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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604601N: <i>Mine Development</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing
0267: <i>Mine Improvements</i>	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing

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; and (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields.

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).

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	5.455	3.933	3.450	-	3.450
Current President's Budget	4.399	3.933	8.335	-	8.335
Total Adjustments	-1.056	-	4.885	-	4.885
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.850	-			
• SBIR/STTR Transfer	-0.178	-			
• Program Adjustments	-	-	4.900	-	4.900
• Rate/Misc Adjustments	-	-	-0.015	-	-0.015
• Congressional General Reductions	-0.028	-	-	-	-
Adjustments					

Change Summary Explanation

Program Adjustments: FY13 +\$4,885K in Total Adjustments: Increase for Mine Warfare Wing Kit Demonstration proving Stand Off delivery and associated Aircraft Certification aboard the F/A-18 and B-52 (+\$4,912K), and Decrease for Misc Adjustments (-\$0.027K).

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy								DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601N: Mine Development				PROJECT 0267: Mine Improvements			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0267: Mine Improvements	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Product Development	2.825	2.299	4.144
Articles:	0	0	0
FY 2011 Accomplishments: Software Development: Modified existing algorithms to implement improvements. Prepared data for minefield planners to use against additional threats. Continued analysis of Quickstrike effectiveness against future threats. Gave presentation to joint Navy and Air force fuze safety board, and respond to action items from the board. Began design modifications of mine data recorders used for in-water reliability testing for use with Quickstrike MK62/63 Mod 3. Conducted a feasibility study for Quickstrike MK 65 Mod 4.			
FY 2012 Plans: Software Development: Modify algorithms based on testing results. Begin generating operational data (OPDATA) for the Fast Patrol Boat, Air Cushioned Vehicle, and large ship algorithms. Continue to work action items assigned by Navy and Air Force fuze safety boards. Continue modifications to mine data recorder design. Work with P-8 Aircraft mission planning software designers to include transfer of MEDAL data to their system.			
FY 2013 Plans: Software Development: Modify algorithms based on testing results. Continue generating OPDATA for fast patrol boat, air cushioned vehicle, and large ship algorithms. Continue to work action items assigned by Navy and Air Force fuse safety boards.			

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Complete modification to mine data recorder design. Continue to work with P-8 Aircraft mission planning software designers to include transfer of MEDAL data to their system. Perform trade study for mine standoff delivery (Wing Kit Development) capability and develop modification to existing system.				
Title: Support FY 2011 Accomplishments: Integrated Logistics Support FY 2012 Plans: Integrated Logistics Support FY 2013 Plans: Integrated Logistics Support		Articles: 0.012 0	0.050 0	0.100 0
Title: Test and Evaluation FY 2011 Accomplishments: Conducted one in-water tests of developed algorithms and begin analysis. Provided engineering and material support to NAVAIR and Air Force for analysis and testing of mines with Quickstrike MK62/63 Mod 3. FY 2012 Plans: Conduct second in-water tests of developed algorithms and begin analysis. Continue Aircraft certification. FY 2013 Plans: Conduct one in-water test to determine baseline reliability of the Quickstrike MK 65 Mod 3 system. Continue Aircraft certification (to include F/A-18 and B-52). Perform test and evaluation on the MINES standoff (Wing Kit) capabiltiy.		Articles: 1.315 0	1.328 0	3.591 0
Title: Management: FY 2011 Accomplishments: Program Management Support and Travel. FY 2012 Plans: Program Management Support and Travel FY 2013 Plans:		Articles: 0.247 0	0.256 0	0.500 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Program Management Support and Travel			
Accomplishments/Planned Programs Subtotals	4.399	3.933	8.335

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN 3231: <i>Quickstrike Mine</i>	6.808	5.770	6.852	0.000	6.852	9.625	9.397	9.526	9.694	0.000	62.338

D. Acquisition Strategy

Procurement of Target Detecting Device (TDD) Mk 71 and associated components.

E. Performance Metrics

Successfully develop new mine data recorders to work with the programmable TDD MK 71 used in the Mod 3.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604601N: Mine Development				PROJECT 0267: Mine Improvements					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSWC PC:WX	112.801	0.653	Nov 2011	2.844	Nov 2012	-		2.844	Continuing	Continuing	Continuing
Ancillary Hardware Development	C/CPAF	Various:Various	2.658	0.500	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Ship Suitability	WR	NSWC PC:WX	2.467	-		-		-		-	Continuing	Continuing	Continuing
GFE	C/CPAF	Various:Various	4.790	-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPAF	Various:WX	15.449	1.146	Nov 2011	1.100	Nov 2012	-		1.100	0.000	17.695	
Future Mines	C/CPAF	Various:Various	-	-	Nov 2011	-		-		-	0.000	0.000	
Subtotal			138.165	2.299		4.144		-		4.144			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NSWC PC:WX	0.572	0.050	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
Subtotal			0.572	0.050		0.100		-		0.100			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NSWC PC:WX	20.231	1.328	Nov 2011	3.591	Nov 2012	-		3.591	0.000	25.150	
Subtotal			20.231	1.328		3.591		-		3.591	0.000	25.150	

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Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	C/CPAF	Various:Various	35.831	0.240	Nov 2011	0.500	Nov 2012	-		0.500	0.000	36.571	
Program Management Support	C/CPAF	Various:Various	0.728	-	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Travel	Various	NAVSEA:PD	0.058	0.016	Nov 2011	-	Nov 2012	-		-	Continuing	Continuing	Continuing
DAWDF	Various	Various:Various	0.010	-	Nov 2011	-		-		-	0.000	0.010	
Subtotal			36.627	0.256		0.500		-		0.500			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	195.595	3.933		8.335		-		8.335			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy			DATE: February 2012
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 0267</i>				
System Development: Minefield Planning Tactical Decision Aid Improvements:	1	2011	4	2017
System Development: Mine Data Recorder Development:	4	2011	3	2013
System Development: Mines Standoff Capability:	1	2013	4	2013
Test and Evaluation: Mines Standoff Capability:	2	2013	4	2013
Test and Evaluation: Quickstrike Mod 3 Aircraft Certification:	1	2011	4	2017
Test and Evaluation: Quickstrike Mod 3 Algorithm Development and Testing:	1	2011	4	2017
Production Milestones: Mine Data Recorder Production:	4	2013	3	2016