

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 3, 2020

TO: Christopher J. Roscetti, Technical Director
FROM: Daniel B. Bullen, Ph.D., P.E., Cognizant Engineer
SUBJECT: Lawrence Livermore National Laboratory (LLNL) Report for March 2020

LLNL Operating Status in Response to COVID-19: On March 23, 2020, Lawrence Livermore National Security, LLC, (LLNS) completed the transition of the LLNL site to Minimum Safe Operations status in response to COVID-19. During Minimum Safe Operations, the Laboratory reduced on-site staffing to a minimum number necessary to ensure the safety and security of the site and its facilities, as well as to carry out a very limited number of mission-critical activities. All other on-site activities are temporarily halted. Minimum Safe Operations are currently scheduled to continue through April 7, 2020.

Building 332 - Approval of Justification for Continued Operations (JCO) for the Potential Inadequacy of the Safety Analysis (PISA) Related to a Design Basis Earthquake: On March 12, 2020, the Livermore Field Office (LFO) approved a JCO for Building 332 in response to the PISA related to the increase in likelihood of degradation of the Building 332 Increment 1 facility structure in a design basis earthquake. The LFO concluded that the existing Building 332 controls, coupled with the compensatory measure and the LFO's conditions of approval, are adequate to ensure a sufficient level of safety for workers, the public, and the environment for the operations authorized and the events evaluated in the LFO's Safety Evaluation Report. The conditions of approval require LLNS to incorporate the JCO and its controls into the next annual update of the Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR) for Building 332. In addition, the LFO's approval is required before Building 332 returns to the TSR's Operation Mode following a seismic event that exceeds 0.3g peak ground acceleration. LLNS is required to provide the LFO with quarterly updates on the status of the Building 332 facility condition assessment results and other related technical evaluations.

Building 332 Vaults - Temporary Extension of Surveillance Requirement: On March 16, 2020, LLNS requested a temporary extension of surveillance requirements for the Building 332 vaults during Minimum Safe Operations. Specifically, LLNS requested an extension to the frequency requirement for the performance of the bi-weekly verification of the Continuous Air Monitor (CAM) alarm set points in the Building 332 vaults. LLNS noted that during Minimum Safe Operations, staff will be reduced to the personnel needed to keep the facility safe. Entering the vaults to check the CAMs requires additional personnel and extensive coordination. The Building 332 vaults will be locked during Minimum Safe Operations, and entry is not anticipated. In addition, LLNS noted that during Minimum Safe Operations all required surveillance will be performed for Building 332 CAMs not located in the vaults. LLNS will conduct the required surveillances for the Building 332 vault CAMs after exiting Minimum Safe Operations and before resuming normal facility operation. On March 27, 2020, the LFO approved this request with one condition of approval, "Appropriate Personal Protective Equipment shall be required when performing 'first' post-minimum safe operations access in the vaults."

Building 331 Safety Basis: On March 24, 2020, the LFO provided LLNS the Review Comment Record comments on the 2019 Annual Update of the Tritium Facility (Building 331) DSA and TSR documents. LLNS is required to resubmit any revisions to the DSA and TSR no later than 60 days following the issuance of the LFO's correspondence.