

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 7, 2018

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

DNFSB Staff Activity: The Board's staff did not conduct any onsite activities at NNSS during November.

U1a Complex Confinement Vessel: The confinement vessel at the U1a Complex is a safety significant control credited to prevent external insults from releasing the radioactive debris from experiments. The U1a Complex technical safety requirements include an in-service inspection (ISI) to verify that the vessel confinement system is qualified in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section VIII Division 3. During October, Mission Support and Test Services, LLC (MSTS) identified that the confinement vessel for the upcoming experiment did not have the documentation for the liquid magnetic particle examination listed in the Boiler and Pressure Vessel Code. MSTS returned the vessel to the manufacturer for the required examination. In addition, MSTS had the manufacturer perform an extent of condition review to identify any additional code compliance issues for the vessel. During November, the manufacturer completed the testing, which the vessel passed. The manufacturer sent the vessel back to NNSS. The extent of condition review identified several other quality assurance concerns that MSTS is working to disposition prior to the experiment. MSTS is investigating whether these issues exist for other confinement vessels procured for future experiments.

Device Assembly Facility (DAF) Glovebox Contamination: During November, a glovebox worker at DAF noticed an elevated radioactivity reading on the surgical glove on their hand after removing it from the glovebox glove. The glovebox worker responded appropriately by inserting their hand back into the glovebox glove and notifying the radiological control technician (RCT) of the potential contamination. The RCT confirmed that there was contamination on the surgical glove and notified the appropriate MSTS and Nevada Field Office personnel. The workers in the building donned respirators, and the RCT performed surveys on the contaminated worker. The RCT removed the contaminated glove from the worker and properly disposed of it. The RCT found no further contamination on the worker or in the immediate area. Although no visible tear was found in the glovebox gloves, the glovebox workers replaced the glovebox gloves used by the contaminated worker. MSTS personnel placed the glovebox building onto administrative hold until appropriate surveys were complete and the building was determined to be safe. MSTS also held a fact finding on the event. MSTS has since removed the building from administrative hold and allowed operations to resume.

DAF Downdraft Table Building: MSTS recently began an effort to restart the DAF downdraft table. MSTS plans to return the building to operable status during the third quarter of this fiscal year. Required preparations include a readiness activity, completing the ISIs identified in the DAF safety basis, and addressing any issues that may arise.