



AAAV GUN & AMMO UPDATE

NDIA GUN AND AMMO SYMPOSIUM



Major Peter W. Cushing USMC
AAAV Firepower Project Officer



Report Documentation Page

Report Date 09Apr2001	Report Type N/A	Dates Covered (from... to) -
Title and Subtitle AAAV Gun & AMMU Update NDIA Gun and AMMO Symposium	Contract Number	
	Grant Number	
	Program Element Number	
Author(s) Cushing, Peter W.	Project Number	
	Task Number	
	Work Unit Number	
Performing Organization Name(s) and Address(es) USMC	Performing Organization Report Number	
Sponsoring/Monitoring Agency Name(s) and Address(es) NDIA (National Defense Industrial Association) 211 Wilson Blvd, STE. 400 Arlington, VA 22201-3061	Sponsor/Monitor's Acronym(s)	
	Sponsor/Monitor's Report Number(s)	
Distribution/Availability Statement Approved for public release, distribution unlimited		
Supplementary Notes Proceedings from the 36th Annual Gun & Ammunition Symposium & Exhibition 9-12 April 2001 Sponsored by NDIA		
Abstract		
Subject Terms		
Report Classification unclassified	Classification of this page unclassified	
Classification of Abstract unclassified	Limitation of Abstract UU	
Number of Pages 16		



TARGETS OF INTEREST

- **Infantry/ATGM**
- **Lightly Armored Vehicles
(1,500-2,000m)**
- **Coastal Naval Combatants
(1,000 - 4,000m)**
- **Bunkers/Urban/Material
Targets**





Lethality Testing Overview





Where Have We Been.....

- **AAAV adopts 30mmx173mm: July 97**
- **Worked with Boeing to Develop Mk 44 30/40mm Gun from Bushmaster II**
- **Mk 44 30/40mm Automatic Gun Qualified**
- **(16) NDI rounds of Ammunition Qualified**
- **Commenced NATO STANAG Process for 30mmx173mm**

.....All within 3 years



MK 44 Mod 1 30/40mm Automatic Gun



- **MK44 selected by AAAV, LPD-17, Norway, Switzerland, Finland**
- **Significant interest from DD-51, DD-21, FFG, and USCG**
- **Over 37,000 rounds fired through Qualification Gun with no closed bolt stoppages or chargeable failures, over 20,000 round barrel life**
- **U.S. Navy Weapon System and Explosive Safety Review Board (WSESRB) Qualified for Service Use during 4th Quarter FY00**



30mm AMMO to WSESRB



•(2) APFSDS-T

•(5) HEI w/ 3 FUZES

•(3) TP-T

•(2) TP

• (3) MPLD

• (1) APDS



APFSDS-T

- **Highly Successful FCT completed Sept 00.**
- **Both candidates met requirements.**
- **Follow-on procurement to support EMD and Joint Live Fire.**
- **Both rounds will satisfy AAAV Operational Requirements.**



HE AMMUNITION

- **Only until Airburst is fielded.**
- **Continuing to evaluate various MPLD, HEI, and SAPHE rounds.**
- **Decision will be based on best NDI round or combination of rounds balancing cost against lethality across the AAAV HE target matrix.**



AIRBURST

- Will provide dramatic increase in lethality against primary target: *INFANTRY*.
- FCT proposal submitted for FY 02 start to evaluate two foreign candidates.
- Concurrent evaluation of one or two domestic candidates.
- Contract in 1st Qtr FY 02.
- Commence testing in 2nd Qtr FY03.
- Down select at end of FY04.



