Exhibit R-2, RDT&E Budget Item 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 0205620N: *Surface ASW Cmbt Sys Integr*							
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	113.835	28.927	27.342	31.863	-	31.863	30.710	27.595	28.095	28.932	Continuing	Continuing
1916: *Surface ASW System Improvement*	113.835	21.427	27.342	31.863	-	31.863	30.710	27.595	28.095	28.932	Continuing	Continuing
9999: *Congressional Adds*	0.000	7.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.500

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 Navy's Strategy is to remain the preeminent maritime power, providing the U.S. a global expeditionary force committed to security and prosperity, while defending the Nation's interests. Within this vision, Anti-Submarine Warfare (ASW) remains a Navy core competency in a dynamic and uncertain maritime environment. U.S. adversaries continue to develop asymmetric capabilities and capacities to deter, disrupt, or delay the entry of U.S. and allied naval forces, and pose a constant challenge as we implement the Maritime Strategy. Evolving submarine technologies offer enhanced stealth, speed, endurance, weapons, and operational proficiency, trends foretelling that the adversary submarine of the future will have a significantly larger sphere of influence, while presenting less vulnerability to ASW forces. The effective offensive engagement range of the adversary submarine of the future will continue to match or outrange individual U.S. and multinational platform sensors and weapons in many tactical environments. Submarines are an increasing threat to all Naval and Allied ships, particularly modern diesel subs and faster torpedoes. Not only can the presence of potential hostile submarines delay naval combatant action until they are located and neutralized, submarines can also disrupt all seaborne logistics supply for any ground campaign as well as maritime commerce. ASW forces must be effective in all operating environments, ranging from the deep open ocean to the littorals, and are key to countering adversarial anti-access and area denial strategies.

The objective of this Program Element (PE) is to significantly improve existing Surface Ship Undersea Warfare (USW) sonar system capabilities through quick and affordable development/integration of emergent, transformational technologies in support of Littoral ASW, Theater ASW, Mine Reconnaissance, and overall Sea Shield efforts required to pace the threat. Detection and classification play uniquely vital roles in the success of any ASW campaign. To be effective against increasingly stealthy threats in an often ambiguous undersea environment, future sensors must be environmentally adaptive, have very low false alarm rates, and exploit the full range of current and future submarine detection vulnerabilities.

Project 1916's primary mission is to improve AN/SQQ-89(V) Measures Of Performance (MOP) by enhancing detection, tracking, classification, passive, active, torpedo Detection, Classification, and Localization (DCL) and sonobuoy data processing and display capabilities, and increasing acoustic sensor frequency bandwidth (Operational Requirements Document #667-76-05 titled 'AN/SQQ-89 Improvement Program', Test and Evaluation Master Plan 801 and 802-2 (TEMP 801 & TEMP 802-2)). Improvements to system simulation, stimulation, Information Assurance (IA), software and network architectures, and safety are included. This project takes advantage of the AN/SQQ-89(V) Open System Architecture (OSA) and Acoustic Rapid Commercial-Off-The-Shelf (COTS) Insertion (ARCI) initiatives to integrate a torpedo DCL and ASW sonar combat system capability improvements. This COTS-based Surface Ship ASW combat system, the AN/SQQ-89A(V)15, is currently planned as a backfit program for both CG47 (select CG59-73 Baseline 3 and 4 ships) and DDG51 (All DDG and follow FLT I/II/IIA) class ships. The Open Architecture

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(OA) (level 3 compliant) of the AN/SQQ-89A(V)15 system drives the Advanced Capability Build (ACB) spiral development process and provides budget flexibility to make COTS/OA technology solutions and ARCI-type initiatives affordable. This will be accomplished via the incorporation of select Pre-Planned Product Improvements (P3I) and emergent, transformational ASW technologies delivered to the AN/SQQ-89(V) prime integrator every two years. ASW technology implementation will take advantage of improvements developed under the submarine Advanced Processing Build (APB) program and will in turn share unique improvements developed under this program with the submarine and surveillance ASW communities. This project will also contribute to development of Littoral Combat Ship (LCS) ASW Mission Packages.

