

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 15 May 2009
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: J. Galaska was onsite this week to observe the support activities nuclear explosive safety master study.

Positive Unreviewed Safety Question (USQ): In January 2008, a potential inadequacy in the documented safety analysis (PISA) was declared after a high wind event exposed a utility pole impact hazard that had not been analyzed in the documented safety analysis (DSA). B&W Pantex immediately restricted transportation activities in affected areas and shortened, reinforced, or replaced utility poles to eliminate the hazard. Soon thereafter, transportation restrictions were removed after initial calculations demonstrated that utility pole impacts were bounded by other hazards in the DSA. After approximately 14 months, B&W Pantex completed the final analysis to determine the precise structural criteria that enable a utility pole to withstand the design basis wind loading event and updated the DSA to incorporate this accident scenario. However, this was done before the USQ determination (USQD) on the PISA had been completed, a sequence that failed to follow the DOE-prescribed PISA process. Further, the USQD was positive because the utility pole impact event for a single nuclear material bay was not already bounded by another accident scenario in the DSA. B&W Pantex reported this process adherence issue through the noncompliance tracking system.

Technical Safety Requirement (TSR) Control Flowdown: It was recently discovered that facility crane load planning and verification steps had been omitted from a special nuclear material lifting and palletizing procedure. B&W Pantex and PXSO personnel determined the issue was management concern, not a TSR violation, after reviewing the derivation of the control in the accident analysis of the applicable DSA and concluding the control was a programmatic administrative control (PAC). B&W Pantex is in the process of converting specific administrative controls (SACs) to PACs and key elements, as appropriate, and a list of accurate AC categorizations should be available when this effort is complete. In the meantime, the site is confident that SACs are being treated in accordance with DOE directives because all ACs, regardless of classification, received rigorous initial implementation reviews.

TSR Implementation Assessment: PXSO authorization basis personnel performed an independent assessment to verify the flowdown of SACs from safety basis documents into implementing procedures. The reviewers intended to select 19 SACs from a list of implemented controls, but most of the controls turned out to be PACs. The two reported weaknesses were the failure to flowdown a stop work requirement if a certain configuration was noted during disassembly operations and the fact that procedural steps that implement SACs are not highlighted in the procedure to signify their added importance.

Container Malfunction: Production technicians (PTs) recently packaged a conventional high explosive main charge into an approved container, lifted it using the two handles provided, and placed it on a pallet. Shortly thereafter, one of the handles fell off the can for no apparent reason. A later inspection indicated most of the seven spot welds holding the handle on the container had not fused properly. The PTs were briefed and a standing order issued to inspect the handle for damage or indications of poor welds prior to use. Packaging engineering is reviewing drawings and evaluating the situation.