

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 4, 2015

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

**DNFSB Staff Activity:** J. Deplitch, W.S. Horton, J. Anderson, R. Arnold, R. Eul, E. Gibson, and S. Seprish were on site November 3 – 5 to review the Quality Assurance (QA) and Software QA Program for both the National Nuclear Security Administration (NNSA) Nevada Field Office (NFO) and the prime contractor, National Security Technologies, LLC (NSTec), for the NNSS. On November 19, the review team conducted the close-out briefing.

J. Deplitch and A. Powers were on site November 16 – 20 for transition cognizant engineer familiarization.

**Device Assembly Facility (DAF):** On November 3, 2015, the DAF staff could not restore the Fire Suppression System (FSS) to Operable condition because a component end of life failure prevented the system from pressurizing. The FSS had been taken out of service per procedure in order to support a particular nuclear operation in a DAF building. Upon completion of the nuclear operation, the FSS must be restored to Operable condition—it was during this transition that the DAF staff identified the defect. The DAF staff entered the appropriate Limiting Condition of Operation when the system could not be restored. The DAF staff will repair the FSS after procuring a replacement for the failing component and then re-enable the FSS.

On November 14, 2015, NSTec declared a technical safety requirement (TSR) violation. A worker had inadvertently activated the Special Door Interlocks (SDI) Emergency Override. When the SDI Emergency Override is activated, it allows both interlock doors to open at the same time. The SDI was restored to Operable condition once the SDI Emergency Override was returned to normal configuration, and the Cognizant System Engineer confirmed this. However, DAF personnel failed to confirm the system was Operable by not physically ensuring the SDI system was once more preventing both interlocked doors from opening simultaneously. This is consistent with the TSR violation criterion, which states, “Failing to PERFORM an ACTION within the required COMPLETION TIME following Exceeding Limiting Condition of Operations” (DAF-TSR-01, 5.3.3.2). Appropriate notifications were made to NSTec and NNSA/NFO line management.

**Joint Actinide Shock Physics Experiment Research (JASPER):** JASPER conducted Surrogate Shot 135 successfully, which returned 100% data. The experiment was executed in a safe manner with no safety issues to report. JASPER has scheduled Shot 136 for the week of November 30<sup>th</sup>.

**QA and SQA Review.** The results of this review revealed numerous and significant deficiencies in the QA Program for both NFO (7 even issues, 4 weaknesses, 1 observation, and no notable practices) and NSTec (13 issues, 2 weaknesses, 2 observations, and 4 notable practices). The review team will provide the Board with a detailed report under separate cover.