

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Matthew Duncan and Rory Rauch, Pantex Site Representatives
SUBJECT: Pantex Plant Report for Week Ending February 19, 2010

Operational Lesson Learned: Technicians were performing a cutting operation to separate a nuclear explosive from its aeroshell when the cutter flexed excessively and scratched the unit. Because of the threat of contamination from such an event, the procedure directing the operation contains a warning requiring the technicians to suspend operations and contact radiation safety if the unit incurs any damage. However, the damage went unnoticed by the technicians and the unit was transported from the facility for further disassembly. The technicians in the destination facility noticed the scratch while preparing for the subsequent disassembly operation and immediately contacted their supervisor. Radiation safety personnel swiped all potentially contaminated tooling and equipment and found no contamination. Process engineering plans to revise the subject procedure to require technicians to perform a complete inspection of the unit upon completion of the cutting operation.

Special Tooling: During W76-1 assembly operations, technicians install the pit using a tool that moves the pit along a semi-circular path from the transfer cart to the workstand in a controlled manner. This week, one of the two bearings that provide the pivot point for this movement broke after technicians lifted the pit approximately 30 degrees from its initial resting position on the transfer cart. Technicians returned the pit to its resting position, suspended operations, and contacted tooling personnel. After evaluating the configuration, tooling personnel concluded that the pin at the end of an interlock, which ensures the technicians only install the vacuum fixture that holds the pit when the tool is at rest, failed to retract fully and placed excessive stress on the pivot bearing, causing it to break. Process engineering will modify the procedure to prompt technicians to inspect the bearings and ensure the pin is fully retracted prior to beginning the operation. Tooling personnel are considering a redesign of the tool to make the pivot bearing more robust.

B61 Operations: The NNSA readiness assessment that reviewed B61 command disablement testing operations has been completed. The assessment team developed one post-start finding related to the fire hazards analysis documents for the facilities where this operation will take place. One or all of the applicable fire hazards analyses: (1) contained out of date plant standards and DOE orders, (2) did not properly evaluate toxic or radiological releases due to fires (one assumed the facility had HEPA filtration when it does not), (3) did not evaluate the impact of lightning on fire safety, (4) did not include the cost of operational interruptions and weapon component values in the maximum possible fire loss calculation, (5) did not thoroughly evaluate how fire water run-off would be handled by the fire department, and (6) did not list the safety systems that are susceptible to fire damage. This week, PXSO approved B&W's corrective action plan and authorized startup of the operation.

W80 Operations: B&W Pantex recently allocated additional technicians to support W80 operations. W80 deliverables are scheduled to increase by approximately 50 percent above the original FY10 baseline.