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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>								DATE <b>June 2001</b>		
BUDGET ACTIVITY <b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603868C Navy Theater Wide - DEM/VAL</b>				PROJECT <b>1266</b>		
COST <i>(In Thousands)</i>	FY2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY2006 Estimate	FY2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	368769	456372								
1266 Navy Theater Wide	368769	456372								
<b>A. <u>Mission Description and Budget Item Justification</u></b>										
In FY02 the Navy Theater Wide Program will be transferred to Program Element (PE) 0603882C, Mid-Course Defense System. This budget is prepared accordingly.										
The requirement for the Navy Theater Wide (NTW) Theater Ballistic Missile Defense (TBMD) system is to provide protection to U.S. and allied forces against medium to long range theater ballistic missiles (TBMs), which may be equipped with Weapons of Mass Destruction (WMD). This protection includes those political and military assets designated as vital to U.S. interests. NTW will provide an effective defense when the ship is positioned near the enemy TBM launcher to effect ascent phase intercepts; along the TBM trajectory as the TBM passes over water, or inland along the coast to effect midcourse intercepts; and, near the defended area to provide descent phase intercepts and achieve an additional layer of defense for lower-tier TBMD systems.										
The NTW system builds upon the existing AEGIS Weapon Systems (AWS) and the STANDARD Missile (SM) infrastructure as a further evolution to the Navy Area TBMD system. The AWS (as modified for Navy Area TBMD) will be evolved to support exoatmospheric ascent, midcourse, and descent phase TBM engagements. The Navy SM-2 Block IV has been modified to accommodate a new third stage propulsion system, a fourth stage kinetic warhead (KW), and associated exoatmospheric guidance. The new variant of the SM is the SM-3. The NTW AEGIS LEAP Intercept (ALI) Flight Demonstration Program (FDP) consists of a series of near-term flight tests with the primary objective of demonstrating that Lightweight Exoatmospheric Projectile (LEAP) technologies can be integrated with a modified SM-2 Block IV and AWS to hit a TBM target in the exoatmosphere.										
In April 1999, the NTW Program was reviewed by the Defense Acquisition Board (DAB) and on 4 May 1999 the Department issued an Acquisition Decision Memorandum (ADM). As part of the revised Upper Tier strategy, the Department directed the Navy to expand the ADM approved evolutionary acquisition approach to incrementally deliver Block I capabilities. From an acquisition viewpoint, the Department has directed the Navy to continue this evolutionary Block approach, through an initial system flight test program (AEGIS LEAP Intercept (ALI)), followed by three developmental increments of the Block I system. These increments, Block IA, IB, and IC, provide the warfighter with the only ascent-phase TMD FoS capability and provide the basis to evolve to the objective Block II system using a spiral evolution acquisition strategy. The NTW program can deliver a warfighting capability by delivering first a contingency capability followed by successive capability deliveries leading to a full ORD compliant NTW Block I system.										
In August 2000 Program Decision Memorandum (PDM) directed BMDO, in coordination with PA&E and the Navy, to conduct a comprehensive study of the NTW program, including the radar, funding requirements, and missile procurement. The study was directed to reevaluate the Block I requirements; define Block II, including requirements and schedule; develop potential alternative solutions to fulfill NTW requirements; and, assess the implications of its findings on the appropriate course for Block I and II for										
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the on-going U.S./Japan cooperative effort. Based on PDM study results that recommend skipping Block I development after ALI testing and progressing directly to Block II.

**NOTE:** In FY01 \$15,790K of the funding for NTW is for cooperative development efforts with the Government of Japan for NTW Block II technologies.

<b>B. Program Change Summary</b>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
Previous President's Budget ( <u>FY 2001</u> PB)	375764	382671		
Adjustments to Appropriated Value		+80000		
Appropriated Value		462671		
a. Congressional General Reductions	-2018	-5296		
b. SBIR / STTR	-1690			
c. Omnibus or Other Above Threshold Reductions				
d. Below Threshold Reprogramming				
e. Rescissions		-1003		
Adjustments to Budget Years Since <u>FY 2001</u> PB	-3287			
Current Budget Submit ( <u>FY 2002</u> PB)	368769	456372		

**Change Summary Explanation:**

FY2000: Congressional General Reductions (\$2.018M); internal adjustments (\$3.287M)

