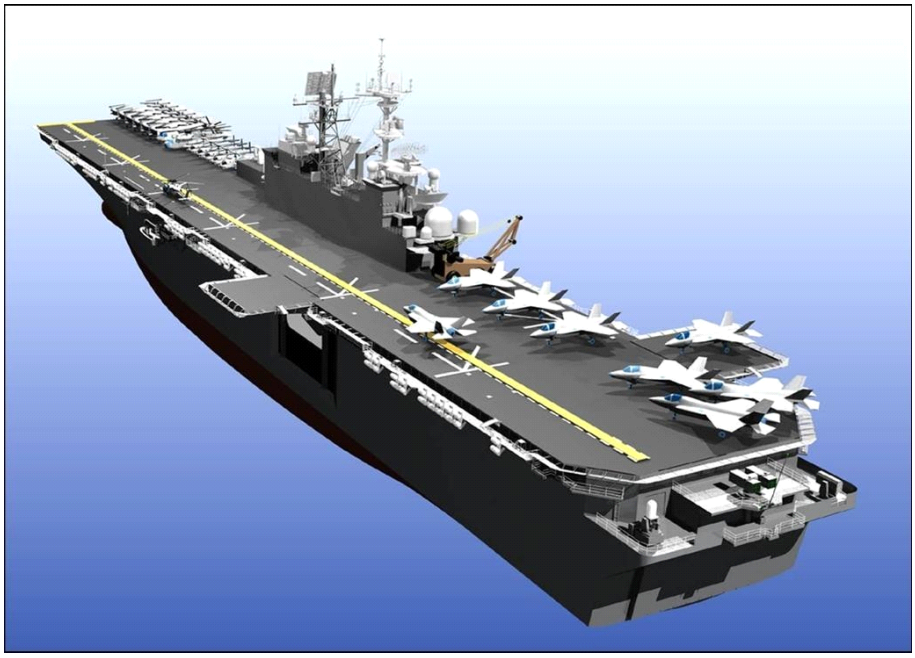
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-333



LHA 6 AMERICA CLASS

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

LHA 6 AMERICA CLASS Amphibious Assault Ship (LHA 6 AMERICA CLASS)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned May 21, 2010

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 12, 2006

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 12, 2006

Mission and Description

The LHA Replacement (LHA(R)) Program is planned to replace existing LHA 1 Class Amphibious Assault Ships, which reach the end of their extended service lives between 2011 and 2015.

The LHA(R) will be the key platform in the Expeditionary Strike Group (ESG)/Amphibious Ready Group (ARG) of the future and will provide the Joint Force Commander options to project expeditionary power. The LHA 6 America Class, the first ship of the LHA(R) Program, will embark and support all of the Short Take-off Vertical Landing (STOVL) and Vertical Take-off Landing (VTOL) Marine expeditionary aviation assets in the ESG/ARG, including the MV-22 and the F-35B, the STOVL model of the Joint Strike Fighter (JSF). The ship will embark over 1600 Marines and transport them and their equipment ashore by rotary-wing aircraft when the situation requires.

The LHA 6 America Class is an LHD 8 gas turbine variant with enhanced aviation capability.

Executive Summary

On March 31, 2011, Huntington Ingalls Industries (HII) completed its spin-off from Northrop Grumman Corporation and became an independent, publicly traded corporation. At the time of the spin-off, Northrop Grumman Shipbuilding, Inc (NGSB) was a wholly-owned subsidiary of HII and was the legal entity holding and performing United States Government contracts. This entity continued to operate as NGSB until April 14, 2011 when NGSB restated its Articles of Incorporation and became Huntington Ingalls Incorporated, with HII continuing as its parent. Huntington Ingalls Incorporated operates through two unincorporated divisions- Newport News Shipbuilding and Ingalls Shipbuilding. Ingalls Shipbuilding is constructing LHA 6 (AMERICA) at its facility in Pascagoula, MS and is also under contract for Advance Procurement (AP) of Long Lead Time Material (LLTM) and engineering and planning for LHA 7.

During 2011, Ingalls Shipbuilding continued its design and production efforts on LHA 6 (AMERICA). Quarterly Progress and Design Reviews were held on a routine basis throughout the year to manage and assess the status of design and production on LHA 6. 98% of detail design drawings were issued to the craft, and fabrication has started on all 216 unit assemblies. 97% of all units/combined units are now erected, and 93% of weld outs are complete. Vessel physical progress on the ship's three super modules is estimated at 56% complete.