Project 1916 also includes funding for the Surface Ship Enhanced Measurement Program (SSEMP), which will measure the performance of existing and new Surface Ship ASW combat systems and enables data-based assessment of the capabilities and shortfalls in the performance of these systems in realistic scenarios.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	29.472	27.342	35.064	-	35.064
Current President's Budget	28.927	27.342	31.863	-	31.863
Total Adjustments	-0.545	0.000	-3.201	-	-3.201
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.545	0.000			
• Program Adjustments	0.000	0.000	-2.912	-	-2.912
• Rate/Misc Adjustments	0.000	0.000	-0.289	-	-0.289

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2012	FY 2013
Project: 9999: *Congressional Adds*		
Congressional Add: *Surf ASW SBIR (Cong)*	7.500	-
Congressional Add Subtotals for Project: 9999	7.500	0.000
Congressional Add Totals for all Projects	7.500	0.000

Change Summary Explanation

Reduced FY14 Surface ASW System Improvement funding efforts to properly phase program requirements in accordance with expenditures.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
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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
1916: *Surface ASW System Improvement*	113.835	21.427	27.342	31.863	-	31.863	30.710	27.595	28.095	28.932	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 ASW Systems Improvements Project will support essential performance enhancements to AN/SQQ-89(V) and Surface Ship Sonar Systems. This project will improve AN/SQQ-89(V) MOP by enhancing detection, tracking, classification, active, passive, torpedo DCL, and sonobuoy data processing and display capabilities, and increasing acoustic sensor frequency bandwidth (Operational Requirements Document #667-76-05 titled 'AN/SQQ-89 Improvement Program'), Test and Evaluation Master Plan 801 and 802-2 (TEMP 801 & TEMP 802-2).

This project will take advantage of the AN/SQQ-89(V) OSA and ARCI initiatives to integrate a TDCL and ASW sonar and combat system capability improvements. This COTS-based Surface Ship ASW combat system, the AN/SQQ-89A(V)15, is currently planned as a backfit program for both CG47 (select CG59-73 Baseline 3 and 4 ships) and DDG51 (All DDG51 and follow FLT I/II/IIA) class ships. This project has delivered the AN/SQQ-89A(V)15 Pre-Production Prototype, performed installation on board CG73, and conducted subsequent Developmental Test & Evaluation (DT&E) and Initial Operational Test & Evaluation (IOT&E) where the system was found 'Operationally Effective' by Command Operational Test and Evaluation Force (COMOPTEVFOR).

The OSA and high performance COTS processing hardware on ships fielded with the AN/SQQ-89A(V)15 combat system provides an opportunity to integrate select P3I as well as emergent, transformational ASW technological improvements that were previously unachievable. The Undersea Warfare (USW) suites on these ships will require periodic upgrades to remain effective well into the 21st century and to pace the threat. Software upgrades target capability increases in high interest areas as prescribed by the Fleet and captured in campaign analysis. To achieve this, this project will package and deliver incremental upgrades every two years to the AN/SQQ-89A(V)15 production program via an ACB spiral development process (ACB-11, ACB-13, etc.) by inserting maturing USW technologies, such as enhancements to improve USW performance in the littoral, reduced manning on AN/SQQ-89(V) equipped ships operator efficiency upgrades via the implementation of robust embedded data record and replay capability and active/passive sonar simulation/stimulation, DCL active/passive processing upgrades passive sonar automated detection and classification processing bell-ringers from the ASW Community-of-Interest, detect and track through maneuvers, integration of MH-60R mission systems with the AN/SQQ-89A(V)15 combat system, integration of Mid-Frequency active detection improvements, false-alarm rate reduction, clutter reduction, and integration of ASW Community-of-Interest improved acoustic intercept and small-object avoidance, ASW Multi-Sensor integration (acoustic similar-source fusion and implementation of integrated shipboard system data, and ASW combat display architecture and reduced watch-team operational concept implementation), distributed engagement management (Network Centric Enterprise Services implementation, new displays and decision aids, ASW Community-of-Interest model capabilities implementation), marine mammal detection and mitigation, Multi-Static Active ASW, Multi-Frequency Acoustic Communications (MF ACOMMS) between Surface Combatants and Submarines, new RAPTOR radar processing, and upgraded technologies such as algorithm improvements, increased Passive Narrow Band (PNB) frequency,

