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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	1,036.876	126.760	190.622	168.040	-	168.040	160.298	129.481	135.865	127.865	Continuing	Continuing
0260: Remote Minehunting Systems	410.219	50.257	39.094	31.837	-	31.837	23.830	18.697	18.726	11.142	Continuing	Continuing
1233: Surface MCM Mid-life Upgrade	126.500	22.204	33.690	39.306	-	39.306	42.210	35.945	31.984	25.205	Continuing	Continuing
2094.: Unmanned Underwater Vehicle	0.000	0.000	36.773	24.164	-	24.164	26.483	34.888	54.634	60.485	Continuing	Continuing
2131: Assault Breaching System	442.056	42.657	59.648	58.789	-	58.789	53.584	33.642	24.463	24.874	Continuing	Continuing
3123: SMCM UUV	58.101	11.642	21.417	13.944	-	13.944	14.191	6.309	6.058	6.159	Continuing	Continuing
MDAP/MAIS Code(s): 286												
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
^{##} The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This program element provides resources for development of mine countermeasure systems to provide minehunting, minesweeping, and neutralization to counter known and projected mine threats. The mine countermeasures systems provide mobile, quick reaction forces capable of land or sea-based minehunting and minesweeping operations worldwide. Resources are for developing and deploying advanced mine-hunting and minesweeping systems and the intelligence and oceanographic capabilities that will enable mine warfare superiority. Tactics and techniques used vary across a diversity of environments and a diversity of threats, including both asymmetric and emerging. Resources provide for systems and support of mine warfare systems, maritime systems, and expeditionary systems to allow for continuous operations of the Navy's warships and support vessels, other military vessels, and commercial vessels. Core capabilities include forward presence, deterrence, sea control, power projection, maritime security, humanitarian assistance and disaster response to maintain freedom of the seas. Increased capability includes conducting minefield reconnaissance (mine density and location) at high area search rates, improving detection capability, decreasing sensor false alarm rates, reducing or eliminating post-mission analysis detect, classify, identify, decide time, improving neutralization time, improving network communications, automatic target recognition, and achieving in-stride detect-to-engage capability. Concept of operations includes development of cooperative, unmanned, modular systems; the establishment of a capable networked command and control systems; and standing up an accurate and interactive environmental system with the ability to form and disseminate a Common Environmental Picture. Efforts benefit the MCM force by transforming the Navy from the platform-centered legacy set of systems to a capability-centered force that is distributed, networked, and able to provide unique maritime influence and access across the entire maritime domain.												
The Surface Mine Countermeasures (SMCM) programs are platform independent and will provide detection, classification, localization, identification, neutralization, and influence clearance capabilities. Programs develop: (1) remote minehunting capability for surface platforms; (2) the integration and improvement of new and existing systems (3) support for systems which detect, localize, classify, identify, and neutralize all mine types across Mine Countermeasure (MCM) Avenger Class and												

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
1319: Research, Development, Test & Evaluation, Navy		PE 0603502N: Surface & Shallow Water MCM				
BA 4: Advanced Component Development & Prototypes (ACD&P)						
other platforms; (4) systems for neutralizing mines and light obstacles through the entire water column to include shallow water, very shallow water, surf zones, and beach landing craft zones in support of operations; (5) the integration of Unmanned Undersea Vehicles (UUVs) to meet Undersea Surveillance capabilities as well as other prioritized and enduring capabilities, requirements and gaps (6) and integrate hardware for experimental testing related to surface ship, aircraft, and other cross platform applications.						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		127.757	190.622	147.397	-	147.397
Current President's Budget		126.760	190.622	168.040	-	168.040
Total Adjustments		-0.997	0.000	20.643	-	20.643
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		0.949	0.000			
• SBIR/STTR Transfer		-1.946	0.000			
• Program Adjustments		0.000	0.000	21.212	-	21.212
• Rate/Misc Adjustments		0.000	0.000	-0.569	-	-0.569
Change Summary Explanation						
Program Adjustments:						
FY12 -\$997K Total adjustments; SBIR -\$1,946K and RMS Reprogramming +\$949K.						
FY14 \$20,643K in Total Program Adjustments; SQQ-94 MCM Trainer \$4,100K, USV Increment II \$4,200K, Persistent Littoral Undersea Surveillance (PLUS) \$3,200K, Assault Breaching System (ABS) -\$6,560K, LDUUV Realignment \$12,300K, UISS realignment \$4,145K, -173K POM Technical Adjustments						
Miscellaneous Adjustments: -\$569K in total adjustments.						

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				PROJECT			
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					PE 0603502N: Surface & Shallow Water MCM				0260: Remote Minehunting Systems			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0260: Remote Minehunting Systems	410.219	50.257	39.094	31.837	-	31.837	23.830	18.697	18.726	11.142	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Under Secretary of Defense, (USD, AT&L) Nunn-McCurdy Certification Acquisition Decision Memorandum (ADM) for the Remote Minehunting Systems (RMS) dated 1 June 2010 recertified and restructured the RMS Program. The Director, Cost Assessment and Program Evaluation (D, CAPE) approved the acquisition cost estimate for the restructured RMS program support and Remote Multi-Mission Vehicle (RMMV) Reliability Growth Program (RGP).

The RMS is a mine reconnaissance system designed for the detection, classification, identification, and localization of bottom and moored targets in shallow and deep water. RMS is a fully integrated system consisting of a semi-submersible Remote Multi-Mission Vehicle (RMMV) carrying a towed variable depth sensor, AN/AQS-20A. Line-Of-Sight (LOS) and Over-The-Horizon (OTH) telemetry provides vehicle Command and Control and mine reconnaissance sensor data transmission to/from a system aboard a Navy ship. RMS will provide the Navy the capability to keep ships and sailors out of the minefield. The RMS will be deployed from the Littoral Combat Ship as part of the ships' Mine Countermeasures (MCM) Mission Package (MP). RMS Integration with LCS will support the LCS MCM MP Initial Opeational Test and Evaluation (IOT&E) in FY14.

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

		FY 2012	FY 2013	FY 2014
Title: Product Development:		24.201	17.888	14.877
	Articles:	0	0	0
FY 2012 Accomplishments:				
- Completed Reliability Growth Program (RGP) Version 4.1 validation testing and demonstrated Mean Time Between Operational Mission Failure (MTBOMF) of 63 hours.				
- Conducted RGP V4.2 Design Review I & II.				
- Installed V4.2 change on one RMMV.				
- Completed RGP 4.2 integration testing on one RMMV.				
FY 2013 Plans:				
- Complete installation of RGP V4.2 on RMMVs.				
- Complete RGP V4.2 integration, verification and validation testing.				
- Conduct RMMV RGP V4.2 Gate Review.				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014	
<div>- Prepare and conduct RGP V4.2 Development Testing (DT IIG).</div> <div>- Complete Technical Data Package (TDP) for V4.1.</div> <div>- Start TDP for V4.2.</div> <div>- Demonstrate MTBOMF of 75 hours.</div> <div>FY 2014 Plans:</div> <div>- Complete Technical Data Package (TDP) for V4.2.</div>					
<div>Title: Support:</div> <div>Articles:</div> <div>FY 2012 Accomplishments:</div> <div>- Provided engineering, logistic and programmatic support for RMMV RGP.</div> <div>- Defined maintenance and supported improvements to better maintain the RMS onboard LCS.</div> <div>- Supported Design Review I & II.</div> <div>FY 2013 Plans:</div> <div>- Provide engineering, logistic and programmatic support for RMMV RGP.</div> <div>- Conduct Physical Configuration Audit (PCA).</div> <div>FY 2014 Plans:</div> <div>- Continue to provide engineering, logistic and programmatic support for the RMMV RGP.</div> <div>- Prepare for the Gate Review followed by the Milestone C DAB.</div> <div>- Begin preparations for FY15 Initial Operational Capability (IOC).</div>		7.840 0	7.135 0	5.458 0	
<div>Title: T&E:</div> <div>Articles:</div> <div>FY 2012 Accomplishments:</div> <div>- Completed Reliability Growth Program (RGP) Version 4.1 validation testing and demonstrated Mean Time Between Operational Mission Failure (MTBOMF) of 63 hours.</div> <div>- Completed RGP 4.2 integration testing on one RMMV.</div> <div>FY 2013 Plans:</div> <div>- Complete RGP V4.2 integration, verification and validation testing.</div> <div>- Prepare and conduct RGP V4.2 Development Testing (DT IIG).</div> <div>- Demonstrate MTBOMF of 75 hours.</div> <div>FY 2014 Plans:</div>		17.171 0	13.173 0	10.592 0	

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2012	FY 2013	FY 2014		
- Complete Technical Data Package (TDP) for V4.2.											
Title: Management:							1.045	0.898	0.910		
Articles:							0	0	0		
FY 2012 Accomplishments: - Provided program management and travel for RMMV V4.1 and V4.2 testing. - Conducted a Business Case Analysis for Full and Open Competition for the RMS Program Full Rate Production. - Conducted the Overarching Integrated Product Team (OIPT) and Defense Acquisition Board (DAB) In-Process Review (IPR). - Maintained oversight of the RGP and RMMV vehicle upgrades and testing.											
FY 2013 Plans: - Provide program management and travel for RMMV V4.2 testing. - Prepare for and conduct the OIPT/V4.2 Gate Review currently planned for 3rd QTR FY13. - Maintain oversight of the RGP and RMMV vehicle upgrades and testing to include development of the V4.2 TDP.											
FY 2014 Plans: - Provide program management support and travel in support of V6.0 Integration Testing. - Prepare for and conduct the OIPT Gate Review and MS C DAB currently planned for 3rd QTR FY14. - Maintain oversight of the RGP and RMMV vehicle upgrades and testing. - Prepare for development and release of the LRIP contract.											
Accomplishments/Planned Programs Subtotals							50.257	39.094	31.837		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN 1601: LCS MCM Mission Modules	0.000	0.000	0.000		0.000	33.299	61.050	58.605	58.458	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
At the conclusion of the Nunn-McCurdy certification process, an Acquisition Decision Memorandum (ADM) dated 01 Jun 2010 was issued by USD (AT&L) rescinding Milestone (MS) C and declaring the program as being post-MS B. A Reliability Growth Program is currently being conducted in accordance with the Acquisition Strategy that was approved September 2011. A DAB IPR will be conducted in 4th QTR FY12. Acquisition Strategy for the program is to conduct DT in FY13 and an OA in FY14 based on the RGP. The remaining RMMV vehicles will be upgraded by a separate contract action. MS C will be conducted in 3rd QTR FY14. A Low Rate Initial Production (LRIP) contract is planned to be awarded based on full and open competition in 4th QTR FY14. This contract will have an option for full rate production											

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<p>planned to be awarded in 4th QTR FY17. DT/Operational Testing (OT) will be conducted on the LRIP systems in early FY17. Exercise of that full rate production option will be based on a Full Rate Production Decision Review (FRPDR) planned for 4th QTR FY17.</p> <p><u>E. Performance Metrics</u></p> <ul style="list-style-type: none"> Obtained Final Nunn-McCurdy/2366b Certification Award RGP Completion Contract Conduct DAB IPR Award RMMV Upgrade Contract Complete RGP Complete DT/OA based on RGP FY14 Award LRIP contract with Options for Full Rate Production MS C FY14 Support LCS MCM MP IOT&E in FY14 Complete IOT&E based on LRIP early FY17 FRPDR FY17 		

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Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development & Integration 1	SS/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	97.283	21.458	Oct 2011	15.101	Oct 2012	12.270	Oct 2013	-		12.270	Continuing	Continuing	Continuing
Hardware Development & Integration 2	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	95.993	0.000		0.000		0.000		-		0.000	0.000	95.993	
Hardware Development & Integration	WR	NSWC, PC: PANAMA CITY, FL	7.140	2.743	Oct 2011	2.287	Oct 2012	1.607	Oct 2013	-		1.607	Continuing	Continuing	Continuing
Systems Engineering 1	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	5.465	0.000		0.000		0.000		-		0.000	0.000	5.465	
Systems Engineering 2	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	16.211	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering 3	WR	NSWC, PC: PANAMA CITY, FL	5.294	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Award Fees	SS/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	5.485	0.000		0.000		0.000		-		0.000	0.000	5.485	
Hardware Development & Integration	C/FFP	ARL/PSU:STATE COLLEGE/PA	0.505	0.000		0.500	Oct 2012	1.000	Oct 2013	-		1.000	0.000	2.005	
Subtotal			233.376	24.201		17.888		14.877		0.000		14.877			
Remarks															
ARL/PSU - Applied Reseach Laboratory - Pennsylvania State University															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development 1	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	7.092	0.000		0.000		0.000		-		0.000	0.000	7.092	