MK46 on PB 777





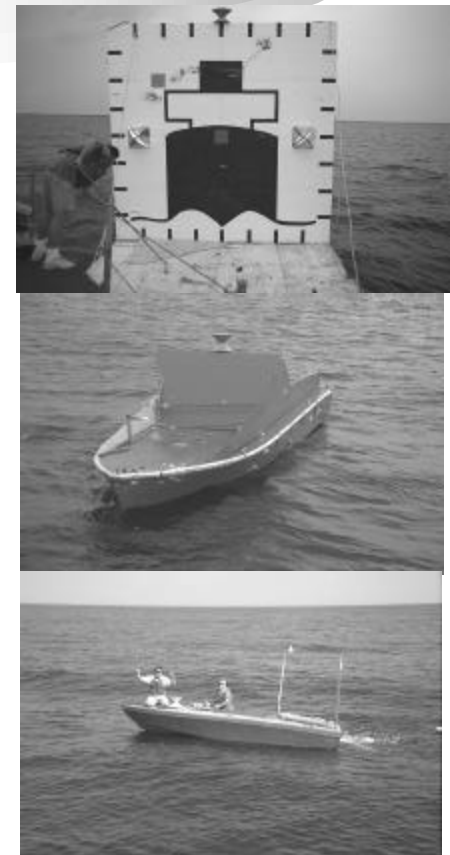
MK46 Space Claim





PB777 Targets

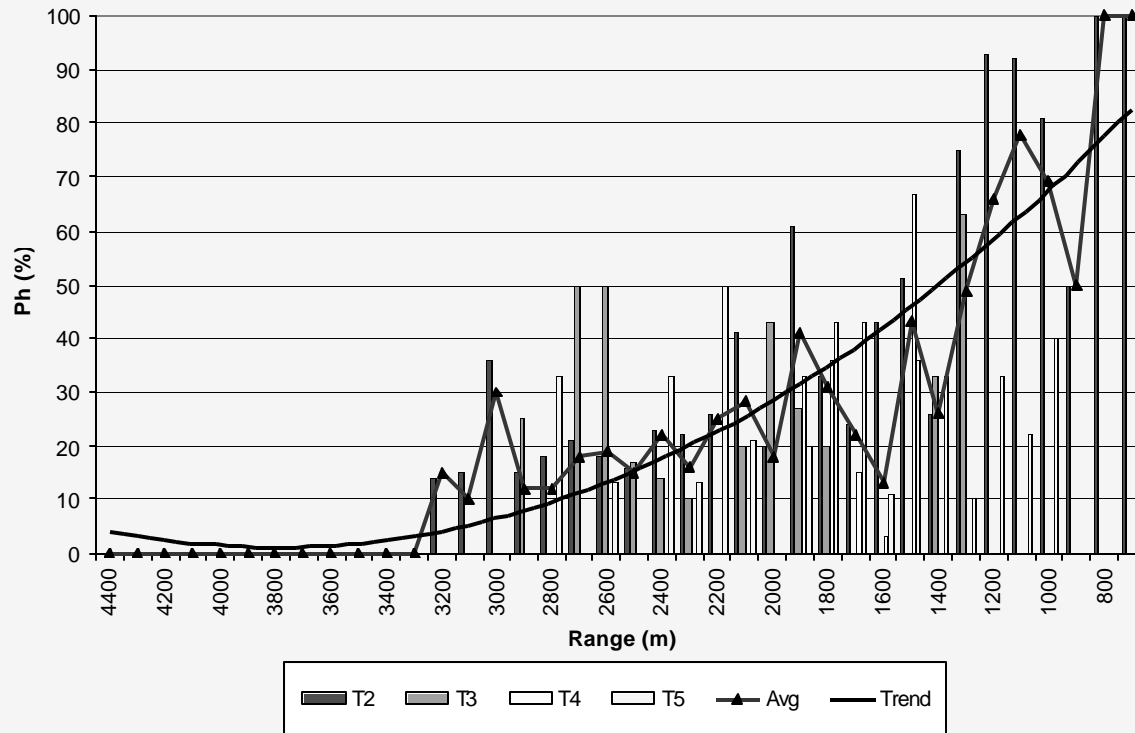
- **16' X 16' Billboard Target**
- **Improved Surface Towed Target (ISTT)**
- **QST -33 Seaborne Powered Target (SEPTAR)**





PB 777 Percent Actual Hits

Average % Actual Hits All Tests (Excluding Familiarization)