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improved Extended Echo Ranging (EER), Continuous Active Sonar (CAS), and beamformer improvements. A rigorous testing program is also required to ensure that these performance enhancements are operationally effective and suitable.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: SQQ-89A(V)15 Surface Ship ASW Advanced Capability Build (ACB) Development	17.927	23.342	27.913
Articles:	0	0	0

Description: Develop enhancements to the AN/SQQ-89A(V)15 Open System Architecture (OSA) via the integration of transformational technologies through an ACB spiral development process. Items include hull-mounted Acoustic Intercept (ACI) sensor, ACI performance predictions and signal injection capabilities, Marine Mammal Detection and Mitigation (MMDM) capability, hull array adaptive beamformer and towed array shape compensated beamformer improvements via the Beamformer Functional Segment (BFFS), Mid-Frequency Active (MFA) Cooperative Organic Mine Defense (COMID) mine avoidance upgrades, MFA rapid replay and multi-waveform tracker, Hull Passive Processing Functional Segment (HPPFS) improvements, Sensor Performance Prediction Functional Segment (SPPFS) improvements, Low Frequency Multi-Static Functional Segment (LFMFS) improvements, Undersea Warfare Control Functional Segment (UCFS) improvements, Supportability Functional Segment (SupFS) improvements, Recording Functional Segment (RecFS) improvements, Common System Services/Mission Package Services (CSS/MPS) improvements, full bandwidth towed array passive ASW and automated torpedo DCL algorithm improvements (active/passive) within the Torpedo Recognition and Alertment Functional Segment (TRAFS) necessary to extend detection ranges and reduce false alert/alarm rates, new Data Fusion Functional Segment (DFFS) sensor to reduce the number of displays required for system operation, Multi-Frequency Acoustic Communications (MF ACOMMS) development, integration of MH-60R mission systems with the AN/SQQ-89A(V)15 combat system, Extended Echo Ranging (EER) "Distant Thunder" integration into the AN/SQQ-89A(V)15 Surface Common Airborne Undersea Sensor System (CAUSS) Functional Segment airframe sensor processing suite, explosive source integration with AN/SQQ-89A(V)15 processes, simplification of displays and active processing, and a Sonar Logger capability to significantly reduce operator data logging requirements. These items will be integrated and delivered to the CG47 and DDG51 class AN/SQQ-89A(V)15 backfit production programs via ACB updates. Import advanced development capabilities from the submarine Advanced Processing Build (APB) and Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (ARCI) projects. Export advanced capabilities to submarine and surveillance combat system programs.

Resolve/troubleshoot issues/deficiencies that arise from the AN/SQQ-89(V) Surface Ship ASW Test & Evaluation program. Rapidly address and correct problems/deficiencies in processing, capability or operations within the following areas within the AN/SQQ-89(V) USW combat system architecture; sensor processing, acoustics, MMDM, fire control, contact management, performance prediction, operator productivity and on-board training, MFTA, Digital Fire Control Interface (DFCI), Remote Mine-Hunting System (RMS), MFA processing, and adaptive beamforming.

FY 2012 Accomplishments:

