

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 7, 2020

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Austin R. Powers, Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for January 2020

**DNFSB Staff Activity:** The Board's staff conducted no onsite activities at NNSS during January.

**Downdraft Table Restart Status:** As discussed in the NNSS Monthly Report for December 2019, Mission Support and Test Services, LLC (MSTS), and Lawrence Livermore National Laboratory (LLNL) completed a joint management self-assessment for downdraft table operations in December. The management self-assessment is a component of the MSTS readiness confirmation process and intended to correct any operational issues and deficiencies prior to the formal readiness review. The scope of this assessment also included verification that MSTS successfully re-established functionality of the out of service systems and equipment in downdraft table building. In January, the assessment team issued the final report, which included 14 findings (13 pre-start and one post-start), four opportunities for improvement, and two noteworthy practices. The pre-start findings include issues with procedures (cannot perform tasks as written), the plan of action for the contractor readiness assessment has not been approved by the startup authorization authority, an airflow study on the primary and secondary confinement areas has not been completed, and the flammable liquids storage cabinet in the downdraft table building is not grounded. During January, MSTS and LLNL addressed all of the pre-start findings, declared that downdraft table operations are ready, and requested MSTS and LLNL management to proceed with the contractor readiness assessment (scheduled in February).

**National Criticality Experiments Research Center (NCERC) July 2019 Incidents:** As discussed in the NNSS Monthly Report for August 2019, NCERC experienced two separate issues, while working to the same procedure. The issues were 1) discovering an open door to a storage location containing fissionable material upon entering an NCERC vault and 2) not entering the correct operational mode prior to moving containers with special nuclear material into an NCERC building. Los Alamos National Laboratory (LANL) has completed the causal analysis for the incidents and identified ten corrective actions. The corrective actions for NCERC management include reiterating expectations for work planning to workers, collecting feedback from workers regarding process gaps and/or improvements, including a step to remind workers that all changes to work scope and/or re-planning must include a reassessment of the adequacy of the hazards and controls, modifying the procedure of concern by moving the requirement for ensuring the proper mode from the prerequisites section to the procedural steps section, and reviewing all NCERC procedures for proper implementation of mode changes. LANL corrective actions include training workers to the revised procedure and implementing a periodic requirement to have mid- and senior-level managers observe NCERC operations. LANL management also plans to submit a letter to MSTS requesting MSTS to review and potentially reduce the number of modes and associated technical safety requirements to be aligned with actual safety impact. LANL will offer suggestions in this letter. LANL expects to address all corrective actions by the end of this year.