In the fall of 2008, the Navy was formally notified of a projected delay in ship delivery from August 31, 2012 to April 8, 2013. The Navy agreed to allow Ingalls to reschedule its baseline. In the summer of 2009, the Navy was informed that, due to labor issues in the shipyard, material delays, engineering deficiencies, and delayed implementation of a yard wide Enterprise Resource Program, delivery of LHA 6 could slip to September 2013. Consequently, ship delivery may be delayed until the end of October 2013. The Navy Program Office is working diligently with Ingalls on efficiency improvement, increased productivity, and risk mitigation in order to improve this date. Ingalls has re-organized its production management team to a dedicated module structure for increased management oversight and issue adjudication. Field Engineering/Planning presence has been increased in order to decrease adjudication cycle time, and Ingalls has also increased 2nd shift manning for quicker cabling/compartment closeout.

Ingalls' latest cost performance assessment for LHA 6 reflects a contract most likely Latest Revised Estimate (LRE) that exceeds the contract Target Price. In October 2010 the Navy Program Office developed the Program Manager's Estimate at Completion (PMEAC), which also exceeds Target Price, but evaluations continue in order to determine the possibility of mitigating costs and incorporating efficiencies to contain the overrun. Contract costs are, however, expected to reach ceiling price. Department of Navy has included funding in FY 2013 to cover Government maximum liability to the contract ceiling price.

The next ship of the AMERICA Class is the LHA 7, a repeat design configuration of the LHA 6 with fact of life updates for equipment obsolescence. Ingalls was awarded an AP contract for LLTM procurement and system engineering on June 30, 2010. A proposal for the Detail Design and Construction (DD&C) modification to the Contract was submitted on April 15, 2011. As of the end of 2011, the Navy and HII continue negotiations for this contract modification. Additional material has been added to the contract within approved funding authorization of the Milestone Decision Authority in order to maintain the ship construction schedule.

Configuration and requirements for LHA(R) Flight 1 (LHA 8) were studied under the direction of a 3-Star Board of Directors that included the Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)), Naval Sea Systems Command (NAVSEA), Office of the Chief of Naval Operations (OPNAV), and Marine Corps Combat Development Command (MCCDC). LHA 8 will be designed with a two Landing Craft Air Cushion (LCAC) well deck and a reduced island. The FY 2013 President's Budget included funding for advanced procurement in FY 2015 and FY 2016, with the first increment of construction funding starting in FY 2017 for this ship.

There are no significant software-related issues with this program at this time.

Threshold Breaches

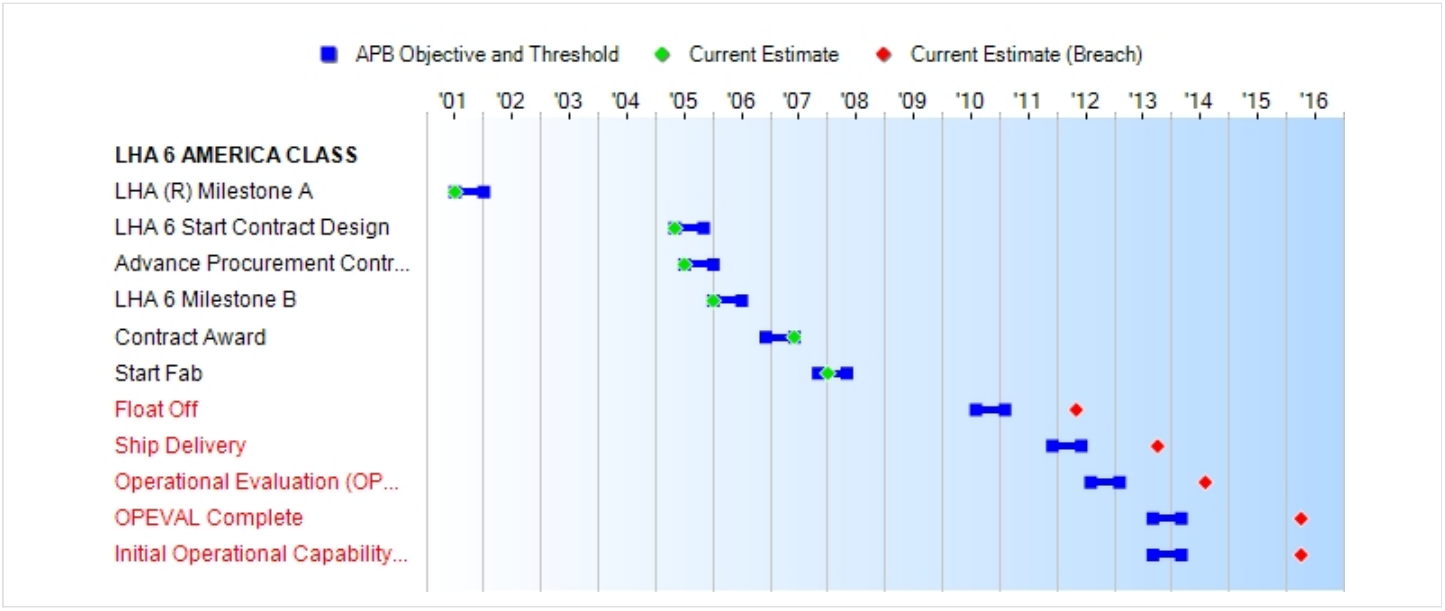
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☑
	Procurement	☑
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

Schedule and Cost breaches previously reported in the Dec 31, 2009 and Dec 31, 2010 SAR.