FY2001: Increase \$80M Congressional add for NTW acceleration and advanced radar competition. Congressional General Reductions and Section 8126 reduction (\$5.296M). Recission (\$1.003M)

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<b>BMDO RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>June 2001</b>
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<b>BUDGET ACTIVITY</b> <b>4 - Demonstration and Validation</b>	<b>PE NUMBER AND TITLE</b> <b>0603868C Navy Theater Wide - DEM/VAL</b>	<b>PROJECT</b> <b>1266</b>
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COST (In Thousands)	FY2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY2006 Estimate	FY2007 Estimate	Cost to Complete	Total Cost
1266 Navy Theater Wide	368769	456372								

**A. Mission Description and Budget Item Justification**

The mission description for the NTW TBMD system was previously provided on page 1 of this exhibit.

**FY 2000 Accomplishments:**

- 343356 Continued execution of the ALI FDP, ALI and Block I associated risk reduction activities, Block II associated radar improvements competition, and NTW Block I TBMD system engineering and planning. Conducted successful rocket motor firings and Attitude Control System (ACS) testing of the Third Stage Rocket Motor (TSRM). In June 2000 the TSRM was fully qualified deeming it safe for shipboard use. Flight Test Round (FTR)-1 was executed in July 2000; however, it did not meet its primary objective to demonstrate third stage stability, and control of the third stage through KW separation due to a mission sequence anomaly. Continued the design, development, manufacturing integration, and testing of ALI FTRs, and associated ground hardware and test equipment. Performed AWS development engineering to support the ALI program. Two independent assessment teams initiated reviews of the Solid Divert and Attitude Control System (SDACS) design. Continued the NTW test and evaluation process to include participation in Pacific Blitz which verified ALI seeker performance in Infrared (IR) acquisition tracking, and evaluated Radio Frequency (RF)/IR NTW prototype correlation algorithms, and SM-3 missile Computer-in-the-Loop (CIL) guidance performance. The Japan/U.S. Cooperative Project prepared results of the NTW Block II system engineering and program plan definition under Task 1.
  - 2188 Continued lethality requirement definition support and lethality performance testing of NTW KW in support of upcoming direct hit sled tests.
  - 13975 Continued targets procurement to support NTW test and evaluation, and provided test facilities support.
  - 3000 Provided support for TMD Special Studies – Naval NMD Concept Definition Study.
  - 6250 Provided support for continued development of adaptive algorithms with BMDO.
- Total 368769

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**FY 2001 Planned Program:**

- 427790 Continue execution of the ALI FDP, FTR-1A, FM-2 and FM-3, and planning for FM-4 test events. Perform SM-3 SDACS qualification activities, including hover test. Continue the development and manufacturing of ALI FTRs and associated ground hardware and test equipment. Continue AWS development engineering to support the ALI program. Continue and conclude studies of alternate DACS. Continue work on Avanced Kill Vehicle pump-propulsion technology development and perform a liquid fuel handling and safety assessment. Continue Block II associated radar improvements competition. Participate in Matching Ballistic Reentry Vehicle (MBRV-2) and Theater Missile Defense Critical Measurements Program (TCMP)-3B test events. Continue design, development, and manufacturing of Block 1A FTRs. Continue Block 1A AWS development engineering. Continue Block 1B AWS development engineering, including common signal processor prototyping. Continue Block IA and Block IB systems engineering and program planning efforts.
- 6573 Continue lethality requirement definition support and lethality performance testing of NTW KW.
- 6219 Continue targets procurement to support NTW test and evaluation.
- 15790 Continue Requirements, Analysis and Design (RA&D) cooperative development efforts with the Government of Japan on selected NTW Block II technologies.

Total 456372

**FY 2002 Planned Program: In FY02 the NTW program will be transferred to PE 0603882C, Mid-Course Defense System**

<b>B. Other Program Funding Summary</b>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	To Complete	Total Cost
Navy Area – 0604867C	303479	271052								
Navy Area Procurement – 0208867C	17908	0								
NTW – 0603868C (Project 2266)	0	0								
NTW – 0603868C (Project 2268)	0	0								

**C. Acquisition Strategy:** The Navy strategy for NTW TBMD development calls for the evolution of the existing AWS, SM Vertical Launching System (VLS), and Battle Management Command, Control, Communications, Computers, and Intelligence (BMC<sup>4</sup>I) systems. This evolutionary approach leverages previous investments and takes advantage of already existing trained crews, industrial capability, engineering support, and previously developed assets such as the LEAP.

