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 0603581N: *Littoral Combat Ship (LCS)*							
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	2,862.241	297.125	429.420	406.389	-	406.389	337.220	158.840	145.502	143.644	Continuing	Continuing
3096: *Littoral Combat Ship*	731.391	84.033	223.681	197.738	-	197.738	170.764	41.962	40.622	41.058	Continuing	Continuing
3129: *LCS Mission Package Development*	691.878	139.714	195.824	203.771	-	203.771	166.456	116.878	104.880	102.586	Continuing	Continuing
4018: *Littoral Combat Ship Construction*	1,438.972	63.378	9.915	4.880	-	4.880	0.000	0.000	0.000	0.000	0.000	1,517.145
9999: *Congressional Adds*	0.000	10.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.000
MDAP/MAIS Code(s): 374,443												

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 (PE) provides funds for detailed design, development, construction, integration, and testing of the Littoral Combat Ship (LCS). LCS is a fast, agile, and networked surface combatant with capabilities optimized to defeat asymmetric threats, and assure naval and joint force access into contested littoral regions. It uses open-systems architecture design, modular weapons, sensor systems, and a variety of manned and unmanned vehicles to expand the battle space and project offensive power into the littoral.

LCS operates with focused-mission packages that deploy manned and unmanned vehicles to execute a variety of missions, including littoral anti-submarine warfare (ASW), surface warfare (SUW) and mine countermeasures (MCM). LCS also possesses inherent capabilities, regardless of the mission package installed, including Intelligence, Surveillance, Reconnaissance (ISR), Homeland Defense, Maritime Interdiction/Interception Operations (MIO), Anti-Terrorism/Force Protection (AT/FP), air self-defense, joint littoral mobility, Special Operating Forces (SOF), and logistic support for movement of personnel and supplies. This relatively small, high-speed surface combatant complements the U.S. Navy's Surface Fleet by operating in environments where it is less desirable to employ larger, multi-mission ships. LCS can deploy independently to overseas littoral regions, remain on station for extended periods of time either with a battle group or through a forward-basing arrangement, and is capable of underway replenishment. LCS will operate with Carrier Strike Groups, Surface Action Groups, in groups of other similar ships, or independently for diplomatic and presence missions. Additionally, LCS can operate cooperatively with the U.S. Coast Guard and Allies.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy					DATE: April 2013
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B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	292.665	429.420	434.955	-	434.955
Current President's Budget	297.125	429.420	406.389	-	406.389
Total Adjustments	4.460	0.000	-28.566	-	-28.566
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	8.766	0.000			
• SBIR/STTR Transfer	-4.306	0.000			
• Program Adjustments	0.000	0.000	-23.222	-	-23.222
• Rate/Misc Adjustments	0.000	0.000	-5.344	-	-5.344

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2012**	**FY 2013**
Project: 9999: *Congressional Adds*		
Congressional Add: *LCS MM SBIR (Cong)*	10.000	-
Congressional Add Subtotals for Project: 9999	10.000	0.000
Congressional Add Totals for all Projects	10.000	0.000

Change Summary Explanation

FY 2014 changes for seaframe and mission package (MP) include the following: rephasing of FY 2014 funds to FY 2015 due to delay of Full Ship Shock Trial (FSST) Test and Evaluation and rephasing of Surface Warfare (SUW) efforts from FY 2014 to FY 2015 for environmental testing (shock, vibration, Electromagnetic Environmental Effects (E3), temperature, salt spray) and developmental flight testing. Other FY 2014 changes include the addition of: support for the dual acquisition strategy and increased COMOPTEVFOR requirements to perform Developmental Testing and Operational Testing (DT/OT) on both LCS variants; Technical Evaluation (TECHEVAL) and Operational Evaluation (OPEVAL) as required for Navy final acceptance; MCM Mission Planning Architecture Software (MPAS) migration to a Service-Oriented Architecture (SOA); and MCM efforts for the completion of integration of RMMV v4.2.1 with MCM MP Increment I.

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
3096: *Littoral Combat Ship*	731.391	84.033	223.681	197.738	-	197.738	170.764	41.962	40.622	41.058	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 RDT&E portion of the LCS Program is comprised of design and development efforts required to deliver the Flight 0 Class Ships, including integration with modular MCM, ASW, and SUW mission packages, and construction of the first two Flight 0 Class Ships, the USS Freedom (LCS 1) delivered September 2008 and the USS Independence (LCS 2) delivered December 2009. It includes the design and development effort required to support the introduction and deployment of a Flight 0+ baseline for the ships awarded in FY09 with the incorporation of lessons learned from the design and construction of USS Freedom (LCS 1) and USS Independence (LCS 2), including improved waterjets and a waterjet tunnel extension on the Lockheed Martin (LM) LCS Design. Additionally, it includes design and development efforts required to support the design baseline for the six year block buy in FY10-15. This baseline will include lessons learned from the LCS 1 through LCS 4.

The LCS design and development phases include platform design and development, experimentation and ship system design and integration, hull platform testing, development of a Technical Data Package (TDP), total ship system engineering and integration, and planning and conduct of system testing, including procurement of ordnance in support of testing.

The RDT&E portion of LCS funding is also comprised of formal Developmental and Operational Assessment testing of the LCS Ships and Mission Packages. Test and Evaluation (T&E) will concentrate on verifying integration and interoperability of employed technologies and systems in the LCS seaframe designs and modular mission packages to achieve the mission capabilities and performance requirements as defined in the LCS Program's Flight 0 and Flight 0+ Capabilities Development Documents (CDD). T&E functions will include the evaluation of Critical Technical Parameters (CTP), Measures of Effectiveness (MOE), Measures of Suitability (MOS), and Key Performance Parameters (KPP) for the core seaframe and the focused missions.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: LCS Program Management	0.687	0.000	0.000
Articles:	0		
Description: Provides for overall LCS Program operations including technical, production, and logistics oversight, and acquisition, contract, Earned Value (EV), risk, science and technology, and financial management.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Completed contract administration for all Flight 0+ ships. Provided LCS program oversight for financial, logistics, technical and production efforts. Continued efforts for Milestone C and to maintain Milestone documentation.			
Title: LCS System-of-Systems Development, Engineering & Experimentation	15.519	35.954	37.507
Articles:	0	0	0

Description: Provides for LCS Program systems engineering in support of Flight 0, Flight 0+, and the new FY10 Block Buy baseline design, development, certification, and production (including ship system design and integration); combat system and C4I design, integration, and test; aviation (manned and unmanned) integration; modular mine countermeasure (MCM), anti-submarine warfare (ASW), and surface warfare (SUW) mission package (MP) integration; logistics product development; and various systems engineering activities required to perform risk analyses of new design and production technology concepts.

FY 2012 Accomplishments:

Flight 0 baseline:

Continued Seaframe systems engineering support for USS Freedom Post Shakedown Availability (PSA) 1 and 2 and USS Independence PSA 1 planning and execution. Continued Seaframe and MP integration engineering support during USS Independence MCM Developmental Testing (DT), USS Independence pre-VTUAV DT engineering analysis, and USS Freedom SUW DT, and conducted engineering analyses efforts for emergent integration issues. Supported preparation for USS Freedom Special Trials (ST). Investigated and developed systems engineering solutions for emergent issues during USS Freedom and USS Independence Post Delivery tests and trials. Continued completion testing and certification of Seaframe systems on USS Independence. Investigated, designed, and developed engineering solutions for design and production issues identified during USS Freedom and USS Independence operations (including testing). Engineering analysis included combat system integration, off-board vehicle communications, and watercraft launch, recovery, and handling.

Flight 0+ and FY10 Block Buy baselines:

Continued engineering Integrated Product Teams (IPTs) to resolve LCS technical issues and develop FY10 baseline changes. Continued developing engineering solutions for emergent issues identified on USS Freedom and USS Independence and ensuring the solutions are incorporated into the LCS 3 and LCS 4 design. Continued providing support reviewing and approving Technical Data Package (TDP) products for FY10 Block Buy Baselines. Developed plan for transition from American Bureau of Shipping (ABS) to Navy Classification. Initial stand up of Navy Design Site for Classification and Systems Engineering support.

FY 2013 Plans:

Flight 0 baseline:

Continue engineering support for USS Independence PSA 1 and 2. Resolve emergent design issues identified during Seaframe DT and Special Trials. Provide engineering support for USS Independence Post Delivery Trials. Continue Seaframe and MP integration engineering support for USS Freedom and USS Independence. Conduct MCM DT, air warfare and surface warfare

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
firing events, sea-keeping trials, and signature trials for USS Independence. Continue deployment preparations of USS Freedom by supporting engineering solutions discovered and corrected via system engineering process are implemented and tested prior to deployment. Develop solutions for emergent design and production issues highlighted in USS Freedom and USS Independence testing, certification and trials. Engineering analysis includes combat system integration, off-board vehicle communications, and watercraft launch, recovery, and handling. Lead the transition of multiple Science and Technology (S&T) projects into the LCS Baseline. Provide engineering support for design incorporation and issue resolution as projects shift from research and development to complete systems onboard both variants. Flight 0+ and FY10 Block Buy baselines: Provide Seaframe systems engineering support for DT for LCS 3. Continue Seaframe and MP integration engineering support for LCS 3 and LCS 4. Conduct DT for the MCM MP on LCS 3, testing the solutions highlighted on USS Freedom and USS Independence, and supporting the integration of these capabilities into their respective Seaframes. Begin planning for DT that will be conducted on the LCS 4. Begin planning for the Total Ship Survivability Trial (TSST) for the LCS 3. Continue planning for Aluminum Compartmentalization on the Independence Variant to support Live Fire Test and Evaluation (LFT&E) requirements. Continue support for Navy Classification design site including facility, Integrated Digital Environment (IDE) support, and engineering support for drawing review. Lead the transition of multiple Science and Technology projects into the LCS Baseline. Provide engineering support for design incorporation and issue resolution as projects shift from research and development to complete systems onboard both variants. ***FY 2014 Plans:*** Flight 0 Baseline: Conduct Technical Evaluation (TECHEVAL) and Initial Operational Test and Evaluation (IOT&E) on USS Independence with the MCM MP, and provide engineering support for the SUW MP DT. Provide in-service engineering support for USS Independence. Flight 0+ and FY10 Block Buy Baselines: Conduct Seaframe and SUW MP OT, TECHEVAL, and IOT&E on LCS 3. Conduct Seaframe DT for LCS 4. Conduct TSST on LCS 3 and begin planning of TSST on LCS 4. Begin planning for the FSST on LCS 5 and 6. Conduct the Aluminum Compartmentalization on the Independence Variant to support LFT&E requirements. Continue support for Navy Classification design site including facility, IDE support, and engineering support for drawing review. Develop technical and performance baseline for FY16 ship procurements based on systems design and testing execution.			
Title: LCS Total System Training Architecture	25.641	129.143	89.125
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014

Description: LCS is minimally manned, and the small crew size, combined with LCS's complex mission, does not allow adequate time for shipboard "on-the-job" training to achieve LCS operational availability. Consequently, LCS uses a Train-to-Qualify (T2Q)/ Train- to-Certify (T2C) training process in an off-ship/shore-based virtual ship trainer environment, focused on tactical operations and equipment operations and maintenance training. When completed, the LCS shore based training capability will satisfy individual, unit, team, and force training and will meet Capability Development Document (CDD) T2Q Key Performance Parameter (KPP) requirements.

FY 2012 Accomplishments:
Continued to transition and implement Training Front End Assessment output in association with the Naval Education and Training Command (NETC) Job Duty Task Analysis (JDTA) Instruction, including Mission Bay analysis and courseware and training device development. Initiated development of the Immersive Virtual Shipboard Environment (IVSE) software/courseware to support the development of the LCS 1 and LCS 2 variant Readiness Control Officer simulators and the Engineering Plant Technician Watchstander training, which will also be used with future LCS Trainers. Began development of courseware in support of Hull, Maintenance, and Electrical (HM&E) system operations and maintenance courses after completion of JDTA.

Through the Training System Executive Agent (TSEA), conducted curriculum design and media analysis, pursued instructor-led and interactive courseware development, coordinated LCS Training Facility Electronic Infrastructure and Infrastructure Integrated Product Team (LTF EII IPT) efforts, executed Learning Management System (LMS) installation and configuration, developed Virtual Reality Lab (VRL) Test Environment Prototype, continued LCS Training Facility (LTF) San Diego Department of Defense Information Assurance (IA)/Certification and Accreditation (C&A) Package (DIACAP), continued development of the Tactical Action Officer Trainer taking advantage of PC Based, Open Architecture, and Re-Configurable Training Systems (PORTS). Also began development of the C2 Part Task Trainers for use on LCS 2 and LCS 1 variants and executed contract to begin development of the Mission Bay Trainer that will be installed in the LCS Training Facility in San Diego upon its completion in 2015.

FY 2013 Plans:
Transition and implement Training Front End Assessment output in association with the Naval Education and Training Command (NETC) Job Duty Task Analysis (JDTA) Instruction including LCS 2 task validation, Mission Bay analysis, and courseware and training device development.

