

W76-1 problems at Pantex

Based on Defence Nuclear Facilities Safety Board (DNFSB) reports.

8 December 2006 – PXSO disagreed with BWTX recommendation that there was no need for NNSA Readiness Assessment of W76-1 D&I operations.

9 March 2007 – First phase of Nuclear Explosive Safety Study (NESS) completed, this covers D&I, second phase will cover rebuild. PXSO due to authorise assembly by July to meet FPU end of FY year date (Sept).

16 March 2007 – BXTX authorised to start Special Nuclear Material Component Requalification Facility (SNMCRF). The plan is to send a select number of pits through the workstation to prove-in the process and obtain an engineering release from the design agency. The schedule shows production of the first W76-1 diamond stamped pit in May.

6 April 2007 – NA-10 has approved the NESS to begin with a submitted, but unapproved, safety basis.

1 June 2007 – Contractor Readiness Assessment found 20 pre-start findings, 2 post-start findings and 13 observations on W76-1 assembly operations. Including steps that could not be performed as written, inadequate flowdown of requirements into the procedures and technicians did not always execute the procedures as written. Party due to fact that the safety analysis had not been approved prior to the start of the review. Readiness Assessment delayed, due date was 14 June.

8 June 2007 – 2 of the 20 prestart findings still to be closed – use of mock tooling during demonstrations and posting safety basis documents.

15 June 2007 – RA due to start 7 May only started last week, completed this week. Three pre-start findings - personnel failed to perform some of the steps of procedures correctly, procedures had errors of failed to designate critical steps or steps requiring person-to-person coverage & several procedure steps could not be performed as written. Operations should be authorised in a few weeks.

20 July 2007 – Safety basis change packages to support and analyse W76-1 D&I and W76-1 assembly operations were approved by PXSO in February and April respectively. Prior to making HAR changes to support W76-1 operations effective BWTX reviewed whether controls incorporated during development of W76-1 analysis were appropriate for W76-0. Reviewer identified a few procedures and tooling documents that had to be revised and one tooling design that needed to be modified. Also BWTX decided to develop flex training course.

27 July 2007 – Senior Management Team met, agenda included plans to perform W76-1 assembly operations during the next several months.

3 August 2007 – NA-12 authorised BXTX to proceed with: (1) minimal production of subassembly components to avoid having to perform vendor restart and re-qualification activities, and (2) fabrication and disassembly of W76-1 prototype units to exercise assembly and disassembly processes. Prototype units will not be delivered to the Navy but used for Retrofit Evaluation System Test (REST) surveillance activities. Engineering and qualification of the Canned Subassembly has not yet been completed.

5 October 2007 – First prototype build completed. But second prototype build must wait until Disassembly & Inspection (D&I) process is reviewed & approved. Contractor Readiness Assessment for D&I to begin next week. Tooling and other resource shortages may prevent the assembly and disassembly processes from running concurrently.

19 October 2007 – In approval letter for D&I PXSO tasked contractor to conduct an independent assessment of its processing for involving explosives experts in the review of nuclear explosive operations. BXTX to incorporate an explosives safety element into NES personnel qualifications.

30 November 2007 – steps in W76 disassembly not marked in procedures are requiring person-to-person cover – technicians working on HE with exposed detonator cables or electrical tester attached to HE.

7 December 2007 – 2 months ago B&W completed the first W76-1 prototype build (FPB). Subsequent prototype build operations have been waiting for the D&I process to be reviewed and authorized. There were 8 pre-start, 4 post-start and 9 observations on D&I. B&W has closed the 8 pre-start findings and expects to startup D&I operations next week.

21 December 2007 – Multi Unit Operations (MUO) proposal for W76 – NNSA rejected option without a barrier, option chosen is a redesign of the current option. BXTX to develop a barrier implementation project plan.