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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development 2	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	6.961	0.000		0.000		0.000		-		0.000	0.000	6.961	
Software Development 3	WR	NSWC, PC:RIVIERA BEACH, FL	2.142	0.000		0.000		0.000		-		0.000	0.000	2.142	
ILS 1	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	17.836	0.000		0.000		0.000		-		0.000	0.000	17.836	
ILS 2	SS/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	2.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Engineeing Support/ILS 3	WR	NSWC, PC:PANAMA CITY, FL	5.057	3.350	Oct 2011	3.800	Oct 2012	2.555	Oct 2013	-		2.555	Continuing	Continuing	Continuing
ILS 4	WR	VARIOUS:VARIOUS	1.125	0.000		0.000		0.000		-		0.000	0.000	1.125	
Ship Integration 1	SS/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	1.258	0.000		0.000		0.000		-		0.000	0.000	1.258	
Ship Integration 2	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	11.938	0.000		0.000		0.000		-		0.000	0.000	11.938	
Ship Integration 3	Various	VARIOUS:VARIOUS	13.714	0.000		0.000		0.000		-		0.000	0.000	13.714	
Engineering Support	WR	NSWC Corona:Corona, CA	0.000	0.110	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Engineering Support	WR	NUWC, NPT:Newport, RI	0.000	1.789	Oct 2011	0.600	Oct 2012	0.618	Oct 2013	-		0.618	Continuing	Continuing	Continuing
Engineering Support	WR	NUWC, KPT:Keyport, WA	0.000	0.615	Oct 2011	0.733	Oct 2012	0.875	Oct 2013	-		0.875	Continuing	Continuing	Continuing
ILS Support	WR	NAWCAD:Patuxent, MD	0.000	0.312	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Engineering Support	WR	NSWC Carderock:Carderock, MD	0.000	0.453	Oct 2011	0.775	Oct 2012	0.660	Oct 2013	-		0.660	Continuing	Continuing	Continuing

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Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sandia labs - Reliability Engineering	WR	NSWC, PC:PANAMA CITY, FL	0.000	1.211	Oct 2011	1.227	Oct 2012	0.750	Oct 2013	-		0.750	Continuing	Continuing	Continuing
Subtotal			69.123	7.840		7.135		5.458		0.000		5.458			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation 1	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	18.470	0.000		0.000		0.000		-		0.000	0.000	18.470	
Developmental Test & Evaluation 2	SS/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	27.671	16.867	Oct 2011	12.865	Oct 2012	10.272	Oct 2013	-		10.272	Continuing	Continuing	Continuing
Developmental Test & Evaluation 3	WR	NSWC, PC:PANAMA CITY, FL	13.994	0.000		0.000		0.000		-		0.000	0.000	13.994	
Developmental Test & Evaluation 4	WR	COTF:NORFOLK, VA	0.300	0.304	Oct 2011	0.308	Oct 2012	0.320	Oct 2013	-		0.320	Continuing	Continuing	Continuing
Developmental Test & Evaluation 5	WR	VARIOUS:VARIOUS	5.298	0.000		0.000		0.000		-		0.000	0.000	5.298	
Subtotal			65.733	17.171		13.173		10.592		0.000		10.592			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPIF	LOCKHEED MARTIN:RIVIERA BEACH, FL	6.569	0.000		0.000		0.000		-		0.000	0.000	6.569	
Government Engineering Support1	WR	NSWC, PC:PANAMA CITY, FL	22.996	0.000		0.000		0.000		-		0.000	0.000	22.996	

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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support2	WR	NSWC, PC: PANAMA CITY, FL	0.237	0.000		0.000		0.000		-		0.000	0.000	0.237	
Program Management Support	C/CPFF	CACI: WASHINGTON, DC	4.358	1.000	Oct 2011	0.853	Oct 2012	0.865	Oct 2013	-		0.865	Continuing	Continuing	Continuing
Travel	WR	NAVSEA: WNY, DC	0.666	0.045	Oct 2011	0.045	Oct 2012	0.045	Oct 2013	-		0.045	Continuing	Continuing	Continuing
SBIR Assessment	WR	VARIOUS: VARIOUS	7.161	0.000		0.000		0.000		-		0.000	0.000	7.161	
Subtotal			41.987	1.045		0.898		0.910		0.000		0.910			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			410.219	50.257		39.094		31.837		0.000		31.837			
Remarks															

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PE 0603502N: *Surface & Shallow Water MCM*
Navy

R-1 Line #34

[illegible]

1319: *Research, Development, Test & Evaluation, Navy*
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE

PE 0603502N: *Surface & Shallow Water*
MCM

PROJECT	
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0260: Remote Minehunting Systems

[illegible]

2014PB - 0603502N - 0260

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 0260: <i>Remote Minehunting Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0260				
Milestones: Milestone C	3	2014	3	2014
Milestones: Full Rate Production Decision	4	2017	4	2017
Events: Technical Evaluation (TECHEVAL)	2	2017	2	2017
Events: Operational Evaluation (OPEVAL)	3	2017	3	2017
Events: Design Review II	3	2012	3	2012
Events: Initial Operating Capability (IOC)	2	2015	2	2015
Events: LCS MCM MP IOT&E	2	2014	3	2014
Events: Contract Awards: RGP Continuation Contract	1	2012	1	2012
Events: Contract Awards: LRIP Award with FRP options	1	2015	1	2015
Events: Reliability Growth Program: Reliability Growth Program	1	2012	3	2014
Events: Reliability Growth Program: OA (OT-B1)	2	2014	2	2014
Events: Reliability Growth Program: DT (DT-IIG)	4	2013	4	2013
Deliveries: 2 LRIPs	2	2017	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
1233: Surface MCM Mid-life Upgrade	126.500	22.204	33.690	39.306	-	39.306	42.210	35.945	31.984	25.205	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This project provides resources for development, improvement and integration of MCM systems. A description of the major planned programs include the following:												
1) AN/SQQ-32(V)4 High-Frequency, Wide Band (HFWB) is a technology upgrade to the AN/SQQ-32 Towed Body which will incorporate HFWB technology into the detection sonar to address performance deficiencies against new mine threats in the littorals. This upgrade will be installed on MCM-1 Class ships with the AN/SQQ-32(V)3 and will develop new transducer modules, fiber optic cable and modify topside processing and display software. 2) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System - Maritime (GCCS-M). MEDAL provides mine and mine warfare planning and evaluation tools and databases to the MCM Commander. 3) Develop and implement Mine Countermeasures Commander's Estimate of the Situation (MCM CES). 4) Unmanned Surface Vehicle (USV) Flight 1 includes the Unmanned Surface Sweep System (US3),a magnetic/acoustic sweep system developed to sweep acoustic/magnetic influence mines, that when integrated with an unmanned surface vehicle (USV) becomes the Unmanned Influence Sweep System (UISS) deployed from the Littoral Combat Ship (LCS); 5) Multi-Function USV Flight 2 integrates a minehunting sensor with the UISS vehicle. The added capability allows a common USV to conduct minehunting and minesweeping missions. 6) Mine Neutralization System (MNS) Seafox on the MCM Class ships. MNS is the replacement to the existing AN/SLQ-48 Mine Neutralization System.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: MCM CES/PRODUCT DEVELOPMENT:									0.110	0.125	0.125	
									0	0	0	
FY 2012 Accomplishments:												
Conducted Contractor Testing of MEDAL EA Iteration 5 and MCM CES software. Participated in Trident warrior 12 exercise with MEDAL EA Iteration 5 and MCM CES software (limited fielding). Completed Iteration 6 software development. Initated (software specifications) for Iteration 7. Conducted CANES/ISNS and LCS Mission Package integration activities. Developed MEDAL EA training job aids. Developed test plans.												
FY 2013 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 1233: Surface MCM Mid-life Upgrade		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014	
Complete development of MEDAL EA Iteration 7. Conduct integration activities with CANES/ISNS and LCS Mission Package. Initiate Information Assurance documentation for Authority to Operate on Navy networks. Conduct series of Development Tests (DT). Conduct OA planning for FY14. Develop MEDAL EA training job aids. FY 2014 Plans: Continue integration activities with CANES/ISNS and LCS Mission Package. Conduct series of Development Tests (DT). Develop MEDAL EA/CES training job aids. Requirements analysis for Running Estimate, Stage Based Planning, path optimization, and performance paratmeters.					
Title: MCM CES/SUPPORT: FY 2012 Accomplishments: Continued introduction of capability and Planning on Risk (PoR) functionality via a limited fielding to Fleet Users including Mine Counter Measures Squadrons (MCMRONS) and Naval Mine and Anti Submarine Warfare Command (NMAWC). FY 2013 Plans: Continue introduction of capability and Planning on Risk (PoR) functionality via a limited fielding to Fleet Users including Mine Counter Measures Squadrons (MCMRONS) and Naval Mine and Anti Submarine Warfare Command (NMAWC). FY 2014 Plans: Continue introduction of capability and Planning on Risk (PoR) functionality via a limited fielding to Fleet Users including Mine Countermeasures Squadrons (MCMRONS) and Naval Mine and Anti Submarine Warfare Command (NMAWC).		0.063 Articles: 0	0.095 0	0.095 0	
Title: MCM CES/TEST AND EVALUATION: FY 2012 Accomplishments: Developed Test plan and conduct initial user evaluation during Trident Warrior 12. FY 2013 Plans: Test Planning for MEDAL EA DT/OA in FY14. FY 2014 Plans: Execution of MEDAL EA DT/OA.		0.139 Articles: 0	0.159 0	0.151 0	
Title: MCM CES/MANAGEMENT: FY 2012 Accomplishments:		0.031 Articles: 0	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 1233: Surface MCM Mid-life Upgrade		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Program management shall include overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and adequate coordination with MEDAL. Other PM tasking will include briefings, demonstrations, and project planning as required.				
Title: HFWB/PRODUCT DEVELOPMENT: Articles: FY 2012 Accomplishments: System engineering, requirements analysis, design and development for AN/SQQ-32(V)4 HFWB P3I effort. FY 2013 Plans: Continue System engineer, requirements analysis and design for AN/SQQ-32(V)4 HFWB P3I effort. FY 2014 Plans: Continue System engineer, requirements analysis and design for AN/SQQ-32(V)4 HFWB P3I effort.		1.268 0	1.378 0	1.233 0
Title: HFWB/SUPPORT: Articles: FY 2012 Accomplishments: Software requirements, configuration and integraton for AN/SQQ-32(V)4 HFWB P3I effort. FY 2013 Plans: Continue software requirements, configuration, and software integration for AN.SQQ-32(V)4 HFWB P3I effort. FY 2014 Plans: Continue software requirements, configuration, and software integration for AN.SQQ-32(V)4 HFWB P3I through the sensor.		0.142 0	0.370 0	0.394 0
Title: HFWB/TEST AND EVALUATION: Articles: FY 2012 Accomplishments: Perform Lab and at sea testing for AN/SQQ-32(V)4 HFWB P3I through the sensor effort. FY 2013 Plans: Continue to perform Lab and at sea testing for AN/SQQ-32(V)4 HFWB P3I effort. FY 2014 Plans: Perform Lab and at sea testing for AN/SQQ-32(V)4 HFWB P3I effort.		0.100 0	0.350 0	0.310 0
Title: HFWB/MANAGEMENT: Articles:		0.000	0.117 0	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 1233: Surface MCM Mid-life Upgrade		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
FY 2013 Plans: FY13 provide program management support and travel for AN/SQQ-32(V)4 HFWB Upgrade program				
Title: MEDAL/PRODUCT DEVELOPMENT: FY 2012 Accomplishments: Conducted Contractor Testing of MEDAL EA Iteration 5 and MCM CES software. Participated in Trident Warrior 12 exercise with MEDAL EA Iteration 5 and MCM CES software (limited fielding). Completed Iteration 6 software development. Initiated (software specifications) for Iteration 7. Conducted CANES/ISNS and LCS Mission Package integration activities. Develop MEDAL EA training job aids. FY 2013 Plans: Complete development of MEDAL EA Iteration 7. Conduct integration activities with CANES/ISNs and LCS Mission Package. Initiate Information Assurance documentation for Authority to operate on navy networks. Conduct series of Development tests (DTs). Conduct OA planning for FY14. Develop MEDAL EA training aids. FY 2014 Plans: Conduct Test & Evaluation of MINEnet Tactical (MEDAL EA). Continue integration activities with CANES/ISNs and LCS Mission Package. Continue to develop Information Assurance documentation for Authority to operate on navy networks. Conduct series of Development tests (DTs). Conduct OA planning for FY14. Initiate planning for the development of MEDAL EA Increment 2. Initiate integration of MEDAL EA course curriculum.		Articles: 5.248 0	5.839 0	4.333 0
Title: MEDAL/SUPPORT: FY 2012 Accomplishments: Oversaw technical integration of developed algorithms and models that have demonstrated their effectiveness with respect to their objectives. Supported effort to include communication with activities such as applied labs, government activities, and designated contractors. Assisted in providing the speed, agility, adaptability, and flexibility required for modern MCM operations. FY 2013 Plans: Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness with respect to their objectives. Support effort to include communication with activities such as applied labs, government activities, and designated contractors. Assist in providing the speed, agility, adaptability, and flexibility required for modern MCM operations. FY 2014 Plans:		Articles: 0.356 0	0.550 0	0.550 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 1233: Surface MCM Mid-life Upgrade		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness with respect to their objectives. Support effort to include communication with activities such as applied labs, government activities, and designated contractors. Assist in providing the speed, agility, adaptability, and flexibility required for modern MCM operations. Prepare for fielding of MEDAL EA; IOC scheduled for Aug 2014.				
Title: MEDAL/TEST AND EVALUATION: Articles: FY 2012 Accomplishments: Completed Iteration 5 Contractor testing. Participated in Trident Warrior 12 (Contractor Test) for initial user evaluation. Developed DT test plans for FY13. FY 2013 Plans: Continue planning and conduct DT for Surface MCM. Continue System Integration testing activities with CANES and ISNS. Continue planning for subsequent FY14 DT and OA events. FY 2014 Plans: Complete DT for Surface MCM. Continue System Integration testing activities with CANES and ISNS. Continue planning for subsequent OA events.		1.650 0	2.000 0	1.960 0
Title: MEDAL/MANAGEMENT: Articles: FY 2012 Accomplishments: Provided program management support and travel for MEDAL program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. As part of the systems engineering element of PM, communicate and coordinate with MIW C4ISR, ICWS, Organic MCM, Mainstreaming MIEW, Expeditionary Warfare C4ISR, tactics development, long term planning, Naval Special Clearance Team (NSCT-1) Assault Breaching Systems of Systems (ABSoS), LCS, and other programs as they relate to MEDAL and MIW Mission Planning, Evaluation, and C4ISR. Other PM tasking to include briefings, demonstrations, and project planning as required. FY 2013 Plans: Provide program management support and travel for MEDAL program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. As part of the systems engineering element of PM, communicate and coordinate with MIW C4ISR, ICWS, Organic MCM, Mainstreaming MIEW, Expeditionary Warfare C4ISR, tactics development, long term planning, Naval Special Clearance Team (NSCT-1) Assault Breaching Systems of		0.607 0	0.768 0	0.759 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 1233: <i>Surface MCM Mid-life Upgrade</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Systems (ABSoS), LCS, and other programs as they relate to MEDAL and MIW Mission Planning, Evaluation, and C4ISR. Other PM tasking to include briefings, demonstrations, and project planning as required.				
FY 2014 Plans: Provide program management support and travel for MEDAL program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. As part of the systems engineering element of PM, communicate and coordinate with MIW C4ISR, ICWS, Organic MCM, Mainstreaming MIEW, Expeditionary Warfare C4ISR, tactics development, long term planning, Naval Special Clearance Team (NSCT-1) Assault Breaching Systems of Systems (ABSoS), LCS, and other programs as they relate to MEDAL and MIW Mission Planning, Evaluation, and C4ISR. Other PM tasking to include briefings, demonstrations, and project planning as required.				
Title: USV Flight 1 (US3)/PRODUCT DEVELOPMENT: FY 2012 Accomplishments: Continued Milestone B documentation. Continued Risk Reduction efforts. FY 2013 Plans: Continue Milestone B documentation. Continue Risk Reduction efforts. FY 2014 Plans: Conduct MS B. Begin Engineering and Manufacturing Design (E&MD) phase. Design and build Engineering Development Model (EDM). Develop software and hardware interfaces. Conduct Preliminary Design Review (PDR). Conduct Critical Design Review (CDR)		7.877 0	10.488 0	10.059 0
Articles:				
Title: USV Flight 1 (US3)/SUPPORT: FY 2012 Accomplishments: Continued development of Milestone B documentation. FY 2013 Plans: Complete Milestone B documentation. FY 2014 Plans: Commence Engineering and ILS support for E&MD phase efforts.		1.273 0	4.339 0	3.000 0
Articles:				
Title: USV Flight 1 (US3)/TEST AND EVALUATION: Articles:		1.800 0	1.972 0	4.245 0

