

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 December 11, 2009

Safety System Surveillance: B&W recently discovered the quarterly surveillance requirements for the wet pipe fire suppression system in a nuclear material staging facility were not performed within the prescribed period. The surveillance requirements were scheduled to be performed on the last day of the grace period as part of a corrective maintenance activity. However, the maintenance work package was annotated to remove the quarterly surveillance activities after the facility manager reviewed and approved the scope of work. This change in scope went unnoticed by the facility manager and the facility status board was inappropriately updated to reflect completion of the quarterly surveillance. Records indicate the missed surveillance activities were performed six days later and the system was confirmed to be functioning properly. A technical safety requirement (TSR) violation was not declared because B&W demonstrated to PXSO's satisfaction that all surveillance requirements were met by chance during the fire suppression system restoration activities following the corrective maintenance. Nonetheless, the processes that B&W relies upon to ensure surveillance and in-service inspection requirements are performed within the time frame specified by the TSRs failed. Facility management plans to examine their interface with maintenance coordinators and whether adding redundancy to the facility status board tracking system is necessary.

Missed Electrical Equipment Evaluation: DOE Order 452.2D, *Nuclear Explosive Safety*, requires organizations responsible for nuclear explosive (NE) operations to verify that all equipment used in nuclear explosive areas (NEAs) be specifically approved for that operation. More specifically, electrical equipment must be controlled at a level commensurate with its electrical threat potential. During the recent contractor readiness assessment (CRA) for a limited number of W84 permissive action link (PAL) coding operations, it was discovered that a piece of category 2 electrical equipment (equipment that is capable of making a mechanical connection to the NE or high explosive assembly, in this case a ground strap resistance tester) had not been specifically approved by system engineering for use in that operation. This failure was captured as an observation in the CRA report along with some language regarding the lack of clear administrative procedures to guide the process engineer's role in the electrical equipment evaluation process.

An investigation of the cause of this issue revealed the reoccurrence of some of the process breakdowns that led to electrical equipment not being evaluated for its electrical threat potential prior to being issued to an NEA (see 4/24/09 report). As a prompt remedial measure following the April 2009 event, B&W issued a standing order requiring process engineers and NES personnel to independently verify that electrical equipment is authorized for use before approving changes to procedures that direct work in an NEA. The standing order was still in effect when both target organizations failed to initiate the requisite electrical equipment evaluation prior to the CRA of W84 PAL operations. The process engineering and NES departments are scheduled to update their internal procedures to reflect the requirements in the standing order by the end of next week. Further, system engineering, as a corrective action from the April 2009 event, has committed to revising the administrative procedures that guide the electrical equipment evaluation process such that all affected organizations' roles and responsibilities are clear.