

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

October 25, 2013

MEMO To: Steven Stokes, Acting Technical Director
FROM: Thomas Spatz, Pantex Site Representative
SUBJECT: Pantex Plant Report for Week Ending October 25, 2013

Resumption of Operations: This week, Babcock & Wilcox Pantex (B&W) has resumed some explosives operations but has not resumed nuclear explosive operations. There have been factors preventing full resumption of operations that are not specifically related to appropriations concerns. One factor is a planned upgrade by B&W to a new narrow-band radio system. B&W has analyzed the maximum possible power output data from the new system to determine if the existing stand-off distance to nuclear explosives is still adequate. B&W Authorization basis personnel perform an Unreviewed Safety Question (USQ) determination and determined the USQ is negative. B&W had paused all nuclear explosive moves until the USQ determination was complete.

A second factor is that B&W has paused nuclear explosive operations until they complete an extent of condition review, following the discovery of a breakdown in the disposition of non-conformed parts. B&W Process Engineers were performing a review of Engineering Authorizations that were awaiting responses from the Design Agencies. The Process Engineers discovered a component that was issued a non-conformance during a disassembly operation, and was then assembled into a weapon prior to the Design Agency releasing the component for reuse. The extent of condition B&W is performing has discovered a second component that was issued a non-conformance, and is in stores without the appropriate quality hold status. B&W is still performing an extent of condition review.

Positive Unreviewed Safety Question (USQ) Determination: This week, B&W Pantex declared a Potential Inadequacy in the Documented Safety Analysis and positive USQ determination when they discovered there was no analysis in the Documented Safety Analysis (DSA) for a particular operation. B&W Authorization Basis personnel had assumed that failure of the lifting and rotating fixture during loading and unloading of a nuclear explosive into an Enhanced Transportation Cart-1 (ETC-1) was not credible. B&W Tooling Engineers were performing a tooling analysis related to the implementation of an already approved authorization basis change package when they discovered that rotation failure of the lifting and rotating fixture when subjected to a tripping man hazard was credible and was not analyzed for these transfer operations. The rotation due to falling man hazard is analyzed in other parts of the operation, just not for transfer operations related to the ETC-1. B&W does not analyze this transfer hazard in the individual weapon Hazard Analysis Reports, and did not capture the rotation failure during transfer in the Transportation Safety Analysis Report. B&W has transmitted the Evaluation of the Safety of the Situation report to the NNSA Production Office, with no compensatory measures.

Process Review: This week, the Site Representative observed two days of an Engineering Division process review of the physics package disassembly for the W76 weapon program. B&W Authorization Basis personnel, Process Engineers, and Tooling Engineers participated in the process review. The physics package disassembly was performed by two B&W Weapon Training Specialists. The purpose of the process review was to evaluate W76 operations for potential process and tooling enhancements.