

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 September 3, 2010

DNFSB Activity: D. Campbell, B. Laake, and C. Martin were onsite to review the special tooling design program.

Special Tooling: In April, W80 technicians identified a discrepancy between the physical makeup of a press that had been delivered to the line and its design definition. Tooling design personnel analyzed the tool and determined that the relative orientation of two pieces of the press was incorrect. The production tooling support manager subsequently initiated a causal analysis, which revealed that the vendor had incorrectly manufactured this copy of the tool and it had been issued to the line with this exact discrepancy on two other occasions. On these occasions, technicians identified the discrepancy and tagged out the tool, but mistakes by an area mechanic and the machine shop led to the discrepancy not being repaired. A total of seven separate organizations responsible for the inspection and acceptance of this tool failed to identify the discrepancy before the press was issued to the line on these three occasions. Most of the corrective actions from this event involve additional training and guidance to reinforce the proper conduct of operations at each of the culpable organizations.

In a separate recent tooling event, technicians suspended a W87 operation after the lifting and rotating fixture that was supporting the weapon could not mate with an enhanced transportation cart (ETC). Tooling design subsequently evaluated the fixture and determined that the machine shop had installed a plate that interfaces with the ETC incorrectly. Production tooling support immediately performed an extent-of-condition review of all lifting and rotating fixtures and found one other fixture that had had been misassembled in the same manner, though this fixture had yet to complete the quality acceptance process. Production tooling support believes the corrective actions from the inspection and acceptance issues associated with the W80 press (above) will minimize recurrence of this event.

B53 Startup Activities: Performance assurance department personnel completed the contractor readiness assessment (CRA) for the startup of B53 SS-21 dismantlement operations this week. At the outbrief for the assessment, the team lead presented 11 pre-start findings, 1 post-start finding, and 6 observations. The notable pre-start findings captured process engineering's failure to properly flow two technical safety requirements into implementing documents, three steps in a pit packaging procedure that could not be performed as written, and operating personnel failing to comply with the work instruction for controlling loading dock operations. Two other pre-start findings were known deficiencies when the CRA commenced. The CRA team lead noted excellent formality of operations from the personnel that demonstrated B53 transportation and dismantlement operations.

Also occurring this week, the B53 SS-21 project team demonstrated the proposed corrective actions for the nuclear explosive safety (NES) deficiency that led to the pre-start finding in the coordination copy of the B53 NES Study report (see 8/13/10 report). To resolve the deficiency, the project team added a symmetric nylon cross as a support feature for the points in the B53 dismantlement process that rely on a phenolic component as part of the load path for the main charge high explosives. Three voting members of the B53 NES Study group, including the chair, attended the demonstration and found no issues with the proposed corrective actions.