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM		PROJECT 1233: Surface MCM Mid-life Upgrade
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Continued development of the TEMP. Commence technology development testing and UISS Demonstration Testing.				
FY 2013 Plans: Continued development of the TEMP. Continue technology development testing and UISS Demonstration Testing.				
FY 2014 Plans: Commence EDM Integrated system testing. Complete TEMP.				
Title: USV Flight 1 (US3)/MANAGEMENT: Articles:		1.540 0	1.540 0	1.900 0
FY 2012 Accomplishments: Program support for Milestone B documentation.				
FY 2013 Plans: Support the award of the engineering and manufacturing development contract in the 1st Qtr FY14.				
FY 2014 Plans: Commence EMD contract management. Commence program support for Milestone C documentation.				
Title: MCM Trainer Development Articles:		0.000	0.000	4.100 0
FY 2014 Plans: SQQ-94 Mine Warfare Countermeasures Simulator; development of hardware and software upgrades to the combat system team/ individual training capabilities on the MCM Class Ship				
Title: MNS Replacement Articles:		0.000	3.600 0	1.892 0
FY 2013 Plans: Continue proof of concept SMCM ship system, engineering and testing for the MCM Ship Mine Neutralization System (Seafox)Replacement program.				
FY 2014 Plans: Continue proof of concept SMCM ship system, engineering and testing for the MCM Ship Mine Neutralization System (Seafox)Replacement program.				
Title: USV Flight 2/PRODUCT DEVELOPMENT Articles:		0.000	0.000	3.800 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
FY 2014 Plans: Develop hardware and software changes to tow minehunting sensor												
Title: USV Flight 2/SUPPORT										0.000	0.000	0.400
Articles:												0
FY 2014 Plans: Engineering and Logistic support for hardware development												
Accomplishments/Planned Programs Subtotals										22.204	33.690	39.306
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• OPN/2622: LV075/LV078/LV080	10.111	37.401	31.434		31.434	21.019	18.315	13.770	17.251	0.000	220.911	
Remarks												
D. Acquisition Strategy												
HFWB - Naval Surface Warfare Center, Panama City (NSWC, PC) and ARL UT designed and developed the HFWB upgrade to the AN/SQQ-32.												
Mine Warfare and Environmental Decision Aids Library (MEDAL) - requirements for MEDAL Builds are generated through a formal requirements process. Requirements conferences gather a list of candidate functions based on a logical sequence to fully implement the overall software architecture. The fleet is presented with a recommended list of candidate capabilities based on this program plan, doctrine, fleet comments, and technology. These capability items are then prioritized by the fleet representatives (coordinated by Naval Mine Warfare and Anti-Submarine Command (NMAWC).The fleet inputs are then consolidated by COMINELWARCOM into an overall list which is then presented to Navy leadership for pricing and final selection. The selection is based on price, risk, available funding, and possibly by other program factors (e.g., ensure that MEDAL supports other program delivery schedules). Selection balances immediate needs, long term objectives, technical maturity and other programmatic factors. A verification and validation process is applied to any algorithms, tactics, or models to be incorporated in the software. MEDAL development to include integration of data fusion techniques and incorporation of Data Access Layer (DAL) architecture to meet FORCENet requirements. Acquisition strategy for Mine Countermeasures Commander's Estimate of the situation (MCM CES) is to deliver the software module within MEDAL builds by implementing the CES framework into the MEDAL software.												
USV Flight 1 (US3)- Requirements for USV Flight 1 (US3) will be documented in the Unmanned Influence Sweep System (UISS) Capability Development Document (CDD). Two Engineering and Manufacturing Development (EMD) contracts will be awarded in FY14 with an option for Low Rate Initial Production (LRIP).												
USV Flight 2 - USV Flight 2 upgrade will be a contract modification to the USV Flight 1 (UISS) EMD contract in FY16.												

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 1233: <i>Surface MCM Mid-life Upgrade</i>

E. Performance Metrics
USV Flight 1 (US3) - Successfully reach Milestone B in FY14; Award EDM contract.
USV Flight 2 - Developmental Test in FY17

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MNS Development	Various	TBD:TBD	17.400	0.000		3.600	Feb 2013	1.892	Nov 2013	-		1.892	0.000	22.892	
SQQ-94 Trainer	C/IDDQ	NSWC, PC:TBD	0.000	0.000		0.000		4.100	Dec 2013	-		4.100	0.000	4.100	
BSP: Develop Bottom Sediment Classifier	WR	NRL:WASHINGTON, DC	0.258	0.000		0.000		0.000		-		0.000	0.000	0.258	
Systems Engineering and Integration	WR	NSWC, PC:PANAMA CITY, FL	0.306	0.000		0.000		0.000		-		0.000	0.000	0.306	
System Development 1	WR	NSWC, PC:SAN DIEGO, CA	0.373	0.000		0.000		0.000		-		0.000	0.000	0.373	
Systems Engineering 2	WR	NSWC, PC:PANAMA CITY, FL	2.915	0.000		0.000		0.000		-		0.000	0.000	2.915	
Systems Engineering 3 MCM CES	WR	NSWC, PC:PANAMA CITY, FL	1.388	0.120	Nov 2011	0.120	Nov 2012	0.125	Nov 2013	-		0.125	Continuing	Continuing	Continuing
HFWB: Primary Hardware Development 1	C/CPAF	NSWC, PC/ARL UT:FLORIDA/TEXAS	15.511	0.000		0.000		0.000		-		0.000	0.000	15.511	
Primary Hardware Development 2	WR	ARL-UT:AUSTIN, TX	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	
HFWB: Tow Cable Development	C/CPAF	NSWC, PC/ARL UT:FLORIDA/TEXAS	1.399	0.000		0.000		0.000		-		0.000	0.000	1.399	
HFWB: Ship Integration	WR	NSWC, PC:PANAMA CITY, FL	1.697	0.000		0.000		0.000		-		0.000	0.000	1.697	
HFWB: SYSTEM ENGINEER	C/CPAF	NSWC/ARL UT:FLORIDA/TEXAS	3.887	1.189	Nov 2011	1.378	Nov 2012	1.233	Nov 2013	-		1.233	0.000	7.687	
Software Development MEDAL EA	C/CPFF	SAIC:SAN DIEGO, CA	25.843	4.167	Nov 2011	5.839	Nov 2012	4.333	Nov 2013	-		4.333	0.000	40.182	
US3: Product Development 1	C/CPIF	ITT:Panama City, FL	5.198	0.000		0.000		0.000		-		0.000	0.000	5.198	
US3: Product Development 2	WR	NSWC, PC:Panama City, FL	1.810	2.513	Mar 2012	0.000		0.000		-		0.000	0.000	4.323	
US3: Product Development 3	C/CPIF	Various:Various	0.430	2.351	Apr 2012	0.000		0.000		-		0.000	0.000	2.781	
US3: Product Development 4	C/CPIF	TBD:TBD	0.000	0.000		10.488	Dec 2012	10.059	Dec 2013	-		10.059	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
US3: Product Development 5	WR	NSWC, CD:Bethesda, MD	0.000	1.224	Mar 2012	0.000		0.000		-		0.000	0.000	1.224	
USV Inc 2: Product Development 1	C/FPIF	TBD:TBD	0.000	0.000		0.000		3.800	Dec 2013	-		3.800	0.000	3.800	
Subtotal			78.415	11.564		21.425		25.542		0.000		25.542			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop Logistics Products	WR	NSWC, PC: PANAMA CITY, FL	0.160	0.083	Nov 2011	0.080	Nov 2012	0.095	Nov 2013	-		0.095	0.000	0.418	
Software Development 1	C/CPFF	SAIC:McLean, VA	0.350	0.000		0.000		0.000		-		0.000	0.000	0.350	
Software Development 2	C/CPFF	SAIC:McLean, Va	0.914	0.000		0.000		0.000		-		0.000	0.000	0.914	
HFVB Software Development	WR	NSWC, PC/ARL-UT:FLORIDA/TEXAS	6.712	0.300	Nov 2011	0.322	Nov 2012	0.394	Nov 2013	-		0.394	0.000	7.728	
HFVB Integrated Logistics Support	WR	NSWC, PC: PANAMA CITY, FL	2.723	0.042	Nov 2011	0.061	Nov 2012	0.310	Nov 2013	-		0.310	0.000	3.136	
Software Engineering 1	WR	SPAWAR:SAN DIEGO, CA	0.778	0.644	Nov 2011	0.000		0.000		-		0.000	0.000	1.422	
Software Engineering 2	WR	NSWC, PC: PANAMA CITY, FL	0.922	0.000		0.550	Nov 2012	0.550	Nov 2013	-		0.550	0.000	2.022	
US3: Engineering 1	C/CPAF	ITT:Panama City, FL	3.018	0.000		0.000		0.000		-		0.000	0.000	3.018	
US3: Engineering 2	WR	NSWC, PC:Panama City, FL	4.612	0.300	Nov 2011	0.539	Dec 2012	1.300	Dec 2013	-		1.300	Continuing	Continuing	Continuing
US3: Engineering 3	WR	NSWC, CD:Bethesda, MD	0.000	0.700	Dec 2011	0.800	Dec 2012	1.300	Dec 2013	-		1.300	Continuing	Continuing	Continuing
US3: Integrated Logistics 1	C/CPAF	ITT:Panama City, FL	1.408	0.000		0.000		0.000		-		0.000	0.000	1.408	
US3: Integrated Logistics 2	WR	NSWC, PC:Panama City, FL	2.545	0.273	Nov 2011	3.000	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM						PROJECT 1233: Surface MCM Mid-life Upgrade			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
US3: Integrated Logistics 3	WR	NSWC, CD:Bethesda, MD	0.000	0.000		0.000		0.400	Dec 2013	-		0.400	0.000	0.400	
USV Inc. 2: Engineering 1	WR	NSWC, CD:Bethesda, MD	0.000	0.000		0.000		0.400	Dec 2013	-		0.400	0.000	0.400	
USV Inc. 2: Engineering 2	WR	NSWC, PC:Panama City, FL	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	
USV Inc. 2: Integrated Logistics 1	WR	NSWC, CD:Bethesda, MD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	
Subtotal			24.142	2.342		5.352		4.749		0.000		4.749			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MEDAL Test and Evaluation	C/FP	SAIC:San Diego, CA	0.000	1.964	Nov 2011	2.000	Nov 2012	1.960	Nov 2013	-		1.960	0.000	5.924	
Test and Evaluation 1	C/CPAF	VARIOUS:VARIOUS	0.473	1.158	Nov 2011	0.148	Nov 2012	0.151	Nov 2013	-		0.151	0.000	1.930	
HFWB: Developmental Test and Evaluation	WR	NSWC, PC:ARL-UT:FLORIDA/TEXAS	4.099	0.100	Nov 2011	0.350	Nov 2012	0.000		-		0.000	0.000	4.549	
Test and Evaluation 2	C/CPAF	VARIOUS:VARIOUS	3.917	1.287	Jun 2012	0.000		0.000		-		0.000	0.000	5.204	
US3: Test and Evaluation 1	C/CPIF	ITT:Panama City, FL	2.118	0.000		0.000		0.000		-		0.000	0.000	2.118	
US3: Test and Evaluation 2	WR	NSWC, PC:Panama City, FL	2.468	1.080	Nov 2011	0.364	Dec 2012	1.950	Dec 2013	-		1.950	Continuing	Continuing	Continuing
US3: Test and Evaluation 3	WR	NSWC, CCD:Bethesda, MD	0.000	0.720	Nov 2011	0.364	Dec 2012	1.750	Dec 2013	-		1.750	Continuing	Continuing	Continuing
US3: Test and Evaluation 4	C/CPIF	TBD:TBD	0.000	0.000		1.244	Dec 2012	0.345	Dec 2013	-		0.345	Continuing	Continuing	Continuing
US3: Test and Evaluation 5	WR	COTF:Norfolk, VA	0.000	0.000		0.000		0.200	Dec 2013	-		0.200	0.000	0.200	
Subtotal			13.075	6.309		4.470		6.356		0.000		6.356			

