

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					R-1 ITEM NOMENCLATURE 0604258N TARGET SYSTEMS DEVELOPMENT (TSD)			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		45.856	37.219	35.677	41.564	42.979	43.830	44.695
A0609 Aerial Target Systems Development		35.225	21.942	23.660	31.336	31.428	29.863	32.326
A0610 Wpn Sysys T&E Development/Procurement		9.494	11.547	11.049	9.238	10.361	12.753	11.130
20612 Surface Targets Development		1.109	0.855	0.968	0.990	1.190	1.214	1.239
K3045 Terrier/SSST		0.028	2.875	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program element funds the development and procurement of aerial and surface targets, and associated Target Augmentation and Auxiliary Systems (TA/AS) necessary to duplicate or simulate threat characteristics. This requirement is necessary to support weapons systems test and evaluation and fleet training. This program element includes the development of: Subsonic Subscale Aerial Target (SSAT), various TA/AS, Target Threat Characterization (TTC), Supersonic Sea Skimming Target (SSST), Navy Full Scale Aerial Target (FSAT) for conversions, the FSAT Follow-On (FO), surface targets for test and evaluation, surface towed targets, improved target control system, and an anti-radiation missile target. This program element also includes Vandal Extended Range testing and procurement of TA/AS Vector Scoring.

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development				PROJECT NUMBER AND NAME A0609/Aerial Target Systems Development			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		35.225	21.942	23.660	31.336	31.428	29.863	32.326
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Aerial Target Systems and associated target augmentation and auxiliary systems are developed to test and provide training for Joint Strike and Littoral Warfare Systems required to defend fleet surface and air units in a hostile environment. The threat envelope covered extends from the surface to 100K feet for speeds in the low subsonic range to MACH 4. This project includes:

- Subsonic Subscale Aerial Target (SSAT) development (including pre-planned product improvements to the existing recoverable, remote-controlled subsonic target - upgraded engine, fuselage, swept wing configuration). The SSAT simulates the anti-ship Cruise Missile threat.
- Supersonic Sea Skimming Target (SSST) development. The current developmental SSST replicates anti-ship cruise missile Threat-C performance.
- Target Augmentation and Auxiliary Systems (TAAS) development. TAAS items allow each target to be uniquely configured for specific mission profiles. TAAS configured targets are used for radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement/test, radar cross section evaluation, decoy effectiveness, maneuver analysis, electronic warfare, warhead effectiveness and evaluation of fleet tactics, readiness and effectiveness.
- Support for core modeling & simulation lab capability, including development and integration of analytical and hardware-in-the-loop simulations, and engineering/technical support to verify and validate target simulations. Continued Target Threat Characterization (TTC).

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development	PROJECT NUMBER AND NAME A0609/Aerial Target Systems Development																	
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Exhibit R-2, RD TEN Budget Item Justification
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<div style="border: 1px solid black; padding: 10px; min-height: 100px;"><p>Complete GQM-163A SSST Engineering and Manufacturing Development and initiate Block Upgrades/evolutionary development to keep pace with evolving threat and associated ORD requirements. Efforts include:</p><ul style="list-style-type: none">-Initiate development of salvo firing and multiple target control capabilities.-Conduct alternative booster system study and initiate alternative booster system development.-Continue improvement of system deficiencies identified during EMD.-Conduct Aerial Target Launch Ship (ATLS) integration.-Develop improved telemetry transmission capabilities.</div>																			
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Exhibit R-2a, RD TEN Project Justification
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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development				PROJECT NUMBER AND NAME A-0610/Weapons Systems T&E Development Procurement			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		9.494	11.547	11.049	9.238	10.361	12.753	11.130
RDT&E Articles Qty		3	5	3	2	2	2	2

