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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5						R-1 ITEM NOMENCLATURE 0604601N, Mine Development					
COST (\$ in Millions)	Prior Years Cost		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Total Program
Project Cost	173.623		4.851	15.161	5.631	6.677	16.897	17.280	6.503	Continuing	Continuing
RDT&E Articles Qty	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project is the only R&D program for mine systems, and is the sole support for the capability to maintain the effectiveness of mines facing new threat targets and increasing emphasis on major regional conflicts and littoral warfare in shallow water. Project tasks are grouped into several areas: (1) Threat Modeling/Analysis, which collects, analyzes, and develops digital models of data on current priority threat target characteristics to support computer simulations; (2) Target Detection and Response, which uses target models to develop optimal mine designs, settings, and firing algorithms; (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields; and (4) Designing and developing the Sea Predator (2010 Mine), which is a replacement for Underwater Mine MK 56 which is designated to be removed from service by the year 2010 due to environmental impact problems. The Sea Predator (2010 Mine) design will include provisions for future capability upgrades. Future upgrades may include: (a) 2-way remote command & control of the minefield, (b) precision standoff delivery from aircraft, (c) an enlarged target detection and damage radius, and (d) advanced power systems for the mine.

(U) B. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2005	FY 2006	FY 2007
FY06 President's Budget	6.052	15.392	15.738
FY07 President's Budget	4.851	15.161	5.631
Total Adjustments	-1.201	-0.231	-10.107

Summary of Adjustments:			
Inflation	0.000	0.000	0.025
Fuel Rates	0.000	0.000	0.005
Pay Rates	0.000	0.000	0.004
Programmatic Changes	-1.201	-0.231	-10.141
Subtotal	-1.201	-0.231	-10.107

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

UNCLASSIFIED

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604601N, Mine Development	PROJECT NUMBER AND NAME 0267, Mine Development																	
(U) C. Accomplishments/Planned Program																			
<table border="1"><thead><tr><th></th><th></th><th>FY 05</th><th>FY 06</th><th>FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td>3.471</td><td>12.486</td><td>3.993</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		3.471	12.486	3.993	RDT&E Articles Quantity				
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Accomplishments/Effort/Subtotal Cost		3.471	12.486	3.993															
RDT&E Articles Quantity																			
<div><p><u>Product Development:</u> FY 2005 PLANS (\$2.939) Hardware Development: Initiate 2010 Mine design and development. (\$0.532) System Engineering: Initiate development of Concept of Operations and conduct other tactical analysis modeling and simulation in support of 2010 Mine development.</p><p>FY 2006 PLANS * (\$12.486) System Engineering: Continue development of Concept of Operations and conduct other tactical analysis modeling and simulation in support of 2010 Mine development.</p><p>FY 2007 PLANS (\$3.993) System Engineering: Continue development of Concept of Operations and other tactical analysis modeling and simulation in support of 2010 Mine development. Continue System Development and Demonstration. Begin development fo aircraft certification for Quickstrike Mod 3.</p><p>* During the PR07 process, the decision was made to delay the development effort for the 2010 mines in order to fund higher priority items. The decision was made too late to affect a change to FY06 budgeted funds. A BTR is in process to reprogram \$3.078M from this PE to PE0603502N, Project 0260 for the Remote Minehunting Program.</p></div>																			

R-1 SHOPPING LIST - Item No. 119

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 2 of 9)

UNCLASSIFIED

UNCLASSIFIED

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		FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		1.237	1.275	1.485															
RDT&E Articles Quantity																			
<div>Development Support: FY 2005 PLANS (\$1.158) Software Development: Continue development of target detection algorithms and PC-based, MEDAL-compliant TDA for minefield planning. (\$0.079) Integrated Logistics Support (ILS). FY 2006 PLANS (\$1.145) Software Development: Continue development of algorithms (target detection) for mini-subcs, HSV/SWATH ships, and MCM ships. Continue development of PC-based, MEDAL-compliant TDAs for minefield planning. (\$0.130) Integrated Logistic Support (ILS). FY 2007 PLANS (\$1.336) Software Development: Continue development of algorithms (target detection) for mini-subcs, HSV/SWATH ships, and MCM ships for Quickstrike Mod 3. Continue development of PC-based, MEDAL-compliant TDAs for minefield planning. (\$0.149) Integrated Logistic Support (ILS).</div>																			

