

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 January 29, 2010

W76-1 Operations: B&W received authorization from the design agencies (DAs) to restart all W76-1 operations, with certain exceptions, last Friday. Besides the noted exceptions (for which a final conclusion regarding the safety of operations has yet to be made), the DAs have determined that there are no safety implications of the cause of the suspension.

B61 Operations: Approximately two weeks ago, a B61 disassembly operation was suspended after technicians were unable to separate the pit from a high explosive (HE) charge. Additional attempts to perform the separation using the techniques and tooling specified in the procedure have also been unsuccessful. Technicians will sometimes encounter variable levels of resistance while attempting to separate the pit from an HE charge, but a B61 unit has never stuck in this configuration before. B&W is designing a new tool, which should be available in March, to complete the operation. B&W is considering whether to permanently incorporate the tool as a process improvement.

New Information: B&W declared another potential inadequacy of the documented safety analysis (PISA) this week to reflect new information that has the potential to change an unmitigated hazard analysis in the W76 hazard analysis report. The weapon response request had been outstanding for several months and, until this week, B&W management had been granting extensions on the new information until the design agency could provide formal weapon response. Operations were deemed safe to continue in the interim because site management believed the mitigated environment was adequately understood and controlled. This is the third PISA declared as a result of new information in three weeks. The increase can be attributed to the fact that B&W has reduced its threshold for declaring PISAs in certain situations. For example, the need for the DA to formally issue weapon response is no longer deemed a viable basis for deferring PISA declarations.

Electrical Safety Requirements: Several components of category 2 electrical equipment (equipment not intended to make an electrical connection to a nuclear explosive or high explosive subassembly but could or does make a mechanical connection) were discovered without the required NRTL listing. At least one of the electrical safety evaluations noted that the components were available as UL listed intrinsically safe; therefore, the evaluator required the applicable drawing to specify the use of NRTL listed versions of the components. While none of this equipment had been used on a nuclear explosive, B&W is evaluating potential improvements to the electrical equipment evaluation and procurement processes to prevent recurrence.

Fire Protection: A recent PXSO assessment of B&W's fire protection program found inconsistencies between B&W's frequency of inspection, testing, and maintenance and the frequencies specified by the recently adopted 2008 version of NFPA 25. In some cases, no approved equivalency exists that supports a less conservative frequency. Another assessment found several examples where assumptions and bases credited in a facility fire assessment (FFA) or fire hazard analysis (FHA) are not properly documented or periodically reviewed and confirmed during performance of the FHAs and FFAs, as suggested by the DOE guide and required by B&W's procedures. In addition, three FHAs had not been reviewed within the three year periodicity required by DOE O 420.1B.