

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 4, 2023

TO: Timothy J. Dwyer, Acting Technical Director
FROM: Sonia G. Thangavelu, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for July 2023

DNFSB Staff Activity: On July 11, the Defense Nuclear Facilities Safety Board's (Board) staff conducted a teleconference review with personnel from the Nevada Field Office (NFO) and Mission Support and Test Services, LLC (MSTS). The review focused on maintenance of electrical power cabling at NNSS to ensure the electrical infrastructure as described in the nuclear safety analyses is a reliable source to supply power to NNSS defense nuclear facilities. During the week of July 16, S. Thangavelu visited the site to perform walk downs at various defense nuclear facilities and discuss the status of safety basis deliverables and site activities with NFO and MSTS senior leaders as part of routine oversight. On July 19, S. Thangavelu attended the Nevada Site Specific Advisory Board meeting held jointly with the Department of Energy Environmental Management Nevada Program.

U1a Complex Fire Protection Strategy. As discussed in the NNSS Monthly Report for June 2023, the National Nuclear Security Administration (NNSA) federal project manager directed MSTS to submit a plan of action to address an independent ad hoc panel's recommendations for the hybrid (water and inert) fire extinguishing system design to support the U1a Complex major modification projects. On July 14, MSTS submitted the plan of action to NFO and NNSA. The plan of action states MSTS and NNSA will charter a committee of fire protection subject matter experts to conduct an analysis of alternatives and recommend an integrated strategy for fire protection within the U1a Complex, including re-evaluation of the hybrid system and final selection of a fire extinguishing system. The committee will develop a report that summarizes their findings and recommends a path forward for fire protection at the U1a Complex in September. MSTS will develop a holistic implementation plan for the recommended path forward for the major modification projects and existing U1a Complex infrastructure in parallel with the report.

Assessment Report for Nuclear Criticality Safety (NCS) Implementation at the National Criticality Experiments Research Center (NCERC). As discussed in the NNSS Monthly Reports for February and April 2023, the Los Alamos Field Office (NA-LA) performed an assessment of the Los Alamos National Laboratory (LANL) NCS implementation at NCERC. NA-LA transmitted its assessment report to NNSA in July. The report concluded that the NCS program at NCERC complies with the LANL NCS program description requirements and the NNSS NCS program description that defines the interface between the LANL and MSTS NCS programs. The report further states weaknesses in the NCERC NCS program identified in the Board's June 16, 2022, letter to the Secretary of Energy remain unresolved. The report identified three findings and seven observations, none of which posed an immediate safety hazard.

Real-Time Radiography (RTR) of Low-Level Radioactive Waste at Radioactive Waste Management Complex. In July, MSTS and Navarro Research and Engineering, Inc. conducted RTR on four low-level radioactive waste containers. MSTS plans to conduct RTR on two more low-level radioactive waste containers during the remainder of the fiscal year.