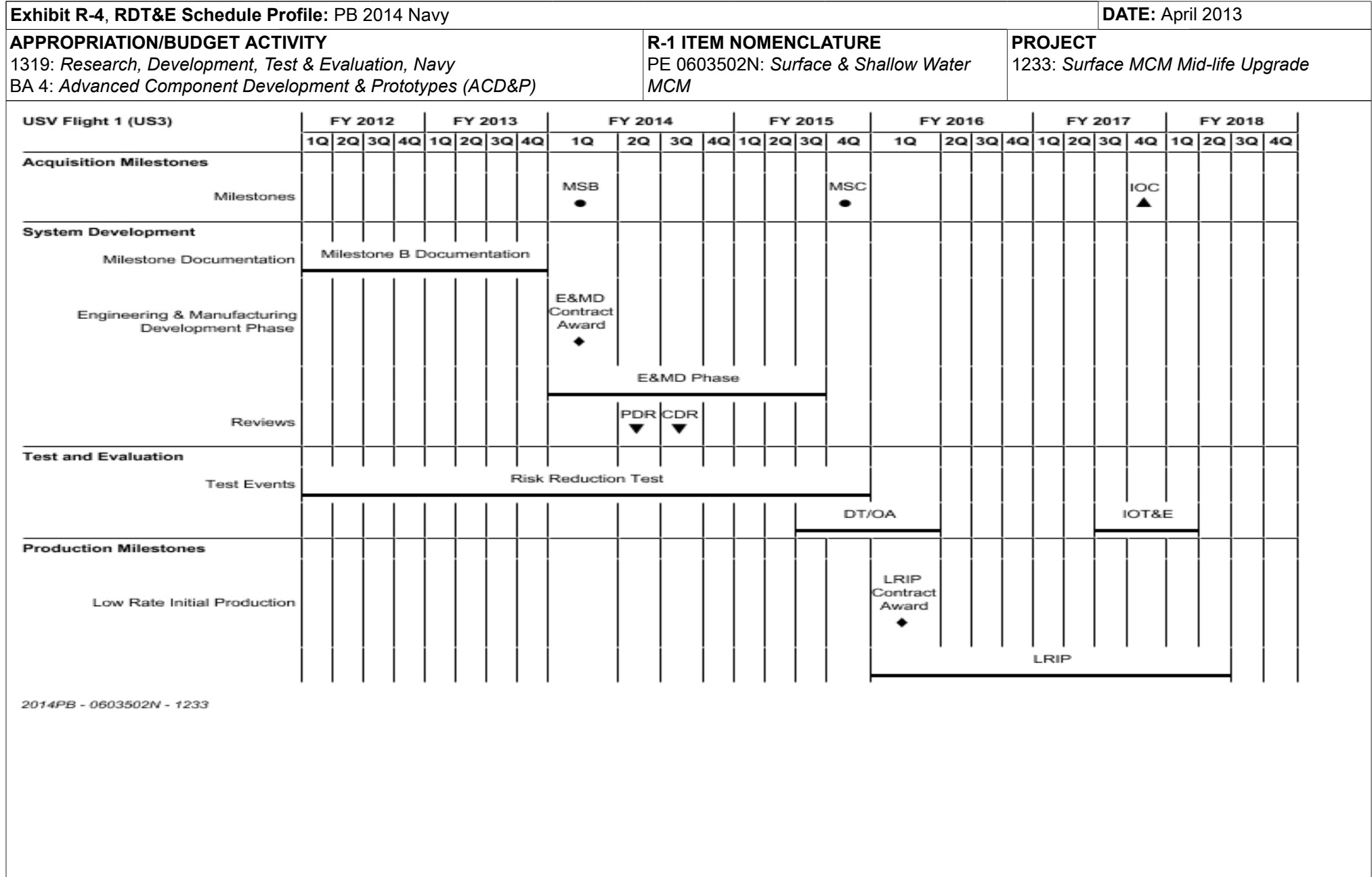
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support 1	C/CPFF	CACI:WASHINGTON, DC	0.263	0.000		0.000		0.000		-		0.000	0.000	0.263	
Travel 1	WR	NAVSEA:WNY, DC	0.084	0.000		0.000		0.000		-		0.000	0.000	0.084	
Government Engineering Support1	WR	NSWC, PC:PANAMA CITY, FL	0.271	0.031	Nov 2011	0.031	Nov 2012	0.000		-		0.000	0.000	0.333	
MEDAL Program Management Support 2	Various	VARIOUS:VARIOUS	0.157	0.498	Nov 2011	0.745	Nov 2012	0.759	Nov 2013	-		0.759	0.000	2.159	
SBIR Assessment 2	Various	VARIOUS:VARIOUS	0.019	0.000		0.000		0.000		-		0.000	0.000	0.019	
Program Management Support 3	C/CPFF	CACI:WASHINGTON, DC	1.341	0.000		0.000		0.000		-		0.000	0.000	1.341	
Program Management Support 4	C/CPFF	CACI:WASHINGTON, DC	0.080	0.000		0.000		0.000		-		0.000	0.000	0.080	
Government Engineering Support3	WR	NSWC, PC:PANAMA CITY, FL	0.090	0.000		0.000		0.000		-		0.000	0.000	0.090	
Travel 3	C/CPAF	NAVSEA:WNY, DC	0.256	0.000		0.000		0.000		-		0.000	0.000	0.256	
Program Management Support 5	C/CPFF	CACI:WASHINGTON, DC	0.167	0.000		0.000		0.000		-		0.000	0.000	0.167	
Government Engineering Support4	WR	NSWC, PC:PANAMA CITY, FL	0.010	0.000		0.000		0.000		-		0.000	0.000	0.010	
Travel4	C/CPAF	NSWC, PC:PANAMA CITY, FL	0.069	0.000		0.000		0.000		-		0.000	0.000	0.069	
HFWB: Program Management Support 6	C/CPAF	VARIOUS:VARIOUS	1.332	0.110	Jan 2012	0.117	Nov 2012	0.000		-		0.000	0.000	1.559	
HFWB: Government Engineering Support5	WR	NSWC, PC:PANAMA CITY, FL	0.750	0.000		0.000		0.000		-		0.000	0.000	0.750	
HFWB: Travel 5	C/CPAF	NAVSEA:WNY, DC	0.060	0.010	Nov 2011	0.010	Nov 2012	0.000		-		0.000	0.000	0.080	
Government Engineering Support6	WR	NSWC, PC:PANAMA CITY, FL	1.352	0.000		0.000		0.000		-		0.000	0.000	1.352	
Travel 6	C/CPAF	NAVSEA:WNY, DC	0.238	0.000		0.000		0.000		-		0.000	0.000	0.238	
SBIR Assessment 6	Various	VARIOUS:VARIOUS	0.054	0.000		0.000		0.000		-		0.000	0.000	0.054	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 1233: Surface MCM Mid-life Upgrade					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support 7	C/CPAF	VARIOUS:VARIOUS	0.350	0.000		0.000		0.000		-		0.000	0.000	0.350	
Acquisition Workforce Fund	Various	VARIOUS:VARIOUS	0.122	0.000		0.000		0.000		-		0.000	0.000	0.122	
US3: Contractor Management 3	WR	ITT: PANAMA CITY, FL	0.776	0.000		0.000		0.000		-		0.000	0.000	0.776	
US3: Government Management	WR	VARIOUS:VARIOUS	2.678	0.940	Nov 2011	0.840	Nov 2012	0.000		-		0.000	Continuing	Continuing	Continuing
US3: Contractor Management 7	C/CPAF	CACI: WASHINGTON, DC	0.249	0.000		0.000		0.000		-		0.000	0.000	0.249	
US3: Contractor Management	C/CPFF	TBD:TBD	0.000	0.300	Nov 2011	0.580	Nov 2012	1.800	Dec 2013	-		1.800	Continuing	Continuing	Continuing
US3: Travel	WR	NAVSEA: WNY, DC	0.100	0.100	Nov 2011	0.120	Nov 2012	0.100	Dec 2013	-		0.100	Continuing	Continuing	Continuing
Subtotal			10.868	1.989		2.443		2.659		0.000		2.659			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			126.500	22.204		33.690		39.306		0.000		39.306			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																							DATE: April 2013						
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)												R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM												PROJECT 1233: Surface MCM Mid-life Upgrade					
HFWB		FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquisition Milestones																													
Milestones																													
System Development																													
P3I		P3I																											
Test and Evaluation																													
Production Milestones																													
Contract Award																													
Full Rate Production		FRP																											
Deliveries																													
Installation		Installation																											
2014PB - 0603502N - 1233																													

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																				DATE: April 2013									
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)										R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM										PROJECT 1233: Surface MCM Mid-life Upgrade									
MEDAL	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
Acquisition Milestones																													
System Development																													
MEDAL EA v.1 Iterations	Iteration 5																												
	Iteration 6																												
				Iteration 7																									
MEDAL EA v.2 Development										v.2 Development																			
Test and Evaluation																													
Enterprise Arch (EA) v.1	EA DT V1												EA DT V2																
Production Milestones																													
Deliveries	Deliveries																												
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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																							DATE: April 2013						
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)												R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM								PROJECT 1233: Surface MCM Mid-life Upgrade									
MCM CES		FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquisition Milestones																													
Milestones																IOC ▲													
System Development																													
Future Development		Future Development																											
Test and Evaluation																													
Build 1																													
Production Milestones																													
Deliveries																													
2014PB - 0603502N - 1233																													