Through the Training System Executive Agent (TSEA), conduct curriculum design and media analysis, pursue instructor-led and interactive courseware development, coordinate LCS Training Facility Electronic Infrastructure and Infrastructure Integrated Product Team (LTF EII IPT) efforts, execute Learning Management System (LMS) installation and configuration, continue LCS Training Facility (LTF) San Diego Department of Defense Information Assurance (IA)/Certification and Accreditation (C&A)

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Package (DIACAP). Begin development of courseware in support of Hull, Maintenance, and Electrical (HM&E) system operations and maintenance courses after completion of JDTA. ***FY 2014 Plans:*** Through the Training System Executive Agent (TSEA), conduct curriculum design and media analysis, pursue instructor-led and interactive courseware development, coordinate LCS Training Facility Electronic Infrastructure and Infrastructure Integrated Product Team (LTF EII IPT) efforts, execute Learning Management System (LMS) installation and configuration, , continue LCS Training Facility (LTF) San Diego Department of Defense Information Assurance (IA)/Certification and Accreditation (C&A) Package (DIACAP). Begin development of courseware in support of Combat Systems and C2 operations and maintenance courses after completion of JDTA. Assess efficiencies gained by bringing existing systems into VR-centric LCS courseware, where applicable.			
Title: LCS Test & Evaluation	42.186	58.584	71.106
Articles:	0	0	0
Description: Execute formal LCS Developmental Testing and Operational Testing (DT/OT), including Live Fire Test and Evaluation (LFT&E), and procurement of T&E Ordnance. Execute DT and C4I integration, and test; aviation (manned and unmanned) integration; modular mine countermeasure (MCM), anti-submarine warfare (ASW), and surface warfare (SUW) mission package (MP) integration. ***FY 2012 Accomplishments:*** Flight 0 baseline: Continued Seaframe testing on USS Freedom and USS Independence, air warfare and surface warfare firing events, aviation integration, signature trials and selected sea-keeping trials. Conducted detailed Seaframe DT and SUW Mission Package (MP) integration on USS Freedom and MCM MP on USS Independence, and conducted analysis efforts for emergent integration issues. Developed solutions for emergent issues during USS Freedom and USS Independence Post Delivery tests and trials including Seaframe DT and Post Shakedown Availability (PSA). Planned and conducted a Quick Reaction Assessment (QRA) to support the fleet request to deploy USS Freedom in early Q2 FY13. Updated the LCS Test and Evaluation Master Plan (TEMP) to reflect revised Acquisition Strategy and program schedule. Flight 0+ and FY10 Block Buy baselines: Begin advance DT/OT planning for the SUW MP on the LCS 3. Conduct testing to validate that solutions for emergent issues identified on USS Freedom and USS Independence are integrated into the LCS 3 and LCS 4. Begin planning of aluminum			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
surrogate testing in the areas of multi-hull blast and fire testing to support LFT&E requirements. Began planning for the Total Ship Survivability Trial (TSST) to be conducted on LCS 3 and LCS 4. ***FY 2013 Plans:*** Flight 0 baseline: Conduct MCM DT, air warfare and surface warfare firing events, seakeeping trials, and signature trials USS Independence. Continue to support deployment preparations of USS Freedom by ensuring engineering solutions discovered and corrected during the system engineering process are implemented and tested prior to deployment. Analysis includes combat system integration, off-board vehicle communications, and watercraft launch, recovery, and handling. Flight 0+ baseline: Conduct Seaframe DT for LCS 3 and LCS 4. Conduct DT/OT for the SUW MP on LCS 3, testing the solutions highlighted on USS Freedom and USS Independence, and supporting the integration of these capabilities into their respective Seaframes. Begin planning for DT to be conducted on the LCS 4. Continue planning for TSST for the LCS 3. Continue planning for aluminum surrogate article testing to support LFT&E requirements. Conduct small component surrogate testing to address knowledge gaps. ***FY 2014 Plans:*** FY14 Plans Flight 0 Baseline: Conduct Technical Evaluation (TECHEVAL) and Initial Operability Test and Evaluation (IOT&E) on USS Independence with the MCM MP. Flight 0+ Baseline: Conduct SUW MP DT, TECHEVAL, and IOT&E on LCS 3 with the SUW MP. Continue planning for TSST for the LCS 3 and LCS 4 and conduct TSST on LCS 3. Begin planning for FSST on LCS 5 and 6. Conduct the aluminum surrogate testing to support LFT&E requirements. Begin planning for the DT testing on LCS 5 and 6. Conduct blast and fire testing on multi-compartment surrogate test article in support of LFT&E requirements.			
Accomplishments/Planned Programs Subtotals	84.033	223.681	197.738

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
• 2127: *Littoral Combat Ship*	1,755.093	1,784.959	1,793.014		1,793.014	1,824.944	997.051	1,032.475	1,056.018	13,085.300	27,004.652
• 1600: *LCS Modules*	65.848	31.319	45.966		45.966	30.951	14.696	18.570	18.897	Continuing	Continuing
• 0443: *Aircraft Procurement, Navy*	191.986	124.573	60.980		60.980	81.336	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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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
• 5110: *Outfitting/Post Delivery .*	25.986	60.053	79.823		79.823	134.113	134.722	208.913	211.197	2,151.400	3,013.642
• 1320: *LCS Training*	29.885	29.772	36.145		36.145	27.748	28.832	31.032	31.538	Continuing	Continuing
• 0944: *LCS Class Support Equipment*	0.000	19.865	47.078		47.078	42.769	43.040	64.300	63.394	Continuing	Continuing
• 1601: *MCM Mission Modules*	0.000	38.392	59.885		59.885	185.017	219.795	219.818	223.744	Continuing	Continuing
• 1602: *ASW Mission Modules*	0.000	0.000	0.000		0.000	3.436	23.612	44.754	45.560	0.000	117.362
• 1603: *SUW Mission Modules*	0.000	32.897	37.168		37.168	40.042	46.282	67.581	68.791	Continuing	Continuing

Remarks

D. Acquisition Strategy

The LCS program takes an evolutionary approach to acquisition that emphasizes competition as a key to achieving affordability. Initially, two industry teams competed against each other with two distinctly different LCS designs. The decision produced two flights with a vessel from each design: Flight 0 (LCS 1 and LCS 2); and Flight 0+ (LCS 3 and out). The Flight 0+ baseline incorporates lessons learned from the design, construction, and testing of the Flight 0 ships. The Navy conducted a limited competition amongst the existing LCS industry teams or team participants for the award of a contract for the construction of a block buy of up to ten (10) LCS Flight 0+ Class ships, with an objective of competitively awarding a single contract to a single industry team.

By Acquisition Decision Memorandum of December 23, 2010, the USD (AT&L) authorized execution of an alternative acquisition strategy for the FY 2010 through FY 2015 procurement of 20 seaframes through two ten-ship block buy contracts. On December 29, 2010, the Navy awarded two contracts for block buys of up to ten ships, beginning with the award to each contractor of one FY 2010 ship and associated non-recurring engineering, the development of the Technical Data Package (TDP), core class services, and associated data. This was followed by the contractual funding of one ship to each contractor in FY 2011 and two ships each funded in FY 2012 through FY 2015.

E. Performance Metrics

The LCS Program achieved Milestone A and Program Initiation in May 2004, and underwent a Milestone A update in FY09. Milestone B was achieved in February 2011.

In an October 2012 LCS Program Acquisition Decision Memorandum (ADM), USD (AT&L) formally rescinded the requirement for the Seaframe to conduct a Milestone C. The decision directs the integrated LCS program to conduct annual Defense Acquisition Board In-Process Reviews (DAB IPRs). The first Seaframe and Mission Module integrated program DAB IPR was conducted in January 2013. DAB IPRs will be held each September hereafter.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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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
LCS 1 & 2 Shore Trainers	C/CPAF	LM, BIW:Various	47.595	8.941	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Training Development - Industry	C/FP	TBD:Various	0.000	8.800	Feb 2012	21.300	Oct 2012	14.340	Oct 2013	-		14.340	Continuing	Continuing	Continuing
Training Development	WR	NAWC TSD:Orlando, FL	0.000	3.000	Feb 2012	96.200	Oct 2012	65.585	Oct 2013	-		65.585	Continuing	Continuing	Continuing
Training Development Support	Various	Various:Various	0.000	0.000		11.643	Oct 2012	9.200	Oct 2013	-		9.200	0.000	20.843	
Class Design Services	SS/CPAF	LM, GD:Various	48.340	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Final Design (Flight 0)	C/CPAF	LM, BIW:Various	175.263	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Flight 0 C4I	WR	PEO C4I:Various	5.506	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
SH-60B Datalink	C/CPAF	LM, BIW:Various	2.435	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Distance Support	WR	NAWC TSD:Orlando, FL	0.000	4.900	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	279.139	25.641		129.143		89.125		0.000		89.125			

Support ($ 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
Government Engineering Support	WR	NSWC/DD:Dahlgren, VA	41.906	4.500	Oct 2011	8.623	Nov 2012	7.489	Nov 2013	-		7.489	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC/PC:Panama City, FL	22.892	0.250	Feb 2012	2.540	Nov 2012	1.854	Nov 2013	-		1.854	Continuing	Continuing	Continuing
Government Engineering Support	WR	NUWC:Newport, RI	8.961	0.100	Oct 2011	0.250	Nov 2012	0.265	Nov 2013	-		0.265	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWC AD:Pax River, VA	18.015	1.369	Feb 2012	3.149	Nov 2012	4.455	Nov 2013	-		4.455	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC/CR:Crane, IN	15.951	0.100	Feb 2012	0.725	Nov 2012	0.625	Nov 2013	-		0.625	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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Support ($ 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
Government Engineering Support	WR	NSWC/ SSES:Philadelphia, PA	45.996	4.000	Oct 2011	8.749	Nov 2012	9.043	Nov 2013	-		9.043	Continuing	Continuing	Continuing
Government Engineering Support	Various	Government Activities:Various	28.228	2.600	Oct 2011	6.070	Dec 2012	8.716	Oct 2013	-		8.716	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPAF	Alion/CSC:Arlington, VA	39.490	2.500	Feb 2012	5.623	Jan 2013	5.060	Jan 2014	-		5.060	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPAF	Various:Various	18.148	0.100	Feb 2012	0.225	Jan 2013	0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	239.587	15.519		35.954		37.507		0.000		37.507			

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
Test & Evaluation	C/CPAF	Alion/CSC:Arlington, VA	11.490	6.000	Feb 2012	6.800	Dec 2012	7.931	Dec 2013	-		7.931	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC/PHD:Port Hueneme, CA	26.271	5.400	Oct 2011	8.770	Oct 2012	9.652	Oct 2013	-		9.652	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC/ SSES:Philadelphia, PA	31.467	6.500	Oct 2011	12.323	Oct 2012	16.229	Oct 2013	-		16.229	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC/PC:Panama City, FL	5.731	4.700	Oct 2011	2.467	Oct 2012	2.955	Oct 2013	-		2.955	Continuing	Continuing	Continuing
Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	7.714	0.425	Nov 2011	1.872	Nov 2012	2.845	Nov 2013	-		2.845	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC/COR:Corona, CA	5.986	2.301	Oct 2011	2.550	Nov 2012	2.950	Nov 2013	-		2.950	Continuing	Continuing	Continuing
Test & Evaluation	WR	Various:Various	44.133	7.036	Nov 2011	12.948	Dec 2012	12.785	Oct 2013	-		12.785	Continuing	Continuing	Continuing
Test & Evaluation/CSS	C/CPAF	LM/GD/ Various:Various	32.936	9.624	Nov 2011	8.752	Dec 2012	12.745	Dec 2013	-		12.745	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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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
Test & Evaluation	WR	PEO C4I:Charleston, SC	5.856	0.100	Feb 2012	1.852	Oct 2012	2.754	Oct 2013	-		2.754	Continuing	Continuing	Continuing
T&E Ordnance	WR	PEO IWS:Various	6.927	0.100	Dec 2011	0.250	Dec 2012	0.260	Oct 2013	-		0.260	Continuing	Continuing	Continuing
		Subtotal	178.511	42.186		58.584		71.106		0.000		71.106			

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- SEAPORT	C/CPAF	Alion/CSC:Arlington, VA	20.393	0.200	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Management Support	Various	Various:Various	11.812	0.400	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Management Support - Design	C/CPAF	Various:Arlington, VA	1.949	0.087	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	34.154	0.687		0.000		0.000		0.000		0.000			

	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
Project Cost Totals	731.391	84.033		223.681		197.738		0.000		197.738			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
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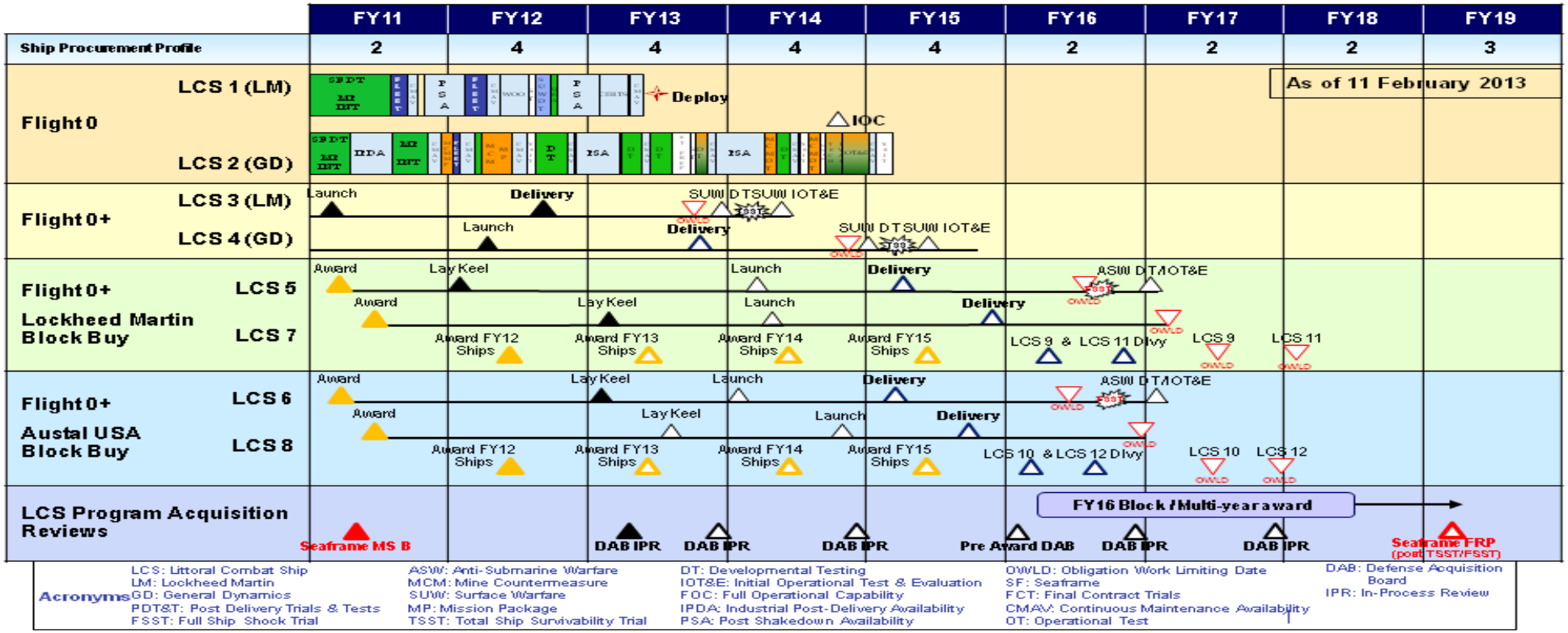

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3096				
Planning: Post Delivery DT/OT - Flight 0: Planning; Post Delivery Developmental Testing (DT)/Operational Testing (OT) - Flight 0	1	2012	4	2014
DT/OT - Flight 0: Flight 0 DT / OT	1	2012	4	2014
LFT&E - Flight 0+: Live Fire Test & Evaluation (LFT&E) - Flight 0+	1	2012	4	2017
Planning: Post Delivery DT/OT - Flight 0+: Planning: Post Delivery Developmental Testing (DT)/Operational Testing (OT) - Flight 0+	1	2012	4	2017
DT/OT - Flight 0+: Flight 0+ DT / OT	1	2012	4	2017
TSST - LCS 3: Total Ship Survivability Trial (TSST) LCS 3	1	2014	1	2014
TSST - LCS 4: Total Ship Survivability Trial (TSST) LCS 4	1	2015	1	2015
DAB IPRS: Defense Acquisition Board/In-Process Reviews	2	2013	4	2017
FSST - LCS 5: LCS 5 FSST	4	2016	4	2016
FSST - LCS 6: LCS 6 FSST	4	2016	4	2016

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
3129: *LCS Mission Package Development*	691.878	139.714	195.824	203.771	-	203.771	166.456	116.878	104.880	102.586	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

Program provides focused war fighting capabilities in littoral mine countermeasures, countering small boat threats and littoral anti-submarine warfare to provide assured access to enable the US Joint Force operations in the littorals. A mission package is a combination of warfare mission modules with specialized crew, support equipment, and vehicles including manned helicopters and unmanned maritime systems. They are packaged in a modular fashion so that they can be quickly swapped out pier side. Mission module development includes architectures, interfaces and integration of mission systems. Mission systems integration also includes the procurement of the first mission packages to be used on the Flight 0 Littoral Combat Ships (LCS). The program has an inventory objective of 24 MCM mission packages, 24 SUW mission packages, and 16 ASW mission packages. Mission package procurement and delivery are aligned with the ship delivery schedule, mission area demand signal from the combatant commanders, and the retirement of legacy platforms. This means that 64 interchangeable mission packages will be available for use among the seaframe variants of the LCS class to support global warfighting and peacetime presence requirements.

