

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 31, 2023

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Sonia G. Thangavelu, Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for March 2023

**DNFSB Staff Activity:** During the week of March 13, Board Vice Chair T.A. Summers and staff members R. Tontodonato, S. Seprish, and S. Thangavelu were on site at NNSS. They visited facilities including the Dense Plasma Focus Facility, machine shop, the Radioactive Waste Management Complex (RWMC), and Radioactive Waste Management Site. The Vice Chair and Board staff also observed the annual emergency exercise at RWMC and met with senior Mission Support and Test Services, LLC (MSTS), Nevada Field Office (NFO), and Joint Laboratory Operations Nevada (JLON) personnel to discuss safety issues at NNSS. During the week of March 20, P. Migliorini, K. Deutsch, Y. Li, R. Csillag, S. Thangavelu, and C. Berg participated in discussions with NFO, MSTS, and JLON personnel for the onsite staff review of the Preliminary Documented Safety Analysis for the U1a Complex Enhancement Project. A. Powers, F. Bamdad, and X. Jiang participated in the review virtually to discuss the hybrid fire suppression system, vessel confinement strategy, atmospheric dispersion modelling of accident scenarios, and development of a new container for onsite transport of subcritical experiment packages. In addition, Y. Li, R. Jackson, and D. Andersen attended meetings in a virtual setting hosted by MSTS to discuss updates to the Device Assembly Facility (DAF) structural building evaluations, which include a new slope stability evaluation.

**Assessment of Nuclear Criticality Safety (NCS) Program at the National Criticality Experiments Research Center (NCERC).** In February, the National Nuclear Security Administration's Los Alamos Field Office (NA-LA) issued an assessment plan to evaluate NCS implementation at NCERC. The assessment plan focuses on four elements. The first element is to evaluate integration of NCS program elements between NNSS and Los Alamos National Laboratory management and operating contactors as well as observe federal oversight by NFO and NA-LA. The second and third elements are to evaluate the adequacy of NCS controls in NCERC operating procedures and evaluate the configuration management/change control process for NCS control documents. The last element is to evaluate the effectiveness of the NCERC NCS program and resolve weaknesses identified. The assessment plan states NA-LA will begin its evaluation and field work at NCERC in March with expected completion by April.

**Update to Violation of Specific Administrative Control (SAC) for Portable Radiography at DAF.** As discussed in the NNSS Monthly Report for September 2022, a radiation generation device (RGD) containing keys was shipped to the DAF receiving warehouse and unknowingly introduced to DAF. This resulted in a technical safety requirement violation for failure to implement the SAC for control of RGD keys. In March, MSTS identified corrective actions to prevent recurrence. One of the actions is to develop a checklist for introducing RGDs to DAF with a specific check for the control of keys. MSTS personnel continue to develop the causal analysis report.

**Waste Shipments to RWMC.** In March, RWMC received and processed eighteen shipments of low-level radioactive waste packages.