<b>D. Schedule Profile</b>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Flight Test Round 1	4Q							
Flight Test Round 1A		2Q						
Flight Mission 2		4Q						
Flight Mission 3		4Q						

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BMDO RDT&E COST ANALYSIS (R-3)										DATE		
BUDGET ACTIVITY										June 2001		
<b>4 - Demonstration and Validation</b>				PE NUMBER AND TITLE					PROJECT			
				<b>0603868C Navy Theater Wide - DEM/VAL</b>					<b>1266</b>			
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Missile Development	CPAF	Raytheon	874264	184295	CONT							
b. AWS & VLS Dev	CPAF	Lockheed Martin	246486	94812	CONT							
c. Radar Development	845	Lockheed Martin	24750	17500	CONT							
d. Radar Development	CPAF	Raytheon	24750	17500	CONT							
e. VLS Development	CPAF	United Defense	15090	4401	CONT							
f. Missile Dev / System Engineering	CPFF	JHU/APL	90376	22391	CONT							
g. System Engineering	CPFF	TSC	8100	2909	CONT							
h. AWS & Missile Dev / System Engineering	WR	NSWC Dahlgren	113352	19204								
i. AWS & Missile Dev / System Engineering	WR	NAWC China Lake	18100	6911								
j. System Engineering / RRA	MIPR	MIT/LL	26142	12391								
k. Alternate DACS Dev	MIPR	LLNL	0	8500								
l. Alternate DACS Dev	CPFF	Aerojet	0	3000								
m. Alternate DACS Dev		BMDO	0	500								
n. Alternate DACS Dev		Various	0	2000								
o. Various		BMDO	111266	0								
p. Various		Misc	20355	8775								
Subtotal Product Development:			1573031	405089								
Remark:												
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Engineering Support	CPFF	Anteon	6419	1208	CONT							
b. Engineering Support	CPAF	Marconi	4272	1144	CONT							
c. Engineering Support	CPFF	SSI/PSI	2318	962	CONT							
d. Engineering Support	CPFF	SPA	1681	0	CONT							
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e. Mgmt & Prof Supt Svcs		Misc	608	516								
Subtotal Support Costs:			15298	3830								
Remark:												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. DT&E	CPAF	Lockheed Martin	2535	519	CONT							
b. DT&E	CPAF	Raytheon	2421	660	CONT							
c. DT&E	CPFF	JHU/APL	7968	1450	CONT							
d. DT&E	WR	NAWC Point Mugu	3072	1162								
e. Lethality / DT&E	WR	NSWC Dahlgren	21782	4588								
f. DT&E	WR	NSWC Port Hueneme	7018	1612								
g. DT&E	MIPR	NAIC	6618	536								
h. DT&E	MIPR	Natl Assess Group	1357	727								
i. DT&E	WR	PMRF	16257	3492								
j. Targets	MIPR	SMDC Army	55436	6219								
k. DT&E	MIPR	SMDC Army	1724	1100								
l. DT&E		Misc	16714	3678								
m. Facilities	MIPR	NHTF	2501	0								
Subtotal Test and Evaluation:			145403	25743								
Remark:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Internal Operating	WR	NAVSEA	7145	3035								
b. Program Management	CPFF	Anteon	12428	6500	CONT							
c. Program Management	CPAF	Marconi	2975	960	CONT							
d. Program Management	CPFF	SSI/PSI	2712	1235	CONT							
e. Program Management	WR	NSWC Dahlgren	25832	4375								
f. Program Management	WR	NRL	4489	865								
g. Program Management	WR	NAWC China Lake	13549	2450								
h. Program Management	WR	NWAD	3536	900								
i. Program Management	WR	NSWC Indian Head	3961	650								
j. Program Management		Misc	3371	325								
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k. Internal Operating		Misc	3350	415							
Subtotal Management Services:			83348	21710							

Remark:

Project Total Cost:			1817080	456372							
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Remark: