

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 19, 2016

MEMO TO: Steven Stokes, Technical Director
FROM: Ramsey Arnold and Zachery Beauvais, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending August 19, 2016

DNFSB Staff Activity: M. Sautman was on site to provide site representative support.

Emergency Planning Hazards Assessment (EPHA): Last week, NPO approved the Pantex EPHA which identifies indicators that would result in an operational emergency and provides the technical basis for developing Emergency Action Levels (EAL). DOE Order 151.1C, *Emergency Management*, requires CNS to update and NPO to approve the EPHA every three years. The approval marks a notable milestone for the Pantex Emergency Management Program, as DOE last approved the EPHA prior to 2010, and is also a deliverable in the DOE Implementation Plan (IP) for DNFSB Recommendation 2015-1, *Emergency Preparedness and Response at the Pantex Plant*. The results of the EPHA update will inform CNS as they are updating the EALs. CNS plans to further update the EPHA and EALs into geographically divided areas of Pantex which generally correspond to different operations performed on site.

35-Account Testing: As follow-up to a recent staff safety basis implementation review (see 8/12/16 report), site representatives walked down the laboratory where 35-account materials are tested before being approved for use during nuclear explosive operations (NEO). CNS scientists demonstrated how static dissipative gloves are tested to meet their safety basis-defined functional requirement of dissipating electrostatic charge build-up. In a given lot received by Pantex, process engineers prescribe a test plan and sample size of gloves to test based on ANSI standards. During the walkdown, the scientists described that in the case of a single glove failure, they immediately notify the process engineer, who determines whether the lot can be used for NEOs. In practice, a lot with a failed glove test is never used for NEOs.

Isolator Test Failure: Production technicians (PT) paused operations last week after receiving an out-of-tolerance reading during an isolator resistance test. The appropriate subject matter experts responded to the pause and directed PTs to install a shorting plug and insulating cover over the tester connection port, install an additional component, and reorient the unit to place it in a safe and stable configuration. A similar out-of-tolerance reading was observed in March 2016 during execution of the same test on a separate unit. After determining that the reading was not a result of the test configuration, CNS process engineers developed a nuclear explosive engineering procedure (NEEP) to replace the isolator consistent with authorization provided by the design agency. The NEEP was executed successfully. The design agency is currently evaluating the electrostatic sensitivity of isolators installed on this program (see 7/10/15 report).

Acceptance Testing: CNS fire protection engineers conducted final installation testing on the infrared (IR) deluge systems installed in two nuclear explosive bays. The IR systems, installed concurrent with the replacement of the high pressure fire loop lead-ins, replace the aging ultraviolet detection systems. Site representatives observed a portion of the acceptance testing performed in one bay. Separate from the IR system, while in the facility, the site representatives verified that the individual fire riser components are labeled, consistent with a corrective action implemented following the Board staff's 2015 conduct of maintenance review (see 6/5/15 report). CNS plans to conduct an implementation verification review of this project next month.