

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending August 19, 2011

Conduct of Operations: Technicians working in a linear accelerator bay were unloading a nuclear explosive from a transportation container when they determined that the lifting and rotating fixture had been installed incorrectly (rotated 180 degrees). After suspending operations, and at management's direction, technicians performed a procedure back out to close the door of the container to send it back to another bay. The process engineer wrote a temporary procedure to reinstall the fixture correctly. As this event was determined to be a simple personnel error, B&W decided that no formal critique was necessary.

Blast Door Interlocks: Blast door interlocks are intended to ensure that at least one blast door is closed and latched at all times when explosives or nuclear material is present within nuclear explosive facilities. During pre-operational checks at the beginning of every shift, technicians perform functional checks to ensure they remain operable. During one such check this week, technicians were able to open both the inner and outer doors while the interlock was required to be operable. The technicians notified the facility manager who then entered the appropriate limiting condition for operation. Since 2009, there have been at least 11 such failures of this safety significant system. In 2005, system engineering personnel quantified the failure rate of this system as approximately $5E-4$ failures per opportunity. System engineering personnel are in the process of formally updating this number again, but believe it will remain in the $1E-4$ failures per opportunity range.

Potential Inadequacy of the Safety Analysis: The RuBee tag issue that led to a nuclear explosive safety rule violation (see last week's report) has also been declared a potential inadequacy of the safety analysis. As with the initial entry into the new information process, B&W has determined that no compensatory measures are required.

Process Anomaly: While lifting the housing approximately $\frac{3}{4}$ in. to separate it from the physics package, the physics package separated in such a way that has not been observed on any previous units of this program. Most of the physics package was still attached to and hanging from the housing. The technicians stopped the operation and notified their production section manager who then suspended the operation. Process engineering and nuclear explosive safety personnel determined it was a safe and stable configuration. Two days later, the desired separation had still not been achieved so the housing was lowered back down to a resting position. Process engineering is working on a path forward.

The Hazard Analysis Report predicted this was possible, and established a process attribute that requires the technicians to visually confirm the separation between the physics package and the housing before raising the housing more than $\frac{3}{4}$ in.

Emergency Management: The site rep observed activities in the emergency operations center during a drill. The drill started with a simulated wildfire similar to several that have occurred this summer. To make the scenario more challenging, the drill controllers added a simulated explosion in a cell with dispersal of radioactive material.