

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 7, 2015

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

DNFSB Staff Activity: J. Deplitch and D. Grover participated in a conference call to discuss the Device Assembly Facility High-Efficiency Particulate Air-filtered Ventilation System (HFVS) Deficiencies and Operability Plan on July 15.

PISAs at Nuclear Facilities: On July 13 & 15, National Security Technologies, LLC (NSTec) declared a potential inadequacy of the Documented Safety Analysis (DSA) at each of the nuclear facilities, and for on-site transportation, based on new information—the discovery that NSTec had not maintained the aircraft crash accident analysis current. An airstrip was constructed at the NNSS and aircraft operations had commenced. NSTec never conducted an unreviewed safety question determination for construction and operation of the new airstrip. As a result, NSTec never entered the process by which they would have updated the Aircraft Crash Accident Analysis. The Aircraft Crash Accident Analysis is the supporting basis for the hazards and accident analysis resulting from aircraft traversing over the NNSS. NSTec has now verified that an unreviewed safety question exists.

Device Assembly Facility (DAF): In preparation to begin replacing fire suppression system lead-in lines on the south side of the facility, NSTec began excavating the connections at the building end of the lead-in lines. Unfortunately, this work revealed that the connection flanges are not visible outside the facility structure and may be under the buildings at the base of the stand pipes. Therefore, reaching the flanges for connecting replacement lines may be difficult. The as-built drawings did not show the flange connections. NSTec is considering possible paths forward. If NSTec has to redesign the by-passes for the lead-in lines on the south side, the replacement of those lines would be delayed.

National Criticality Experimental Research Center (NCERC): NCERC personnel conducted criticality experiments on the Comet and Flat-Top machines in July. NCERC personnel completed corrective actions regarding radiological controls from the Godiva building readiness assessment before resuming operations in the Godiva building. NCERC personnel will address other corrective actions from the readiness assessments during execution of the Startup Plan for Godiva Burst Operations. NSTec fixed problems with the HFVS for the criticality assembly machine buildings before resuming radiological operations in the buildings.

Subcritical Experiments: Los Alamos National Laboratory (LANL) and NSTec personnel continued to prepare at the DAF and U1a Complex for an upcoming subcritical experiment with surrogate material. In July, LANL personnel conducted dry-runs for assembling the experiment device at the DAF. LANL and NSTec are on schedule to complete experiment operations within one year of the previous subcritical experiment, in order to maintain readiness for subcritical experiments.

Joint Actinide Shock Physics Experimental Research Facility (JASPER): Lawrence Livermore National Laboratory and NSTec personnel successfully executed an actinide shot, Shot 130, during the last week of July.