An incremental development approach to delivering capability allows the continued insertion of mature capabilities throughout the life of the program without the need for modifications to the sea frames. Future mission package increments will be considered when joint warfighting objectives or changing threats create new operational capability requirements that cannot be met by current mission package designs, or when new technological opportunities allow significant progress toward delivering cost effective, enhanced capabilities. Future mission module increments can be tested, constructed, and incorporated into existing mission packages, one of the most important benefits of LCS modular design.

The LCS MCM mission package will counter deep, shallow, and tethered mines in the littoral without putting Sailors in the minefield. When the MCM mission package is embarked, LCS is capable of conducting detect-to-engage operations (hunting, sweeping, and neutralization) against very shallow and deep-water sea mine threats. The MCM mission package provides these capabilities through the use of sensors and weapons deployed from an MH-60S multi-mission helicopter and unmanned off-board vehicles. The MCM package consists of the following systems: Coastal Battlefield Reconnaissance & Analysis (COBRA), Airborne Laser Mine Detection System (ALMDS), Organic Airborne & Surface Influence Sweep (OASIS) System, Remote Multi-Mission Vehicle (RMMV), AQS-20A Mine hunting Sonar, Airborne Mine Neutralization System (AMNS), Unmanned Integrated Sweep System (UISS)(which is comprised of the Unmanned Surface Vehicle (USV) and the Unmanned Surface Sweep System (US3)), Surface Mine Countermeasures (SMCM) Unmanned Undersea Vehicle (UUV) with Low Frequency Broad Band (LFBB), support equipment and support containers. The individual systems are combined into five modules: Organic Airborne Mine Countermeasures (OAMCM) Module, Remote Mine Hunting Module, Unmanned Influence Sweep Module, Coastal Mine Reconnaissance Module and the Buried Mine Module. The Organic Airborne Mine Countermeasures Module provides rapid mine hunting and clearing using the embarked MH-60 helicopter and Mine Countermeasure systems. The Remote Mine Hunting Module uses

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a Remote Multi-Mission Vehicle (RMMV) and AQS-20A to provide sustained mine hunting and clearing from the surface. The Influence Sweep Module provides endurance bottom sweep capability, the Coastal Mine Reconnaissance Module (CMRM) will allow detection of minefield patterns and obstacles from an embarked Fire Scout VTUAV, and the Buried Mine Module will allow detection of buried mines. When complete, the MCM mission package will provide full capability against floating, tethered, bottom, and buried mines.

The ASW mission package enables LCS to conduct detect-to-engage operations against modern submarines that pose a threat. Specific ASW capabilities include protecting forces in transit, protecting joint operating areas, and establishing ASW barriers.

ASW modules developed to provide the warfighter capabilities that can be employed for ASW area search as well as high value unit escort missions. Module components include a torpedo countermeasures system, a Variable Depth Sonar, and a Multi-Function Towed Array. The Aviation Module offers airborne threat localization and engagement capability through a Fire Scout VTUAV and an MH-60R with MK54 torpedoes. The individual systems are combined into three modules: Torpedo Defense Countermeasure; ASW Escort/Large area Clearance; and Localization & Engagement.

The SUW mission package increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving LCS the ability to protect the sea lanes and move a force quickly through a choke point or other strategic waterway. With the SUW mission package embarked, LCS has enhanced detection and engagement capability against enemy small craft and similar littoral surface threats.

The SUW mission package is comprised of several modules including the Gun Mission Module (GMM). The GMM is comprised of two high velocity 30mm cannons and is augmented with the ship's 57mm gun to counter close in to mid-range threats. The Aviation Module uses the embarked the MH-60R helicopter with Hellfire missile and the MQ-8B Fire Scout Vertical Take-off and Landing Tactical Unmanned Aerial Vehicle (VTUAV) - for the detection, identification, and classification of surface contacts and to engage long range threats. The Maritime Security Module supports the embarkation of a Visit, Board, Search, and Seizure (VBSS) team. The Irregular Warfare (IW) Module provides an expanded medical and training capability to the LCS Surface Warfare (SUW) Mission Package. It includes the following IW medical and training enhancements: an Afloat Trauma Care (ATC) Medical Module; a Humanitarian Assistance/Health Services Support Medical Module; and a Training Module. The Surface to Surface Missile Module (SSMM) will provide missile coverage for mid-range threats and small boats.

The LCS Mission Modules Common Equipment consists of enabling products required by all mission packages to provide common hardware interfaces, computer operating environment, communications systems, aviation interface systems and portable development & integration test-sets. Common hardware interfaces include definition, installation and control of mechanical, electrical and cooling requirements common to all mission packages. The Mission Package Computing Environment (MPCE) provides common services and Operating Environment to support all Mission Package Application Software and Open Architecture Products. The Multi-Vehicle Communications System (MVCS) enables the control and data exchange of simultaneous unmanned mission vehicles and the Seaframes. Aviation interface systems include integration and management of data communications, data processing and physical hardware interfaces such as common equipment and containers used by all mission packages. Development and integration test-sets provide a mobile operating environment installed in the Mission Package Portable Control Stations (MP-PCS) to serve as a surrogate Seaframe during mission package development and integration test events at test ranges.

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: System Engineering	16.245	13.816	10.239
Articles:	0	0	0

FY 2012 Accomplishments:

Completed the Mission Package Operating Environment (MPOE) 5.0.2 Government Factory Acceptance Test (GFAT) at AAC. Obtained/renegotiated connection agreements with Littoral Combat Ship (LCS) Class Squadron (LCSRON) IA Manager (IAM) allowing system(s) to operate on LCS until PIT Risk Approval (PRA) received. Renegotiated connection agreement for the Surface Warfare (SUW) Mission Package (MP) to LCS-1. Negotiated connection agreements for Multiple Vehicle Communication System (MVCS) to LCS-3 and LCS-4. Mine Countermeasures (MCM) Certification Test and Evaluation (CT&E) event conducted which included MPAS v1.5 and results used to develop revised PRA package/risk deficiency database. Developed the LCS Mission Modules Program Protection Plan and the Information Assurance Strategy. Obtained PRAs for the SUW MP and MVCS, which authorizes operation of the systems in an afloat environment. Supported the SSSTRP and WSESRB Review of SUW MP with LCS 1 and prepared the closure of findings. Developed MAR package for risk acceptance. Developed the Safety Level 2 Specification including ESOH requirements. Developed a PMS 420 System Safety Management Plan (SSMP) Plan. Completed a SUW MP Integration System Hazard Analysis (SHA). Completed the development of the PESHE. Conducted Environmental Assessment for HAZMAT Identification and Environmental Compliance. Developed a PMS 420 Hazardous Material Management Program (HMMP) Plan. Identified and managed ESOH mishap risk maintained within the Hazard Tracking Database. Identified and coordinated HSI activities across MPs and integrated MPs with seaframe HSI activities. Provided updated PMS 420 MM HSI Plan. Developed MPCC HSI requirements for ICD and SSDD. Developed M&S requirements for FireScout, RMV, and SUW assets. Received accreditation approval for the Naval Mine Warfare Simulation. Completed the following SE related MS B documents: MM PDR Equivalency Report; LCS MM SEP; Corrosion Prevention Control Plan (CPCP). Developed the S&T Noteboook; Developed Weight Management Plan; Provided SE guidance to the TSRs, CCBs, RMB, and RAM-C Working group. Coordinated and provided guidance for all LCS MP SETR events. Established Configuration Control Board (CCB) Directives for every approved ECP; Developed Class I and Class II Standard Operating Procedures (SOP)s. Automated ACSN Process and ECP Forms in PMS 420 Integrated Data Environment (IDE). Updated all ASW System Engineering documentation to reflect ASW MP Increment II requirements. Documented all interface requirements between ASW MP and other common components mission package application software (MPAS), mission package operating environment (MPOE), and support containers). Defined and documented how the ASW MP Increment II will achieve all specified requirements related to the key performance parameters, concept of operations, how design considerations will be addressed and balanced with other program requirements and established a technical baseline.

FY 2013 Plans:

Support CPD Development for the MCM Increment 1 and SUW MP Increment 1/2: Incremental KPP development; Net-centric operations; End-to-end (E2E) System of Systems (SoS) Architecture and Net Ready Key Performance Parameter (NR-

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
KPP) update; identify capabilities and limitations for SUW Increment 2 and MCM MP Increment 1; Support engineering and programmatic analysis for future capabilities. LCS MM Baselines Development: align baseline nomenclatures toward common schema that is aligned with the MM Increments; establish functional and allocated baselines for SUW Increment 3, MCM Increment 2, ASW Capability; improve the level of detail contained in the product baselines to define a production-level product baseline; establish product baselines for SUW Increment 2 and MCM Increment 1 Capability; support efforts to authorize/certify MP product baselines. Develop a strategic plan for M&S to include M&S tools, which primarily support performance prediction; validating T&E plans; and/or training and stim/sim efforts. Develop FY13 LCS MM SETR Plans through SUW Increment 3, MCM Increment 4, and ASW Capability. Close PDR equivalency report look-ups, incorporate and align SW SETR events with HW SETR planning. Improve and standardize SE inputs to PARM system System Project Directives (SPDs). Track lead/lag SE Metrics including requirements volatility; engineering Change volatility; LCS MM Systems Readiness Level (SRL) assessments and improve issue tracking through resolution. Update mission threads to the CONEMP, NMWS, SOSAT, and other models; coordinate the development of integrated Reliability Block Diagrams (RBDs) to support RAM analyses; verify data, architecture, and mission thread assumptions in RAM model; allocate required reliability improvement to targeted mission systems through the Common Logistic Requirements Document (CLRD); standardize and improve RAM data collection; implement FRACAS and FRBs Develop SEP v2.0 iaw 2011 policy and latest streamlined template; close PDR report/PSR/or other MS B look-ups. Develop and maintain an integrated Future S&T roadmap to comprehensively align with overall LCS MM Program Plans; synergize with LCS S&T and DoD-wide initiatives, and ultimately guide PMS 420 and PEO LCS investments from a strategic perspective. Perform ESOH risk/hazard analysis and mitigation tracking; align hazards and MARs to product baseline; complete ESOH risk/hazard analysis and mitigation tracking; develop and implement Hazardous Material Management Program (HMMP). Implement Corrosion Prevention and Control Plan (CPCP): assess and address corrosion issues associated with SUW Increment 1/2 integration, test, and deployment activities; assess and address corrosion issues associated with MCM Increment 1 integration and test events. Develop a Quality Assurance Plan (QAP) tailored for LCS MM needs and implement QAP for production systems/sub-systems. Implement an updated problem process (TOR process); develop a PMS 420 Hardware/Software Problem Resolution Process; complete update to the CM Plan with new processes. ***FY 2014 Plans:*** Support Capability Production Document (CPD) for SUW Increment III, MCM Increment II/III development. Provide SE guidance to the TSRs, CCBs, RMB, PPP and RAM-C Working group and others as identified in the LCS MM SEP. Coordinate and provide guidance for all LCS MP SETR events including but not limited to the following: PDR, CDR, SRR, TRR. Provide management oversight for the Configuration Control Board including reviewing and approving ECPs. Negotiate connection agreements			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
with Littoral Combat Ship (LCS) Squadron One (LCSRON) Class IA Manager (IAM) allowing mission packages to operate on LCS. Support all Certification Test and Evaluation (CT&E) events conducted which include MPAS, results will be used to develop revised PRA package/risk deficiency database. Update the LCS Mission Modules Program Protection Plan and the Information Assurance Strategy to support MPCE 2.0 development. Support the SSSTRP and WSESRB Review of mission packages and prepare the closure of findings. Develop MAR package for risk acceptance. Update the PMS 420 System Safety Management Plan (SSMP) Plan. Complete mission package Integration System Hazard Analysis (SHA). Update the PMS 420 Hazardous Material Management Program (HMMP) Plan. Identify and manage ESOH mishap risk maintained within the Program Hazard Tracking Database. Coordinate HSI activities across MPs and integrate MPs with seaframe HSI activities. Monitor the implementation of the PMS 420 MM HSI Plan. Update the following SE documents including: LCS MM SEP; Corrosion Prevention Control Plan (CPCP), PESHE, Life Cycle Signature Support Plan. Continue supporting opportunities for technology transition identified in the S&T Notebook to include at-sea refueling, data mission payload, and lightweight container. Support and track weight against the Weight Management Plan. Leverage modeling and simulation to support CPD development for mission packages. Continue tracking SE Metrics including requirements and engineering change volatility and LCS MM Systems Readiness Level (SRL) assessment. Continue implementation of M&S Plan to certify the following: NMWS M&S in support of MCM IOT&E; ATRT to support SUW MPAS regression testing; SUW MM Increment I/II modeling; ASW modeling for developmental testing.			
Title: Program Management	6.301	6.108	4.727
Articles:	0	0	0
FY 2012 Accomplishments: Supported all efforts associated with Milestone B. Continued PM efforts: business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives that are not associated with specific hardware elements or included in systems engineering. Provided management oversight for the scheduled test events and for new LCS MM capabilities. ***FY 2013 Plans:*** Support all efforts associated with Milestone B. Continue PM efforts: business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives that are not associated with specific hardware elements or included in systems engineering. ***FY 2014 Plans:*** Support all efforts associated with Milestone C. Continue PM efforts: business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives that are not associated with specific hardware elements or included in systems engineering.			
Title: System Test and Evaluation	31.975	26.360	36.416

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Articles:	0	0	0

FY 2012 Accomplishments:

Completed test execution, data analysis and test reporting of the MCM MP Developmental Test (DT) aboard LCS 2. Conducted additional Launch, Handling, and Recovery and RMMV developmental testing aboard LCS 2 prior to scheduled Post-Shake Down Availability. Conducted test planning, DT and complete data analysis, and test reporting for SUW MP DT aboard LCS 1. As a result of the deployment of LCS-1, the remainder of SUW DT, TECHEVAL, and IOT&E will be conducted aboard LCS 3. Prepared 30mm GMM LFT&E plan. Maintained the Mission Package Integration Lab in support of Mission Package software development, testing, and certification for both testing and deployment on both seaframe variants. Conducted National Environmental Policy Act (NEPA) and environmental planning and coordination to support DT events. Supported incremental testing and evaluation of modules under integration and certification phases, including managing and supporting test assets needed for all mission package testing. Performed verification and validation of mission module and mission package requirements. Performed and documented analysis, and evaluated and reported test results. Conducted Mission Package certification test events. Prepared for final certification that will be conducted in conjunction with IOT&E for each MP prior to fleet introduction. Conducted Test planning and documentation for SUW MP DT aboard LCS 1.