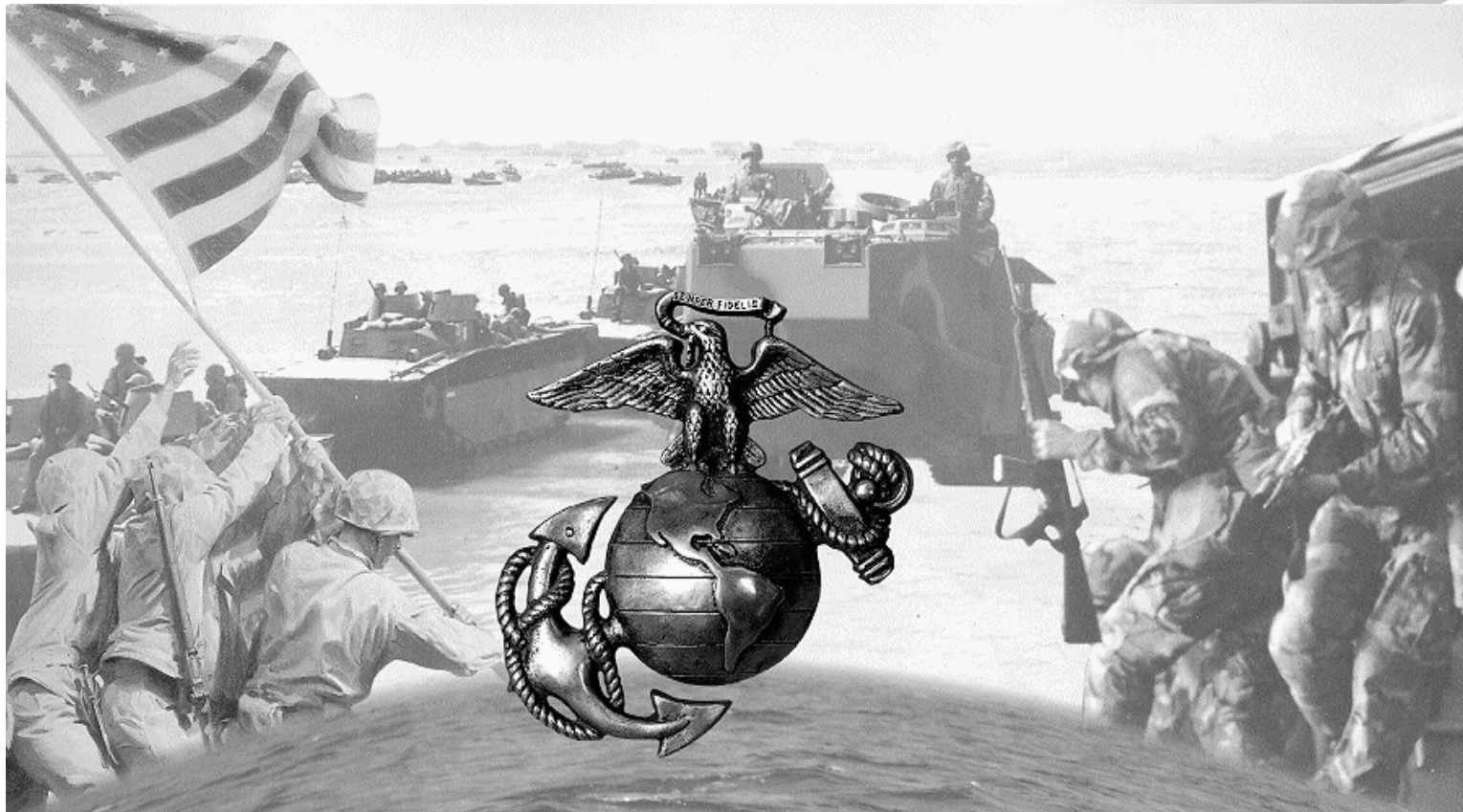


PB 777 Demo Summary

- **34 test runs; 2,000 rds fired; 25% hits**
- **All targets hit multiple times prior to keep out of 1000m**
- **“..Mk46 demonstrated approximately twice the engagement range and twice the Ph when compared to systems previously tested under similar test plans.”** (pg 35, NSWCCDD/MP-00/110)



Questions?



[Http://www.aaav.usmc.mil](http://www.aaav.usmc.mil)