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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War Dev</i>
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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	25.171	6.210	1.434	1.464	-	1.464	3.308	3.346	3.168	3.221	Continuing	Continuing
1265: <i>Sub Defensive Warfare</i>	25.171	6.210	1.434	1.464	-	1.464	3.308	3.346	3.168	3.221	Continuing	Continuing

[#] 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 develops a Submarine Acoustic Warfare System (SAWS) to improve the survivability of all U.S. Submarine classes.

This project funds the Next Generation Countermeasure (NGCM) program which entail simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other Research, Development, Test & Evaluation (RDT&E) initiatives. New and emerging hardware and software are rigorously evaluated in representative acoustic environments, against projected threats through both digital and hardware-in-the-loop simulations, to determine their effectiveness in the NGCM, and how that improves submarine survivability. The technology is then incorporated into the appropriate countermeasure. The Torpedo Defense Working Group (TDWG) assesses fleet threats annually.

The key new capabilities for NGCM are adaptive countermeasure technology (ACM) with full duplex capability and mobility.

Funding provides In-Service Engineering Agent and Technical Direction Agent hardware and software development support for Countermeasure Devices (NAE Beacon, ADC 2/3/4) as well as CSA MK 2 and CSA MK 3 systems and Acoustic Augmentation Support Systems in the Acoustic Augmentation Support Program (AASP), including obsolete unit-level Technical Refresh.

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0101226N: Submarine Acoustic War Dev			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	6.360	1.434	1.553	-	1.553
Current President's Budget	6.210	1.434	1.464	-	1.464
Total Adjustments	-0.150	0.000	-0.089	-	-0.089
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.150	0.000			
• Program Adjustments	0.000	0.000	-0.074	-	-0.074
• Rate/Misc Adjustments	0.000	0.000	-0.015	-	-0.015
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Not applicable.					

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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 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev				PROJECT 1265: Sub Defensive Warfare			
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
1265: Sub Defensive Warfare	25.171	6.210	1.434	1.464	-	1.464	3.308	3.346	3.168	3.221	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 develops a Submarine Acoustic Warfare System (SAWS) to improve the survivability of all U.S. Submarine classes. The Torpedo Defense Working Group conducts assessments of current and projected countermeasure performance against current and projected threat weapons using the Weapons Analysis Facility (WAF).												
This project funds the Next Generation Countermeasure (NGCM) program which entail simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other Research, Development, Test & Evaluation (RDT&E) initiatives. New and emerging hardware and software are rigorously evaluated in representative acoustic environments, against projected threats through both digital and hardware-in-the-loop simulations, to determine their effectiveness in the NGCM, and how that improves submarine survivability. The technology is then incorporated into the appropriate countermeasure.												
The key new capabilities for NGCM are adaptive countermeasure technology (ACM) with full duplex capability and mobility.												
Funding provides In-Service Engineering Agent and Technical Direction Agent hardware and software development support for in-service countermeasure devices (NAE Beacon, ADC 2/3/4) as well as CSA MK 2 and CSA MK 3 systems and Acoustic Augmentation Support Systems in the Acoustic Augmentation Support Program (AASP), including obsolete unit-level Technical Refresh.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Sub Acoustic Warfare									6.210	1.434	1.464	
									Articles: 0	0	0	
FY 2012 Accomplishments:												
- NGCM: Continued integration of technology by 2 development contractors.												
- Conducted Preliminary Design Reviews (PDRs).												
- FY12 delivery of 5 Special Test Units (STUs) from each developer was delayed.												
- Conducted TDWG and review and updated Threat Assessment.												

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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev				PROJECT 1265: Sub Defensive Warfare				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
- Critical Design Reviews (CDR) delayed due to funding restriction.												
FY 2013 Plans:												
- Continue integration of technology by contractors and continue development towards NGCM CDRs.												
- Start Contractor Testing of NGCM subsystems.												
- Continue low level TDWG activity.												
FY 2014 Plans:												
- NGCM: Continue integration of technology by contractors and testing of subsystems.												
- Conduct TDWG review and assessment.												
Accomplishments/Planned Programs Subtotals										6.210	1.434	1.464
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/221000/221005: Submarine Acoustic Warfare	20.503	21.489	24.077		24.077	27.312	26.286	29.236	29.676	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
This project develops a Submarine Acoustic Warfare System (SAWS) to improve the survivability of all U.S. Submarine classes. The integration of technology into the Next Generation Countermeasure (NGCM) and the NGCM-Capable CSA MK3 system will continue through FY18. The development is through a full and open competition for two cost-plus-fixed-fee (CPFF) contracts to deliver NGCM Engineering Development Models (EDMs) to the Navy. The NGCM development contracts were awarded in 1Q-FY11. NGCM contractor's testing will be FY13 through FY18 and Navy DT will be in FY17-18, with OT in FY19-20 & MS C in FY21.												
E. Performance Metrics												
Progress Reviews Execution Reporting and Reviews Milestone Reviews												