FY 2013 Plans:

Plan and conduct SUW MP DT aboard LCS 1 variant. Plan, Execute, Conduct Data Analysis and Report SUW MP DT with increasingly stressing scenarios to characterize performance of SUW MP against requirements. SUW Test events will include Integrated Tracking Exercise (TRACKEX), 30mm Towed Sled Firing events, & Layered Defense firing events against small boats and targets utilizing MH-60R, 57mm Gun, & 30mm GMMs. Prepare analysis and reporting for SUW MP DT aboard LCS 1 variant in preparation and readiness for TECHEVAL and IOT&E. Conduct test planning for TECHEVAL and IOT&E and Operational Test Readiness Review (OTRR) preparation for SUW MP IOT&E. Begin conduct of test planning for SUW MP Gun Mission Module (GMM) DT on LCS 2 variant. Conduct 30mm live fire test program to include data analysis and report preparation. Prepare SSMM LFT&E plan. MCM MP DT/TECHEVAL/IOT&E will be conducted aboard LCS 2 variant. MCM DT events will include RMS and OAMCM systems, RMMV LH&R, mission scenario events. Conduct test planning, test execution, data analysis, and test reporting for MCM MP DT-B2 Phase 4 aboard LCS 2 variant. Conduct test planning, preparation, and documentation for MCM MP TECHEVAL and IOT&E. Plan for OTRR for MCM MP, to include collection of OQE across systems areas. Conduct initial test planning of the ASW MP on the LCS platform. Conduct National Environmental Policy Act (NEPA) and environmental planning and coordination to support DT/TECHEVAL/OT/FOTE. Conduct and Support Certification Test and Evaluation to include software certification/assessment testing, reporting, and events such as MPRAs, MRAs, Test Readiness Reviews, WSESRB, etc and in order to support fleet deployment upon completion of the IOT&E and FOTE events. Conduct planning, preparation, and execution of an MDEMO.

FY 2014 Plans:

