

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

July 1, 2016

**TO:** Steven A. Stokes, Technical Director  
**FROM:** Austin R. Powers, Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for June 2016

**DNFSB Staff Activity:** A. Powers was on site June 6<sup>th</sup>-9<sup>th</sup> to perform routine oversight and observe an actinide shot at the Joint Actinide Shock Physics Experimental Research (JASPER) facility.

**U1a Complex Documented Safety Analysis (DSA) Update:** On June 9, 2016, National Security Technologies, LLC (NSTec), briefed the Nevada Field Office (NFO) on the 90 percent complete DSA revision for the U1a Complex. NSTec initiated the DSA revision because the hazard categorization (HC) for the facility is being changed from HC-3 to HC-2. During the briefing, NSTec outlined to NFO the changes being made to the current DSA for the new DSA revision in advance of the submittal to NFO. Among other things, NSTec informed NFO that they planned to downgrade the classification of the U1h hoist safety catch system in the U1h shaft from safety significant (SS) to defense in depth. The current DSA states that the credited safety function of the U1h hoist safety catch system is to prevent a free fall of the U1h cage and its contents (i.e., workers or the experimental package). The free fall of the shaft cage loaded with the experimental package could result in a potential loss of confinement and/or high explosives violent reaction (HEVR) event. In order to mitigate the effects of this possible scenario, NSTec proposed to introduce a new specific administrative control (SAC) that would prevent any workers from being underground in the facility during operations of lowering an experimental package down the U1h shaft.

NFO expressed its concerns during the briefing about the proposal for downgrading of the U1h hoist safety catch system. In particular, NFO was concerned with the strategy of using a mitigative SAC instead of the preventive passive engineered control already in place. Since the briefing, NSTec has submitted the 90 percent complete DSA to NFO for approval. The revised DSA ultimately submitted did not downgrade the classification of the SS hoist safety catch system. The cognizant engineer plans to continue to follow the changes made to the DSA as it is processed and approved.

**Device Assembly Facility Coring Project:** During the month of June, NFO validated and approved the closing of all of the pre-start findings from the Coring Project Federal Readiness Assessment (FRA). NFO plans to conduct the start-up authority meeting during the month of July 2016. NSTec expects the first coring operation to be performed during the week of July 18<sup>th</sup>. The NNSS cognizant engineer plans to continue to follow the progress leading up to start-up operations and follow up with NFO on the progress of the post-start findings from the FRA.

**JASPER Facility Actinide Shots:** During the month of June, the JASPER facility conducted Actinide Shots 141 and 142 successfully, which returned 100% data. The experiments were executed in a safe manner with no safety issues to report. The NNSS cognizant engineer was on site to observe Actinide Shot 141 and noted the satisfactory conduct of operations during the experiment.