

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: Friday, June 24, 2005
SUBJECT: Pantex Plant Weekly Report

DNFSB Staff Activity: A. Matteucci was on site this week providing Site Rep coverage.

Electrical Testers: PXSO recently completed a review of the Pantex electrical tester program which concluded that design, control, and use requirements were implemented properly. The final report indicates tester program requirements were generally well documented, understood and followed. Of the seven findings noted, the most significant involved a plant standard that still allowed testers for production use that were no longer qualified. A significant observation was that tester program requirements were spread out over about 20 different documents, a situation similar to what existed with the tooling program prior to its upgrade. BWXT is expected to respond to the findings by submitting a corrective action plan to PXSO.

Fire Protection Upgrades: BWXT recently issued its High Pressure Fire Loop (HPFL) Upgrade Conceptual Design Report (CDR) which shows a 30 percent increase from the current budget (\$18.4M) in estimated total project cost. The HPFL supports a critical safety function by providing water to facility fire suppression systems and exterior fire hydrants, primarily in the Material Access Area. The CDR suggests a project to replace the degrading ductile and cast iron piping with non-corrosive high density polyethylene. Replacement activities include new mains, lead-ins, valves, and installation of cathodic protection for metal components. Awarding of the Architect/Engineer contract and commencement of Title I design is currently scheduled for November. Construction, to be completed by 2009, will be performed by a separate contractor.

W62 Disassembly: BWXT recommenced operations this week to disassemble sub-components from an anomalous W62 unit. After disassembly and removal of the nuclear explosive (NE) sub-component from the facility, a revised Nuclear Explosive Engineering Procedures (NEEP), generated to complete separation and disposition of the other sub-component, was then performed. Separation of two parts of the non-NE sub-component occurred when a silicone-based material was pumped into the space between the parts as instructed by the NEEP. Present during the separation process were both production section managers and the process engineer for the W62. After the subject parts were separated, the next step of the process required the use of a plastic spatula to remove energetic material from one of the parts. During this removal process, a piece of high explosive was dislodged and fell a few feet to the floor. Although this event is covered by the existing authorization basis and associated weapons response, PXSO previously requested that BWXT employ processes to prevent dropping high explosive to the floor through the use of engineered controls.

Nuclear Criticality Safety (NCS): NNSA completed its periodic assessment last week of the BWXT criticality safety program, focusing on monitoring and oversight. The review team concluded that the program was functioning well, identifying no weaknesses, but provided several examples of actions that could be taken to continue improving. Increased interaction between the NCS engineers and operators, reduction in peripheral tasks, and heightened line management auditing of NCS elements would benefit the program. The assessment team noted that the Pantex Plant Criticality Safety Program Analysis shows that an accidental criticality is incredible; thus, there are no criticality alarms on site.