

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 2 December 2005
SUBJECT: Pantex Plant Weekly Report

Technical Safety Requirements Integrated Implementation Plan (TSRIIP): On 15 November, BWXT issued Revision 3 of the TSRIIP. TSRIIP, Rev. 3, addresses many of the concerns PXSO expressed to BWXT in a 4 November letter. In particular, TSRIIP, Rev. 3, contains a schedule for implementing several safety management programs and 39 controls. BWXT has committed that all the Documented Safety Analyses will be made effective by 1 May 2006. Concurrently, NNSA has completed its readiness assessments (RAs) of the transportation Technical Safety Requirements, a commitment in the DOE Implementation Plan for Recommendation 98-2. The NNSA RAs validated the implementation of the 44 controls in the Transportation Safety Analysis Report that provide a safety function. The most recent RA identified three pre-start findings, the most significant findings involved training deficiencies. PXSO has expressed concern that the identified training deficiencies could be indicative of a programmatic breakdown of the overall training program.

Anchor Bolt Evaluation: In support of the Seismic Project Plan, BWXT developed its rationale for performing concrete anchor bolt inspections in selected bays and cells. To date, evaluations of four facilities have been completed and three others have results pending. To avoid evaluating all 66 nuclear explosive facilities, a representative sampling was proposed. The highest priority for evaluations are the facilities where conventional high explosive (HE) may be exposed. Based on data from the four facility evaluations that have been completed, the average number of anchor bolts per facility is about 150, of which very few are located in the ceiling. Of the more than 500 testing results available to date, one ceiling bolt failed and 48 anchors failed the wall tightness or embedment tests. BWXT plans to complete anchor studies in three additional facilities—bringing the total number of facilities evaluated to 10 or about 15 percent—and then a decision will be made on whether or not the risk is acceptable.

Degraded Safety System: While crafts were performing blast door interlock (BDI) preventive maintenance, two nuclear explosive bays failed a step that required ensuring the inner personnel door would not open when the outer door was open. When it was realized the interlock was inoperable, BWXT placed the facility in maintenance mode and an administrative control was implemented to assure at least one personnel blast door was always closed. An investigation revealed a failure of the electro-mechanical locking mechanism.

Conduct of Operations: Operations were suspended in a joint test assembly bay last week due to a connector being loosened by mistake. The procedure step directed the production technician to remove a specific labeled connector, but the adjacent connector was loosened. The process engineer added steps to the engineering instruction to recover from the error and retorqued the loosened connector.

Human Performance Improvement (HPI): BWXT-Corporate provided training on HPI fundamentals to BWXT-Pantex management personnel, union leadership, and select PXSO individuals. The stated objective of HPI is to promote behaviors that support safe and reliable conduct of operations. HPI principles recognize that behavior is influenced by organizational values and error-likely situations are predictable and preventable. The first-line supervisors and production technicians are expected to receive the training during the next few months. In addition, the Department of Energy has established an office within Environment, Safety and Health (EH-21) to oversee the HPI process within the complex.