

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 September 17, 2010

DNFSB Activity: J. Anderson and outside expert D. Boyd were onsite to observe the first week of the NNSA readiness assessment of B53 SS-21 dismantlement operations.

B53 SS-21 Dismantlement: During the recently completed contractor readiness assessment of the B53 SS-21 dismantlement process, the step in which the technicians wait for the pit and high explosives (HE) to separate took much longer than originally anticipated (the gravity-driven separation took several days to achieve). Though the B53 project team believes this was an artifact of the trainer unit, tooling personnel have re-designed the HE holding plate in an effort to expedite the separation. The HE holding plate will provide an additional downward force on the HE using two load cell-actuated jackscrews. Tooling personnel have designed the load cells to ensure the force applied by the jackscrews is well below weapon response screening values. The tooling modification should be implemented prior to the first B53 SS-21 dismantlement unit.

Maintenance Tracking: In the last nine months, B&W has discovered three in-service inspections (ISIs) and one surveillance requirement (SR) that were not performed within the prescribed period (see 12/11/09, 4/23/10, 8/13/10, and 8/27/10 reports). B&W senior management has chartered a team to map the current process for tracking ISIs and SRs and identify areas of improvement that will prevent recurrence of these failures. The guiding principles for the team include: eliminating work in the grace period, reducing reliance on human actions (expert knowledge) to prevent errors, clearly defining roles and responsibilities, and ensuring the established or newly identified barriers for preventing process breakdowns are implementable and effective. The report for this evaluation is scheduled to be issued on November 22. Meanwhile, as an interim measure, the nuclear facility operations department has issued a standing order to add a second person verification to various steps in the ISI/SR scheduling and closeout processes.

High Pressure Fire Loop: Technicians were unable to reset electric fire pumps in two buildings following an automatic start of a diesel fire pump resulting from various flow tests. The utilities supervisor entered a limiting condition for operation (LCO) for when an automatic start of one or more fire pumps occurs, except during testing. The LCO requires the cause of the pump start to be determined immediately and if the cause is a leak, it must be isolated within two hours. The Pantex operations center initiated a conference call, which included the fire protection engineer, who determined that the LCO did not need to be entered (although he was not aware at the time that the LCO had already been entered). Various personnel from the Pantex fire department, utilities, and security were dispatched to look for a possible leak. One hour later, a leak of approximately 20 gallons per minute was discovered. Fire department personnel attempted to isolate the leak, but were unable to significantly reduce the flow. The LCO was officially exited at that time. Finally, approximately three hours after the initial entry in the LCO, fire department personnel were able to stop the leak by further closing a sectional valve they had already closed. Technicians then successfully reset the electric fire pumps. At PXSO's request, B&W critiqued the event and plans to externally report this event as a management concern.

W84 SS-21 Disassembly and Inspection (D&I) Operations: B&W began processing the first W84 SS-21 D&I unit this week.