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 May 14, 2010

DNFSB activity: R. Rosen and T. Spatz were at Pantex to observe the first week of the W84 SS-21 Nuclear Explosive Safety Study. W. Andrews was onsite to augment site rep coverage.

Lift Planning and Execution: The documented safety analysis contains a specific administrative control (SAC) that requires the operations center (OC) to authorize all crane operations in the material access area (MAA). The OC utilizes the lift plan for the crane operation to determine whether they must limit the duration of the lift authorization. Typically, this will occur if the lift is scheduled to take place near an approved nuclear explosive or explosive transportation route. This week, per the lift plan associated with a construction activity in the MAA, the OC instructed the B&W liaison for the construction subcontractor to cease lifting operations at a specific time in anticipation of a material move. The liaison failed to discontinue lifting operations when the authorization for the lift expired. The subject SAC is covered by the Generic Limiting Condition of Operation (LCO). Therefore, upon notification of this noncompliance (approximately 24 hours after the lift authorization expired), the manager for nuclear facility operations entered the Generic LCO, determined compliance with the SAC had been achieved (i.e., lifting operations had ceased), and exited the LCO.

B&W and PXSO determined this event was not a technical safety requirement (TSR) violation because the version of the lift plan utilized by the OC did not correctly represent the TSR implications of the lift. The original version of the lift plan correctly stated that the lift was not taking place near an approved nuclear explosive or explosive transportation route. However, this information was deleted in subsequent revisions to the lift plan. B&W will perform a causal analysis to address the configuration management and formality of operations issues from this event.

Conduct of Operations: Technicians assembled a W88 arming, fuzing, and firing (AF&F) system using the incorrect revision of the procedure. They subsequently installed the AF&F onto a nuclear explosive. The process engineer had recently revised the procedure but the new issue never made it to the nuclear explosive bay. There were no safety or quality issues that resulted due to the nature of the changes to the procedure.

There are several controls intended to prevent such an occurrence. Every time technicians perform pre-operational checks—which occur every shift or every 24 hours for a continuously performed operation—they are required to verify procedures against an electronic database that lists the current revision as well as any applicable annotated changes. The technician must initial the pre-operational checklist to document completion of the verification. Once the technicians complete the entire checklist, everyone involved is required to review it to verify completion of all tasks. In this instance, the technician failed to adequately verify the procedure and did not initial the checklist. Also, all of the technicians failed to review the checklist carefully and missed the fact that the initials for the procedure verification were absent from the checklist. Finally, the technicians failed to maintain a cover sheet on the procedure that tracks these verifications, tracks procedure changes, and ensures that annotated changes have been incorporated as required.