

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 5, 2021

**TO:** Christopher J. Roscetti, Technical Director  
**FROM:** Austin R. Powers, Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for January 2021

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

**COVID-19 Impact:** During January, NNSS remained in Phase 2 of its return to work plan. In this phase, NNSS continued to be in the "Normal Operation with Maximum Telework" work status. The increase in confirmed COVID-19 cases in Nevada has not impacted the ability of Mission Support and Test Services, LLC (MSTS), to maintain required staffing at the NNSS defense nuclear facilities.

**NNSS Atmospheric Dispersion:** As discussed in the NNSS Monthly Report for December 2020, MSTS discussed with the Board's staff its plans to update the atmospheric dispersion calculations for the applicable NNSS defense nuclear facilities. As part of this effort, MSTS followed the guidance in Department of Energy (DOE) Standard 3009-2014, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, and selected to use option 3, which allows contractors to use site-specific methods and parameters as defined in a site/facility specific DOE-approved modeling protocol. In September, MSTS developed the modeling protocol. The protocol establishes the process MSTS will use when performing the dispersion analysis for accident scenarios at the applicable NNSS defense nuclear facilities. The protocol is generally consistent with option 2 in DOE Standard 3009-2014, with the exception of release heights and the use of a site-specific dry deposition velocity. In December, the Nevada Field Office approved the modeling protocol. MSTS plans to follow this protocol when analyzing the accident scenarios in the preliminary documented safety analysis for the enhanced capabilities for subcritical experiments project and the re-write for the Device Assembly Facility documented safety analysis, both of which will be developed in accordance with DOE Standard 3009-2014.

**U1a Complex Hoists Evaluation:** As discussed in the Board's letter dated May 13, 2020, MSTS developed a statement of work to hire a subcontractor to evaluate the hoists at the U1a Complex. In October 2020, the subcontractor completed its report that documents the evaluation results. For the evaluation, the subcontractor performed an onsite inspection of the hoists, with the objectives to identify obsolete components and any additional issues with the systems and surrounding infrastructure. From the inspection, the subcontractor developed recommendations and next step tasks. As it relates to the safety significant U1h hoist control system, the subcontractor identified obsolescence issues with some of the major components of the electrical control system (e.g., programmable logic controllers). The subcontractor notes that each component is interconnected within the system. As a result, if any one component is replaced, it will have to be adapted to the rest of the older components which will limit features. Therefore, the subcontractor recommended that the electrical control system be replaced as a whole. As a long term action, the subcontractor recommended that engineering should be done to determine the best method to update the system and make it compliant with current industry and safety significant standards. The subcontractor did not identify any emergency items to justify ceasing operations of the hoists.