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides for the development and procurement of Aerial Targets used exclusively for test and evaluation of Naval Weapons Systems which closely replicate current and projected threats to fleet units in the Joint Strike and the Littoral Warfare environments. This replication must include characteristics related to size, performance envelope, and electromagnetic and infrared signatures. As threats change, changes must be made to keep the targets as threat representative as possible. This is done in response to changes in the requirements of the developers of Naval weapons.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development	PROJECT NUMBER AND NAME A0610/Weapons Systems T&E Development/Procurement		
(U) B. Accomplishments/Planned Program				
	FY 02	FY 03	FY 04	FY 05
Continued Full Scale Aerial Target support		8.442	9.407	7.504
RDT&E Articles Quantity		3	5	3
<div style="border: 1px solid black; padding: 5px;"> <p>The Full Scale Aerial Target is a supersonic, high altitude, remote-controlled aerial target. This target has full command and control capability through normal flight maneuvers. Continued program, engineering and logistics support for the Full Scale Aerial Target (FSAT), including Aviation Depot Level Repairables (AVDLR), procurement of kit material and conversion of three F-4 aircraft into FSAT targets. The Navy will begin joint procurement of QF-4 T&E assets with USAF in FY03 and beyond.</p> </div>				
	FY 02	FY 03	FY 04	FY 05
Continued T&E TAAS Vector Scorer		1.007	2.140	3.145
RDT&E Articles Quantity				
<div style="border: 1px solid black; padding: 5px;"> <p>Target Augmentation and Auxillary Systems items allows each target to be uniquely configured for specific mission profiles. TAAS configured targets are used for radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement/test, radar cross section evaluation, decoy effectiveness, maneuver analysis, electronic warfare, warhead effectiveness and evaluation of fleet tactics, readiness and effectiveness. Continued T&E Target Augmentation and Auxillary Systems (TA/AS) Vector Scorer development/procurement/support.</p> </div>				
	FY 02	FY 03	FY 04	FY 05
Continued VANDAL support		0.045		
RDT&E Articles Quantity				
<div style="border: 1px solid black; padding: 5px;"> <p>The vandal target is a surface launched, expendable, ramjet powered missile converted to a Aerial Target which simulates anti-ship threat missiles. The target provides sea skimming and anti-radiation missile profiles. Continued VANDAL support.</p> </div>				

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(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2003	FY 2004	FY 2005	
Previous President's Budget:	11.820	11.677	15.186	
Current BES/President's Budget	9.494	11.547	11.049	
Total Adjustments	-2.326	-0.130	-4.137	

Summary of Adjustments

Congressional program reductions				
Congressional undistributed reductions		-0.130		
Congressional rescissions				
SBIR/STTR Transfer	-0.058			
Economic Assumptions			-0.020	
Reprogrammings	-1.257			
Other Navy/OSD Adjustments	-1.011			
Reprioritization			-4.117	
Subtotal	-2.326	-0.130	-4.137	

(U) Schedule:
Not applicable.

(U) Technical:
Not applicable.

(U) D. OTHER PROGRAM FUNDING SUMMARY:

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	To <u>Complete</u>	Total <u>Cost</u>
228000 Aerial Target System	66.605	77.718	72.686	127.064	88.126	89.933	91.773	Continuing	

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Project Cost		1.109	0.855	0.968	0.990	1.190	1.214	1.239
RDT&E Articles Qty		1	1	1	1	1	1	1

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project develops seaborne targets systems and their related target augmentation systems in support of air-to-surface and surface-to-surface weapons test and evaluation and fleet training.

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Accomplishments/Effort/Subtotal Cost		0.642	0.192	0.202															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> -Continued requirements Study/Analysis of target requirements in response to weapons systems development and upgrades. -Continued development of real-time surface target scoring systems, including move to vector scorer. -Continued command and control upgrade development. -Continued Weapons System/Emitter, Target Augmentation System (TAS) upgrade. -Continued Target/Threat Characterization and Validation. </div>																			
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RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> -Procured prototype off-the-shelf boat for testing and evaluation of enhanced High Speed Maneuverable Seaborne Target (HSMST). -Initiated requirements study, prepare source selection criteria, prepare integration plan, performance test plan, evaluation plan and select prototype hull(s). Procure prototype small (50-60'), high speed, missile-capable, patrol craft threat; integrate target systems, test and evaluate for QST-35 replacement. -Revise/update design package for medium (40M) Coastal Patrol Craft threat. -Procure prototype Medium (130') missile-capable, patrol craft threat to address known threat (Got) design. Integration of on-board control system to be completed in FY06 upon receipt of vessel. -Conduct testing of small, high-speed, missile capable patrol craft threat, finalize reports and prepare procurement recommendations to sponsors. -Develop high-speed (>45 knots) tow platform to be utilized in conjunction with small high-speed patrol craft threat to enhance platform survivability. </div>																			
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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development	PROJECT NUMBER AND NAME 0612/Surface Targets Development	
C. PROGRAM CHANGE SUMMARY:			
Funding:	FY 2003	FY 2004	FY2005
Previous BES/President's Budget: (FY 04/05 Pres Controls)	1.112	0.864	0.968
Current President's Budget: (FY05 Pres Controls)	1.109	0.855	0.968
Total Adjustments	-0.003	-0.009	0.000
Summary of Adjustments			
Misc. Adjustments	-0.003	-0.009	
Subtotal	-0.003	-0.009	0
Schedule: Not applicable			
Technical: Not applicable			