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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 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acooustic War Dev				PROJECT 1265: Sub Defensive Warfare					
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
WAF ANALYSIS TDWG	WR	NUWC:NEWPORT, RI	10.000	1.241	Dec 2011	0.185	Dec 2012	0.185	Dec 2013	-		0.185	Continuing	Continuing	Continuing
NGCM SYSYTEM ENGINEERING	WR	NUWC:NEWPORT, RI	7.625	0.419	Dec 2011	0.253	Dec 2012	0.253	Dec 2013	-		0.253	Continuing	Continuing	Continuing
NGCM DEVELOPMENT 1	C/CPAF	Argon ST:Fairfax, VA	2.769	2.088	Feb 2012	0.383	Dec 2012	0.400	Dec 2013	-		0.400	Continuing	Continuing	Continuing
NGCM DEVELOPMENT 2	C/CPAF	Ultra:Braintree, MA	2.496	2.088	Feb 2012	0.383	Dec 2012	0.400	Dec 2013	-		0.400	Continuing	Continuing	Continuing
CSA MK3 SYSTEM ENGINEERING	WR	NUWC:KEPORT, WA	1.020	0.199	Dec 2011	0.100	Dec 2012	0.096	Dec 2013	-		0.096	Continuing	Continuing	Continuing
Subtotal			23.910	6.035		1.304		1.334		0.000		1.334			
Remarks															
NGCM Development contracts awarded 12/22/2010 to Argon ST and Ultra.															
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
ACQUISITION WORKFORCE	Various	Not Specified:Not Specified	0.036	0.000		0.000		0.000		-		0.000	0.000	0.036	0.036
TRAVEL	WR	NAVSEA:Washington, DC	0.425	0.075	Nov 2011	0.030	Oct 2012	0.030	Oct 2013	-		0.030	Continuing	Continuing	Continuing
PROGRAM MANAGEMENT SUPPORT	C/CPAF	TECH MARINE:Washington, DC	0.800	0.100	Feb 2012	0.100	Nov 2012	0.100	Dec 2013	-		0.100	Continuing	Continuing	Continuing
Subtotal			1.261	0.175		0.130		0.130		0.000		0.130			
			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			25.171	6.210		1.434		1.464		0.000		1.464			
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 7: Operational Systems Development												R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev								PROJECT 1265: Sub Defensive Warfare								
Proj 1265	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
Torpedo Defense Working Group(TDWG)				TDWG ▲							TDWG ◆				TDWG ◆				TDWG ◆				TDWG ◆					
Weapons Analysis Facility	WAF																											
Next Generation Countermeasure(NGCM)	TEMP																											
					PDR ▲			Contractor Testing																				
														CDR ▲							Developmental Testing							
														CDR ▲														
2014PB - 0101226N - 1265																												

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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 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0101226N: <i>Submarine Acoustic War</i> <i>Dev</i>	PROJECT 1265: <i>Sub Defensive Warfare</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 1265				
Torpedo Defense Working Group(TDWG): FY14 TDWG	3	2014	3	2014
Torpedo Defense Working Group(TDWG): FY15 TDWG	3	2015	3	2015
Torpedo Defense Working Group(TDWG): FY16 TDWG	3	2016	3	2016
Torpedo Defense Working Group(TDWG): FY17 TDWG	3	2017	3	2017
Torpedo Defense Working Group(TDWG): TDWG	4	2012	4	2012
Weapons Analysis Facility: COUNTERMEASURE (CM) EFFECTIVENESS/WEAPON ANALYSIS FACILITY (WAF) VULNERABILITY	1	2012	4	2018
Next Generation Countermeasure(NGCM): TEST & EVALUATION MASTER PLAN (TEMP) Draft Approved	1	2012	3	2013
Next Generation Countermeasure(NGCM): PRELIMINARY DESIGN REVIEW (PDR)	1	2013	1	2013
Next Generation Countermeasure(NGCM): CONTRACTOR TESTING	4	2013	1	2018
Next Generation Countermeasure(NGCM): DEVELOPMENTAL TESTING (DT)	2	2017	4	2018
Next Generation Countermeasure(NGCM): CDR-1	2	2015	2	2015
Next Generation Countermeasure(NGCM): CDR-2	2	2015	2	2015