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continued development and integration of enhancements to the AN/SQQ-89A(V)15 for ACB-13. Conducted independent testing and initiated transition of the ACB-13 software. ACB-13 will focus on reducing Operator Machine Interfaces complexity to support ease of use and reduced training burden; improved active detection and tracking automation; full sensor simulation for training; improved situational awareness through automation and OMI; enhanced software architecture to improve system reliability. ***FY 2013 Plans:*** Continue testing and production of enhancements to the AN/SQQ-89A(V)15 for ACB-13. Land-based testing will include capability and suitability testing in-lab of the integrated system on tactical hardware. Finish production development of ACB-13 and deliver the ACB-13 software build to the AEGIS certification process for approval and testing prior to fielding. Initiate development of concepts and capabilities for ACB-15. Development will include completing the first step and starting the second step of the 4 Step ACB process; Step 1 - algorithm assessment by peer review panels of subject matter experts to down select technologies and assist developers with technical guidance; Step 2 - algorithm/technology testing with open and closed data sets to further down select and refine capabilities prior to integration and test. ACB-15 will focus on transitioning passive improvements from submarine APB development, improved torpedo detection and classification performance, and integrating MH-60R capability into the SQQ-89. MH-60R integration with ACB-15 is being conducted in alignment with Aegis integration of MH-60R. ***FY 2014 Plans:*** Continue development and integration of enhancements to the AN/SQQ-89A(V)15 for ACB-15. Finish the conduct of independent Step 2 testing of ACB-15 individual technologies to finalize transitions for integration onto the tactical hardware. Following independent testing, begin integration of ACB-15 capabilities into the tactical string. Integrated ACB-15 will be used for land-based testing of full system. Prepare data collection and test plans for Step 3 land-based testing as part of 4 Step ACB process. Step 3 is peer review by subject matter experts of fully integrated tactical capability.			
Title: AN/SQQ-89(V) Surface Ship ASW Test & Evaluation Program	0.300	0.800	0.700
Articles:	0	0	0
FY 2012 Accomplishments: Continued ACB-11 AN/SQQ-89A(V)15 Surface Ship ASW test and evaluation planning support; SAT analysis, determined test ship, test location, target requirements, personnel requirements and materials required, developed a test plan based on system configuration, at-sea data requirements, and ship, target, and range availabilities. ***FY 2013 Plans:*** Conduct Development Test (DT) and Operational Test (OT) to support fielding of ACB-11. In support of ACB-13, complete AN/SQQ-89A(V)15 System Qualification Test (SQT) 3Q13 and Aegis Integration Event (AIE) 4Q13. ***FY 2014 Plans:***			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue ACB-13 AN/SQQ-89A(V)15 ASW test and evaluation. Determine test ship, test location test location, target requirements, personnel requirements and materials required to support at sea test in conjunction with Aegis.			
Title: Surface Ship Enhanced Measurement Program (SSEMP)	3.200	3.200	3.250
Articles:	0	0	0
Description: Analyze the sonar employment in the operational setting and reported results for improvement of training/ employment guidance. Perform Fleet exercise data reconstruction and post-test analysis each year. Conduct selected at-sea data collection activities by providing planning support, ship riders, and analyst support. Evaluate prototype sonar employment tactics, sonar processing and automation algorithms, and communication protocols for the detection, classification, tracking, and intra-Fleet hand-off to Fleet ASW assets, and provided summary reports to document results.			
FY 2012 Accomplishments: Conducted ACB-09 and ACB-11 lab-based system and operator performance comparison test. Completed analysis of SSEMP cases 25 and 27.			
FY 2013 Plans: Continue ACB-11 performance assessment and operator at-sea testing and analysis of SSEMP cases. Update lab hardware to TI-12 and install ACB-11 tactical software.			
FY 2014 Plans: Commence ACB-11 and ACB-13 lab-based system and operator performance comparison test and continue analysis of SSEMP cases.			
Accomplishments/Planned Programs Subtotals	21.427	27.342	31.863

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/2136: *AN/SQQ-89 Surface ASW Combat System*	71.771	89.201	83.231		83.231	112.892	129.202	120.115	149.861	Continuing	Continuing
• OPN/0900: *DDG Modernization*	126.373	452.371	285.994		285.994	517.286	469.890	530.225	801.286	Continuing	Continuing
• OPN/0960: *CG Modernization*	557.503	101.000	10.539		10.539	79.058	10.992	0.000	0.000	Continuing	Continuing

Remarks

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D. Acquisition Strategy

- Completed AN/SQQ-89A(V)15 Surface Ship ASW Combat System Pre-Production Prototype, performed installation, conducted DT&E, and Initial IOT&E. Via an ACB spiral development process, incorporate evolutionary and transformational technologies into AN/SQQ-89A(V)15 production systems (planned for select Baseline 3 and 4 CG47 Class and all FLT I/II/IIA DDG51 Class hulls) at scheduled intervals to pace the threat.
- Awarded new, competitive contract for AN/SQQ-89(V) prime system integrator in FY 2007. Plan to award next new, competitive contract for AN/SQQ-89(V) prime system integrator in FY 2014.

E. Performance Metrics

- Deliver incremental capability increases in high interest areas, as prescribed by the Fleet and captured in campaign analysis, every two years to the AN/SQQ-89A(V)15 production program via an ACB spiral development process (ACB-09, ACB-11, ACB-13, etc.) by inserting maturing USW technologies.
- Continue ACB-11 development reflecting active capability for Continuous Active Sonar (CAS) including clutter reduction, passive processing from submarine APB-09, SAST, and improvements in contact and data management.
- Continue SAST system development, integration and testing.