R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 9)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604601N, Mine Development	PROJECT NUMBER AND NAME 0267, Mine Development																	
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RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 10px; min-height: 300px;"><p><u>Management:</u> FY 2005 PLANS Program Management Support.</p> <p>FY 2006 PLANS Program Management Support.</p> <p>FY 2007 PLANS Program Management Support.</p></div>																			
<table style="width: 100%;"><tr><td style="width: 30%;">TOTAL</td><td style="width: 15%;">FY 05 4.851</td><td style="width: 15%;">FY 06 15.161</td><td style="width: 15%;">FY 07 5.631</td></tr></table>					TOTAL	FY 05 4.851	FY 06 15.161	FY 07 5.631											
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R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 4 of 9)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604601N, Mine Development		PROJECT NUMBER AND NAME 0267, Mine Development			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
Line 323100, WPN									
QS Mod 3	2.952	2.978	3.103						
2010 Mine Replacement	0.000	0.000	0.000						
Total	2.952	2.978	3.103						

(U) E. ACQUISITION STRATEGY:

NSWC PC, Panama City FL is teamed with other Navy activities and various contractors to design and develop the 2010 Mine as a replacement for the Mine MK56. Procurement is scheduled to start in FY11.

R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2006				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-5			0604601N, Mine Development			0267, Mine Development								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WX	NWSC-PC	106.622			2.939	12/04	11.059	12/05	3.000	12/06	Continuing	Continuing	N/A
Ancillary Hardware Development			2.158										2.158	N/A
Ship Suitability	WX	NWSC-PC	1.935			0.532	12/04	1.427	12/05	0.993	12/06	Continuing	Continuing	N/A
GFE			4.790										4.790	N/A
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Product Development			115.505			3.471		12.486		3.993		Continuing	Continuing	
Remarks:														
Software Development	WX	Various	5.467			1.158	12/04	1.145	12/05	1.336	12/06	Continuing	Continuing	N/A
Integrated Logistics Support	WX	NWSC-PC	0.320			0.079	12/04	0.130	12/05	0.149	12/06	Continuing	Continuing	N/A
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Support			5.787			1.237		1.275		1.485		Continuing	Continuing	
Remarks:														

R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

Exhibit R-2a, RD TEN Project Justification
(Exhibit R-2a, page 6 of 9)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2006				
APPROPRIATION/BUDGET ACTIVITY RD&E, N / BA-5			PROGRAM ELEMENT 0604601N, Mine Development			PROJECT NUMBER AND NAME 0267, Mine Development								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NWSC-PC	15.833									0.000	15.833	N/A
												0.000	0.000	N/A
												0.000	0.000	
												0.000	0.000	
												0.000	0.000	
												0.000	0.000	
												0.000	0.000	
Subtotal T&E			15.833			0.000		0.000		0.000		Continuing	Continuing	
Remarks:														
Government Engineering Support			35.599									0.000	35.599	N/A
Program Management Support	Various	Various	0.889			0.133	12/04	1.390	12/05	0.143	12/06	Continuing	Continuing	N/A
Travel	PD	NAVSEA	0.010			0.010	12/04	0.010	12/05	0.010	12/06	Continuing	Continuing	N/A
												0.000	0.000	
												0.000	0.000	
												0.000	0.000	
Subtotal Management			36.498			0.143		1.400		0.153		Continuing	Continuing	
Remarks:														
Total Cost			173.623			4.851		15.161		5.631		Continuing	Continuing	
Remarks:														

R-1 SHOPING LIST - Item No. 119

UNCLASSIFIED

Exhibit R-2a, RD&E Project Justification
(Exhibit R-2a, page 7 of 9)

UNCLASSIFIED

EXHIBIT R-4, Schedule Profile																			DATE: February 2006																			
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT										R-1 ITEM NOMENCLATURE																		
RDT& E, N/BA-5										0604601N, Mine Development										0267, Mine Development																		
E. Schedule Profile																																						
MINE DEVELOPMENTS PROGRAM SCHEDULE																																						
					FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				FY 2010				FY 2011									
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4						
Events																																						
TDA Design/Development																																						
TDA Verification/Validation																																						
Algorithm Design/Development																																						
Algorithm Verification/Validation																																						
2010 Mine Analysis of Alternatives																																						
2010 Mine Requirements Analysis and Component Development																																						
2010 Mine Design/Development																																						
2010 Mine Production																																						

R-1 SHOPPING LIST - Item No. 119

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 9 of 9)

R-1 SHOPPING LIST - Item No. 119