

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: Timothy J. Dwyer, Technical Director
FROM: Timothy Hunt and Rory Rauch, Pantex Site Representatives
DATE: 31 July 2009
SUBJECT: Pantex Plant Weekly Report

Lessons Learned: As a result of a loss of vacuum event last week while lifting a heavy component, B&W Pantex is using the information-rich event to reevaluate several elements of the process. The staff has raised questions about the tooling design, operating procedure, technician training, and decisions made to place the unit in a safe and stable configuration immediately following the event. Manufacturing Division supervisors will be briefed on the event as part of the continuing reinforcement of conservative decision making principles. In addition, as a long-term process improvement, B&W Pantex plans to add a visual indicator (e.g., load cells) or an engineered feature (e.g., clutch) to prevent the generation of forces that counteract the lifting force of the vacuum fixture. The next unit will be disassembled with the design agency (DA) present after all potential concerns are resolved.

Potential Inadequacy in the Documented Safety Analysis (PISA): On 18 June, B&W Pantex received weapon response indicating the safety theme of certain units of a specific program had been impacted. However, the change in weapon response for some of the units was not quantified. B&W Pantex subsequently entered the uncertainty associated with this weapon response into its new information process. This week, B&W Pantex declared a PISA because the unreviewed safety question determination (USQD) on the new information could not be performed in a timely manner. No operations have been performed on the subject units since the weapon response was issued; therefore, no additional compensatory measures were needed. B&W Pantex is expecting a weapon response clarification and formal instruction from the DA not to initiate or continue assembly operations on the units impacted by the new information. The USQD will be performed at that time.

Nuclear Explosive Safety (NES) Assessment: The onsite NES division personnel recently issued their July assessment. The focus area of the assessment was the B&W Pantex category 1, 2, and 3 electrical equipment program. After observing widespread use of an older electrical equipment labeling system, the assessment team recommended that B&W Pantex develop a detailed implementation plan to convert the plant to the current system and prevent any possible confusion. Of additional note, after reviewing the communication of an emerging technical issue from the DA to the site, the assessment team concluded that the B&W Pantex NES department was not notified of the issue in a timely manner. This resulted in nuclear explosive operations being performed without appropriate NES review. PXSO is reviewing the findings from this assessment for potential improvements.

Special Nuclear Material Component Requalification Facility Operation: During a recent recertification activity on a particular component, it was found that the internal pressure was about 10 times greater than expected and the fill gas comprised some unusual constituents. The component was rewelded and is deemed to be in a safe configuration while awaiting disposition instructions from the DA. The anomalous situation is thought to be a result of errors made during the original production of the component and not a breach of containment.