

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 6, 2018

TO: Christopher J. Roscetti, Technical Director
FROM: Austin R. Powers, Cognizant Engineer
SUBJECT: Nevada National Security Site (NNSS) Report for June 2018

DNFSB Staff Activity: K. Amundson, A. Martin, A. Powers, and R. Tontodonato were on site during the week of June 11 to review the U1a Complex safety basis and walkdown the facility. In addition to this review, A. Powers also performed walkdowns at the Device Assembly Facility (DAF) and the Radiological Waste Management Complex as part of routine oversight for the quarterly cognizant engineer site visit.

U1a Complex Safety Basis Update: As mentioned in the NNSS Monthly Report for March 2017, the Nevada Field Office approved the U1a Complex safety basis. The previous management and operating (M&O) contractor, National Security Technologies, LLC, updated the U1a Complex safety basis to account for the change in hazard categorization (HC) for the facility (changed from HC-3 to HC-2). As part of the 2018 annual update, the current M&O contractor, Mission Support and Test Services, LLC (MSTS), is re-analyzing the safety basis to account for planned experiments. Members of the Board's staff reviewed the 2017 safety basis and developed lines of inquiry on the process hazard analysis, accident analysis, credited control set, technical safety requirements, and how the safety basis will change in the 2018 annual update.

During the on-site interaction, MSTS explained that the device shipping container (DSC) will no longer be credited to protect the experimental packages from thermal and electrical insults in the 2018 annual update DSA. This is due to a Potential Inadequacy in the Safety Analysis that was identified in the approved and implemented U1a Complex safety basis and declared in March 2018. In the current analysis, the safety basis does not identify functional or performance criteria for electrical and thermal protection for the DSC. In the 2018 annual update DSA, MSTS will rely only on specific administrative controls to ensure the experimental packages are protected from thermal and electrical insults (e.g., fire watch, combustible material control, limited concurrent activities). MSTS has looked at other alternatives to the DSC that will provide protection for thermal and electrical insults, but no decisions have been made yet. MSTS plans to submit the annual update in July.

DAF Fire Suppression System (FSS) Improvement Project: MSTS has continued to make improvements to the FSS in DAF. MSTS completed construction work for the 23rd of these buildings (out of 25) during June. MSTS plans to complete the necessary surveillances and inspections for the FSS and declare the building operable during July. As mentioned in the NNSS Monthly Report for May 2018, MSTS still plans to begin construction work in late August for the last remaining building to have its lead-in line addressed.

DAF Lightning Bonding Upgrades: As mentioned in the NNSS Monthly Report for March 2018, MSTS is currently upgrading the lightning bonding in three buildings at the DAF. MSTS completed the lightning bonding construction activity in two of the three buildings during June. MSTS is continuing the construction activity for the remaining building.