

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 2, 2022

TO: Katherine R. Herrera, Acting Technical Director
FROM: Sonia G. Thangavelu, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for November 2022

DNFSB Staff Activity: The Board's staff did not conduct any onsite activities at NNSS during November.

U1a Complex Evaluation of the Safety of the Situation (ESS) of Muck Accumulation. As discussed in the NNSS Monthly Report for October 2022, Mission Support and Test Services, LLC (MSTS), developed an ESS for the Potential Inadequacy of the Safety Analysis (PISA) related to muck accumulation for the U1h hoist at the U1a Complex. In October, the Nevada Field Office (NFO) approved the ESS. The ESS states an operational restriction is in place to prohibit moving subcritical experiment (SCE) packages to the U1a Complex until the safety basis is revised with new surveillance requirements during the next annual update. One of the new surveillance requirements limits the operation of the U1h hoist to a reduced speed, implemented as a specific administrative control. This speed will be verified prior to utilizing the hoist to lower an SCE package into the U1a Complex. MSTS personnel are calculating a new stopping distance for the hoist, based on the reduced speed limit, and will control the muck level to accommodate that stopping distance to prevent the hoist from impacting the muck in a runaway hoist scenario. The second surveillance requirement has operators verify the available stopping distance prior to movement of an SCE package using the hoist. MSTS personnel have removed the excess muck from the hoist sump and plan to monitor the muck level periodically to prevent accumulation.

U1a Complex ESS of the Vessel Confinement System. As discussed in the NNSS Monthly Report for July 2022, MSTS developed an ESS for the PISA related to the credited vessel confinement system used to conduct experiments at the U1a Complex. In October, NFO approved the ESS. The ESS states two operational restrictions will remain in place for the U1a Complex until the safety basis is revised with an improved in-service inspection and system description of the vessel during the next annual update. The first operational restriction prohibits emplacement of SCE packages into the vessel confinement system. The second operational restriction prohibits the presence of radiological material and SCE packages in the U1a Complex while the facility is in a cold standby status. The ESS concludes the vessel confinement system meets the fabrication and certification requirements of the *American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII, Division 3, Code Case 2564*, based on a technical document from the national laboratories. Therefore, the ESS concludes that the vessel confinement system will be able to perform its nuclear safety function. MSTS plans to use this confinement vessel for the next planned experiment once the safety basis is revised and the operational restrictions are removed.

Enhanced Staging Project at the Device Assembly Facility (DAF). In October, NFO approved the change notice to the DAF Documented Safety Analysis for the Enhanced Staging Project. The project involves installation of racks to stage materials in a designated building while providing space for DAF personnel to perform various mission-related activities.