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SQQ-89 S/W Development/Integration	C/CPFF	AAC:NY	4.508	1.300	Jan 2012	1.850	Feb 2013	1.850	Dec 2013	-		1.850	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	AM:VA	11.622	1.650	Dec 2011	2.250	Jan 2013	2.350	Dec 2013	-		2.350	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	GD-AIS:VA	11.322	0.000		0.000		0.000		-		0.000	0.000	11.322	
SQQ-89 S/W Development/Integration	C/CPFF	In-Depth Engineering:VA	2.100	0.875	Jan 2012	0.950	Dec 2012	1.200	Dec 2013	-		1.200	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	JHU/APL:MD	8.675	3.761	Feb 2012	5.435	Dec 2012	6.125	Dec 2013	-		6.125	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	Lockheed Martin:NY	8.705	1.500	Feb 2012	2.450	Dec 2012	2.690	Dec 2013	-		2.690	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	Lockheed Martin:VA	1.800	1.700	Feb 2012	1.750	Dec 2012	2.125	Dec 2013	-		2.125	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	WR	NSWC/ Carderock:MD	1.720	0.000		0.125	Nov 2012	0.350	Nov 2013	-		0.350	0.000	2.195	
SQQ-89 S/W Development/Integration	WR	NSWC/Dahlgren:VA	1.336	0.104	Jan 2012	0.175	Apr 2013	0.000		-		0.000	Continuing	Continuing	Continuing
SQQ-89 S/W TDA Support	WR	NUWC/Newport:RI	5.473	1.287	Nov 2011	2.583	Nov 2012	2.745	Nov 2013	-		2.745	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	SEDNA:VA	1.400	1.400	Dec 2011	1.400	Dec 2012	1.400	Dec 2013	-		1.400	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	UT/ARL:TX	6.767	0.500	Dec 2011	0.975	Feb 2013	1.110	Dec 2013	-		1.110	Continuing	Continuing	Continuing
SQQ-89 S/W Development/Integration	C/CPFF	VAR:VAR*	4.890	3.088	Dec 2011	3.893	Dec 2012	5.608	Dec 2013	-		5.608	Continuing	Continuing	Continuing
SAST Development/ Integration	C/CPFF	JHU/APL:MD	8.302	0.000		0.000		0.000		-		0.000	0.000	8.302	
SAST Development/ Integration	WR	NSWC/ Carderock:MD	11.265	0.000		0.000		0.000		-		0.000	0.000	11.265	
SAST Development/ Integration	WR	NUWC/Newport:RI	2.950	0.000		0.000		0.000		-		0.000	0.000	2.950	

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SAST Development/ Integration	C/CPFF	SEDNA:VA	4.792	0.000		0.000		0.000		-		0.000	0.000	4.792	
SAST Development/ Integration	C/CPFF	UT/ARL:TX	1.652	0.000		0.000		0.000		-		0.000	0.000	1.652	
SAST Development/ Integration	C/CPFF	VAR:VAR*	0.380	0.000		0.000		0.000		-		0.000	0.000	0.380	
		Subtotal	99.659	17.165		23.836		27.553		0.000		27.553			

Remarks

*Consists of multiple performing activities with funding for each not greater than $1M per year.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SSEMP ConductTest/Data Evaluation	C/CPFF	JHU/APL:MD	5.760	2.005	Feb 2012	2.100	Dec 2012	2.100	Dec 2013	-		2.100	Continuing	Continuing	Continuing
SSEMP Conduct/Test/ Data Evaluation	WR	NUWC/Newport:RI	1.362	0.550	Nov 2011	0.500	Nov 2012	0.500	Nov 2013	-		0.500	Continuing	Continuing	Continuing
SSEMP Conduct/Test/ Data Evaluation	C/CPFF	UT/ARL:TX	1.878	0.600	Dec 2011	0.600	Feb 2013	0.600	Dec 2013	-		0.600	Continuing	Continuing	Continuing
SQQ-89 IV&V/SAT/TEMP Assess./Update	WR	NUWC/Newport:RI	1.276	0.350	Nov 2011	0.000		0.000		-		0.000	0.000	1.626	
SQQ-89 DT/OT/ Miscellaneous T&E	WR	VAR:VAR*	1.475	0.310	Dec 2011	0.000		0.800	Dec 2013	-		0.800	0.000	2.585	
		Subtotal	11.751	3.815		3.200		4.000		0.000		4.000			