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy												DATE: April 2013																	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)												R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM								PROJECT 1233: Surface MCM Mid-life Upgrade									
USV Flight 2		FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquistion Milestones																													
Milestones																													
System Development																													
Upgrade Development																													
EDM Build																													
LRIP Build																													
Test and Evaluation																													
Testing Events																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 1233: Surface MCM Mid-life Upgrade	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
USV Flight 1 (US3)				
Acquisition Milestones: Milestones: Milestone B	1	2014	1	2014
Acquisition Milestones: Milestones: Milestone C	4	2015	4	2015
Acquisition Milestones: Milestones: Initial Operational Capability	4	2017	4	2017
System Development: Milestone Documentation: Milestone B Documentation	1	2012	4	2013
System Development: Engineering & Manufacturing Development Phase: E&MD Contract Award	1	2014	1	2014
System Development: Engineering & Manufacturing Development Phase: Engineering & Manufacturing Development phase	1	2014	3	2015
System Development: Reviews: PDR Decision	2	2014	2	2014
System Development: Reviews: CDR Decision	3	2014	3	2014
Test and Evaluation: Test Events: Risk Reduction	1	2012	4	2015
Test and Evaluation: Test Events: DT Testing	3	2015	1	2016
Test and Evaluation: Test Events: Initial Operation Test and Evaluation	3	2017	1	2018
Production Milestones: Low Rate Initial Production: LRIP Contract Award	1	2016	1	2016
Production Milestones: Low Rate Initial Production: LRIP phase	1	2016	2	2018
HFWB				
System Development: P3I: P3I Development	1	2012	4	2018
Production Milestones: Full Rate Production: FRP	1	2012	1	2014
Deliveries: Installation: Installation	2	2012	4	2018
MEDAL				
System Development: MEDAL EA v.1 Iterations: EA v.1 Iteration 5 Tactical Server	1	2012	3	2012
System Development: MEDAL EA v.1 Iterations: EA v.1 Iteration 6	1	2012	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM		PROJECT 1233: Surface MCM Mid-life Upgrade
		Start		End
Events by Sub Project		Quarter	Year	Quarter Year
System Development: MEDAL EA v.1 Iterations: EA v.1 Iteration 7		4	2012	2 2014
System Development: MEDAL EA v.2 Development: EA v.2 Development		2	2014	1 2018
Test and Evaluation: Enterprise Arch (EA) v.1: Enterprise Arch (EA) v.1 Development and Test		1	2012	3 2015
Test and Evaluation: Enterprise Arch (EA) v.1: Enterprise Arch (EA) v.2 Development and Test		1	2016	1 2018
Production Milestones: Deliveries: Deliveries		1	2012	4 2018
MCM CES				
Acquisition Milestones: Milestones: IOC		3	2015	3 2015
System Development: Future Development: MCM CES Future Development		1	2012	4 2018
Test and Evaluation: Build 1: Build 1 Development Test		4	2013	3 2015
USV Flight 2				
Acquistion Milestones: Milestones: MS C		3	2017	3 2017
System Development: Upgrade Development: Schedule Detail		2	2014	1 2016
System Development: EDM Build: Schedule Detail		2	2016	1 2017
System Development: LRIP Build: Schedule Detail		4	2017	4 2018
Test and Evaluation: Testing Events: Schedule Detail		2	2017	3 2017

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 2094.: Unmanned Underwater Vehicle			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2094.: Unmanned Underwater Vehicle	0.000	0.000	36.773	24.164	-	24.164	26.483	34.888	54.634	60.485	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
The Persistent Littoral Undersea Surveillance (PLUS) Innovative Naval Prototype (INP) Program provides Undersea Surveillance capability by employing mobile Unmanned Undersea Vehicle (UUV) technology. PLUS is being developed in response to an Urgent Operational Need (UON) identified by the Fleet. PLUS uses both conventionally powered UUVs with propellers and UUVs propelled by buoyancy engines (commonly called gliders). PLUS INP S&T development program is planned to transition into a prototype User Operational Evaluation System (UOES). The Large Displacement Unmanned Undersea Vehicle (LDUUV) provides long endurance UUVs operating autonomously in denied littorals with multiple mission payloads to increase the Navy's capacity and capability. Persistent Littoral Undersea Surveillance (PLUS): The Persistent Littoral Undersea Surveillance (PLUS) program provides effective, adaptive and persistent undersea surveillance targets over large littoral areas.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: LDUUV Product Development Articles: FY 2013 Plans: LDUUV - Develop Performance Specifications to support Preliminary Design phase of LDUUV POR. FY 2014 Plans: Develop Interface Control Document (ICD), system specifications, and Test and Evaluation Strategy (TES) for LDUUV Engineering Development Model (EDM).									0.000	0.250 0	2.622 0	
Title: LDUUV Support Articles: FY 2013 Plans: LDUUV - Conduct Cost Analysis. Develop statutory documents for Gates 2/3 Reviews and Milestone A. Develop Technical Data Package for RFP release. FY 2014 Plans:									0.000	5.731 0	8.610 0	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 2094.: Unmanned Underwater Vehicle		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Conduct Milestone A. Provide engineering support for the preliminary design of the LDUUV EDM. Develop Milestone B documentation.				
Title: LDUUV Management Articles: FY 2013 Plans: Provide program management support and travel for the LDUUV program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. Travel and other PM tasking to include briefings, demonstrations, and project planning as required. FY 2014 Plans: Provide program management support and travel for the LDUUV program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. Travel and other PM tasking to include briefings, demonstrations, and project planning as required.		0.000	0.960 0	0.990 0
Title: PLUS Product Development Articles: FY 2013 Plans: PLUS - Identify/establish contract vehicle(s) and system specifications. Based on determinations from transition and Concept of Employment (CONEMP) Plans, develop prototype using REMUS 600 UUVs, hydrophone towed arrays, SEAGLIDER communication and navigation vehicles, and other material as determined for integration, Launch and Recovery (L&R) Hardware, Command and Control (C2) Hardware. FY 2014 Plans: Complete procurement of the PLUS system consisting of REMUS 600 UUVs, hydrophone towed arrays, SEAGLIDER communication and navigation vehicles. Complete system integration and all relevant certifications, incorporating any updates identified through system testing.		0.000	13.000 0	2.800 0
Title: PLUS Support Articles: FY 2013 Plans: PLUS - Commence development of tailored UOES technical documentation to support transition from S&T to a UOES project. Develop system & operational classification guidance. Generate system training and support plans. Document appropriate C2 strategy for system operations. Complete requisite Approval to Operate (ATO), Information Assurance/Anti-Tampering (IA/		0.000	7.000 0	1.539 0

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 2094.: Unmanned Underwater Vehicle		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014	
AT) certifications to support Fleet Exercise. Develop Logistics Plan. Obtain requisite Fleet approvals and develop Concept of Employment (CONEMP).					
FY 2014 Plans: PLUS - Complete the documentation of tailored UOES technical documentation to support transition of PLUS to the fleet. Complete all training and support plans, CONOPS, tactics techniques and procedure documents, and complete the logistics packages for fleet introduction.					
Title: PLUS Test and Evaluation		0.000	1.000	4.077	
Articles:			0	0	
FY 2013 Plans: PLUS - Participate in test demonstrations and Fleet Exercises					
FY 2014 Plans: PLUS - Participate in tests, demonstrations and Fleet Exercises					
Title: PLUS Management		0.000	0.850	0.550	
Articles:			0	0	
FY 2013 Plans: Provide program management support and travel for PLUS program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. Travel and other PM tasking to include briefings, demonstrations, and project planning as required.					
FY 2014 Plans: Provide program management support and travel for PLUS program. Program management shall include overall technical guidance and leadership for the program. Oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. Travel and other PM tasking to include briefings, demonstrations, and project planning as required.					
Title: Persistent Littoral Undersea Surveillance (PLUS)		0.000	7.982	2.976	
Articles:			0	0	
Description: Persistent Littoral Undersea Surveillance (PLUS): The Persistent Littoral Undersea Surveillance (PLUS) program provides effective, adaptive and persistent undersea surveillance targets over large littoral areas.					
FY 2013 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 2094.: <i>Unmanned Underwater Vehicle</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
<ul style="list-style-type: none"> -Initiate the User Interface for the Operator consoles for the command and control functions. -Initiate the evaluation and implementation of IA and Anti-Tamper on a test vehicle. -Initiate the construction of the optimized array (s) for the system, test integration with autonomy and signal processing. -Initiate construction of the Revised and Optimized PLUS Sensor Vehicle. -Initiate the testing and evaluation of USBL Navigation and the construction of the CARINA vehicle. -Initiate and complete a Field Test and Evaluation with the Fleet. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> -Continue all efforts of FY13, unless noted as complete. -Continue construction the Revised and Optimized PLUS Sensor Vehicle. -Complete the User Interface for the Operator Consoles for the command and control functions. -Complete the evaluation and implementation of the IA and Anti-Tamper on the PLUS system. -Complete the construction of the optimized array (s) for the system; test integration with autonomy and signal processing. -Complete testing of the USBL Navigation and Carina vehicle. -Complete a Field Test and Evaluation with the Fleet. 			
Accomplishments/Planned Programs Subtotals		0.000	36.773
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy PLUS will develop a prototype User Operational Evaluation System (UOES) in response to an Urgent Operational Need (UON) request from the Fleet. The PLUS UOES will be utilized in fleet experimentation events and fleet exercises to develop Concept of Employment (CONEMP) for a potential follow-on program of record. LDUUV Innovative Naval Prototype (INP) program will transition 2 prototype LDUUVs to PMS406 LDUUV POR as User Operational Evaluation Systems (UOES). The LDUUV UOES will be utilized in Exercises to support requirement development that feeds into LDUUV POR. This effort will transition to PEO-LCS / PMS406 as a User Operational Evaluation System (UOES) in FY 2013.			
E. Performance Metrics PLUS - Prototype Delivery LDUUV - Achieve MS A Performance metrics for this effort are classified.			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 2094.: Unmanned Underwater Vehicle					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LDUUV Specification	WR	NUWC Newport:Newport, RI	0.000	0.000		0.250	Dec 2012	1.214	Dec 2013	-		1.214	0.000	1.464	
LDUUV ICD	SS/CPFF	APL/JHU:Laurel, MD	0.000	0.000		0.000		0.723	Mar 2014	-		0.723	0.000	0.723	
LDUUV TES	Various	Various:Various	0.000	0.000		0.000		0.685	Dec 2013	-		0.685	0.000	0.685	
PLUS Prototype Hardware	Various	Various:Various	0.000	0.000		13.000	Dec 2012	0.600	Dec 2013	-		0.600	Continuing	Continuing	Continuing
PLUS System Integration	TBD	Unknown:Unknown	0.000	0.000		0.000		2.200	Feb 2014	-		2.200	0.000	2.200	
Arrays	C/CPFF	Ocean Acoustical Services and instrumentation:Lexington, MA	0.000	0.000		0.500	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.686	
TDA's	C/CPFF	Ocean Acoustical Services and instrumentation:Lexington, MA	0.000	0.000		0.300	Oct 2012	0.111	Oct 2013	-		0.111	0.000	0.411	
SP-Intergration	C/CPFF	Ocean Acoustical Services and instrumentation:Lexington, MA	0.000	0.000		0.500	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.686	
TDA's	C/CPFF	METRON:Reston, VA	0.000	0.000		0.300	Oct 2012	0.111	Oct 2013	-		0.111	0.000	0.411	
Navigation	C/FPRP	Woods Hole Oceanographic Institution:Woods Hole, MA	0.000	0.000		0.400	Oct 2012	0.148	Oct 2013	-		0.148	0.000	0.548	
SP-Intergration	Reqn	NAVSEA:Baltimore, MD	0.000	0.000		0.500	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.686	
TDA's	Reqn	NUWC:Newport, RI	0.000	0.000		0.300	Oct 2012	0.111	Oct 2013	-		0.111	0.000	0.411	
SP Intergration	Reqn	NUWC:Newport, RI	0.000	0.000		0.200	Oct 2012	0.074	Oct 2013	-		0.074	0.000	0.274	
Anti-Tamper	Reqn	Sandia Natl Lab:Livermore, CA	0.000	0.000		0.500	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.686	
Vehicle	C/CPFF	Hydroid Kongsberg Marine:Pocasset, MA	0.000	0.000		0.600	Oct 2012	0.223	Oct 2013	-		0.223	0.000	0.823	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM						PROJECT 2094.: Unmanned Underwater Vehicle			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		17.350		6.944		0.000		6.944			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LDUUV Engineering Support	WR	NUWC Newport:Newport, RI	0.000	0.000		2.426	Dec 2012	2.675	Dec 2013	-		2.675	0.000	5.101	
LDUUV Engineering Support 2	SS/CPFF	APL/JHU:Laurel, MD	0.000	0.000		2.335	Jan 2013	1.150	Mar 2014	-		1.150	0.000	3.485	
LDUUV Engineering Support 3	SS/CPFF	ARL PSU:State College, PA	0.000	0.000		0.145	Jan 2013	0.550	Mar 2014	-		0.550	0.000	0.695	
LDUUV Engineering Support 4	WR	NUWC Keyport:Keyport, WA	0.000	0.000		0.333	Dec 2012	0.100	Dec 2013	-		0.100	0.000	0.433	
LDUUV Engineering Support 5	WR	VAR:VAR	0.000	0.000		0.000		1.225	Dec 2013	-		1.225	0.000	1.225	
LDUUV Engineering Support 6	C/CPFF	VAR:VAR	0.000	0.000		0.000		2.535	Mar 2014	-		2.535	0.000	2.535	
LDUUV ILS Support	WR	SSC Lant:Charleston, SC	0.000	0.000		0.205	Dec 2012	0.000		-		0.000	0.000	0.205	
LDUUV ILS Support 2	WR	VAR:VAR	0.000	0.000		0.287	Dec 2012	0.375	Dec 2013	-		0.375	0.000	0.662	
PLUS ILS Support	WR	NUWC Newport:Newport, RI	0.000	0.000		0.500	Nov 2012	0.989	Dec 2013	-		0.989	Continuing	Continuing	Continuing
PLUS Engineering Support	WR	NUWC Newport:Newport, RI	0.000	0.000		1.500	Nov 2012	0.050	Dec 2013	-		0.050	Continuing	Continuing	Continuing
PLUS Engineering Support 2	TBD	WHOI:Woods Hole, MA	0.000	0.000		1.000	Feb 2013	0.200	Feb 2014	-		0.200	Continuing	Continuing	Continuing
PLUS Engineering Support 3	SS/CPFF	APL/JHU:Laurel, MD	0.000	0.000		1.000	Dec 2012	0.200	Feb 2014	-		0.200	Continuing	Continuing	Continuing
PLUS C2 Support	C/CPFF	APL/UW:Seattle, WA	0.000	0.000		3.000	Mar 2013	0.100	Feb 2014	-		0.100	Continuing	Continuing	Continuing
Test	Reqn	NUWC:Newport, RI	0.000	0.000		0.030	Oct 2012	0.011	Oct 2013	-		0.011	0.000	0.041	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>						R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>						PROJECT 2094.: <i>Unmanned Underwater Vehicle</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test	Reqn	NSWD:Dahlgren, VA	0.000	0.000		0.060	Oct 2012	0.022	Oct 2013	-		0.022	0.000	0.082	
Test	Reqn	NUWC:Patuxent, MD	0.000	0.000		0.020	Oct 2012	0.007	Oct 2013	-		0.007	0.000	0.027	
IA	Reqn	NUWC:Newport, RI	0.000	0.000		0.150	Oct 2012	0.055	Oct 2013	-		0.055	0.000	0.205	
Subtotal			0.000	0.000		12.991		10.244		0.000		10.244			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PLUS Fleet Experimentation	Various	Various:Various	0.000	0.000		1.000	May 2013	4.077	May 2014	-		4.077	Continuing	Continuing	Continuing
Test	C/CPFF	Ocean Acoustical Services and instrumentation:Lexington, MA	0.000	0.000		0.500	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.686	
Test	C/FPRP	Woods Hole Oceanographic Institution:Woods Hole, MA	0.000	0.000		0.982	Oct 2012	0.372	Oct 2013	-		0.372	0.000	1.354	
Testing	C/CPFF	Woods Hole Oceanographic Institution:Woods Hole, MA	0.000	0.000		0.350	Oct 2012	0.130	Oct 2013	-		0.130	0.000	0.480	
Testing	Reqn	NUWC:Newport, RI	0.000	0.000		0.400	Oct 2012	0.037	Oct 2013	-		0.037	0.000	0.437	
Testing	Reqn	NPS:Monterey, CA	0.000	0.000		0.100	Oct 2012	0.024	Oct 2013	-		0.024	0.000	0.124	
Testing	Reqn	SPAWAR:San Diego, CA	0.000	0.000		0.065	Oct 2012	0.148	Oct 2013	-		0.148	0.000	0.213	
Subtotal			0.000	0.000		3.397		4.974		0.000		4.974			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE				PROJECT					
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						PE 0603502N: Surface & Shallow Water MCM				2094.: Unmanned Underwater Vehicle					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LDUUV Program Management	WR	NUWC Newport:Newport, RI	0.000	0.000		0.435	Dec 2012	0.530	Dec 2013	-		0.530	Continuing	Continuing	Continuing
LDUUV Program Management 2	TBD	TBD:TBD	0.000	0.000		0.475	Jan 2013	0.360	Mar 2014	-		0.360	0.000	0.835	
LDUUV Travel	Various	NAVSEA:Washington, DC	0.000	0.000		0.050	Dec 2012	0.100	Dec 2013	-		0.100	0.000	0.150	
PLUS Program Management	Various	VAR:VAR	0.000	0.000		0.739	Dec 2012	0.500	Dec 2013	-		0.500	Continuing	Continuing	Continuing
PLUS Travel	Various	NAVSEA:Washington, DC	0.000	0.000		0.111	Dec 2012	0.050	Dec 2013	-		0.050	Continuing	Continuing	Continuing
Program	C/CPFF	Systems Planning & Analysis:Arlington, VA	0.000	0.000		0.700	Oct 2012	0.100	Oct 2013	-		0.100	0.000	0.800	
Program	SS/BA	Kentco:Sterling, VA	0.000	0.000		0.475	Oct 2012	0.176	Oct 2013	-		0.176	0.000	0.651	
Program	SS/BA	Mandex:Fairfax, VA	0.000	0.000		0.050	Oct 2012	0.186	Oct 2013	-		0.186	0.000	0.236	
Subtotal			0.000	0.000		3.035		2.002		0.000		2.002			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		36.773		24.164		0.000		24.164			
Remarks															

