

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 13, 2017

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending January 13, 2017

Cell Concrete Repair: CNS subcontractors completed the placement of concrete in two facilities to replace concrete that was identified to not meet minimum strength requirements (see 5/27/16 and 12/15/16 reports). Along with subcontractor personnel, CNS personnel verified that appropriate steps were taken throughout the concrete placement process to assure the necessary commercial grade dedication specifications were met. This included verifications of the appropriate concrete mixture, adequate ambient temperature, mixing time, placement and vibrating techniques of concrete, and application of moisture retaining covers. Additionally, a subcontractor was on-site from a test laboratory to perform the slump tests and prepare concrete cylinder samples to verify final compression strength. A site representative observed the placement of concrete in each cell, as well as test sampling and preparation of concrete at the on-site batch plant. Concrete samples will be tested for compressive strength at seven and 28 days to validate the acceptability of the concrete.

Readiness Verification (RV): CNS personnel began a RV review in preparation to start-up alteration and restart disassembly operations on one weapon program. Disassembly operations on this program last occurred in summer 2015. The RV team began observations of all operations within the scope of the RV, as well as review of supporting documentation for safety management programs. A site representative observed portions of the RV demonstrations. The start-up and restart will require successful completion of contractor and federal readiness assessments, as well as a nuclear explosive safety study to authorize operations.

High Pressure Fire Loop (HPFL): The Emergency Services Dispatch Center received a low temperature signal from an HPFL pump house and CNS personnel responded appropriately, per a February 2015 standing order put in place following similar weather-related low temperature signals (see 1/2/15 and 1/9/15 reports). Personnel inspected the pump house, determined that temperatures were adequately warm, and that the low temperature signal was likely received because the sensor was close to a vent open to the outside environment. Based on the adequate temperature in the pump house, the responsible facility representative and fire protection engineer determined, per the standing order, that the system was operable and a limiting condition for operability (LCO) entry was not required based on the currently approved safety basis. At the time of the low temperature signal, the HPFL was at its minimum operable configuration without requiring LCO entry, due to issues with a separate pump house. CNS has developed a safety basis change package to include consideration for low temperature signals as an LCO entry; however, the change package is not yet approved or implemented.

Loss of Power: Late this week, Pantex experienced a partial loss of power following a fault experienced during testing of a breaker installed on the 115 kV electrical distribution system. Power was restored approximately four hours after the initial fault. The loss of power required unplanned LCO entries for the HPFL, blast door interlock and fire suppression systems in several nuclear explosive bays. At the time of this report, facilities personnel are verifying the availability of safety systems in the affected locations.