

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 April 22, 2011

Potential Inadequacy in the Safety Analysis (PISA): B&W authorization basis (AB) personnel declared a PISA this week after a tooling evaluation concluded that two W87 stand adapters could not meet an AB functional requirement when subjected to a newly postulated accident scenario. B&W management has suspended the subset of W87 operations affected by the new scenario. The accident scenario in question was postulated during the W87 operational safety review. A member of the team observed the primary shifting in the adapter during a component removal step. He asked if an analysis had been performed that demonstrates the adapter/ primary configuration can withstand an impact from a tripping technician without causing the primary to topple. The W87 tooling engineer re-examined the tripping technician analysis for the adapter and found that the incident load imparted by the technician had only been applied to the tool, not the component proper. When he analyzed the response of the configuration to a load applied directly to the primary, he found that the primary would not remain stable. AB personnel have not completed the unreviewed safety question (USQ) determination for the PISA, but believe it will be positive. Before resuming the affected W87 operations, program personnel plan to incorporate stabilizing braces for the sequence of steps in which the stand adapters are utilized. Per the USQ process, AB personnel plan to document the basis for restarting operations using the stabilizers in an Evaluation of the Safety of the Situation.

Work Planning: A special mechanic inspector stopped a fire suppression system maintenance activity in a nuclear explosive bay after discovering that the revision of the procedure he was using was older than the revision of the procedure being used by an observer in the facility. Upon further investigation of the discrepancy, maintenance personnel determined that the older revision of the procedure was acceptable for use. Per B&W procedures, upon issuance of a new revision to a maintenance procedure, the maintenance planner can decide not to replace the old revision that was printed with the work package if the new revision does not have any quality, safety, or security impacts (subsequently generated work packages would have the new revision). Despite this process working as intended, this discrepancy did unveil two potential areas of improvement in the maintenance work planning process. First, B&W maintenance personnel plan to determine whether the planner should be given the latitude to defer issuance of a new procedure revision to the field if he considers the change insignificant. Second, they plan to evaluate whether the maintenance planning process needs to be modified to ensure the individuals executing the work are aware of the approved procedure revisions for their activity.

Loss of Power Event: This week, 12 nuclear explosive bays lost normal power for approximately 8 hours during the Tuesday day and swing shifts. All backup power systems in the facility worked as designed; however, loss of primary power to the deluge fire suppression system requires entry into a limiting condition of operation (LCO). After approximately 20 minutes on backup power, per the action statements of the subject LCO, the facility manager directed the production technicians in the affected bays to stop work and achieve a safe and stable configuration. He also placed the affected bays in maintenance mode. Fire protection engineering personnel evaluated each facility and determined no fire watch was needed. System engineering personnel and craft electricians have not yet determined the cause of the event.

B53 Operations: Last week, after installing a different compression ring, technicians successfully removed the cap from the primary on the latest B53 dismantlement unit. The B53 tooling engineer is evaluating the ineffective compression ring.