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PE 0603502N: *Surface & Shallow Water MCM*
Navy

R-1 Line #34

R-1 ITEM NOMENCLATURE

PE 0603502N: *Surface & Shallow Water*
MCM

2094.: *Unmanned Underwater Vehicle*

2014PB - 0603502N - 2094.L24

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

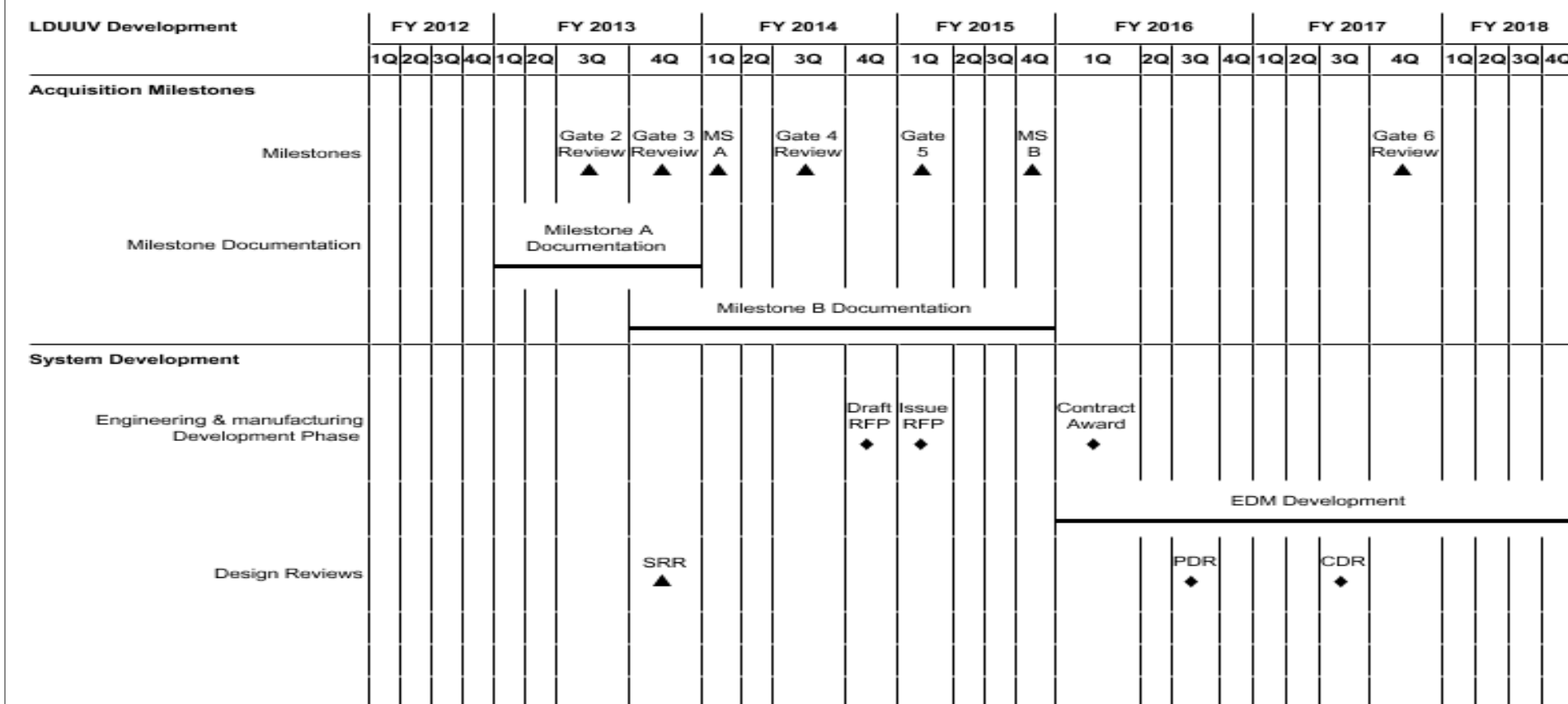
1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603502N: Surface & Shallow Water
MCM

PROJECT

2094.: Unmanned Underwater Vehicle



2014PB - 0603502N - 2094.L24

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 2094.: <i>Unmanned Underwater Vehicle</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>PLUS Development</i>				
Prototype Integration: UUV/Arrays Integration	2	2013	2	2014
Prototype Integration: Glider Integration	2	2013	2	2014
Fleet Experimentation: UOES Forward Fleet Exercise: MRR	2	2014	2	2014
Fleet Experimentation: UOES Forward Fleet Exercise:	4	2014	4	2014
Fleet Experimentation: UOES Follow-on Fleet Exercises: MRR	1	2015	1	2015
Fleet Experimentation: UOES Follow-on Fleet Exercises: Schedule Detail	2	2015	4	2018
Requirements Development: Transition Plan: Schedule Detail	1	2013	1	2013
Requirements Development: Concept of Employment: Schedule Detail	2	2013	4	2013
Program Transition: UOES Transition Documentation: Schedule Detail	1	2013	4	2014
Product Improvement: Product Improvement: Product Improvement Implementation	1	2016	1	2016
<i>LDUUV Development</i>				
Acquisition Milestones: Milestones: Gate 2 Reveiw	3	2013	3	2013
Acquisition Milestones: Milestones: Gate 3 Reveiw	4	2013	4	2013
Acquisition Milestones: Milestones: Milestone A	1	2014	1	2014
Acquisition Milestones: Milestones: Gate 4 Reveiw	3	2014	3	2014
Acquisition Milestones: Milestones: Gate 5	1	2015	1	2015
Acquisition Milestones: Milestones: Milestone B	4	2015	4	2015
Acquisition Milestones: Milestones: Gate 6	4	2017	4	2017
Acquisition Milestones: Milestone Documentation: Milestone A Documentation	1	2013	4	2013
Acquisition Milestones: Milestone Documentation: Milestone B Documentation	4	2013	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM		PROJECT 2094.: Unmanned Underwater Vehicle	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
System Development: Engineering & manufacturing Development Phase: Draft Request for Proposal		4	2014	4	2014
System Development: Engineering & manufacturing Development Phase: Issue RFP		1	2015	1	2015
System Development: Engineering & manufacturing Development Phase: E&MD Contract Award		1	2016	1	2016
System Development: Engineering & manufacturing Development Phase: EDM Development		1	2016	4	2018
System Development: Design Reviews: PDR		3	2016	3	2016
System Development: Design Reviews: CDR		3	2017	3	2017
PE 0603502N PLUS SPEED TO FLEET R&D Initiative R-4					
User Interface for the Operator consoles for the command and control functions: Development A: SRR		1	2013	1	2013
User Interface for the Operator consoles for the command and control functions: Development A: PDR		3	2013	3	2013
User Interface for the Operator consoles for the command and control functions: Development A: FDR		4	2013	4	2013
User Interface for the Operator consoles for the command and control functions: Development A: T&E		1	2014	1	2014
User Interface for the Operator consoles for the command and control functions: Development A: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.		4	2014	4	2014
Evaluation of IA and Anti-Tamper on a test vehicle: Development B: SRR		1	2013	1	2013
Evaluation of IA and Anti-Tamper on a test vehicle: Development B: CDR		3	2013	3	2013
Evaluation of IA and Anti-Tamper on a test vehicle: Development B: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.		2	2014	2	2014
Implementation of IA and Anti-Tamper on a test vehicle: Build A: FDR		4	2013	4	2013
Implementation of IA and Anti-Tamper on a test vehicle: Build A: T&E		1	2014	1	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM		PROJECT 2094.: Unmanned Underwater Vehicle
		Start		End
Events by Sub Project	Quarter	Year	Quarter	Year
Implementation of IA and Anti-Tamper on a test vehicle: Build A: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.	2	2014	2	2014
Construction of the optimized array (s) for the system: Development C: CDR	1	2013	1	2013
Construction of the optimized array (s) for the system: Development C: T&E	4	2013	4	2013
Construction of the optimized array (s) for the system: Build B: CDR	3	2013	3	2013
Construction of the optimized array (s) for the system: Build B: T&E	4	2013	4	2013
Construction of the optimized array (s) for the system: Build B: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.	1	2014	1	2014
Testing and integration of the array with autonomy and signal processing: Development D: ICD	1	2013	1	2013
Testing and integration of the array with autonomy and signal processing: Development D: TRR	3	2013	3	2013
Testing and integration of the array with autonomy and signal processing: Development D: T&E	4	2013	4	2013
Testing and integration of the array with autonomy and signal processing: Development D: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.	1	2014	1	2014
Pg 2 PE 0603502N PLUS SPEED TO FLEET R&D Initiative R-4				
Testing and evaluation of USBL Navigation: Development E: ICD	1	2013	1	2013
Testing and evaluation of USBL Navigation: Development E: TRR	2	2013	2	2013
Testing and evaluation of USBL Navigation: Development E: T&E	4	2013	4	2013
Testing and evaluation of USBL Navigation: Development E: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.	1	2014	1	2014
Testing of the CARINA vehicle: Build C: CDR	1	2013	1	2013
Testing of the CARINA vehicle: Build C: TRR	2	2013	2	2013
Testing of the CARINA vehicle: Build C: T&E	4	2013	4	2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>		PROJECT 2094.: <i>Unmanned Underwater Vehicle</i>
		Start		End
Events by Sub Project		Quarter	Year	Quarter
Testing of the CARINA vehicle: Build C: PLUS is headed to a User Operated Evaluation System,this sets the specifications of the system.		4	2014	4
Fleet Field Test and Evaluation: Development F: IPC		1	2013	1
Fleet Field Test and Evaluation: Development F: MPC		3	2013	3
Fleet Field Test and Evaluation: Development F: FPC		4	2013	4
Construction of the Revised and Optimized PLUS Sensor Vehicle: Build D: CDR		1	2013	1
Construction of the Revised and Optimized PLUS Sensor Vehicle: Build D: TRR		4	2013	4
Construction of the Revised and Optimized PLUS Sensor Vehicle: Build D: T&E		1	2014	1