Remarks

*Consists of multiple performing activities with funding for each not greater than $1M per year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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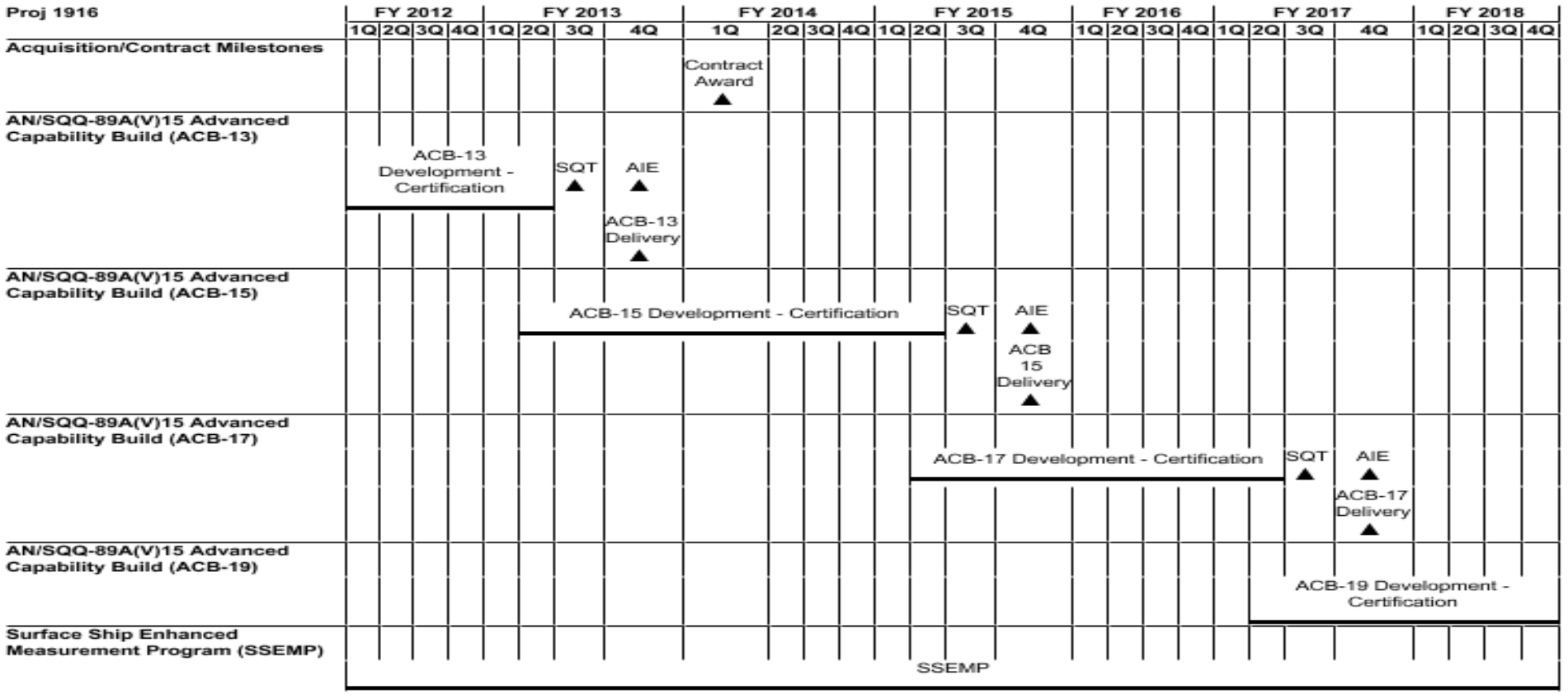
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	BAE Systems:MD	1.896	0.347	Feb 2012	0.256	Jan 2013	0.250	Dec 2013	-		0.250	Continuing	Continuing	Continuing
Program Office Travel	Allot	NAVSEA PEO IWS5:DC	0.529	0.100	Jan 2012	0.050	Nov 2012	0.060	Oct 2013	-		0.060	Continuing	Continuing	Continuing
		Subtotal	2.425	0.447		0.306		0.310		0.000		0.310			