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Conduct SUW MP TECHEVAL/IOT&E aboard LCS 1 variant. Complete Planning, and conduct Execution, Data Analysis and Reporting for SUW MP TECHEVAL with increasing stress scenarios to characterize performance of SUW MP against requirements and in preparation and readiness for IOT&E. Complete test planning and OTRR preparation and execute both events for SUW MP IOT&E on LCS 1 variant. Conduct data analysis and reporting for SUW MP TECHEVAL and IOT&E. Conduct SUW MP DT on LCS 2 variant. Begin SUW MP SSMM planning. Commence conduct of SSMM live fire test program and complete GMM live fire test program to include data analysis and report. Conduct MCM MP OAMCM Phase B Operational Assessment. Conduct MCM MP Unmanned Systems Operational Assessment. Complete test planning and OTRR preparation and execute both events for MCM MP TECHEVAL and IOT&E. Conduct data analysis and reporting for MCM MP TECHEVAL and IOT&E. Continue test planning, conduct initial integration test, transition from engineering to DT testing of the ASW MP on the LCS platform; Perform data analysis of initial ASW MP testing. Conduct National Environmental Policy Act (NEPA) and environmental planning and coordination to support DT/TECHEVAL/OT/FOTE. Conduct and Support Certification Test and Evaluation to include software certification/assessment testing, reporting, and events such as MPRAs, MRAs, Test Readiness Reviews, WSESRB, etc and in order to support fleet deployment upon completion of the IOT&E and FOTE events.			
Title: Integration, Assemble, Test and Checkout	8.228	5.588	5.131
Articles:	0	0	0
FY 2012 Accomplishments: Continued program-level Integration, Assembly, Test & Checkout efforts: Technical and functional activities associated with the development and production mission systems, parts, materials, and software required to assemble mission modules hardware/ software elements into mission equipment and integrate with sea-frames. This effort includes integration management, common processing systems, off board communications systems, aviation systems, and common and mission package software products and mission modules-to-seaframe integration. Effort includes integration engineering at the waterfront in support of ships under construction and conducting initial testing. Led and managed execution of engineering change proposals (ECPs) required to integrate mission package systems and subsystems into LCS 1 and LCS 2.			
FY 2013 Plans: Perform Mission Package - Seaframe Integration and Aviation Integration. Seaframe Integration provides services that support the successful integration of the MCM, SUW, and ASW Mission Packages into both variants of LCS seaframes. Mission Package (MP) - Seaframe integration engineering includes: Hardware integration engineering, Software integration engineering, Launch handling & recovery integration engineering, Waterfront integration, Mission Systems and Ship Integration Team (MSSIT), Communications integration, Seaframe studies and ship modification technical data package development. Aviation Integration: Complete VTUAV Baseline Integration, INCO, AVCERT & Dynamic Interface LCS 2 & LCS 3. Transition VTUAV Baseline from MP R&D to Sea Frame production. Enable TCDL Data Link Capability (first event will be SUW DT/			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
TECHEVAL on LCS 3). Implement Tactical Common Data Link radio monitor & control for LCS 2 & LCS 3. Mitigate OAMCM shipboard operating environment and tempo issues and risks. Enable AMNS, AQS-20, OASIS loading onto the helo in operational sea states and ship motion. Mitigate OAMCM tow system failure (free streaming) risk. Optimize AVDET PUK & Sup Container/ RO-ROs for MP deployment & sustainment. Continue program level Integration, Assembly, Test & Checkout efforts of ECPs required to correct findings from Developmental and Operational test events. ***FY 2014 Plans:*** Perform Mission Package - Seaframe Integration and Aviation Integration. Seaframe Integration provides services that support the successful integration of the MCM, SUW, and ASW Mission Packages into both variants of LCS seaframes. Mission Package (MP) - Seaframe integration engineering includes: Hardware integration engineering, Software integration engineering, Launch handling & recovery integration engineering, Waterfront integration, Mission Systems and Ship Integration Team (MSSIT), Communications integration, Seaframe studies and ship modification technical data package development. Aviation Integration: Integrating new capabilities of VTUAV onto LCS, such as weapons and radar. Integrate the larger and higher endurance MQ-8C with LCS. Integrate new Mission Package driven payloads onto the VTUAV. Provide HSF or CV-TSC/PLA functionality as MP solution. Integrate MH-60S SUW enhancements into SUW MP (20mm gun, rockets, radar, data link). Conduct systems engineering for VTUAV and MH-60S ASW enhancements into ASW MP. Conduct systems engineering analysis of alternatives for integrating new Unmanned Aerial Systems into MPs. Continue program level Integration, Assembly, Test & Checkout efforts of ECPs required to correct findings from Developmental and Operational test events.			
Title: Training Systems Development	15.886	14.649	10.689
Articles:	0	0	0
FY 2012 Accomplishments: Began transition from vendor training to NETC training facilities with anticipated FY14 partial RFT using Common Mission Package Trainer (CMPT) and Networked Tactical Training System (NTTS) capable of meeting Train to Certify (T2C) KPP for team training certification requirements. Train to Certify (T2C) capability will be achieved in FY17 after all systems have been delivered, trainers are in place and formal training has been developed and accepted. Obtained Information Assurance Platform IT (PIT) designation for CMPT to permit integration with Seaframe tactical team trainers. Successfully integrated CMPT and LCS-2 Seaframe trainers to permit integration into Navy Cooperative Training Environment (NCTE) to support participation in Joint Synthetic Training and numbered fleet commander deployment unit certification events. Conducted Mine Warfare Evaluator (MIWE), Remote Vehicle Operator (RVO) and Remote Sensor Operator (RSO) course pilots and began formal classes to initiate transition from vendor to formal training using CMPT and NTTS. Delivered initial NTTS part			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
task trainer MCM capability (Remote Vehicle Operator - RVO and Remote Sensor Operator - RSO) software and hardware tech refresh to replace ONR partial capability demonstration system. Performed instructor training on NTTS. Interim software drop used as part of RVO/RSO course pilot. Commenced development of CMPT and NTTS SUW integrated team trainer capability. Developed requirements for CMPT (full SUW watch team capability) and NTTS (Gun Console Operator Part Task Trainer) with anticipated delivery in FY13. Early delivery of limited GCO functionality planned early FY13 to support anticipated LCS 1 training requirements for planned FY13 deployment. Began transition from vendor training to formal SUW Gun Mission Module (GMM) system course with standup of Interim Training at NSWC Dahlgren and procurement of GMM Part Task Trainer for installation at CSCS Dam Neck. Commenced development of curriculum to support standup of interim GMM differences course at CSCS Dam Neck in FY13. Continued MCM formal training curriculum and began SUW formal training curriculum instruction development for MM Fundamentals, Capstone and Planning Courses necessary to achieve partial MCM RFT in FY14 and SUW RFT in FY15. Updated formal curriculum incorporated findings from program and formal test events. Commenced curriculum development for Mission Package Computing Environment (MPCE) and Multi-Vehicle Communications System (MVCS) for delivery to and incorporation into Seaframe IT Total Ships Computing Environment (TSCE) training. Funded training related detachment travel in support of training and testing events. Performed vendor and interim training for formal MCM, and SUW test events. Funded 9 contract instructors (7 MCM and 2 SUW) for LTF prior to transition to N1 funding coincident with RFT in FY14. Provided MM crews additional training for formal MCM and SUW test events. Provided vendor and interim formal training to mission module replacement Sailors, two new MCM and two new SUW detachments in accordance with CSPPs.			
FY 2013 Plans: Continue transition from training on MCM MP #1 and SUW MP #1 hardware to NETC training facilities with anticipated FY14 partial Ready For Training (RFT) using Common Mission Package Trainer (CMPT) team trainer and Networked Tactical Trainer System (NTTS) part task trainers. Train to Certify (T2C) capability will be achieved in FY17 after all systems have been delivered, trainers in place and formal training has been developed and accepted. Continue Mine Warfare Evaluator (MIWE), Remote Vehicle Operator (RVO) and Remote Sensor Operator (RSO) training precursors to LCS MCM MM Fundamentals and Capstone courses. MCM MP #1 and SUW MP #1 hardware will continue to be utilized until T2C capability is achieved. Update formal curriculum to incorporate findings from program test events, operations and classroom experience. Deliver CMPT MCM and SUW integrated team trainer software to support MM Fundamentals, MM Operations and MM Planning curriculum in preparation for FY14 partial RFT for MCM MM integrated team training. Deliver NTTS Gun Control Operator and Mission Package Coordinator software and hardware add on for GCO part task trainer capability to LTF. Perform instructor training on NTTS MCM and SUW watchstation capabilities.			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Complete Information Assurance requirements to connect to Navy Cooperative Training Environment (NCTE) and complete integration of CMPT and Seaframe tactical team trainers. Complete MCM formal training curriculum instruction development for MM Fundamentals, Capstone and Planning Courses. Formal RFT for this course will follow in FY14. Continue transition from vendor training to formal SUW Gun Mission Module (GMM) system course. Interim GMM training will transition from NSWC Dahlgren to CSCS Dam Neck. GMM Differences course is a follow on to PEO IWS-3C MK-46 Mod 2 Gun Operations and Maintenance course. Formal RFT for this course will follow in FY14. Complete curriculum development for Mission Package Computing Environment (MPCE) and Multi-Vehicle Communications System (MVCS) for delivery to and incorporation into Seaframe IT Total Ships Computing Environment (TSCE) training. Continue SUW formal training curriculum instruction development for MM Fundamentals, Capstone and Planning Courses necessary to achieve partial RFT in FY15. Fund 16 contract instructors (7 MCM and 9 SUW) for LTF prior to transition to N1 funding coincident with RFT in FY14. Perform vendor and interim training for formal MCM, and SUW test events. Fund training related detachment travel and provide Vendor and interim formal training to MCM, ASW, and SUW MM replacement Sailors and new MCM and SUW detachments in accordance with CSPPs. ***FY 2014 Plans:*** Achieve partial Ready for Training (RFT) at NETC facility for MCM MM training using Common Mission Package Trainer (CMPT) team trainer and Networked Tactical Trainer System (NTTS) part task trainers. Achieve RFT for GMM Difference course. Full Train to Certify (T2C) capability will be achieved in FY17 after all systems have been delivered, trainers in place and formal training has been developed and accepted. Continue Mine Warfare Evaluator (MIWE), Remote Vehicle Operator (RVO) and Remote Sensor Operator (RSO) training precursors to LCS MCM MM Fundamentals and Capstone courses. Update formal curriculum to incorporate findings from program test events, operations and classroom experience. Update CMPT MCM and SUW integrated team trainer software for delivery of incremental capability to support MM Fundamentals, MM Operations and MM Planning curriculum. Update NTTS watchstation trainer software for delivery of incremental capability and as a result of formal test events lessons learned. Update Information Assurance posture as required to support integrated and Fleet Synthetic Training using Navy Cooperative Training Environment (NCTE). Complete SUW formal training curriculum instruction development for MM Fundamentals, Capstone and Planning Courses necessary to achieve partial RFT in FY15. Fund 16 contract instructors (7 MCM and 9 SUW) for LTF prior to transition to N1 funding coincident with RFT in FY14. Perform vendor and interim training for formal MCM, and SUW test events. Fund training related detachment travel and provide Vendor and interim formal training to MCM, ASW, and SUW MM replacement Sailors and new MCM and SUW detachments in accordance with CSPPs.			
Title: Program Technical Data	1.065	1.279	0.805
Articles:	0	0	0
FY 2012 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provided Integrated Logistics Support for the scheduled test events and for new capabilities of the LCS MMs. Provided validation and verification for technical data. Provided for development of LCS MM specific transportation requirements to Naval support organizations. Updated Program Technical Data packages to incorporate findings from the MCM MP and SUW MP DT test events and MCM MP TECHEVAL and OT events. ***FY 2013 Plans:*** Update Program Technical Data packages in preparation for SUW MP TECHEVAL test events. Continue Integrated Logistics Support efforts for the scheduled test events. Implement Technical Manual Management Activity to review, produce and distribute technical documentation. Continue development of Maintenance Figure of Merit (MFOM) to maintenance management that incorporates engineering, failure, technical and provisioning into single model that uses criticality factors to assist prioritization of maintenance management. Implement MPSF inventory management system (IMS) based on pRFID solution. Provide overarching provision for Program. ***FY 2014 Plans:*** Update Program Technical Data packages to incorporate findings from SUW MP and MCM MP OT events. Finalize initial Integrated Logistics Support products in support of SUW MP FY14 IOC. Prepare for the MCM MP IOC late FY 14 / early FY 15. Continue Technical Manual Management Activity to review, produce and distribute technical documentation for the program. Continue development of MPSF automated inventory management system (IMS) based on pRFID solution. Start integrated logistics overarching support for the ASW MP and the new increments. Provide overarching provision for Program.			
Title: Common Equipment	12.688	12.230	10.784
Articles:	0	0	0
FY 2012 Accomplishments: Mission Data Processing: Finalized development, test and validation of updated MPCE hardware and associated Mission Package Services (MPS) and MPOE. Began comprehensive system-level analyses and evaluation of next generation MPCE technology requirements. Performed detailed OA evaluations and initiate implementation. Begin implementation of common mission package software program baseline. Provided MPCE technical and test support for the MCM Technical Evaluation on LCS 2. Off-board Communications: Continued development towards full capability of the MVCS Build 1.0, used for the concurrent management of multiple off-board unmanned vehicles. Conducted dock-side testing of RT-1944/U radio terminal set with two Remote Multi-Mission Vehicles (RMMV) and conducted in-port and at-sea seaframes integrations and testing. Conducted Study of MVCS hardware and continued developing and performing MVCS ECPs on Unmanned Integrated Sweep System (UISS) and LCS 2. Continued performing engineering design, testing and evaluation of aerial communication systems for over-the-horizon range. Continued integration testing and installation of cryptographic systems for unmanned vehicles. Initiated Over-the-Horizon			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
(OTH) radio replacement study for the RMMV legacy PRC-117F VHF radio. Provided Offboard Communications technical and test support for the MCM Developmental Test (DT) on LCS 2. ***FY 2013 Plans:*** Mission Package Computing: MPCE v1.9 hardware validation, production and tech refresh activities will occur in FY13. MPAS validation will be conducted for MCM and SUW mission packages. INCO will be conducted on LCS 4 and 5. Tech Refresh will be conducted for the shore sites (CMPT#1 and the labs). Maintenance deliveries will be provided for MPS/MPOE. MUS 1.0 will be backfit on LCS 1-4. Mission Package Console mods will be retrofit on LCS 3 and 4. Documentation to be completed includes final versions of the ACSN and SSDD, as well as an ECP, Technical Data Package and INCO procedure updates. Design reviews and test events to be conducted for MPCE v1.9 include System Design Review (SDR), MUS Test Readiness Review (TRR) and First Article Testing. FY13 will include development activities to evolve MPCE software architecture to a Service Oriented Architecture (SOA), in support of the PMS 420 Mission Package Common Software Architecture (CSA) Baseline. Mission Package Communications: Finalize MVCS v1.0.0 baseline and activities to support MCM MP Operational Test on LCS 2. Conduct a launch & recovery (L&R) communications characterization on LCS 3. Develop a Data Mission Payload (DMP) prototype and integrate on the Fire Scout air vehicle. Identify anti-jamming requirements for MVCS. Continue integration of MVCS v1.0.0 on RMMV and begin integration on SMCM UUV and SMCM UUV. Support High Frequency Ground Wave (HFGW) radio Rapid Technology Transition (RTT) effort. ***FY 2014 Plans:*** Mission Package Computing: Continue MPCE v1.9 hardware production and tech refresh activities. INCO of CMPT #3 on LCS 6. Conduct tech refresh for the shore sites (MPPCS #1 and #2) and for LCS 1and LCS 2. Provide maintenance deliveries for MPS/MPOE. PMS 420 CM delivery of MUS v1.1 will occur. Conduct quarterly IPRs. Continue development activities to evolve MPCE software architecture to a Service Oriented Architecture (SOA), MPCE v2.0, in support of the CSA Baseline. Mission Package Communications: Support MCM MPT TechEval with MVCS v1.0.0. Deliver MVCS HW and SW builds v2.6. Support testing of MVCS v1.0.0 on SMCM UUV and UISS. Conduct DMP demonstration on Fire Scout air vehicle.			
Title: Mine Countermeasures (MCM) Mission Package	21.942	23.602	28.794
Articles:	0	0	0
FY 2012 Accomplishments: Continued development, integration and testing of Unmanned Influence Sweep System (UISS). Groomed and conducted End-to-End testing during MCM MP DT to ensure MCM mission package readiness to enter TECHEVAL. Conducted KPP modeling analysis. Integrated COBRA/VTUAV into MCM mission package.			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
MPAS: In support of MCM MP, incorporated the following items into MPAS: RMMV RGP V4.1 improvements and correction of software Program Trouble Reports (PTRs) identified during DT events. Delivered next MPAS build in support of TECHEVAL. Resolved hardware PTRs identified during DT through development of Advanced Change Study Notices (ACSNs). Performed Systems Engineering (risk management, information assurance, human systems integration, and safety), Configuration management and Integrated Logistics Support. ***FY 2013 Plans:*** Initial design for Surface Mine Countermeasures (SMCM) UUV container. Design and integration of SMCM UUV into MCM MPs. Groom and conduct MVCS dual control/RGP 4.2 RMMV End-to-End testing to ensure MCM mission package readiness to enter OPEVAL. Conduct KPP modeling analysis. Resolve hardware PTRs identified during MCM Developmental Testing through development of ACSNs. In support of MCM mission package TECHEVAL and OPEVAL, incorporate the following items into MPAS: RMMV RGP V4.2 improvements, correction of software PTRs identified during end-to-end testing. Deliver next MPAS build in support of FY 14 TECHEVAL and OPEVAL. Perform systems engineering (risk management, information assurance, human systems integration, safety), configuration management and Integrated Logistics Support. Prepare for and conduct Systems Engineering Technical Reviews (SETR) (SRR/PDR) for MCM MP Increment II. ***FY 2014 Plans:*** Procure USV EDMs. Finalize design for Surface Mine Countermeasures (SMCM) UUV container and procure EDM support container. Design and integration of SMCM UUV into MCM MPs. Conduct MCM mission package TECHEVAL and OPEVAL. Conduct KPP modeling analysis. Resolve hardware PTRs identified during testing through development of ACSNs. Complete the integration of RMMV v4.2.1 with MCM MP Increment I. Prepare for and conduct Systems Engineering Technical Reviews (SETR) (SRR/PDR) for MCM MP Increment III. In support of MCM mission package, incorporate the following items into MPAS: RMMV RGP V4.3 improvements, correction of software PTRs identified during MCM MP testing, and MEDAL EA integration. Perform systems engineering (risk management, information assurance, human systems integration, safety), configuration management and Integrated Logistics Support.			
Title: Anti-Submarine Warfare (ASW) Mission Package	0.000	34.367	41.890
Articles:		0	1
FY 2013 Plans: Continue development of the ASW Mission Modules (MM) that were transitioned from IWS 5 and NUWC Newport, including ASW Escort capability and Torpedo Defense. Initiate development of the Common Mission Management/Decision Support system required for the integration of the ASW MMs, including manned and unmanned aircraft integration. Initiate detailed LCS ASW			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Mission Module systems engineering and integration plans. Develop Ship integration plan and required shipboard integration mods. Conduct component and system level testing and related predictive performance modeling and simulation. Conduct a Preliminary Design Review (PDR) leading to a Critical Design Review/Production Readiness Review (CDR/PRR) in FY14. Manage and administer required Systems Engineering Technical Reviews (SETR), and required systems Certification Reviews. Conduct risk mitigation efforts necessary to cost effectively minimize residual risk to mission module and overall program performance. Conduct technology demonstrations to benchmark technology system performance and related potential to mitigate current risks and acknowledged capability gaps. Provide a common ship-to-air integration and test of Helo Support Function (HSF) Mission Package Application Software (MPAS) to ensure availability of capability for planned ASW Mission Package activities. Establish helicopter interface requirements, integrate, and demonstrate end-to-end capability. Conduct ASW MP Increment 2 ILS planning to include development of ASW MP Reliability Growth Plan. Review environmental impacts and assess testing requirements to ensure NEPA compliance. Conduct studies and analyses on emerging technologies for incorporation into future ASW MP increments.			
FY 2014 Plans: Conduct a Critical Design Review (CDR) that focuses on the transition of the final system design, development and integration of ASW MP Increment II ASW Escort and Torpedo Defense mission modules. Conduct required systems engineering technical reviews to ensure system design meets the total CDD requirement. Conduct component and system level testing and related predictive performance modeling and simulation to establish system and module performance and reliability baselines. Provide developmental engineering support for logistical engineering data and technical documentation. Continue Mission Module development and LCS integration to include Mission Module level at-sea testing. ASW Increment 2 final development, integration and test. Award competitive contract(s) for EDM/Production Representative Article (PRA) set of ASW Escort/Torpedo Defense systems to support IOT&E in FY16. Maintain configuration control of ASW MP data, hardware, and software. Collect data and perform analysis associated with the ASW MP Reliability, Maintainability, and Availability (RMA) program. Provide Find/Fix/Repair for technical issues associated with Mission Package Application Software (MPAS) identified during integration and developmental testing and conduct necessary regression testing on proposed fixes. Initiate environmental testing on Mission Package (MP) Increment 2 and incorporate required Engineering Change Proposals (ECP) into the Technical Data Package (TDP). Provide developmental engineering support, equipment, and documentation for logistical engineering data and technical publications to include training (ship's crew and Mission Package Support Facility (MPSF) personnel), maintenance and provisioning. Conduct mission package certification, obtain Information Assurance (IA) approvals, and conduct land based test events with each seaframe manufacturer prior to			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
conducting formal shipboard test events. Support the planning and preparations for FY15 Developmental Test (DT) of ASW MP Increment 2. Conduct studies and analyses on emerging technologies for incorporation into future ASW MP Increments.			
Title: Surface Warfare (SUW) Mission Package	23.908	51.864	51.094
Articles:	0	0	0
FY 2012 Accomplishments: In support of the SSMM redesign, conducted System Requirement Review (SRR) including missile, launcher, SSMM and software specifications. Modified the SSMM Increment 1 to address surface missile system requirements and Navy environmental standards. Conducted preliminary Weapon Systems Explosive Safety Review Board (WSESRB) on SSMM Increment 1 and Griffin missile program. Conducted one baseline restrained fire test and two engineering restrained fire test. Procured two Griffin Block IIB missiles in support of sea based barge testing. Procured one full suite of Battle Management System (BMS) hardware that includes three KARNACs and one Command and Control (C2) system. Procured two GMS prototypes to support restrained fire mitigation engineering tests. Modified BMS software based on results from Dynamic Transfer Alignment testing. Provided Find/Fix/Repair for technical issues associated with GMM and Mission Package Application Software (MPAS) identified during integration and developmental testing and conduct necessary regression testing on proposed fixes. Completed environmental testing on Mission Package (MP) #2 and incorporate required Engineering Change Proposals (ECP) into the GMM Technical Data Package (TDP). Provided developmental engineering support, equipment, and documentation for logistical engineering data and technical publications to include training (ship's crew and Mission Package Support Facility (MPSF) personnel), maintenance and provisioning. Conducted combat system certification, mission package certification, obtain WSESRB / Software System Safety Technical Review Panel (SSSTRP) and Information Assurance (IA) approvals, and conducted land based test events with each seaframe manufacturer prior to conducting formal shipboard test events. Groomed and updated the SUW MP to support Developmental Test (DT) events. Supported the planning and preparations for FY13 Operational Test (OT) of SUW MP Increment 1 and Structural Test Firing.			
FY 2013 Plans: Continue design and development of SSMM Increment 1. Conduct a Preliminary Design Review (PDR) that focuses on the SSMM Increment 1. Finalize design modification to the SSMM Increment 1 and procure necessary hardware to support barge shots. Conduct one restrained fire engineering test at the GMS level. Conduct one restrained fire test that includes the GMS mechanical support structure and the BMS electronics. Conduct SSMM Increment 1 end-to-end test event that includes SSMM Increment 1 hardware / software, BMS, and MEP. Begin SSMM Increment 1 and missile environmental confidence testing focusing on shock, vibe, Electromagnetic Environmental Effects (E3), temperature and salt spray. Procure Griffin B-Block II missiles to support			

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developmental testing, procure seven GMS prototypes to support flight testing, procure three SSMM Increment 1 launch systems to support flight testing and procure four suites of BMS hardware and software to support flight testing. Award the competitive contract for the SSMM Increment 2 missile system. Initiate SSMM Increment 2 missile system design. Conduct appropriate systems engineering technical reviews to ensure missile system design meets the total CDD requirement. Begin planning the SSMM Increment 2 environmental confidence level testing, start development of the detailed launcher design that supports the GMS concept. Generate SSMM Increment 2 MEP requirements and architecture. Find/Fix/Repair technical issues associated with GMM and MPAS identified during STF and DT/OT events. Maintain configuration control of SUW MP data, hardware, and software. Collect data and perform analysis associated with the SUW MP Reliability, Maintainability, and Availability (RMA) program. Conduct combat system certification, MP certification, obtain WSESRB/SSSTRP approval, IA approvals, and conduct land based test events with each seaframe manufacturer prior to conducting shipboard events. Support formal testing of the SUW MP for LCS 1 variant OT events, STF from LCS 2 variant, DT from LCS 2 variant, and OT from LCS 2 variant. ***FY 2014 Plans:*** SSMM Inc 1 formal technical data package will be finalized. Continue SSMM Increment II development. Initiate developmental testing to categorize modifications to the current MPAS baseline. Initiate modifications to MPAS to support continued SSMM Increment II development. Conduct appropriate systems engineering technical reviews to ensure missile system design meets the total CDD requirement. Continue planning the SSMM Increment II environmental confidence level testing. Continue development of the detailed launcher design that supports the SSMM Increment II concept. Complete DT/OT/IOT&E for the Gun Mission Module onboard LCS 1 & 2 variants. Find/Fix/Repair technical issues associated with GMM and MPAS identified during STF and DT/OT events. Maintain configuration control of SUW MP data, hardware, and software. Collect data and perform analysis associated with the SUW MP Reliability, Maintainability, and Availability (RMA) program. Conduct combat system certification, MP certification, obtain WSESRB/SSSTRP approval, IA approvals, and conduct shipboard test events with each seaframe manufacturer. Support formal testing of the SUW MP for LCS 1 variant OT events, STF from LCS 2 variant, DT from LCS 2 variant, and OT from LCS 2 variant.			
Title: Irregular Warfare Module ***Articles:*** ***FY 2013 Plans:*** Conduct the System Requirements Review, Preliminary Design Review, Critical Design Review and develop an Engineering Development Module. The Irregular Warfare Module consists of the following enhancements to the Surface Warfare Mission	0.000	4.000 0	0.000

