

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 2, 2015

**TO:** Steven A. Stokes, Technical Director  
**FROM:** John E. Deplitch, Cognizant Engineer  
**SUBJECT:** Nevada National Security Site (NNSS) Report for September 2015

**DNFSB Staff Activity:** There were no staff visits or conference calls.

**Device Assembly Facility (DAF):** National Security Technologies, LLC (NSTec), completed bypassing the second fire suppression system lead-in line and conducting associated hydrostatic testing. NSTec is still considering how it will replace the lead-in lines on the south side of the facility, after discovering in July that flange connections may be located under some buildings and therefore may be much more difficult to reach than originally thought. NSTec will likely bypass the four lead-in lines with couplings at DAF's structural boundary on the south side in 2016. A recent inspection of the DAF water tank showed significant internal corrosion and has caused NSTec to reconsider repair or replacement of the water tank.

DAF personnel have implemented the changes to the DAF Documented Safety Analysis and Technical Safety Requirements (Change Notice 4) for the Coring Project. Lawrence Livermore National Laboratory (LLNL) and NSTec personnel conducted the management assessment and plan to begin the contractor readiness assessment later in October.

**National Criticality Experiments Research Center (NCERC):** NCERC personnel completed in-service inspections and surveillance requirements to declare Godiva operable on September 22. NCERC personnel conducted a burst with Godiva on September 24 as part of the Godiva Startup Plan. This allowed NCERC personnel to re-characterize Godiva reactivity and output following emplacement of the Top Hat. The startup plan also addresses new engineered features and practices for contamination control. The Nevada Field Office facility representatives, safety system engineer, and subject matter experts for health physics and maintenance observed the operations.

**Subcritical Experiments/U1a Complex:** At the U1a Complex, Los Alamos National Laboratory (LANL) and NSTec personnel successfully emplaced the experiment assembly (containing surrogate material) and executed subcritical experiment Orpheus in September. There were no safety issues. The experiment achieved 100% data collection.

NSTec is preparing the U1a Complex safety basis addendum for the underground construction operations to mine through the back of the 05 Drift experiment room and connect to the new 07 Drift. NSTec also has begun revision of the U1a Complex safety basis to change the facility from Hazard Category-3 to Hazard Category-2.

NSTec continued fire protection improvements in the U1a underground with the installation of fire barriers in the 02, 07, and 100 Drifts, and installation of a fire detection system in the 07 Drift.

**Joint Actinide Shock Physics Experimental Research Facility (JASPER):** LLNL and NSTec personnel successfully executed actinide Shot 133. The experiment was executed in accordance with operating procedures with no safety issues. The shot returned 100% data. LLNL and NSTec began pre-assembly of the Primary Target Chamber for the upcoming surrogate Shot 134.