

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director

FROM: Matthew Duncan, Timothy Hunt, and Rory Rauch, Pantex Site Representatives

SUBJECT: Pantex Plant Report for Week Ending August 28, 2009

Nuclear Explosive Safety Exemption: DOE Order 452.2D, *Nuclear Explosive Safety*, states that nuclear explosives (NEs) must not be transported or staged with any other assembly that could be mistaken for an NE. Last month, B&W requested an exemption to this requirement following an impact evaluation that determined it would cause unnecessary cost and schedule delays for certain operations in which NEs and NE-like assemblies are commonly co-located. PXSO, in coordination with NA-122.11, recently determined an exemption is not necessary because they believe B&W can meet the intent of the requirement without physical separation.

High Pressure Fire Loop (HPFL): Critical decision (CD)-3 approval of the HPFL upgrade project—which will replace 13,000 feet of deteriorating ductile iron piping, valves, and hydrants—was received on 9 July. The construction contract was subsequently awarded to Ledcor CMI Ltd. Last week, NNSA approved a new funding profile and schedule for the \$43 million project. Construction is scheduled to begin next month and complete by the end of FY12.

Procedure Adequacy: Technicians suspended an NE operation this week when they noticed a procedural step placed out of order. Upon further examination, the subsequent eight steps were also found to be disarranged. The first misplaced step has been attributed to a mistake in an annotated change that was processed last year. Conversely, the second sequence of misplaced steps was the result of a number formatting issue in the word processing software. The formatting errors were introduced two revisions prior despite the fact that the subject steps were not the intended target of the revision. After experiencing several of these formatting problems (but after the subject procedure revision was processed), document control established a requirement to note in the procedure change routing form whether any issues were experienced during word processing. This is an indication to the process engineer that a more thorough review of the document is required before it is issued to the line. Process engineering is re-examining all procedures that had been changed during the last two months as an initial extent of condition review. In addition, B&W has established a team to evaluate these formatting issues with the word processing software in an attempt to minimize recurrence.

W76-1 Assembly: During the process of building a primary assembly, high explosive (HE) main charges are bonded together, subjected to a compressive load force, and held for a minimum 18 hour cure time. On Tuesday, after releasing the load, the charges separated at the equator with some HE cracking and transferring with the bonding material to the adjacent charge. An engineering instruction is under development to tear down the assembly and the rebuild will use mostly new components. B&W is working with the design agency to evaluate the many variables that could have contributed to this issue.

Hoist Degradation: Following completion of a technical safety requirement related step where a manual 2-ton hoist (greater than 20 years old) was used to support the task exhaust around bare HE, the nut on the screw holding the safety latch to the hook fell to the floor. The task exhaust and hoist were never located above the unit and had been moved away from the vulnerable configuration when the situation occurred. The pre-operational check performed by the technicians prior to each shift and the periodic maintenance inspections (last performed two weeks ago) all have actions requiring verification that the hook/latch is functioning properly and undamaged. A jam nut was installed on the screw as a corrective measure and the crafts plan to check thread engagement on hoist safety latches in all nuclear facilities in the near-term.