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Package: an Afloat Trauma Care (ATC) Medical unit, a Humanitarian Assistance/Health Services Support Medical unit and a Training unit.			
Title: Reliability, Availability and Maintainability	1.476	1.961	3.202
Articles:	0	0	0
FY 2012 Accomplishments: Updated Reliability, Availability, Maintainability-Cost (RAM-C) plan in support of MS C. Refined MCM and SUW RAM model assumptions based on actual data. Implemented a reliability growth program that provides assessment to determine changes to the mission module baselines. The reliability growth program metrics and assessments will provide data to qualify and quantify suitability requirements changes and improvements to lower Total Ownership Costs at the mission module level. Ran additional RAM model scenarios incorporating actual performance/reliability/maintainability data from test events and updated mission profiles to include peacetime and wartime analysis. Also established RAM model scenarios involving multiple sea-frames employing multiple mission systems simultaneously.			
FY 2013 Plans: Monitor Reliability Growth and update plans as necessary. Continue with RAM efforts to provide multiple excursions that consider multiple MPs and multiple ships within a single area of responsibility (AOR) to identify major contributors to MP RAM model; continue to refine RAM model assumptions based on actual data and conduct multiple sensitivity analysis to quantify the effect of alternate sparing philosophies (i.e. more onboard spares, complete spare system, etc.) based on mission module availability. Determine the maintenance throughput capability for the mission systems at the Mission Package Support Facility/Mission Module Readiness Center (MPSF/MMRC) depot. Commence the introduction of the ASW MP into the program RAM model. Develop a Failure Reporting Analysis, Corrective Action System (FRACAS) tailored to the mission module system of systems to include MPCE/MVCS hardware and software failures and modes.			
FY 2014 Plans: Continue to monitor Reliability Growth and update plans as necessary. Continue to refine RAM model assumptions based on actual data and conduct multiple sensitivity analysis to quantify the effect of alternate sparing philosophies (i.e. more onboard spares, complete spare system, etc.) based on mission module availability. Determine the maintenance throughput capability for the mission systems at the Mission Package Support Facility/Mission Module Readiness Center (MPSF/MMRC) depot. Refine modeling of ASW MP. Continue utilizing FRACAS to feed back product and process improvements to the Systems Engineering and ILS organizations.			
Accomplishments/Planned Programs Subtotals	139.714	195.824	203.771

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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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
• 2127 : *Littoral Combat Ship*	1,755.093	1,784.959	1,793.014		1,793.014	1,824.944	997.051	1,032.475	1,056.018	13,085.300	27,004.652
• 1600 : *LCS Common Mission Modules Equipment*	65.848	31.319	45.966		45.966	30.951	14.696	18.570	18.897	Continuing	Continuing
• 0443 : *Aircraft Procurement, Navy*	191.986	124.573	60.980		60.980	81.336	0.000	0.000	0.000	Continuing	Continuing
• 5110: *Outfitting/Post Delivery*	25.986	60.053	79.823		79.823	134.113	134.722	208.913	211.197	2,151.400	3,013.642
• 1320: *LCS Training Equipment*	29.885	29.772	36.145		36.145	27.748	28.832	31.032	31.538	Continuing	Continuing
• 0944: *LCS Class Support Equipment*	0.000	19.865	47.078		47.078	42.769	43.040	64.300	63.394	Continuing	Continuing
• 1601: *LCS MCM Mission Modules*	0.000	38.392	59.885		59.885	185.017	219.795	219.818	223.744	Continuing	Continuing
• 1602: *LCS ASW Mission Modules*	0.000	0.000	0.000		0.000	3.436	23.612	44.754	45.560	0.000	117.362
• 1603: *LCS SUW Mission Modules.*	0.000	32.897	37.168		37.168	40.042	46.282	67.581	68.791	Continuing	Continuing

Remarks

D. Acquisition Strategy

The LCS Mission Module Acquisition Strategy is employing an incremental procurement approach to allow for the rapid introduction of additional capabilities as system technology matures. This phased plan provides incremental fielding of capability through the introduction of mature programs of record into the respective Mission Packages until the full baseline capability defined in the Capability Development Document (CDD) is reached.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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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
1.1 System Engineering	WR	NSWC PC:Panama City, FL	2.982	2.565	Nov 2011	1.597	Oct 2012	2.050	Oct 2013	-		2.050	Continuing	Continuing	Continuing
1.1 System Engineering	WR	NSWC DD:Dahlgren, VA	2.950	2.850	Nov 2011	1.228	Oct 2012	1.079	Oct 2013	-		1.079	Continuing	Continuing	Continuing
1.1 System Engineering	C/CPFF	Northrop Grumman:Bethpage, NY	4.000	5.980	Jan 2012	1.196	Dec 2012	3.782	Oct 2013	-		3.782	Continuing	Continuing	Continuing
1.1 System Engineering	WR	SPAWAR PAC:San Diego, CA	1.000	1.450	Nov 2011	1.134	Nov 2012	1.928	Oct 2013	-		1.928	Continuing	Continuing	Continuing
1.1 System Engineering	WR	NUWC NPT:Newport, RI	0.500	1.800	Dec 2011	1.207	Oct 2012	0.000		-		0.000	Continuing	Continuing	Continuing
1.1 System Engineering	C/CPFF	CACI:Fairfax, VA	2.500	0.500	Jan 2012	0.137	Dec 2012	0.500	Oct 2013	-		0.500	Continuing	Continuing	Continuing
1.1 System Engineering	C/CPFF	AAC:Uniontown, PA	0.000	0.000		7.317	Jan 2013	0.000		-		0.000	0.000	7.317	
1.1 System Engineering	WR	NSWC PHD:Port Hueneme, CA	0.000	1.362	Jan 2012	0.000		0.000		-		0.000	0.000	1.362	
1.1 System Engineering	WR	NSWC Carderock:Bethesda, MD	0.000	0.000		0.000	Nov 2012	0.450	Oct 2013	-		0.450	0.000	0.450	
1.1 System Engineering	C/CPFF	JHU/APL:Laurel, MD	0.000	0.000		0.000	Jan 2013	0.450	Oct 2013	-		0.450	0.000	0.450	
1.4 Integration, Assembly, Test and Check	WR	NAWC AD:Patuxent River, MD	0.340	0.794	Nov 2011	0.486	Nov 2012	0.800	Oct 2013	-		0.800	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Checkout	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		0.857	Dec 2012	0.400	Oct 2013	-		0.400	0.000	1.257	
1.4 Integration, Assembly, Test and Check	WR	SPAWAR PAC:San Diego, CA	0.994	0.235	Nov 2011	1.204	Nov 2012	0.000		-		0.000	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Check	WR	NUWC NPT:Newport, RI	0.647	0.297	Dec 2011	0.202	Oct 2012	0.000		-		0.000	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Check	WR	NSWC PC:Panama City, FL	0.000	2.000	Nov 2011	0.128	Oct 2012	0.450	Oct 2013	-		0.450	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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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
1.4 Integration, Assembly, Test and Check	WR	SUPSHIP Gulfcoast:Pascagoula, MS	0.500	1.000	Feb 2012	0.543	Jan 2013	0.000	Oct 2013	-		0.000	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Check	WR	SUPSHIP Bath:Bath, ME	0.500	1.000	Feb 2012	0.550	Jan 2013	0.000	Oct 2013	-		0.000	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Check	WR	NSWC DD:Dahlgren, VA	1.758	3.034	Nov 2011	0.768	Oct 2012	1.115	Oct 2013	-		1.115	Continuing	Continuing	Continuing
1.4 Integration, Assembly, Test and Checkout	WR	NSWC PHD:Port Hueneme, CA	0.000	0.000		0.850	Oct 2012	0.000	Oct 2013	-		0.000	0.000	0.850	
1.4 Integration, Assembly, Test and Checkout	WR	NSWC Crane:Crane, Indiana	0.000	0.000		0.000	Nov 2012	0.600	Oct 2013	-		0.600	0.000	0.600	
1.4 Integration, Assembly, Test and Checkout	WR	NSWC Carderock:Bethesda, MD	0.000	0.000		0.000	Oct 2012	0.966	Oct 2013	-		0.966	0.000	0.966	
1.4 Integration, Assembly, Test and Checkout	C/CPFF	CACI:Fairfax, VA	0.000	0.000		0.000	Dec 2012	0.400	Oct 2013	-		0.400	0.000	0.400	
1.4 Integration, Assembly, Test and Checkout	Sub Allot	CECOM Bldg 1207:Various	0.000	0.000		0.000	Nov 2012	0.400	Oct 2013	-		0.400	0.000	0.400	
1.12 Common Equipment Development	WR	NSWC PC:Panama City, FL	68.070	10.892	Nov 2011	5.702	Oct 2012	4.702	Oct 2013	-		4.702	Continuing	Continuing	Continuing
1.12 Common Equipment Development	C/CPFF	Northrop Grumman:Bethpage, NY	18.727	0.000		3.001	Dec 2012	1.729	Oct 2013	-		1.729	Continuing	Continuing	Continuing
1.12 Common Equipment Development	WR	NUWC NPT:Newport, RI	7.829	0.000		0.840	Nov 2012	0.488	Oct 2013	-		0.488	Continuing	Continuing	Continuing
1.12 Common Equipment Development	WR	NSWC DD:Dahlgren, VA	1.921	0.000		2.687	Oct 2012	1.245	Oct 2013	-		1.245	Continuing	Continuing	Continuing
1.12 Common Equipment Development	WR	NAVAIR PMA266:Patuxent River, MD	4.500	2.000	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
1.12 Common Equipment Development	C/CPFF	AAC:Uniontown, PA	0.000	0.000		0.000	Jan 2013	0.932	Oct 2013	-		0.932	0.000	0.932	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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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
1.12 Common Equipment Development	WR	PMW 760:Various	0.000	0.000		0.000	Nov 2012	0.356	Oct 2013	-		0.356	0.000	0.356	
1.12 Common Equipment Development	WR	SPAWAR PACIFIC:San Diego, CA	0.000	0.000		0.000	Nov 2012	1.070	Oct 2013	-		1.070	0.000	1.070	
1.12 Common Equipment Development	C/CPFF	ARL/UT:Austin, TX	0.000	0.000		0.000	Dec 2012	0.262	Oct 2013	-		0.262	0.000	0.262	
1.13 MCM MP	WR	NSWC PC:Panama City, FL	116.600	16.296	Nov 2011	9.265	Oct 2012	15.031	Oct 2013	-		15.031	Continuing	Continuing	Continuing
1.13 MCM MP	WR	NSWC CD:Little Creek, VA	0.000	6.000	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
1.13 MCM MP	Sub Allot	PMS 406:Various	0.000	0.000		6.337	Oct 2012	6.013	Oct 2013	-		6.013	0.000	12.350	
1.13 MCM MP	C/CPFF	Lockheed Martin:Riviera Beach, FL	0.000	0.000		8.000	Oct 2012	7.750	Oct 2013	-		7.750	0.000	15.750	
1.14 ASW MP	Sub Allot	PEO IWS5:Various	0.000	0.000		10.877	Nov 2012	29.202	Oct 2013	-		29.202	0.000	40.079	
1.14 ASW MP	WR	NUWC NPT:Newport, RI	0.000	0.000		11.100	Oct 2012	9.708	Oct 2013	-		9.708	0.000	20.808	
1.14 ASW MP	TBD	Various:Various	153.473	0.000		10.170	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
1.14 ASW MP	WR	NSWC Dam Neck:Virginia Beach, VA	0.000	0.000		0.920	Dec 2012	1.380	Oct 2013	-		1.380	0.000	2.300	
1.14 ASW MP	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		1.300	Dec 2012	1.600	Oct 2013	-		1.600	0.000	2.900	
1.15 SUW MP	WR	NSWC DD:Dahlgren, VA	165.774	20.026	Nov 2011	37.194	Oct 2012	23.706	Oct 2013	-		23.706	Continuing	Continuing	Continuing
1.15 SUW MP	WR	NSWC PHD:Port Hueneme, CA	6.000	2.500	Dec 2011	2.558	Oct 2012	6.388	Oct 2013	-		6.388	Continuing	Continuing	Continuing
1.15 SUW MP	WR	SPAWAR PACIFIC:San Diego, CA	1.205	0.937	Nov 2011	1.117	Oct 2012	0.000		-		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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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
1.15 SUW MP	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		10.995	Dec 2012	15.000	Oct 2013	-		15.000	0.000	25.995	
1.15 SUW MP	WR	NAWC WD:Ridgecrest, CA	0.000	0.000		0.000	Dec 2012	6.000	Oct 2013	-		6.000	0.000	6.000	
1.20 Irregular Warfare Module	WR	SPARWAR PAC:San Diego, CA	0.000	0.000		1.320	Nov 2012	0.000		-		0.000	0.000	1.320	
1.20 Irregular Warfare Module	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		2.680	Dec 2012	0.000		-		0.000	0.000	2.680	
1.16 MP-PCS Equipment	WR	Various:Various	3.547	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
1.19 Pre-Production Engineering	WR	Various:Various	8.425	0.000		0.000		0.000		-		0.000	0.000	8.425	
1.1.7 System Engineering RAM-C Project	WR	Various:Various	0.000	1.500	Oct 2011	1.961	Nov 2012	3.202	Dec 2013	-		3.202	0.000	6.663	
		Subtotal	574.742	85.018		147.428		151.134		0.000		151.134			

