DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 23 September 2005
SUBJECT: Pantex Plant Weekly Report

DNFSB Activity: T. Dwyer was on-site this week to observe ongoing operations. Outside expert L. McGrew was on-site observing the NNSA tooling review.

Readiness Assessments Causal Analysis: In response to PXSO memoranda dated 24 May and 7 July, BWXT has proposed using an affidavit process in lieu of a readiness verification (RV) during the readiness validation activities prior to starting a new operation. PXSO requested that the affidavit process be implemented immediately. Therefore, BWXT will no longer perform RVs. In addition, PXSO requested that BWXT develop formal corrective actions to improve the contractor readiness assessment process.

Tooling Technical Safety Requirement (TSR) Violation: BWXT engineers recently discovered a discrepancy between the tooling analysis and TSR control description for a protective cover used during W62 operations. The applicable TSR is derived from an accident scenario that assumes the workstand collapses on a unit. Given that it would be impractical to design, construct, and implement a protective cover that could withstand the proposed insult of 3700 ft-lbs, BWXT plans on re-analyzing the scenario and crediting the work stand in lieu of the cover.

Equipment Room Fire: Last weekend, the Fire Department responded to a smoke alarm in an equipment room adjacent to nuclear explosive bays. First responders made entry and identified light smoke and embers through the top cover of an electric boiler, removed the cover, and extinguished the fire. After further investigation, the smoke source was identified as smoldering barrier material near the heat tube bundle in the hot water unit and charred wiring insulation. This outdated electric boiler had a history of problems and does not have several safety features incorporated into modern boiler designs. Similar boilers can be found in other nuclear facility equipment rooms on-site.

Safety System Degradation: There is a TSR that the contaminated waste isolation valves (CWIV) servicing the nuclear explosive cells shall remain closed to be considered operable. The CWIVs are credited to isolate the contaminated waste drain lines during an explosion to limit the leak path for dispersable material. During a semi-annual system surveillance last week, crafts personnel discovered that the CWIVs in three nuclear facilities had significant leakage despite being "closed." One valve was replaced and two were exercised manually until indications showed they were closed. It appears that the subject maintenance procedure historically used to verify valve closure was inadequate.

Special Tooling Issue: The Production Technicians stopped an operation last week when a problem with a lifting fixture was noticed prior to hoisting a weapon. It was subsequently discovered that a threaded hole had not been drilled deep enough in a part, precluding the proper fit up of the fixture with the weapon. This was the first time this copy of the tool had been used and a dimensional inspection was not required during the tooling acceptance process.

NNSA Tooling Review: This week, NNSA reconvened the Pantex tooling review that was suspended last November due to the number and variety of preliminary findings. Initial feedback from the review team indicates that the tooling program has significantly improved over the past 10 months.