	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	113.835	21.427		27.342		31.863		0.000		31.863			

Remarks

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 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*



2014PB - 0205620N - 1916

Exhibit R-4A, RDT&E Schedule Details: 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 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1916				
Acquisition/Contract Milestones: New AN/SQQ-89(V) Prime Integrator Contract Award	1	2014	1	2014
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-13): SQQ-89A(V)15 ACB-13 Dev./ Step Eval./PRT/Integ./Cert.	1	2012	2	2013
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-13): SQQ-89A(V)15 ACB-13 System Qualification Test (SQT)	3	2013	3	2013
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-13): SQQ-89A(V)15 ACB-13 Aegis Integration Event (AIE)	4	2013	4	2013
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-13): SQQ-89A(V)15 ACB-13 Prdtn. S/W Delivery to Integrator	4	2013	4	2013
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-15): SQQ-89A(V)15 ACB-15 Dev./ Step Eval./PRT/Integ./Cert.	2	2013	2	2015
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-15): SQQ-89A(V)15 ACB-15 System Qualification Test (SQT)	3	2015	3	2015
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-15): SQQ-89A(V)15 ACB-15 Aegis Integration Event (AIE)	4	2015	4	2015
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-15): SQQ-89A(V)15 ACB-15 Prdtn. S/W Delivery to Integrator	4	2015	4	2015
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-17): SQQ-89A(V)15 ACB-17 Dev./ Step Eval./PRT/Integ./Cert.	2	2015	2	2017
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-17): SQQ-89A(V)15 ACB-17 System Qualification Test (SQT)	3	2017	3	2017
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-17): SQQ-89A(V)15 ACB-17 Aegis Integration Event (AIE)	4	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: 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 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-17): SQQ-89A(V)15 ACB-17 Prdtn. S/W Delivery to Integrator	4	2017	4	2017
AN/SQQ-89A(V)15 Advanced Capability Build (ACB-19): SQQ-89A(V)15 ACB-15 Dev./ Step Eval./PRT/Integ./Cert.	2	2017	4	2018
Surface Ship Enhanced Measurement Program (SSEMP): Surface Ship Enhanced Measurement Program (SSEMP)	1	2012	4	2018

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 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 9999: *Congressional Adds*	

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
9999: *Congressional Adds*	0.000	7.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.500
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

Congressional Add.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: Surf ASW SBIR (Cong)	7.500	-
FY 2012 Accomplishments: Provided the DESRON Commander, performing the Anti-Submarine Warfare Commander (ASWC) role, the ability to enhance the execution of Surface ASW by enabling net-centric ASW information exchange between assigned units. Currently the ASWC's two primary sensors, Periscope Detection Radar (PDR), SPS-74, and Surface Ship Sonar, AN/SQQ-89A(V)15, only provide data to the installed ship. Sharing this sensor information will dramatically improve the successful execution of the DESRON Commanders ASW mission. Provided engineering services that support integration, testing, evaluation, and certification of the interfaces between the Undersea Warfare - Decision Support System (USW-DSS) Build 2 and above surface ASW sensors. This is accomplished via the execution of a formal test plan that includes: formal External Interface Testing (EIT); formal lab-based software certification; and multiple at-sea testing events as part of Development Testing in preparation for Operational Testing Certification.		
Congressional Adds Subtotals	7.500	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Add.

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 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 9999: *Congressional Adds*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
New Technology Development	C/CPFF	Adaptive Methods:VA	0.000	1.700	Jul 2012	0.000		0.000		-		0.000	0.000	1.700	
New Technology Development	C/CPFF	Progeny Systems:VA	0.000	5.400	Jul 2012	0.000		0.000		-		0.000	0.000	5.400	
New Technology Development	C/CPFF	Purvis Systems:NY	0.000	0.400	Sep 2012	0.000		0.000		-		0.000	0.000	0.400	
		Subtotal	0.000	7.500		0.000		0.000		0.000		0.000	0.000	7.500	

	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	7.500		0.000		0.000		0.000		0.000	0.000	7.500	

Remarks