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 2131: Assault Breaching System			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2131: Assault Breaching System	442.056	42.657	59.648	58.789	-	58.789	53.584	33.642	24.463	24.874	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program provides a combination of U.S. Navy systems to counter the threat to amphibious forces from obstacles and anti-landing/sea mines in the Beach Zone and Surf Zone (0-10 ft water). The Assault Breaching Systems (ABS) consist of a system of systems approach that includes the following programs: JABS - Joint Direct Attack Munition (JDAM) Assault Breaching System; CMS - Countermine System; COBRA - Coastal Battlefield Reconnaissance and Analysis; PNMS - Precision Navigation and Marking System; and C4I - Command, Control, Computers, Communications, and Intelligence. The Assault Breaching Systems enable the Navy-Marine Corps team to conduct Joint Forcible Entry Operations (JFEO), Ship-To-Objective Maneuver (STOM), and other combat operations to project power ashore.

The JDAM Assault Breaching System (JABS) is a currently fielded system that neutralizes surface mines and obstacles in the Beach Zone and Surf Zone. The ABS Tactical Decision Aid optimizes the Desired Points of Impact (DPI) for JDAM munitions to effectively neutralize mines and obstacles while minimizing the required number of munitions and friendly aircraft sorties. Continued testing is required to optimize the ABS Tactical Decision Aid database for the most common enemy mines and obstacles.

The Countermine System (CMS) is the far-term solution for neutralizing buried mines in the Beach Zone and Surf Zone. CMS transitioned from a 6.3 S&T Concept Demonstration effort to a 6.4 development program after a concept decision/AoA in FY06. CMS is the only USN system capable of neutralizing buried mines.

Coastal Battlefield Reconnaissance and Analysis (COBRA) is the ABS program to conduct ISR/T. This system provides Airborne Mine Countermeasures (AMCM) capability, and one system consists of two Airborne Payloads and one Post Mission Analysis Station. Under the umbrella of evolutionary acquisition, three increments of development are planned. Block I is a multispectral sensor capable of daytime detection of surface-laid minefields and obstacles in the Beach Zone. Block II adds a 3D LIDAR (Light Detection and Ranging) sensor that enables nighttime detection of mines and obstacles in the Beach Zone and the Surf Zone (0-10 ft of water). Block II also adds on-board near real-time processing of multispectral imagery data. Block III adds an interferometric sensor that is capable of detecting buried mines. Blocks II and III will incorporate technology being developed by 6.3 S&T. COBRA consists of a modular payload architecture that can be integrated onto the MQ-8B Fire Scout Vertical Takeoff and Landing Unmanned Aerial Vehicle (VTUAV) or USN manned helicopters like the SH-60. COBRA will serve as the "detect" mission module in the Surf Zone and Beach Zone for the Littoral Combat Ship (LCS) Mine Warfare mission package.

Precision Navigation & Marking System (PNMS) provides navigational upgrades for the Landing Craft, Air Cushion (LCAC); Landing Craft, Utility (LCU); and Amphibious Assault Vehicle (AAV). A system of virtual lane marking improves the navigation ability of these three assault craft which enables them to navigate safely through the neutralized assault lanes provided by JABS and CMS. OPN funds the CRAFTALTS to upgrade the navigation systems. LCU Navigation Upgrade:

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 2131: Assault Breaching System		
Modernized the navigation system to enable safe transit through the breached lane. LCAC Autopilot Upgrade: An integrated improvement to the LCAC Service Life Extension Program (SLEP) navigation system for craft control that allows precise navigation and hovering within the breached lane. These software upgrades and backfits occur during scheduled LCAC SLEPs. AAV Navigation Upgrade : Modernize the navigation system to enable precise transit through the breached lane.					
Command, Control, Computers, Communications and Intelligence (C4I) system will tie all of the above systems together under an integrated ABS architecture that is compatible with the existing Mine Warfare architecture.					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Title: Product Development: Articles:			32.036	47.642	45.715
			0	0	0
FY 2012 Accomplishments: CMS - Continued HE/reactive neutralization design, development and testing with emphasis on aero-dynamics and structures. Began CMS neutralizer lethality design and testing (100 darts). Conducted CMS neutralizer formal down select to High Explosive (HE) dart vice Solid Reactive material neutralizer dart. COBRA - Completed BLK I integration Flight Tests with VTUAV. Began COBRA Blk II design and development capability. Precision Navigation/Marking (PN/M) - Continued evaluation/assessment of EDMs supporting PN/M efforts.					
FY 2013 Plans: CMS - Continue HE neutralization the design and development COBRA - Continue design and development of COBRA Block II capability.					
FY 2014 Plans: CMS - Continue HE neutralization design and development. Conduct critical Design reveiw (CDR) COBRA - Continue design and development of COBRA Block II capability.					
Title: Technical Support: Articles:			0.644	0.926	1.019
			0	0	0
FY 2012 Accomplishments: CMS/COBRA - Provided mine magazine inventory management and shipping, contract management and test/studies, C4I/Data Fusion. Provided technical/acquisition support and documentation (ILS, training, data, drawings).					
FY 2013 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM		PROJECT 2131: Assault Breaching System
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
CMS/COBRA - Provide mine warfare inventory and shipping, contract management test studies C4I Data fusion. Provide technnncl acquisition support.				
FY 2014 Plans: CMS/COBRA - Provide mine magazine inventory management and shipping, contract and test/studies, C4I Data Fusion. Provide technical /acquisition support and documentttation (ILS, training, data, drawings).				
Title: Test and Evaluation:		8.599	9.695	10.664
Articles:		0	0	0
FY 2012 Accomplishments: CMS - Conducted CMS Lethality Testing on the neutralizers (HE/Reactive). Tested against different mines in different conditions to determine the final dart design and lethality. COBRA - Conducted Blk I Initial Operational Test and Evaluation (IOT&E) and flight test on the VTUAV. PN/M - Conducted tests of the Precision Navigation and Marking design capability.				
FY 2013 Plans: CMS - Continue 100 shot for neutralizers testing, payload modular. COBRA - Initial development testing of Block II. PN/M - Continue testing of the Precision Navigation and Marking design capability.				
FY 2014 Plans: CMS - Complete 100 shot for the HE Neutralizer and accomplish CDR. COBRA - Continue Block II development testing. PN/M - Continue to test the Precision Navigation and Marking design capability.				
Title: Management:		1.378	1.385	1.391
Articles:		0	0	0
FY 2012 Accomplishments:				

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>				PROJECT 2131: <i>Assault Breaching System</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012	FY 2013	FY 2014
Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion.						
FY 2013 Plans: Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion.						
FY 2014 Plans: Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion.						
Accomplishments/Planned Programs Subtotals				42.657	59.648	58.789

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPN/2624: <i>SHALLOW WATER MCM SHIP</i>	1.045	6.950	8.548		8.548	8.100	27.231	27.779	28.279	0.000	116.997
• OPN/1601: <i>LCS MODULES</i>	0.000	0.000	8.359		8.359	16.198	4.455	4.531	4.781	0.000	46.099
Remarks											
D. Acquisition Strategy											
<p>Countermine/Counter Obstacle (CM/CO) is a two phased approach, near term and far term solutions. The near term approach for CM/CO is JDAM Assault Breaching System (JABS) and ABS Tactical Decision Aid and this effort has been completed. The far term solution is CMS, which transitioned from ONR in 2nd QTR 07 followed by SD&D contract in 4th QTR 08.</p> <p>Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T) - COBRA Block I achieved MS C in 3rd QTR FY09. COBRA Block II technology transferred from ONR and achieved MS B in 3rd QTR FY11. COBRA Block III technology will transition in FY16.</p> <p>Precision Navigation & Marking System (PNMS) - The navigation upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) are in progress. AAV enhancements will be achieved through an ECP (PMA AAV (Marine Corps)) in 4th QTR FY11.</p> <p>All of the above systems continue to meet or exceed their Key Performance Parameters and benefit from effective program management that efficiently allocates the funding it receives. Any delays in program timelines and increases in costs are due directly to previous year's budget cuts.</p>											
E. Performance Metrics											
Successful COBRA integration, flight tests and Operational Assessment (OA) into the Vertical Take-off Unmanned Arial Vehicle (VTUAV). CMS successful design analysis with the down selection of the dart and provide a near surface neutralization capability to the fleet.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 2131: Assault Breaching System					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Dev, COBRA	C/CPAF	Arete:MELBOURNE, FL	120.307	7.045	Nov 2011	7.045	Nov 2012	7.045	Nov 2013	-		7.045	0.000	141.442	
Primary Hardware Dev, CMS	C/CPAF	Boeing:St. Louis, MO	67.591	17.255	Nov 2011	31.288	Oct 2012	30.429	Nov 2013	-		30.429	0.000	146.563	
Ancillary Hardware Dev, JABS	C/CPAF	Unknown:Unknown	12.436	3.214	Feb 2012	3.214	Nov 2012	3.214	Nov 2013	-		3.214	0.000	22.078	
Systems Engineering, COBRA	WR	NSWC, PC:PANAMA CITY, FL	20.860	0.000		0.000		0.000		-		0.000	0.000	20.860	
Software Dev, COBRA	WR	NAVAIR:PANAMA CITY, FL	12.958	0.000		0.000		0.000		-		0.000	0.000	12.958	
Systems Engineering, CMS	WR	NSWC, PC:PANAMA CITY, FL	27.199	1.603	Nov 2011	1.703	Nov 2012	1.703	Nov 2013	-		1.703	Continuing	Continuing	Continuing
Training Dev, COBRA	WR	NSWC, PC:PANAMA CITY, FL	6.801	0.845	Nov 2011	0.845	Nov 2012	0.845	Nov 2013	-		0.845	0.000	9.336	
Tooling	WR	NSWC, PC:PANAMA CITY, FL	0.860	0.000		0.000		0.000		-		0.000	0.000	0.860	
ABS IPT/Test Assets/Proj Eng	WR	NSWC, PC:PANAMA CITY, FL	7.212	0.417	Nov 2011	0.417	Nov 2012	0.417	Nov 2013	-		0.417	0.000	8.463	
Precision Navigation & Marking	WR	NSWC, PC:PANAMA CITY, FL	8.041	2.800	Nov 2011	3.100	Nov 2012	3.100	Nov 2013	-		3.100	0.000	17.041	
Subtotal			284.265	33.179		47.612		46.753		0.000		46.753			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support Equipment	WR	NSWC, PC:PANAMA CITY, FL	16.767	1.110	Nov 2011	1.123	Oct 2012	1.123	Oct 2013	-		1.123	0.000	20.123	
Software Development	WR	NSWC, PC:PANAMA CITY, FL	8.037	0.000		0.000		0.000		-		0.000	0.000	8.037	
Integrated Logistics Support	WR	NSWC, IH:NDIAN HEAD, MD	2.712	0.000		0.000		0.000		-		0.000	0.000	2.712	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM						PROJECT 2131: Assault Breaching System			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	WR	NSWC, PC: PANAMA CITY, FL	3.744	0.000		0.000		0.000		-		0.000	0.000	3.744	
Technical Data	WR	NSWC, PC: PANAMA CITY, FL	2.588	0.000		0.000		0.000		-		0.000	0.000	2.588	
Studies & Analysis	WR	NSWC, PC: PANAMA CITY, FL	5.195	0.225	Nov 2011	0.222	Oct 2012	0.222	Oct 2013	-		0.222	0.000	5.864	
GFE	WR	NSWC, PC: PANAMA CITY, FL	0.400	0.000		0.000		0.000		-		0.000	0.000	0.400	
Subtotal			39.443	1.335		1.345		1.345		0.000		1.345	0.000	43.468	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NSWC, IH: NDIAN HEAD, MD	36.680	5.107	Nov 2011	6.207	Oct 2012	6.207	Nov 2013	-		6.207	0.000	54.201	
Operational Test & Evaluation	WR	NSWC/ IH, PC: NDIAN HEAD, PANAMA CITY	8.655	0.000		0.000		0.000		-		0.000	0.000	8.655	
Tooling	WR	NSWC/ IH, PC: NDIAN HEAD, PANAMA CITY	0.700	0.000		0.000		0.000		-		0.000	0.000	0.700	
GFE	WR	NSWC/ IH, PC: NDIAN HEAD, PANAMA CITY	0.400	0.000		0.000	Oct 2012	0.000		-		0.000	0.000	0.400	
Development Test	C/FP	NSWC PC: Panama City, FL	2.392	2.392	Nov 2011	3.558	Oct 2012	3.558	Oct 2013	-		3.558	0.000	11.900	
Subtotal			48.827	7.499		9.765		9.765		0.000		9.765	0.000	75.856	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 2131: Assault Breaching System					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	CACI, Norhtrup Grumman:DC, FL	10.355	0.100	Nov 2011	0.120	Oct 2012	0.120	Oct 2013	-		0.120	0.000	10.695	
Government Engineering Support	WR	NSWC, IH:NDIAN HEAD, MD	32.135	0.220	Nov 2011	0.482	Oct 2012	0.482	Oct 2013	-		0.482	0.000	33.319	
Program Management Support	WR	NSWC/ IH, PC:NDIAN HEAD, PANAMA CITY	24.025	0.250	Nov 2011	0.250	Oct 2012	0.250	Oct 2013	-		0.250	0.000	24.775	
Travel	WR	NAVSEA:WNY, DC	1.361	0.074	Nov 2011	0.074	Oct 2012	0.074	Oct 2013	-		0.074	0.000	1.583	
Assessment/BTR	C/CPAF	VARIOUS:VARIOUS	1.434	0.000		0.000		0.000		-		0.000	0.000	1.434	
Acquisition Workforce	Various	VARIOUS:VARIOUS	0.211	0.000		0.000		0.000		-		0.000	0.000	0.211	
Subtotal			69.521	0.644		0.926		0.926		0.000		0.926	0.000	72.017	
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			442.056	42.657		59.648		58.789		0.000		58.789			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