Support ($ 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
1.5 Training Systems Development	WR	NAWC TSD:Orlando, FL	6.933	2.887	Jan 2012	4.917	Jan 2013	1.725	Oct 2013	-		1.725	Continuing	Continuing	Continuing
1.5 Training Systems Development	WR	NSWC PC:Panama City, FL	10.823	4.715	Nov 2011	1.215	Oct 2012	1.575	Oct 2013	-		1.575	Continuing	Continuing	Continuing
1.5 Training Systems Development	WR	NSWC PHD:Port Hueneme, CA	2.900	2.500	Dec 2011	1.054	Dec 2012	1.477	Oct 2013	-		1.477	Continuing	Continuing	Continuing
1.5 Training Systems Development	C/CPFF	AAC:Uniontown, PA	4.000	3.800	Mar 2012	3.010	Jan 2013	1.496	Oct 2013	-		1.496	Continuing	Continuing	Continuing
1.5 Training Systems Development	C/CPFF	CACI:Fairfax, VA	0.000	0.000		0.576	Nov 2012	0.750	Oct 2013	-		0.750	0.000	1.326	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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Support ($ 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
1.5 Training Systems Development	WR	CSCS:Dahlgren, VA	0.000	1.240	Feb 2012	0.843	Jan 2013	1.828	Oct 2013	-		1.828	Continuing	Continuing	Continuing
1.5 Training Systems Development	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		1.934	Dec 2012	1.088	Oct 2013	-		1.088	0.000	3.022	
1.5 Training Systems Development	WR	CNSF:San Diego, CA	0.000	1.000	Feb 2012	1.100	Dec 2012	0.750	Oct 2013	-		0.750	Continuing	Continuing	Continuing
1.6 Program Technical Data	WR	NSWC PC:Panama City, FL	0.000	1.082	Dec 2011	0.279	Nov 2012	0.243	Oct 2013	-		0.243	Continuing	Continuing	Continuing
1.6 Program Technical Data	C/CPFF	Northrop Grumman:Bethpage, NY	0.000	0.000		0.750	Dec 2012	0.337	Oct 2013	-		0.337	0.000	1.087	
1.6 Program Technical Data	WR	CACI:Fairfax, VA	0.000	0.000		0.250	Dec 2012	0.225	Oct 2013	-		0.225	0.000	0.475	
		Subtotal	24.656	17.224		15.928		11.494		0.000		11.494			

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
1.3 System Test and Evaluation	WR	NSWC PC:Panama City, FL	27.165	16.183	Nov 2011	10.275	Nov 2012	14.210	Nov 2013	-		14.210	Continuing	Continuing	Continuing
1.3 System Test and Evaluation	WR	NSWC DD:Dahlgren, VA	24.500	4.500	Nov 2011	5.513	Nov 2012	7.369	Nov 2013	-		7.369	Continuing	Continuing	Continuing
1.3 System Test and Evaluation	WR	NUWC NPT:Newport, RI	5.000	1.200	Dec 2011	0.000	Nov 2012	0.750	Nov 2013	-		0.750	Continuing	Continuing	Continuing
1.3 System Test and Evaluation	WR	NSWC PHD:Port Hueneme, CA	4.000	6.718	Dec 2011	5.852	Oct 2012	7.937	Nov 2013	-		7.937	Continuing	Continuing	Continuing
1.3 System Test and Evaluation	WR	SPAWAR PAC:San Diego, CA	3.645	1.068	Nov 2011	0.894	Nov 2012	1.250	Nov 2013	-		1.250	Continuing	Continuing	Continuing
1.3 System Test and Evaluation	WR	COMOPTEVFOR:Norfolk, VA	1.435	1.400	Jan 2012	0.248	Nov 2012	1.250	Nov 2013	-		1.250	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
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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
1.3 System Test and Evaluation	WR	PMA 266:Patuxent River, MD	0.000	0.000		0.344	Jan 2013	0.350	Nov 2013	-		0.350	0.000	0.694	
1.3 System Test and Evaluation	C/BA	Silver Ships:Theodore, AL	0.000	0.000		0.550	Jan 2013	0.550	Nov 2013	-		0.550	0.000	1.100	
1.3 System Test and Evaluation	C/BA	CNSF:Norfolk, VA	0.000	0.000		0.264	Dec 2012	0.250	Nov 2013	-		0.250	0.000	0.514	
1.3 System Test and Evaluation	C/BA	NAWC WD:Point Mugu, CA	0.000	0.000		2.420	Nov 2012	2.500	Nov 2013	-		2.500	0.000	4.920	
		Subtotal	65.745	31.069		26.360		36.416		0.000		36.416			

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
Acquisition Workforce	Various	Various:Various	1.047	0.000		0.000		0.000		-		0.000	0.000	1.047	
1.2 Program Management	C/CPFF	CACI:Fairfax, VA	25.688	6.403	Dec 2011	3.175	Nov 2012	2.199	Nov 2013	-		2.199	Continuing	Continuing	Continuing
1.2 Program Management	WR	NSWC PC:Panama City, FL	0.000	0.000		1.453	Oct 2012	1.264	Oct 2013	-		1.264	Continuing	Continuing	Continuing
1.2 Program Management	WR	NSWC DD:Dahlgren, VA	0.000	0.000		1.480	Oct 2012	1.264	Oct 2013	-		1.264	Continuing	Continuing	Continuing
		Subtotal	26.735	6.403		6.108		4.727		0.000		4.727			

	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	691.878	139.714		195.824		203.771		0.000		203.771			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
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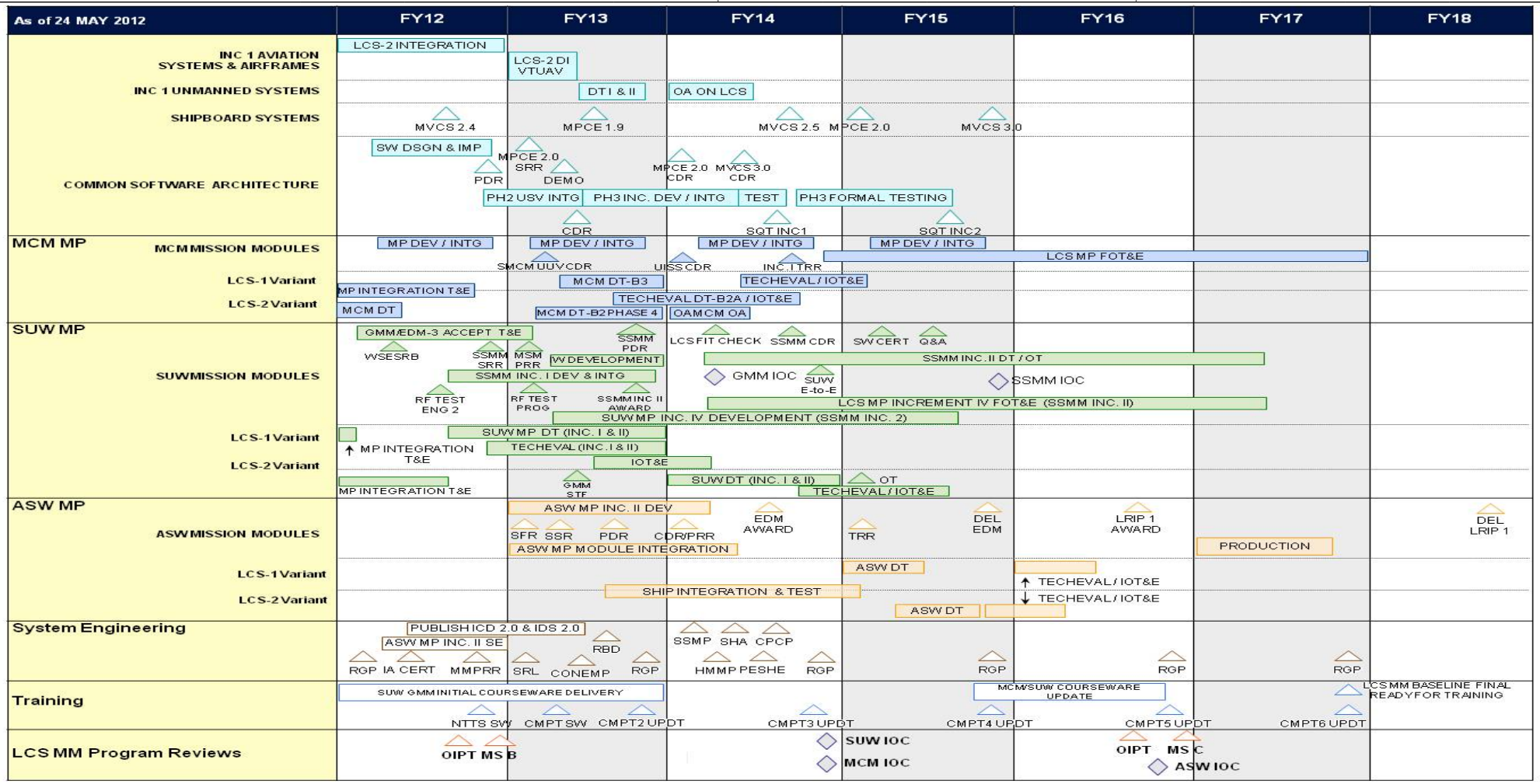

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603581N: *Littoral Combat Ship (LCS)*	**PROJECT** 3129: *LCS Mission Package Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3129				
MCM Aviation Systems and Airframe Integration (LCS 2)	1	2012	4	2012
MCM MP Integration T&E (LCS 2)	1	2012	3	2012
MCM MP Aviation Systems & Airframe Dynamic Interface Testing (LCS 2)	1	2013	2	2013
MCM MP Increment I DT-B3 (LCS 1)	2	2013	4	2013
MCM MP Increment I DT-B2 Phase 4 (LCS 2)	2	2013	4	2013
MCM MP OAMCM Operational Assessment (LCS 2)	1	2014	2	2014
MCM MP Increment I TECHEVAL DT-B2A (LCS 2)	3	2013	3	2014
MCM MP Increment I IOT&E (LCS 2)	3	2013	3	2014
MCM MP Increment I IOC	4	2014	4	2014
MCM - UISS CDR	1	2014	1	2014
MCM - SMCM UUV CDR	2	2013	2	2013
MCM MP FOT&E	4	2014	4	2017
MCM MP Shipboard System MVCS vs. 1.0.0 (SW 2.4) INSTALL	3	2012	3	2012
MVCS 2.5 Install	3	2014	3	2014
MVCS 3.0 Install	4	2015	4	2015
MCM Courseware Update (MCM UUV, RMMV & UISS IOC)	4	2015	3	2016
Initial LCS MM Baseline Final Ready for Training	4	2017	4	2017
SUW MP GMM/EDM-3 Acceptance T&E	1	2012	1	2013
SUW MP Increment II PRR (MSM)	1	2013	1	2013
SUW MP Increment I & II DT (LCS 1 variant)	3	2012	4	2013
SUW MP Increment I & II DT (LCS 2 variant)	1	2014	4	2014

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 3129: *LCS Mission Package Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SUW MP GMM Structural Test Fire	2	2013	2	2013
SUW MP Increment I & II TECHEVAL (LCS 1 variant)	4	2012	4	2013
SUW MP Increment I & II IOT&E (LCS 1 variant)	3	2013	2	2014
SUW MP Increment I & II IOC	4	2014	4	2014
SUW MP Increment III Development (IW & SSMM)	2	2013	4	2013
SUW Increment III E2E	4	2014	4	2014
SUW MP Increment III FOT&E	2	2014	2	2015
SUW Increment III (SSMM Increment 1) IOC	4	2015	4	2015
SUW MP Increment IV SRR (SSMM Increment 2)	4	2012	1	2013
SUW MP Increment IV PDR (SSMM)	4	2013	4	2013
SUW MP Increment IV Development (SSMM Increment 2)	2	2013	3	2015
SUW MP Increment IV FOT&E (SSMM Increment 2)	2	2014	2	2017
SUW GMM Initial Courseware Delivery	1	2012	4	2013
SUW Courseware Update (SSMM IOC)	4	2015	3	2016
ASW MP Increment II SFR	1	2013	1	2013
ASW MP Increment II SSR	2	2013	2	2013
ASW MP Increment II PDR	3	2013	3	2013
ASW MP Increment II CDR/PRR	1	2014	1	2014
ASW MP Increment II Module Integration	1	2013	2	2014
ASW MP Increment II Ship Integration & Test	3	2013	1	2015
ASW MP Increment II EDM/PRA Award	1	2014	1	2014
ASW MP Increment II EDM 1 Delivery	4	2015	4	2015
ASW MP Increment II TRR	1	2015	1	2015
ASW MP Increment II DT (LCS 1 variant)	1	2015	2	2015
ASW MP Increment II DT (LCS 2 variant)	2	2015	3	2015

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 3129: *LCS Mission Package Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ASW MP Increment II TECHEVAL (LCS 1 variant)	1	2016	1	2016
ASW MP Increment II TECHEVAL (LCS 2 variant)	4	2015	4	2015
ASW MP Increment II IOT&E (LCS 1 variant)	1	2016	2	2016
ASW MP Increment II IOT&E (LCS 2 variant)	4	2015	1	2016
ASW MP Increment II IOC	4	2016	4	2016
ASW MP Increment II LRIP 1 Award	3	2016	3	2016
ASW MP Increment LRIP 1 Delivery	3	2018	3	2018

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*	

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
4018: *Littoral Combat Ship Construction*	1,438.972	63.378	9.915	4.880	-	4.880	0.000	0.000	0.000	0.000	0.000	1,517.145
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 Littoral Combat Ship (LCS) is a fast, agile, and networked surface combatant with capabilities optimized to defeat asymmetric threats, and assure naval and joint force access into contested littoral regions. It uses open-systems-architecture design, modular weapons, and sensor systems, and a variety of manned and unmanned vehicles to expand the battle space and project offensive power into the littoral. LCS operates with focused-mission packages that deploy manned and unmanned vehicles to execute a variety of missions, including littoral anti-submarine warfare (ASW), surface warfare (SUW), and mine countermeasures (MCM). LCS also possesses inherent capabilities, regardless of mission package installed, including Intelligence Surveillance Reconnaissance (ISR), homeland defense, Maritime Interdiction/Interception Operations (MIO), anti-terrorism/force protection (AT/FP), air self-defense, joint littoral mobility, and Special Operating Forces (SOF) and logistic support for movement of personnel and supplies. This relatively small, high-speed surface combatant will complement the U.S. Navy's AEGIS fleet by operating in environments where it is less desirable to employ larger, multi-mission ships. It can deploy independently to overseas littoral regions, remain on station for extended periods of time either with a battle group or through a forward-basing arrangement, and is capable of underway replenishment. It will operate with Carrier Strike Groups, Surface Action Groups, in groups of other similar ships, or independently for diplomatic and presence missions. Additionally, it can operate cooperatively with the U.S. Coast Guard and Allies. The LCS construction phase includes the construction of two LCS Flight 0 Class Ships, one each of two designs, and includes Government Furnished Equipment (GFE) for ships systems, Final System Design (FSD), Detail Design, introduction of final interface requirements for integration with mission packages from the Mission Systems and Ship Integration Team (MSSIT), and Outfitting and Post Delivery (OF/PD).

