

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 18, 2014

MEMO TO: Steven Stokes, Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending April 18, 2014

DNFSB Staff on Site: M. Sautman was at the Pantex Plant this week to provide Site Representative support.

Loss of Two-Person Control in Zone Coverage Update: Babcock & Wilcox Technical Services Pantex, LLC (B&W) has re-categorized this event as a Nuclear Explosive Safety (NES) requirements violation. (See report for 4/11/2014.) The requirement states the two-person concept is implemented to ensure no lone individual has unrestricted access to a nuclear explosive or a Category-1 tester. As a corrective action, B&W has performed training that requires the Production Technicians (PTs) to complete a sweep of the facility for exposed combustibles and complete the 'close station' activities before touching the interlock door hardware.

Potential Inadequacy of the Safety Analysis (PISA) for Unanalyzed Pressure: B&W declared a PISA when they discovered that one weapon program Hazard Analysis Report failed to include the pressure the Sylgard™ pump exerts on the high explosive during disassembly operations. B&W has paused all operations using the Sylgard™ pump on this program.

Pause in Operations Due to Component Failure: B&W paused operations in one nuclear explosive operating facility when the PTs could not continue the disassembly operation due to a component failure. B&W was performing an assembly operation on a unit when the PTs identified a blemish on a detonator cable assembly (DCA). B&W requested the Design Agency to issue a Specification Exception Release (SXR) to accept the DCA. The Design Agency denied the SXR, and B&W began disassembling the unit. While attempting to remove a piece of high explosive from a mating component by pumping Sylgard™ through a hole in the mating component, the PTs discovered Sylgard™ leaking from a crack in the non-energetic component. B&W paused operations and, with the Design Agency, determined that the unit was safe and stable.

B&W and the Design Agency determined that the unit did not meet the definition of an Anomalous Unit because the unit is in a configuration that has previously been analyzed and was not a threat to nuclear explosive safety. However, disassembly cannot continue using the approved procedures. B&W and the Design Agency have developed a path forward which includes the development of a Nuclear Explosive Engineering Procedure using an existing fixture that is not currently approved for use on this weapon program. B&W Nuclear and Explosives Surety (NES) personnel are determining whether this change will require a Nuclear Explosive Safety Change Evaluation (NCE) or can be approved by a Contractor NCE.

Post-Indicator Valve (PIV) Failure: B&W discovered a weld failure in a recently installed PIV. B&W completed replacing several lead-ins on the High Pressure Fire Loop to one building. In addition to the lead-ins, they replaced one of the PIVs. Recently, B&W discovered that the weld at the base of the PIV stem had cracked around the circumference of the stem. B&W is in contact with the vendor of the PIV and is planning to replace the valve.