

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 6, 2013

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending December 6, 2013

DNFSB Staff on Site: R. Arnold was at the Pantex Plant this week to observe a W78 Hazard Analysis Task Team walkdown.

Nonconformance of a Credited 35-Account Control: Babcock & Wilcox Technical Services Pantex, LLC (B&W) discovered four sizes of the same type of 35-account nitrile gloves that had not passed acceptance testing prior to being used in nuclear explosive operations. (35-account material is commercial material that is authorized to be in the nuclear explosive facility.) These 35-account gloves are credited with preventing an event with consequences that challenge the Evaluation Guidelines. B&W considers the gloves a design feature in the Sitewide Safety Analysis Report, with a functional requirement to allow the dissipation of 100 volts in less than one second when two pairs are being worn. B&W implements the functional requirement by performing acceptance testing of gloves on the 35-account list for electrostatic dissipation (ESD). The gloves passed the ESD test for one pair, but fail when two pairs are worn. B&W personnel have removed the gloves from service and categorized this event as a violation or nonconformance of a credited hazard control. B&W has entered this discovery into their authorization basis new information process.

Ultraviolet Flame Detector Head Failure: This week during the annual electrical planned maintenance for the fire detection system, B&W Maintenance personnel discovered one ultraviolet flame detector head failed the surveillance test. B&W categorized the discovery as a performance degradation of a safety class structure, system, or component when not required to be operable. The head has been repaired and the planned maintenance completed.

ESD Floor Failure: This week during planned maintenance, B&W Maintenance personnel discovered two localized spots of an ESD floor in a nuclear explosive facility that were outside of the acceptable range for resistance. B&W System Engineering evaluated the test method and performed a second test, resulting in the floor passing. B&W System Engineering discovered that the probe used by Maintenance personnel gave different readings than the one used by System Engineering personnel. B&W placed the facility back in service. B&W has only recently resolved problems associated with acceptance testing failures of newly poured ESD floors. (See reports for 6/14/13, 6/28/13, 7/19/13, and 7/26/13.)

High Pressure Fire Loop (HPFL) Check Valve Failure, Update: Last week, B&W discovered that an HPFL check valve on the diesel pump side failed during planned maintenance. (See report for 11/29/13.) B&W entered the appropriate Limiting Conditions for Operation (LCO) in order to perform the maintenance, and remained in the LCO after the valve failure was discovered. Following replacement of the check valve, B&W encountered difficulty restoring power to the jockey pump used to maintain pressure in the HPFL. This week, B&W repaired several circuit issues in the electrical panel supplying power to the jockey pump and other parts of the pump house. B&W successfully completed the planned maintenance and exited the LCO.