

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 January 7, 2011

Technical Procedures: Process engineering has instituted the practice of creating variations of the same procedure number and revision that contain line-throughs of any unnecessary steps. These variations account for the minor processing differences, such as what would be required for different alts of a given mod on the B61 program. The responsible engineer creates different electronic file names to track the procedure differences and uses a preparation chart to assign the correct variation of the procedure to a given unit. Document control clerks use this preparation chart to print a hard copy of the correct procedure for the unit folder.

This week, technicians were preparing to perform work on a B61 tail assembly and noticed the tail did not have a parachute restraint, which is required as a worker safety control for this type of unit equipped with a gas generator. The technicians immediately stopped work and contacted their supervisor. Technicians have since installed the restraint using a recovery procedure and restarted operations.

Upon investigation, B&W discovered that the technicians in the original disassembly bay for this unit had used the incorrect variation of the procedure, one in which the sequence of steps to install the parachute restraint had been lined through. B&W will perform a cause analysis to determine the definitive causes of the event, but it appears the document control clerk prepared the wrong procedure for this unit. B&W management has also determined that, contrary to past practice, the process engineer did not verify whether the document control clerk had prepared the unit folder properly. As a near-term compensatory measure, process engineering will reinstitute this practice. The technicians, as required, verified the procedure number and revision were correct, but plant administrative procedures currently do not require them to compare the file identifiers on the preparation chart to the procedure in the unit folder. B&W management may assign this responsibility to the technicians or their first line supervisors in the future.

W78 Operations: Process engineers developed a temporary procedure that allowed the technicians and B&W engineering personnel to further evaluate a potentially damaged detonator cable assembly (DCA, see 12/24/10 report). After inspecting the DCA, engineering personnel determined that the damage was significant enough to require design agency (DA) input before the operation could continue. With direction from engineering personnel, technicians wrapped the damaged area in Kapton® tape and left the remainder of the assembly in its current configuration. Engineering personnel hypothesize that the damage occurred at some point during the later stages of the disassembly process for two reasons. First, the results of electrical tests performed during the opening disassembly tasks indicate the DCA was initially undamaged. Second, the engineers and technicians found indicators that the DCA had not been properly restrained during assembly, which may have left it vulnerable to the current disassembly process.

Radioisotopic Thermoelectric Generator (RTG) Operations: PXS0 approved a safety basis change that adds the electrical heat sink testing of RTGs and several associated packaging and unpackaging operations involving newly approved containers to the documented safety analysis. A DA is requiring the electrical heat sink test as a surveillance activity to verify the power output and temperature of the RTGs before they are shipped to the DOD. These shipments, along with a series of FY11 RTG shipments to another DOE site, will reduce the RTG inventory at Pantex; however, it should be noted that most of the RTGs stored at Pantex have no defined disposition path.