Data as of Jan 2013:
USS Freedom (LCS 1)
Basic Construction: 521.0
Change Orders: 0.5
GFE: 12.0
Other: 3.5
Total Cost*: 537.0

USS Independence (LCS 2)
Basic Construction: 635.0
Change Orders: 3.5

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*

GFE: 7.0
Other: 7.5
Total Cost*: 653.0

Non End Cost Item: FSD/MSSIT 25.0 (LCS1), 54.0 (LCS2) Non End Cost Item: OF/PD 121.8 (LCS1), 118.3 (LCS2) FSD/MSSIT costs for USS Freedom and USS Independence are not true construction costs and are costs associated with design completion.

* Does not include OF/PD and early design costs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Outfitting and Post Delivery	63.378	9.915	4.880
Articles:	0	0	0

Description: Provides for the completion of ship outfitting to include: (a) ship provisioning and fuel, (b) initial load-out of repair parts, spares, and test equipment in accordance with allowance list, (c) provision of technical manuals and required drawings, (d) installation and validation of PMS and EOSS, and (e) crew training and completion of ship system certification requirements. Implements instrumentation packages and validates structural, sea keeping, and hydrodynamic performance. Provides emergent support during the execution of Post Delivery Test & Trials (PDT&T) and Post-Shakedown Availability (PSA). Incorporates Engineering Change Proposals (ECPs) to correct trial card deficiencies, and mission critical upgrades (as required).

FY 2012 Accomplishments:
For USS Freedom (LCS 1):
Completed PSA 1 to accomplish dry-docking, engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T. Continued PSA 2 planning to include engineering efforts, work package development, and procurement of long-lead materials. Conducted Final Contract Trials (FCT)/Special Trials (ST) and provided technical support for the Board of Inspection and Survey (INSURV). Began PSA 2 to accomplish engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T.

For USS Independence (LCS 2):
Continued PSA 1 and PSA 2 planning to include engineering efforts, work package development, and procurement of long-lead materials. Began PSA 1 to accomplish dry-docking, engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T.

FY 2013 Plans:
For USS Freedom (LCS 1):
Complete PSA 2 to accomplish engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T.

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
For USS Independence (LCS 2): Complete PSA 1 to accomplish dry-docking, engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T. Conduct FCT/ST and provide technical support for the INSURV Board. Continued PSA 2 planning to include engineering efforts, work package development, and procurement of long-lead materials. Begin PSA 2 to accomplish engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T. ***FY 2014 Plans:*** For USS Independence (LCS 2): Complete PSA 2 to accomplish engineering changes, equipment repairs, and correction of trial cards and seaframe discrepancies identified during PDT&T.			
Accomplishments/Planned Programs Subtotals	63.378	9.915	4.880

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
• 2127: *Littoral Combat Ship*	1,755.093	1,784.959	1,793.014		1,793.014	1,824.944	997.051	1,032.475	1,056.018	13,085.300	27,004.652
• 1600: *LCS Modules*	65.848	31.319	45.966		45.966	30.951	14.696	18.570	18.897	Continuing	Continuing
• 0443: *Aircraft Procurement, Navy*	191.986	124.573	60.980		60.980	81.336	0.000	0.000	0.000	Continuing	Continuing
• 5110: *Outfitting/Post Delivery*	25.986	60.053	79.823		79.823	134.113	134.722	208.913	211.197	2,151.400	3,013.642
• 1320: *LCS Training*	29.885	29.772	36.145		36.145	27.748	28.832	31.032	31.538	Continuing	Continuing
• 0944: *LCS Class Support Equipment*	0.000	19.865	47.078		47.078	42.769	43.040	64.300	63.394	Continuing	Continuing
• 1601: *MCM Mission Modules*	0.000	38.392	59.885		59.885	185.017	219.795	219.818	223.744	Continuing	Continuing
• 1602: *ASW Mission Modules*	0.000	0.000	0.000		0.000	3.436	23.612	44.754	45.560	0.000	117.362
• 1603: *SUW Mission Modules*	0.000	32.897	37.168		37.168	40.042	46.282	67.581	68.791	Continuing	Continuing

Remarks

D. Acquisition Strategy

The LCS program takes an evolutionary approach to acquisition that emphasizes competition as a key to achieving affordability. Initially, two industry teams competed against each other with two distinctly different LCS designs. The decision produced two flights with a vessel from each design: Flight 0 (LCS 1 and LCS 2); and Flight 0+ (LCS 3 and out). The Flight 0+ baseline incorporates lessons learned from the design, construction, and testing of the Flight 0 ships. The Navy conducted a limited competition amongst the existing LCS industry teams or team participants for the award of a contract for the construction of a block buy of up to ten (10) LCS Flight 0+ Class ships, with an objective of competitively awarding a single contract to a single industry team. By Acquisition Decision Memorandum of December 23, 2010, the

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*

USD (AT&L) authorized execution of an alternative acquisition strategy for the FY 2010 through FY 2015 procurement of 20 seaframes through two ten-ship block buy contracts. On December 29, 2010, the Navy awarded two contracts for block buys of up to ten ships, beginning with the award to each contractor of one FY 2010 ship and associated non-recurring engineering, the development of the Technical Data Package (TDP), core class services, and associated data. This was followed by the contractual funding of one ship to each contractor in FY 2011 and two ships each funded in FY 2012 through FY 2015.

E. Performance Metrics

The LCS Program achieved Milestone A and Program Initiation in May 2004, and underwent a Milestone A update in FY09. Milestone B was achieved in February 2011.

In an October 2012 LCS Program Acquisition Decision Memorandum (ADM), USD (AT&L) formally rescinded the requirement for the Seaframe to conduct a Milestone C. The decision directs the integrated LCS program to conduct annual Defense Acquisition Board In-Process Reviews (DAB IPRs). The first Seaframe and Mission Module integrated program DAB IPR was conducted in January 2013. DAB IPRs will be held each September hereafter.

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*	

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
LCS Ship 1 Construction	C/CPAF	Lockheed Martin:Moorestown, NJ	521.000	0.000		0.000		0.000		-		0.000	0.000	521.000	521.000
LCS Ship 1 Change Orders	C/CPAF	Lockheed Martin:Moorestown, NJ	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	0.500
LCS Ship 1 GFE	C/CPAF	Lockheed Martin:Moorestown, NJ	12.000	0.000		0.000		0.000		-		0.000	0.000	12.000	12.000
LCS Ship 2 Construction	C/CPAF	General Dynamics:Bath, ME	635.000	0.000		0.000		0.000		-		0.000	0.000	635.000	635.000
LCS Ship 2 Change Orders	C/CPAF	General Dynamics:Bath, ME	3.500	0.000		0.000		0.000		-		0.000	0.000	3.500	3.500
LCS Ship 2 GFE	C/CPAF	General Dynamics:Bath, ME	7.000	0.000		0.000		0.000		-		0.000	0.000	7.000	7.000
LCS Ship 1 FSD/MSSIT	C/CPAF	Lockheed Martin:Moorestown, NJ	25.000	0.000		0.000		0.000		-		0.000	0.000	25.000	25.000
LCS Ship 2 FSD/MSSIT	C/CPAF	General Dynamics:Bath, ME	54.000	0.000		0.000		0.000		-		0.000	0.000	54.000	54.000
Initial Outfitting/Logistics	Various	Various:Various	21.601	0.000		0.000		0.000		-		0.000	0.000	21.601	21.601
Test and Trials	WR	Various:Various	32.013	8.412	Oct 2011	0.500	Nov 2012	0.300	Nov 2013	-		0.300	0.000	41.225	
Post Delivery ECP	C/CPAF	Lockheed Martin - General Dynamics:Various	46.957	0.500	Oct 2011	0.400	Oct 2012	0.200	Oct 2013	-		0.200	0.000	48.057	57.457
PSA/PSA Planning/ INSURV/OPTAR	WR	Various:Various	68.720	54.466	Oct 2011	9.015	Oct 2012	4.380	Oct 2013	-		4.380	0.000	136.581	
		Subtotal	1,427.291	63.378		9.915		4.880		0.000		4.880	0.000	1,505.464	

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*	

Support ($ 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
Travel	WR	SUPSHIP:Various	0.460	0.000		0.000		0.000		-		0.000	0.000	0.460	
Other Program Costs	WR	Various:Various	11.000	0.000		0.000		0.000		-		0.000	0.000	11.000	
		Subtotal	11.460	0.000		0.000		0.000		0.000		0.000	0.000	11.460	

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
Acquisition Workforce	Various	Various:Various	0.221	0.000		0.000		0.000		-		0.000	0.000	0.221	
		Subtotal	0.221	0.000		0.000		0.000		0.000		0.000	0.000	0.221	

	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	1,438.972	63.378		9.915		4.880		0.000		4.880	0.000	1,517.145	

Remarks

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 4018: *Littoral Combat Ship Construction*

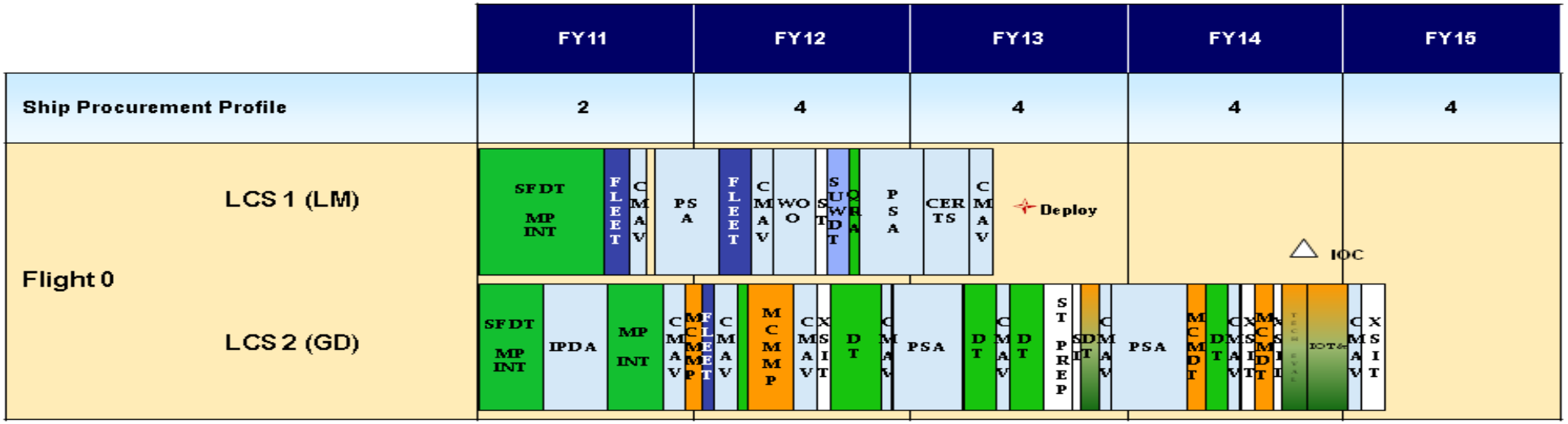

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603581N: *Littoral Combat Ship (LCS)*	**PROJECT** 4018: *Littoral Combat Ship Construction*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4018				
LCS 2 PSA 1	4	2012	2	2013
LCS 2 Final Contract Trials/ Special Trials	4	2013	4	2013
LCS 2 PSA 2	4	2013	1	2014
LCS 2 Transit (XSIT) 2 (Fleet Cost)	3	2014	3	2014
LCS 2 Transit (XSIT) 3 (Fleet Cost)	1	2015	1	2015

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 0603581N: *Littoral Combat Ship (LCS)*	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	10.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.000
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

Provides resources to support both LCS Mission Package Development.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013
Congressional Add: LCS MM SBIR (Cong)	10.000	-
FY 2012 Accomplishments: Continue development of a next generation LCS test bed, which supports development, demonstration, testing and evaluation of critical technologies to enable rapid introduction of advance warfighting capabilities and workload reduction initiatives required by the LCS mission packages. Deliverables include: a next generation LCS test bed based on Service-Oriented Architecture (SOA); demonstration of the ease of inserting a SOA-based C2 product such as MCM Supervision of Unmanned Vehicle Mission Management by Interactive Teams (SUMMIT) or USW-DSS with documented metrics in Demonstration Report ; and a prototype of SOA-based Unmanned System Control System for future LCS unmanned systems (surface and underwater vehicles).		
Congressional Adds Subtotals	10.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Adds.

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 0603581N: *Littoral Combat Ship (LCS)*	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
1.18 Technology Insertion	C/CPFF	AAC:Uniontown, PA	0.000	0.204	Feb 2013	0.000		0.000		-		0.000	0.000	0.204	
1.18 Technology Insertion	C/CPFF	Lockheed Martin:Riveria Beach, FL	0.000	1.617	Mar 2013	0.000		0.000		-		0.000	0.000	1.617	
1.18 Technology Insertion	WR	NSWC DD:Dahlgren, VA	0.000	0.118	Nov 2012	0.000		0.000		-		0.000	0.000	0.118	
1.18 Technology Insertion	WR	NSWC PC:Panama City, FL	0.000	0.523	Dec 2012	0.000		0.000		-		0.000	0.000	0.523	
1.18 Technology Insertion	WR	NSWC NPT:Rhode Island	0.000	0.435	Jan 2013	0.000		0.000		-		0.000	0.000	0.435	
1.18 Technology Insertion	C/CPFF	Adaptive Methods:Centreville, VA	0.000	0.200	Jul 2012	0.000		0.000		-		0.000	0.000	0.200	
1.18 Technology Insertion	C/CPFF	Progeny:Manassas, VA	0.000	6.000	Jul 2012	0.000		0.000		-		0.000	0.000	6.000	
1.18 Technology Insertion	C/BA	TBD:TBD	0.000	0.383	Apr 2013	0.000		0.000		-		0.000	0.000	0.383	
1.18 Technology Insertion	WR	NSWC KPT:Keyport, WA	0.000	0.125	Aug 2012	0.000		0.000		-		0.000	0.000	0.125	
1.18 Technology Insertion	WR	SSC PAC:San Diego, CA	0.000	0.260	Nov 2012	0.000		0.000		-		0.000	0.000	0.260	
		Subtotal	0.000	9.865		0.000		0.000		0.000		0.000	0.000	9.865	

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
1.2 Program Management	C/CPFF	CACI:Fairfax, VA	0.000	0.135	Aug 2012	0.000		0.000		-		0.000	0.000	0.135	
		Subtotal	0.000	0.135		0.000		0.000		0.000		0.000	0.000	0.135	

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 0603581N: *Littoral Combat Ship (LCS)*	PROJECT 9999: *Congressional Adds*	

	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	10.000		0.000		0.000		0.000		0.000	0.000	10.000	

Remarks