

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 9, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending September 9, 2016

DNFSB Staff Activity: R. Verhaagen was on site to provide site representative support.

Federal Readiness Assessment (FRA): An NNSA review team began an FRA to verify readiness to start disassembly for surveillance operations on a given weapon program. The FRA follows completion of a contractor readiness verification and contractor readiness assessment (see 8/26/16 report). The FRA team consists of NPO personnel from Pantex and Y-12. Site representatives shadowed weapon operation demonstrations, interviews with contractor personnel responsible for implementing the training program, and an emergency response drill conducted as part of the FRA. The drill simulated the production technician and radiation safety technician response to a breached pit tube, assumed to result in a localized radioactive material release. The FRA will continue next week.

Anomalous Units Weapon Response: Pantex received a revised Information Engineering Release from the design agency that updates the weapon responses for continuing disassembly operations on two anomalous units. The weapon response pertains to two units which received multiple over-range readings during detonator cable assembly resistance testing performed last year (see 4/15/2015, 8/14/2015 and 2/19/2016). These units have been in interim staging in approved configurations since February of this year. Based on a series of recently completed tests, the design agency determined that the potential for high order consequences resulting from certain postulated hazards now screens. CNS is in the process of developing a nuclear explosive engineering procedure (NEEP) to continue disassembly of these units. CNS anticipates that their full disassembly may require a cut and cap operation to be performed on these units. To facilitate this, tooling engineers have developed a new, specialized cap to be used as part of this process. A nuclear explosive safety change evaluation to be performed by NNSA, design agency, and Pantex personnel as well as NPO approval of safety basis changes will be required before disassembling these units.

Special Tooling Removal: Following the conclusions of an engineering evaluation to analyze the implications of unthreaded pin components and a bend discovered last week on a piece of special tooling (see 9/2/2016 report), CNS process engineers developed a NEEP to continue operations. Specifically, the NEEP directs PTs to remove additional installed tooling, rotate the unit to a configuration which allows access to the bent tool, lower the unit onto a separate support fixture, remove the bent tool, reinstall a separate copy and proceed with normal operations. This operation required the bent tool to support the unit for a short duration prior to its removal. Site representatives observed PTs execute this NEEP. After the bent tool was removed from the unit, the process engineer and production manager noted that both pin components installed on the tool were loosely threaded. These connections normally have adhesive applied to prevent this from occurring. Similar bends have been observed previously on other copies of this tool, and the maintenance procedure for the tool includes a check for this specific condition.