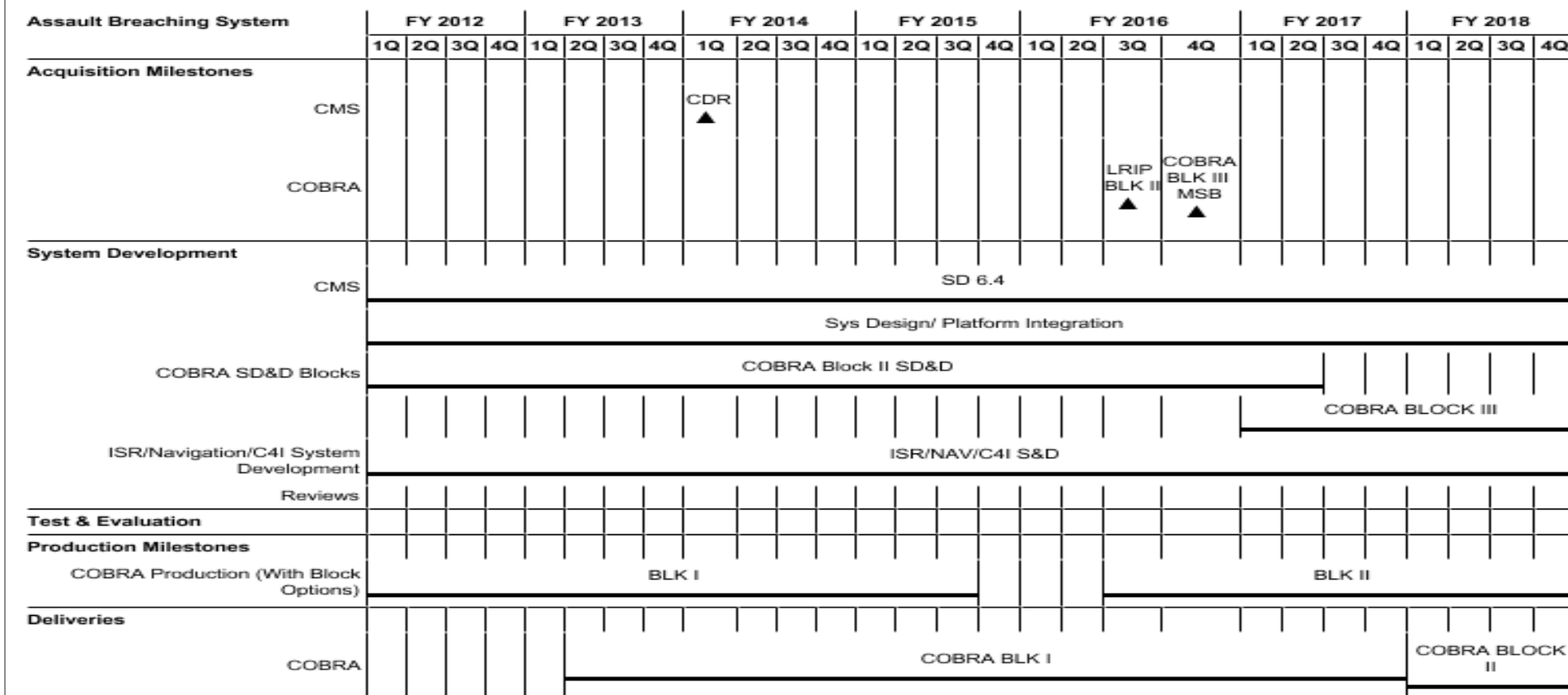
1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603502N: Surface & Shallow Water
MCM

PROJECT

2131: Assault Breaching System



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM	PROJECT 2131: Assault Breaching System	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Assault Breaching System				
Acquisition Milestones: CMS: CDR - Critical Design Review	1	2014	1	2014
Acquisition Milestones: COBRA: COBRA Block III Milestone B	4	2016	4	2016
Acquisition Milestones: COBRA: LRIP Decision Review Block II	3	2016	3	2016
System Development: CMS: CMS System Development 6.4	1	2012	4	2018
System Development: CMS: CMS System Design/Platform Integration	1	2012	4	2018
System Development: COBRA SD&D Blocks: COBRA Block II SD&D	1	2012	2	2017
System Development: COBRA SD&D Blocks: COBRA Block III SD&D	1	2017	4	2018
System Development: ISR/Navigation/C4I System Development: ISR/Navigation/C4I System Development	1	2012	4	2018
Production Milestones: COBRA Production (With Block Options): COBRA Block I	1	2012	3	2015
Production Milestones: COBRA Production (With Block Options): COBRA Block II	3	2016	4	2018
Deliveries: COBRA: Block I	2	2013	4	2017
Deliveries: COBRA: Block II	1	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>					R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>				PROJECT 3123: <i>SMCM UUV</i>			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3123: <i>SMCM UUV</i>	58.101	11.642	21.417	13.944	-	13.944	14.191	6.309	6.058	6.159	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
The Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) develops Unmanned Underwater Vehicles to support mine countermeasure operations, including buried mine detection. Equipment includes vehicles and associated systems support equipment. Potential P3I candidates include communications upgrades, on-board sonar processing and target recognition, command and control improvements, and other smaller tasks.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Title: SMCM UUV LFBB <div style="text-align: right;">Articles:</div>										11.344 0	21.417 0	13.944 0
FY 2012 Accomplishments: Conducted Preliminary Design Review (PDR). Continue E&MD contract efforts.												
FY 2013 Plans: Conduct Critical Design Review (CDR). Commence vehicle fabrication.												
FY 2014 Plans: Complete vehicle fabrication. Commence Development Testing												
Title: SMCM UOES <div style="text-align: right;">Articles:</div>										0.298 0	0.000	0.000
FY 2012 Accomplishments: Support fleet exercises. Completed UOES Phase												
Accomplishments/Planned Programs Subtotals										11.642	21.417	13.944
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 3123: <i>SMCM UUV</i>
<u>D. Acquisition Strategy</u> An acquisition program was initiated in FY11 to develop Surface Mine Countermeasure Unmanned Undersea Vehicles (SMCM UUV) equipped with Low Frequency Broadband (LFBB) sonar that provides buried mine detection capability. Initial procurement of the SMCM UUV with LFBB begins in FY16.		
<u>E. Performance Metrics</u> Successful Milestone C in Q1 FY16. Reach Full Rate Production Decision in Q2 FY17.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM				PROJECT 3123: SMCM UUV					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SMCM UOES Development	C/CPAF	BLUEFIN:CAMBRIDGE, MA	14.844	0.298	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
SMCM UUV Development	C/CPIF	Various:Various	17.033	0.000		0.000		0.000		-		0.000	0.000	17.033	
SMCM UUV Development 2	C/CPIF	General Dynamics AIS:McLeansville, NC	9.800	6.900	Dec 2011	16.570	Dec 2012	9.399	Dec 2013	-		9.399	Continuing	Continuing	Continuing
Software Development	WR	NSWC, PC:PANAMA CITY, FL	0.805	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			42.482	7.198		16.570		9.399		0.000		9.399			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support 1	WR	NSWC, PC:PANAMA CITY, FL	8.599	2.421	Dec 2011	2.325	Dec 2012	2.650	Dec 2013	-		2.650	Continuing	Continuing	Continuing
Engineering Support 2	WR	NUWC, Newport:NEWPORT, RI	2.415	0.649	Dec 2011	0.612	Dec 2012	0.597	Dec 2013	-		0.597	Continuing	Continuing	Continuing
Engineering Support 3	WR	VARIOUS:VARIOUS	1.158	0.401	Dec 2011	1.160	Dec 2012	0.504	Feb 2014	-		0.504	Continuing	Continuing	Continuing
Subtotal			12.172	3.471		4.097		3.751		0.000		3.751			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NOMWC:STENNIS, MI	0.456	0.070	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Government T&E Support	WR	VARIOUS:VARIOUS	0.985	0.228	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Test and Evaluation	WR	COMOPTEVFOR:NORFOLK, VA	0.266	0.125	Dec 2011	0.100	Dec 2012	0.100	Feb 2014	-		0.100	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)							R-1 ITEM NOMENCLATURE PE 0603502N: Surface & Shallow Water MCM					PROJECT 3123: SMCM UUV			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			1.707	0.423		0.100		0.100		0.000		0.100			

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	VARIOUS:WASHINGTON, DC	1.543	0.500	Dec 2011	0.600	Dec 2012	0.619	Feb 2014	-		0.619	Continuing	Continuing	Continuing
Travel	WR	NAVSEA:WNY, DC	0.150	0.050	Dec 2011	0.050	Dec 2012	0.075	Dec 2013	-		0.075	Continuing	Continuing	Continuing
Acquisition Workforce	WR	VARIOUS:VARIOUS	0.047	0.000		0.000		0.000		-		0.000	0.000	0.047	
Subtotal			1.740	0.550		0.650		0.694		0.000		0.694			

			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			58.101	11.642		21.417		13.944		0.000		13.944			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603502N: Surface & Shallow Water
MCM

PROJECT

3123: SMCM UUV

SMCM UUV	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
SMCM UUV UOES																												
Dual Frequency SAS Development																												
SMCM UUV Acquisition Program																												
SMCM UUV Milestones																	MS C ▲				IOC ▲							
SMCM UUV Contract Award																												
SMCM UUV Development																												
SMCM UUV Design Reviews			PDR ▲			CDR ▲																						
SMCM UUV Test Events													DT/OA					OT										
SMCM UUV LRIP																												
SMCM UUV Full Rate Production Decision																					FRPD ▲							
SMCM UUV Full Rate Production																												
P3I																												

2014PB - 0603502N - 3123

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603502N: <i>Surface & Shallow Water MCM</i>	PROJECT 3123: <i>SMCM UUV</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SMCM UUV				
SMCM UUV UOES: Dual Frequency SAS Development: Schedule Detail	1	2012	2	2012
SMCM UUV Acquisition Program: SMCM UUV Milestones: Milestone C	1	2016	1	2016
SMCM UUV Acquisition Program: SMCM UUV Milestones: IOC	2	2017	2	2017
SMCM UUV Acquisition Program: SMCM UUV Development:	1	2012	4	2015
SMCM UUV Acquisition Program: SMCM UUV Design Reviews: Preliminary Design Review	3	2012	3	2012
SMCM UUV Acquisition Program: SMCM UUV Design Reviews: Critical Design Review	2	2013	2	2013
SMCM UUV Acquisition Program: SMCM UUV Test Events: DT/OA	1	2015	3	2015
SMCM UUV Acquisition Program: SMCM UUV Test Events: OT	1	2016	1	2017
SMCM UUV Acquisition Program: SMCM UUV LRIP:	2	2016	2	2017
SMCM UUV Acquisition Program: SMCM UUV Full Rate Production Decision:	2	2017	2	2017
SMCM UUV Acquisition Program: SMCM UUV Full Rate Production:	3	2017	4	2018
SMCM UUV Acquisition Program: P3I:	1	2016	4	2018