

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 September 11, 2009

Potential Inadequacies in the Documented Safety Analysis (PISAs): B&W declared two PISAs this week. The first was declared after engineering personnel discovered the pressurized hydraulic system in a piece of equipment had not been accounted for in the hazard analysis for a safeguards operation that confirms the absence of special nuclear material. All copies of the subject equipment were immediately tagged out of service when the issue was discovered and the affected operations have been placed on hold. B&W plans to restart the operation with equipment that does not use a pressurized hydraulic system.

The second PISA was declared after a PXSO assessment of facility structures for nuclear explosive bays revealed that calculations of the design basis snow loading on the structures had not taken into account all relevant factors (e.g., roof slope, unbalanced loading, drifting). Adjustments to the calculations show that all applicable structures still meet the new design basis snow loading by a factor of approximately four; therefore, B&W will not institute any compensatory measures.

Positive USQ: In July, B&W declared a PISA after discovering weapon response rules that appeared to increase the frequency of a specific low-consequence accident scenario. The newly discovered rules contained different accident parameters than the scenarios postulated in the documented safety analysis (DSA); therefore, the USQ determination could not be processed until the design agency confirmed their applicability. B&W declared a positive USQ this week after design agency confirmation was formally received. The affected program is not currently operating and no additional controls are expected as a result of this change to the DSA.

Nuclear Explosive Operating Procedure (NEOP) Development: All revisions to assembly procedures are not normally reviewed by the process engineer prior to developing a new disassembly procedure; this issue came to light during recent W78 operations. Generally, drawing sets maintained, to varying degrees, by the design agencies are used as the basis for development of disassembly procedures. The information contained in the drawing sets is complemented by interviewing available personnel having historical knowledge of the process and reviewing short term engineering procedures that were issued to address unit or process anomalies during assembly. The benefit in evaluating all revisions to an assembly procedure would be to include any variations to the process in the initial disassembly procedure. Through lessons learned from previous SS-21 projects, B&W has implemented measures on the W80, W84, and B53 procedure development processes that have improved the ability to identify anticipated process or unit anomalies of this nature. B&W engineering management is evaluating whether any additional documentation should be reviewed to further this effort.

Voluntary Separation Program (VSP): This week, B&W announced that a VSP will be offered due to shortfalls in the fiscal year 2010 operating budget. The VSP is expected to be complete by 15 October. At this time, B&W does not anticipate the need for an involuntary separation program.