

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 16, 2015

**MEMO TO:** Steven Stokes, Technical Director  
**FROM:** Zachery Beauvais, Pantex Site Representative  
**SUBJECT:** Pantex Plant Report for Week Ending October 16, 2015

**DNFSB Staff Activity:** C. Berg was onsite to augment the Board's site coverage.

**Recovery of Nuclear Explosive Operations (NEO):** Consolidated Nuclear Security, LLC (CNS), continued their activities to resume NEOs following the work stoppage and strike (see 10/9/2015 report). The CNS Pantex Plant Manager has authorized the resumption of high explosives operations, joint test assembly (JTA) operations, and NEOs for select weapons programs. This week, CNS technicians resumed machining insensitive high explosives and JTA assembly operations. Despite having received the authorization to resume work on specific programs, no NEOs have resumed at the time of this report. NEOs will be restarted on a facility-by-facility basis once the required preventive maintenance on safety-related equipment is completed.

**High Pressure Fire Loop (HPFL) Lead-In Replacement Project:** This week, the Site Representative and member of the Board's staff observed subcontractor personnel perform reinforced concrete cutting operations in the equipment room of a nuclear explosive cell and walked down the exterior construction site for an ongoing HPFL lead-in replacement project. As part of this project, the subcontractor plans to tunnel underneath two nuclear explosive cells and place a high density polyethylene (HDPE) pipe that will be connected to the HPFL. The use of HDPE piping will reduce the possibility for corrosion. This and a similar effort to replace the HPFL lead-in for two nuclear explosive bays are part of the broader Bay and Cell Reinvestment Project that is currently in progress. The anticipated orientation of this pipe is roughly perpendicular to the current lead-in positions. In order to connect the water supply to the facility deluge systems, the subcontractor is removing a section of the reinforced concrete in the cell equipment rooms to gain access to the underground pipe, once installed. In August, structural engineers postulated that leaking water from the HPFL lead-in could have caused a void to have formed under the facility (see 8/14/2015 report). CNS structural engineers plan on assessing this possibility as part of their inspections later in the project.

**Evaluation of the Safety of the Situation (ESS) Approval:** Last week, the NNSA Production Office (NPO) released a Safety Evaluation Report (SER) approving the ESS for an abnormally loaded work stand. The SER contained no conditions of approval. The abnormal loading occurred when production technicians continued disassembly operations while a retaining nut remained in place from a previous shift (see 7/31/2015 report). Following an engineering evaluation performed by CNS tooling engineers and component analysis by the Design Agencies, CNS determined the abnormal load exceeded the limit allowed per the specified safety margin but did not exceed the yield stress of the affected tooling. CNS developed a Nuclear Explosive Engineering Procedure (NEEP) for this operation that requires production technicians to replace the insertion stand and assembly cart during continued disassembly operations. Per the SER, NPO concurred that the insertion stand and assembly cart will adequately support the unit until they are replaced and no additional compensatory measures are necessary. A Nuclear Explosive Safety (NES) Study Group will conduct a NES Change Evaluation on the proposed operation prior to CNS executing the NEEP.