

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5			R-1 ITEM NOMENCLATURE 0604601N/MINE DEVELOPMENT				
COST (In Millions)			FY 2008	FY 2009	FY 2010		
Total PE Cost			2.030	1.999	2.249		
0267 / MINE IMPROVEMENTS			2.030	1.999	2.249		
<p>A. MISSION DESCRIPTION: (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>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; and (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields.</p> <p>Data Recorders: Mine data recorders record mine target detection and mine fire data during in-water reliability testing. Current recorders are no longer supportable and cannot be used with the Quickstrike Mod 3. New recorders will work with the programmable Target Detecting Device MK 71 used in the Mod 3. They will support in-water testing of all in-service Quickstrike Mods (0, 1, and 3)</p> <p>Remote Control (RECO): Provide on-way Remote Control of Quickstrike Mine MK 65. Commands will be Arm, Sterilize and Self Destruct. RECO mines can be planted before a conflict begins and armed if required. Sterilize or self destruct commands will neutralize the minefield as soon as hostilities are over. Work includes development of transmitters to communicate with the mines.</p>							

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EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION) **DATE**
May 2009

APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE**
RD TEN/BA 5 **0604601N/MINE DEVELOPMENT**

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY 2010
FY09 President's Budget	2.048	2.008	2.277
FY10 President's Budget	2.030	1.999	2.249
Total Adjustments	-0.018	-0.009	-0.028
(U) Summary of Adjustments			
Congressional Rescissions			
Congressional Adjustments			
SBIR/STTR/FTT Assessment	-0.018		
Program Adjustments			
Rate/Misc Adjustments		-0.009	-0.028
Total	-0.018	-0.009	-0.028

C. OTHER PROGRAM FUNDING SUMMARY:

To Total

Line Item No. and Name	FY 2008	FY 2009	FY 2010						Total Cost
WPN 3231	3.214	3.496	4.680						11.390

D. ACQUISITION STRATEGY:

The Target Detecting Device (TDD) Mk 71 Mod 1 was modified by the TDD Adapter Mk 157 - used in Quickstrike Mk 65 Mod 3 kits, the Safe and Arming Device Mk 75, TDD Adapter Mk 163, and Lithium Battery Mk 176 - used in the Quickstrike Mk 62/63 Mod 3 kits.

E. MAJOR PERFORMERS:

Major performers are NSWC PC, NUWC Keyport, NSWC IH, and SAIC.

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604601N/MINE DEVELOPMENT			PROJECT NUMBER AND NAME 0267/MINE IMPROVEMENTS		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	2.030	1.999	2.249				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>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; and (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields.</p> <p>Data Recorders: Mine data recorders record mine target detection and mine fire data during in-water reliability testing. Current recorders are no longer supportable and cannot be used with the Quickstrike Mod 3. New recorders will work with the programmable Target Detecting Device MK 71 used in the Mod 3. They will support in-water testing of all in-service Quickstrike Mods (0, 1, and 3)</p> <p>Remote Control (RECO): Provide on-way Remote Control of Quickstrike Mine MK 65. Commands will be Arm, Sterilize and Self Destruct. RECO mines can be planted before a conflict begins and armed if required. Sterilize or self destruct commands will neutralize the minefield as soon as hostilities are over. Work includes development of transmitters to communicate with the mines.</p>							

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B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
		FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost		1.490	1.448	1.679
RDT&E Articles Quantity		0	0	0
Development Support:				
FY 2008-2011 PLANS:				
Software Development: Continue initial development of the High Speed Vessels/Shallow Water Twin Hull (HSV/SWATH) algorithm for the Quickstrike Mod 3 (Target Detecting Device Mk 71 Mod 1). Conduct in-water testing of the Air Cushioned Vehicle algorithm and HSV/SWATH algorithm. Complete generating operational data (OPDATA) for the Fast Patrol Boat and large ship algorithms for minefield planning, and begin generating OPDATA for the Air Cushioned Vehicle algorithm. Generate operational data for the Air Cushioned Vehicle algorithm for minefield planning. Continue the second phase of development for the ForceNet-compliant Tactical Decision Aid for minefield planning in MEDAL/GCCS-M, to pass minefield plans directly to ForceNet target and aircraft-mission planning software. Integrated Logistic Support (ILS).				
		FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost		0.470	0.484	0.500
RDT&E Articles Quantity		0	0	0
Product Development:				
FY 2008 PLANS:				
System Engineering: Perform flight testing leading to aircraft certification for Quickstrike Mod 3.				
FY 2009 PLANS:				
System Engineering: Continue to perform flight testing leading to aircraft certification for Quickstrike Mod 3.				
FY2010 PLANS:				
System Engineering: Continue to perform flight testing leading to aircraft certification for Quickstrike Mod 3.				

