

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

November 4, 2016

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

DNFSB Staff Activity: The Defense Nuclear Facilities Safety Board's staff did not conduct any on-site activities at NNSS for the month of October.

Device Assembly Facility (DAF) Fire Suppression System (FSS) Improvement Project:

During the month of October, National Security Technologies, LLC (NSTec), continued to make improvements to the FSS in DAF. NSTec facility personnel completed the surveillance testing for one building and declared the building operable in October. NSTec construction also completed all of the lead-in line construction activities (by abandoning the lead-in line and tying the FSS into the inside fire loop) for three other buildings. Also, for these three buildings, NSTec construction is currently addressing the FSS sprinkler deficiencies and has already completed this work for two out of the three buildings. NSTec is planning to have all three buildings operable by the end of November. Going forward with the lead-in line replacement and FSS deficiencies projects, NSTec plans to replace the lead-in lines and address the building's deficiencies concurrently. During the month of October, NSTec construction has already begun to follow this approach for one building and plans to follow this approach for an additional two buildings in November. The NNSS cognizant engineer will continue to follow the progress of the improvements made to the DAF FSS.

DAF Glovebox: During the month of October, NSTec completed the investigation for the cracked window panes discovered in the DAF glovebox used for coring operations and assembly of Joint Actinide Shock Physics Experiment Research (JASPER) targets. The investigation found that NSTec recently made a change in the nitrogen supply system for the glovebox. Therefore, NSTec was conducting a proof-of-operation activity, which had the glovebox continuously being purged. While this proof-of-operation activity was occurring, NSTec was also performing normal periodic maintenance functions on the systems that affect glovebox exhaust. The maintenance procedures required the normal glovebox exhaust path to be bypassed, but key valves in the alternate flow path did not automatically reposition, which closed the flow path out of the glovebox. (The procedures did not call for the operators to physically verify the position of valves.) This resulted in an inadvertent overpressurization condition inside of the glovebox and cracked two of the window panes. NSTec has since developed corrective action plans to ensure that this event does not reoccur. As part of the corrective action plan, NSTec revised their procedures to ensure that the operators will verify the positions of the valves prior to and after such activities.

Also, during the month of October, NSTec replaced the cracked window panes with the new replacement window. NSTec has since then returned the glovebox to an operable status. NSTec plans to resume operations in the glovebox during the month of November. The resumption of operations allows the JASPER facility to resume their experiments, with the next actinide shot scheduled for the month of December 2016.