DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 12, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending August 12, 2016

DNFSB Staff Activity: D. Andersen, C. Berg, and D. Owen were on site for a staff review of Technical Safety Requirements (TSR) implementation at Pantex. The staff team reviewed processes for implementation and implementation verification of TSRs including implementing procedures and training provided on the TSR controls. The staff team held discussions with control owners, and received demonstrations of electronic systems used for management of surveillance requirement scheduling. Further, the staff team performed walkdowns of surveillance procedures including fire protection maintenance in nuclear explosive facilities, transportation activities, special purpose facility operations, and combustible control monitoring.

Emergency Preparedness and Response Agreement-in-Principle (AIP) Meeting: A site representative attended an AIP meeting held between officials from NPO, CNS, neighboring counties, the city of Amarillo, and Texas state agencies. Participants discussed topics including upcoming site activities, statuses of memoranda of understanding between Pantex and stake holders, and funding and staffing plans.

Cell Structural Repair: A Board staff member observed a structural inspection hold point related to the removal of concrete from a faulty repair in two nuclear explosive cells (see 5/27/16 and 7/29/16 reports). CNS established hold points for structural engineers to visually verify that existing reinforcing steel was minimally damaged by concrete and splice removal. The Board staff member did not observe any notable damage to reinforcing steel at this stage of demolition.

Fire Suppression System Riser: CNS project engineering recently discovered that a component installed on a safety class fire suppression system riser did not meet all applicable requirements. Specifically, the cement and coal-tar lined tee and reducer installed as part of system modifications made to support high pressure fire loop lead-in replacement work for two nuclear explosive bays were not approved for use in above ground piping per code specified approval lists. The facility had not yet been returned to service following the modification. The design description provided by CNS project engineering allowed the subcontractor performing the work to re-make the components as necessary to ensure a proper fit, but did not provide other expectations for the design of the components. CNS will remove the non-conforming components and has submitted a revised specification to the project subcontractor, detailing the requirements for the replacement component.

Insertion Cart: While performing physics package insertion operations in a nuclear explosive bay, a dowel pin used to attach a torque handle to the insertion cart sheared, causing the handle to dislodge. Production technicians paused operations and made the appropriate notifications. Degradation of the pin and the removal of the handle do not affect the credited safety functions of the insertion cart. Following an engineering evaluation from tooling and machine design, process engineering developed a nuclear explosive engineering procedure (NEEP) directing PTs to install a cotter pin, bent and taped to prevent rotation or removal, in place of the hardened steel dowel pin, and continue operations. PTs successfully executed the NEEP. Tooling and machine design plan to modify the design of this component to prevent this failure mechanism.