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0604258N/Target Systems Development			PROJECT NUMBER AND NAME 0612/Surface Targets Development				
D. OTHER PROGRAM FUNDING SUMMARY:									
<u>Line Item No. & Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
OPN Line 545500 ASW Range Spt Equipment	7.123	7.221	7.175	7.381	7.467	7.69	7.858		51.915
 E. ACQUISITION STRATEGY:									
Not applicable									

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EXHIBIT R-2a, RDT&E Project Justification							DATE: FEBRUARY 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0604258N TARGET SYSTEMS DEVELOPMENT (TSD)			PROJECT NUMBER AND NAME 3045 Terrier/SSST			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		0.028	2.875					
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project funds the Terrier Supersonic Sea Skimming Target (SSST) development to provide both a low-fidelity and a moderate-fidelity Terrier Missile Target (TMT) for Fleet training against a supersonic sea skimming threat. Major efforts involve integrating a Flight Termination System (FTS), running 6-DOF simulations, recertifying rocket motors, modifying the launch control system, modifying the initialization code, and the build up and firing of rounds.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N TARGET SYSTEMS DEVELOPMENT (TSD)	PROJECT NUMBER AND NAME 3045 Terrier/SSST

C. PROGRAM CHANGE SUMMARY:

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget (PB04 Controls):	2.914	2.908	0.000
Current BES/President's Budget (PB05 Controls):	0.028	2.875	0.000
Total Adjustments	-2.886	-0.033	0.000
Summary of Adjustments			
Congressional program reductions			
FY03 Update	-2.808		
Congressional rescissions			
SBIR/STTR Transfer	-0.070		
Economic Assumptions		-0.033	
Reprogrammings			
BSO Adjustments	-0.008		
Congressional increases			
Subtotal:	-2.886	-0.033	0.000

Schedule:

Not Applicable

Technical:

Not Applicable.

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<p>D. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <p>E. ACQUISITION STRATEGY:</p> <p>Not applicable</p>		

R-1 SHOPPING LIST - Item No. 141

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Exhibit R-3 Cost Analysis (page 1)										DATE: FEBRUARY 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6			PROGRAM ELEMENT 0604258N TARGET SYSTEMS DEVELOPMENT (TSD)			PROJECT NUMBER AND NAME 3045 Terrier/SSST							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Primary Hardware Development											0.000		
Ancillary Hardware Development	WR	NSWC/IHD			10/02	0.075	10/03				0.075		
Component Development											0.000		
Ship Integration											0.000		
Ship Suitability											0.000		
Systems Engineering	WR	JHU/APL			10/02	0.204	10/03				0.204		
Systems Engineering	SS/CPAF	Ratheon Missile Sytems Tucson, AZ			10/02	2.100	10/03				2.100		
Training Development											0.000		
Licenses											0.000		
Tooling											0.000		
GFE											0.000		
Award Fees		Ratheon Missile Sytems Tucson, AZ			10/02	0.175	10/03				0.175		
Subtotal Product Development			0.000	0.000		2.554		0.000		0.000	2.554	0.000	
Remarks:													
Development Support											0.000		
Software Development											0.000		
Training Development											0.000		
Integrated Logistics Support	WR	NSWC/PHD			10/02	0.100	10/03				0.100		
Configuration Management	WR	VARIOUS			10/02	0.025	10/03				0.025		
Technical Data											0.000		
GFE											0.000		
Award Fees											0.000		
Subtotal Support			0.000	0.000		0.125		0.000		0.000	0.125		
Remarks:													

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Exhibit R-3 Cost Analysis (page 2)										DATE: FEBRUARY 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6				PROGRAM ELEMENT 0604258N TARGET SYSTEMS DEVELOPMENT (TSD)			PROJECT NUMBER AND NAME 3045 Terrier/SSST					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	PMRF, Pacific Missile Range Facility, HI			10/02	0.075	10/03				0.075	
	WR	VAR		0.028	10/02	0.025	10/03				0.053	
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	0.028		0.100		0.000		0.000	0.128	
Remarks:												
Contractor Engineering Support	VAR	VAR			10/02	0.050	10/03				0.050	
Government Engineering Support											0.000	
Program Management Support	VAR	VAR			10/02	0.021	10/03				0.021	
Travel	PD	NAVSEA HQ			10/02	0.025	10/03				0.025	
Labor (Research Personnel)											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.096		0.000		0.000	0.096	
Remarks:												
Total Cost			0.000	0.028		2.875		0.000		0.000	2.903	0.000
Remarks:												

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