

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

MEMO TO: J. Kent Fortenberry, Technical Director
FROM: Timothy Hunt and Dave Kupferer, Pantex Site Representatives
DATE: 21 April 2006
SUBJECT: Pantex Plant Weekly Report

W56 Spinner Dismantlement: BWXT exercised the spinner process for the first time this week and successfully untorqued the initial units. After injecting epoxy into two holes drilled into the aeroshell and allowing to cure for a minimum of 72 hours, the units separated at 7,800 psi and 6,200 psi, respectively. The procedurally allowed limit is 8,000 psi. If no unforeseen problems arise, the remaining regular and spinner units could be dismantled by June.

Facility Structure: There is documented evidence that a nuclear explosive bay wall has had an anomalous condition for several years. Rust colored stains seeping from a wall joint indicate possible moisture corroded rebar in the concrete structure. An annual Technical Safety Requirement in-service inspection mandates that the structure be evaluated for signs of wear and degradation. Although there are records of this damage being noted during the last five annual inspections, no documented evaluation of the potential effect on the structural integrity or Faraday cage characteristics has been performed.

Multi-Unit Operations: Pantex authorization basis and work control documentation does not clearly define multi-unit operations. The term is being used interchangeably at the site to refer to facility operations where two separate crews perform work autonomously on two units or one crew works serially on two units. The recent B61 and W87 Nuclear Explosive Safety Studies (NESS) observed and evaluated only two-crew operations. The contractor readiness assessments (RAs) also only evaluated two-crew operations but the upcoming NNSA RAs may be expanded to look at other multi-unit variations. The requirements for single crew, multi-unit operations have not been formally documented and these operations are not being demonstrated for review teams. BWXT Manufacturing Division management has committed to develop definitions and guidance on the implementation of multi-unit operations.

Special Tooling: BWXT has experienced several tooling related problems recently that indicate the program has not reached full maturity. There is evidence that tooling identified in the inventory system can not be accounted for and three copies of the same cart were found to each have incorrect or malfunctioning parts. A March NNSA survey of machine shop operations found several unsatisfactory conditions; including, deviations made to tooling without being processed through engineering and the inability of BWXT to reduce the large backlog of tooling repairs and modifications.

Zone 4 Storage: It was discovered this week that seven items staged in a Zone 4 magazine for many years are not identified on the list of authorized configurations to be staged or transported on-site. The nuclear explosive type assemblies (NELAs) include a component containing special nuclear material (SNM). The authorization basis (AB) list of possible nuclear or nuclear explosive configurations overlooked the fact that these NELAs were built with this component and thus did not analyze the configuration; a potential inadequacy of the safety analysis. Authorization basis personnel believe the unreviewed safety question evaluation will be negative as the configuration will be bounded by other storage scenarios. The SNM has been appropriately accounted for by quantity and location in the Move Right system. Immediate compensatory measures were directed to ensure these items are not moved while the analysis is performed and AB revised.