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604601N/MINE DEVELOPMENT	PROJECT NUMBER AND NAME 0267/MINE IMPROVEMENTS		
		FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost		0.070	0.067	0.070
RDT&E Articles Quantity		0	0	0
Management: FY 2008 PLANS: Program Management Support and Travel FY 2009 PLANS: Program Management Support and Travel FY2010 PLANS: Program Management Support and Travel				

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EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS										DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604601N/MINE DEVELOPMENT					PROJECT NUMBER AND NAME 0267/MINE IMPROVEMENTS					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)			FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date		Total Cost (\$000)	Target Value of Contract
Primary Hardware Development	WX	NSWC PC	111.099			0.484	OCT-08	0.500	OCT-09		112.083	0.000
Ancillary Hardware Development			2.158			0.000		0.000			2.158	0.000
Ship Suitability	WX	NSWC PC	2.467			0.000		0.000			2.467	0.000
GFE			4.790			0.000		0.000			4.790	0.000
Subtotal Product Development			120.514			0.484		0.500			121.498	0.000
Remarks:												
Software Development	WX	Various	12.848			1.428	OCT-08	1.658	OCT-09		CONT	0.000
Integrated Logistics Support	WX	NSWC PC	0.539			0.020	OCT-08	0.021	OCT-09		0.580	0.000
Subtotal Support Costs			13.387			1.448		1.679			CONT	0.000
Remarks:												
Development Test & Evaluation	WX	NSWC PC	17.916			0.000		0.000			17.916	0.000
Subtotal Test and Evaluation			17.916			0.000		0.000			17.916	0.000
Remarks:												
Government Engineering Support			35.599			0.000		0.000			35.599	0.000
Program Management Support	Various	Various	1.666			0.062	OCT-08	0.065	OCT-09		1.793	0.000
Travel	PD	NAVSEA	0.038			0.005	OCT-08	0.005	OCT-09		0.048	0.000
Subtotal Management Services			37.303			0.067		0.070			37.440	0.000
Remarks:												
Total Cost			189.120			1.999		2.249			CONT	0.000

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EXHIBIT R-4, SCHEDULE PROFILE

DATE

May 2009

APPROPRIATION/BUDGET ACTIVITY
RD TEN/BA 5

PROGRAM ELEMENT NUMBER AND NAME
0604601N/MINE DEVELOPMENT

PROJECT NUMBER AND NAME
0267/MINE IMPROVEMENTS

Mine Development Program Schedule

Fiscal Year	FY08				FY09				FY10																		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4															
Minefield Planning Tactical Decision Aid Improvements	██████████				██████████				██████████																		
Quickstrike Mod 3 Aircraft Certification	██████████				██████████				██████████																		
Quickstrike Mod 3 Algorithm Development & Testing	██████████				██████████				██████████																		

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EXHIBIT R-4a, SCHEDULE DETAIL	DATE May 2009
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APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604601N/MINE DEVELOPMENT	PROJECT NUMBER AND NAME 0267/MINE IMPROVEMENTS
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Schedule Profile	FY 2008	FY 2009	FY 2010				
Minefield Planning Tactical Decision Aid Improvements	1Q-4Q	1Q-4Q	1Q-4Q				
Quickstrike Mod 3 Aircraft Certification	1Q-4Q	1Q-4Q	1Q-4Q				
Quickstrike Mod 3 Algorithm Development and Testing	1Q-4Q	1Q-4Q	1Q-4Q				

