

## Timeline

3 Apr 1992	Initiation of Mk4A/Mk5A Alternative Warhead Phase 6.2 Study
3 June 1993	Mk4A Military Characteristics for Mk4A/Mk5A study - includes "near surface burst"
Feb 1995	Completion of Mk4A/Mk5A Alternative Warhead Phase 6.2 Study
29 June 1995	Kick-off meeting for SLBM Warhead Protection Programme (SWPP)
1995	Funding for W76 AF&F Life Extension
1995	Funding for W76/88 Redevelopment focused on AF&F
1 Jul 1997	Start of W76 replacement AF&F project as part of SWPP
8 Aug 1998	NWC authorised Phase 6.2/6.2A study of W76-1/Mk4A
Dec 1999	Completion of W76-0/Mk4 Dual Revalidation
2000	Development of CMOS7r processor completed
2000	Scheduled W76 fuze revalidation computer simulation
Dec 2000	Final approval for Phase 6.3 (development engineering) of W76-1/Mk4A
Apr 2001	ALEGRA software used for W76-1 radar fuze design and performance
2001	ALEGRA software used for W76-1 contact fuze
End 2001	Scheduled completion of AF&F performance model
May 2002	Deadline to simulate radar, logic and timer - normal environment HPEMSS
End 2002	Scheduled virtual prototyping W76 JTA
11 Dec 2002	First flight test of W76-1/Mk4A from USS Nevada
Apr 2003	Flight test of Mk4A AFS from USS Maine
Summer 2003	Scheduled virtual prototyping W76 AF&F
Sep 2003	Computer simulation of Permafrost ASIC completed using XYCE
2004	Hardware to measure radar performance developed for FY2004 flight test
10 Nov 2004	4 RVs tested FCET 32 flight test – including first AFS/missile interface test, JTA1 and AF&F; USS Nevada
9 Dec 2005	FCET 34 flight test - 2 <sup>nd</sup> test of JTA1
2006	FCET 35 flight test (USS Alaska) - AFS tested
21 Nov 2006	FCET 36 (USS Maryland) - 3 <sup>rd</sup> & final development test of JTA1 AF&F
2006	Completed development and qualification of all 38 components of W76-1
6 Feb 2007	Delivery of First Production Unit of AFS
29 May 2007	Delivery of First Production Unit of AF&F
Aug 2009	Delivery to Navy of First Production Unit of W76-1 (after problem with AF&F)