

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 3 October 2008
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: C. Martin was onsite to observe the nuclear explosive safety master study for special purpose facilities.

B53 SS-21 Dismantlement: This week, B&W Pantex informed PXSO of its decision to perform B53 nuclear explosive dismantlement work in a cell and non-nuclear work in a bay. This decision was based on the conclusion that performing B53 nuclear explosive operations in a cell minimizes the number of external explosion scenarios. As an additional safety measure, B&W Pantex will be installing static dissipative flooring in the cell.

Two-Person Control: B&W Pantex has proposed procedural changes for implementation of person-to-person [M] coverage requirements when items are in vulnerable configurations. Last year, a systemic problem with the nuclear explosive procedure process regarding identification of steps requiring person-to-person coverage was discovered (in many cases, the [M] was not directly associated with the appropriate step when procedures were revised). The procedural change would eliminate the [M] in the margins of the procedures and the requirement for the reader to verbally announce that the step to be performed is "person-to-person." The proposal is to replace [M]s by critical steps to post the area around the sensitive configuration.

Material Move Events Causal Factors Analysis (CFA): B&W Pantex issued an investigation report last week that looks at 21 material move events that have occurred during the past two years; six events where trackable material (nuclear explosives, nuclear or radiological material, high explosives) was moved inappropriately occurred during a seven week span in June and July. Potential problems include facility overloads, incompatible material being collocated, and move window incompatibility. The investigation categorized four of the events as high risk (technical safety requirement (TSR) violations) and one medium risk. Human error was a factor in all five significant events. Organizational issues with feedback and delayed process changes allowed the recent events to recur over a short timeframe. Five judgments of need were identified, including: reevaluation of the TSR that requires authorization before initiating moves, reviewing number and robustness of barriers, and evaluation of the qualification requirements for managers overseeing moves.

W76-1 First Production Unit (FPU): B&W Pantex achieved a significant Level II milestone last week with the completion of the W76-1 FPU assembly. The process took approximately two weeks (about 20 shifts) with only minor tester and tooling glitches. Laboratory, engineering and production management support were superior.

Weapon Trainer Units: The Board letter of 8 July 2008 identified a lack of formal preventive maintenance and parts procurement programs for weapon trainer units. In response, B&W Pantex will develop a plan and schedule by mid-October that adds trainer units to the provisioning process that is currently limited to ultimate user and test programs. An action plan for each weapon program will include validating all trainers against design drawings, evaluating the fidelity of each trainer, an assessment of expected usage requirements and useable lives of parts, and a list of all parts and anticipated replacement dates.

Radiobioassay Program: Pantex has not performed an assessment of its radiobioassay provider since 2005. DOE-STD-1112-98, *Laboratory Accreditation Program [LAP] for Radiobioassay*, requires DOELAP participants to conduct annual audits to ensure quality is maintained. A lack of travel funds and insufficient manpower to support the audits are identified causes. B&W Pantex radiation safety personnel will perform the laboratory audit by the end of October.