally, LFO requested a briefing by LLNS on its performance against the SPOMC in May 2019 and the submission of a final report in November 2019.

**National Ignition Facility (NIF) Target Fabrication:** On December 14, 2018, LLNS requested approval from LFO to transfer fabrication and assembly of high-Z targets for NIF from Building 235 to the Plutonium Building (Building 332). LLNS stated that a majority of the operations to be conducted in Building 332 will duplicate those currently being performed in Building 235. LLNS also stated that the target fabrication and assembly operations will be performed with new equipment, none of which will require safety designation due to the small quantity of radioactive material involved in the processes. LLNS incorporated the target fabrication and assembly operations, via page changes, into the 2017 Documented Safety Analyses (DSA) and Technical Safety Requirements (TSR) for the Plutonium Building and noted that these operations will not change the overall risk profile of the facility.

**Evaluation of Safety of the Situation (ESS) Building - 332 Glovebox Nitrogen Supply System (GNSS):** On December 18, 2018, LFO approved the Plutonium Facility Manager's ESS and the proposed Justification for Continued Operation (JCO) for the Plutonium Facility using a temporary nitrogen supply tank until the permanent Safety Significant GNSS nitrogen supply tank has been installed and is operational. LFO provided the technical bases for its approval in a Safety Evaluation Report (SER). LFO stated that its approval expires no later than one year from the date of the approval of the SER (December 4, 2018).

**Building 331 (Tritium Facility) DSA and TSR Approval:** On December 17, 2018, LFO approved the 2018 Building 331 DSA and TSR Annual Updates. In their approval letter, LFO noted one condition – that LLNS evaluate whether prior Safety Basis Amendments (SBA) relating to the operation of propane-powered forklifts and the Diffusion Fill System have been incorporated into the B331 DSA and TSRs, and either propose removal of the SBAs from the B331 Safety Basis, or incorporate the SBAs into the B331 Safety Basis.