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
LHA (R) Milestone A	JUL 2001	JUL 2001	JAN 2002	JUL 2001	
LHA 6 Start Contract Design	MAY 2005	MAY 2005	NOV 2005	MAY 2005	
Advance Procurement Contract	JUL 2005	JUL 2005	JAN 2006	JUL 2005	
LHA 6 Milestone B	JAN 2006	JAN 2006	JUL 2006	JAN 2006	
Contract Award	DEC 2006	DEC 2006	JUN 2007	JUN 2007	
Start Fab	NOV 2007	NOV 2007	MAY 2008	JAN 2008	
Float Off	AUG 2010	AUG 2010	FEB 2011	**MAY 2012**[1]	
Ship Delivery	DEC 2011	DEC 2011	JUN 2012	**OCT 2013**[1]	
Operational Evaluation (OPEVAL) Start	AUG 2012	AUG 2012	FEB 2013	**AUG 2014**[1]	
OPEVAL Complete	SEP 2013	SEP 2013	MAR 2014	**APR 2016**[1]	(Ch-1)
Initial Operational Capability (IOC)	SEP 2013	SEP 2013	MAR 2014	**APR 2016**[1]	(Ch-1)

[1] *APB Breach*

Acronyms And Abbreviations

Fab - Fabrication

Change Explanations

(Ch-1) A change in the Amphibious Warfare Mission assessment (Operational Evaluation (OPEVAL) Complete) caused a schedule shift from May 2014 to April 2016. The schedule shift is reflected in the revised Test and Evaluation Master Plan (TEMP) with a corresponding shift in the Initial Operational Capability (IOC) from October 2014 to April 2016.

Memo

Schedule reflects October 2013 Delivery for LHA 6.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Net Ready	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture	TBD	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture
Vertical Take Off and Landing land/launch spots	9 CH-53E/MV-22	9 CH-53E/MV-22	9 CH-53E/MV-22	TBD	9 CH-53E/MV-22
F-35B capacity	23 Aircraft	23 Aircraft	20 Aircraft	TBD	23 Aircraft
Aviation operations	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	TBD	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)
Vehicle space	12,000 sq. ft.	12,000 sq. ft.	10,000 sq. ft.	TBD	11,760 sq. ft.
Total manpower (includes ship's force and all embarked elements such as troops, staffs, detachments, etc.)	2,891 Persons	2,891 Persons	2,891 Persons	TBD	2,891 Persons
Cargo space	160,000 cu. ft.	160,000 cu. ft.	130,000 cu. ft.	TBD	160,000 cu. ft.
Troop accomodations	1,686 Persons	1,686 Persons	1,626 Persons	TBD	1,686 Persons
Survivability: Navy Survivability Policy for Surface Ships	Equals threshold, implement	Equals threshold, implement	Level II per OPNAV-INST 9070.1	TBD	Equals threshold, implement

	recommenda t-ions of the NAVSEA USS COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	recommenda t-ions of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	of 23 Sep 1988 (LHA (R) cargo magazine protection as stated in para. 6.b.17 of the CDD		recommenda tions of the NAVSEA COLE Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003
Force Protection: Collective Protection System (CPS)	Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities	TBD	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities
Force Protection: Decontamination Stations	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	Four decontaminat -ion stations (two CPS, one casualty, and one conventional) providing a capability of decontaminat ion an avg of ten people per hr per	TBD	Four decontamin- ation stations (two CPS, one casualty, and one conventional) providing a capability of decontamin- ation an avg of ten people

	station	station	station		per hr per station

Requirements Source: Capability Development Document (CDD), dated December 19, 2005 and Capability Development Document (CDD), dated December 17, 2009.

Acronyms And Abbreviations

avg - average
CBR - Chemical, Biological, and Radiological
CDD - Capability Development Document
cu. - cubic
etc. - Etcetera
ft. - feet
hrs - hours
INST. - Instruction
NAVSEA - Naval Sea Systems Command
OPNAV - Office of the Chief of Naval Operations
sq. - Square
TBD - To be determined

Change Explanations

None

Classified Performance information is provided in the classified annex to this submission.

Track To Budget

RDT&E				
APPN 1319	BA 04	PE 0603564N	(Navy)	
	Project 0408	Ship Preliminary Design & Feasibility Studies/Ship Development	(Shared)	(Sunk)
APPN 1319	BA 05	PE 0604567N	(Navy)	
	Project 2465	Ship Contract Design/Live Fire Test & Evaluation/LHA(R)	(Shared)	
	Project 9235	Ship Contract Design/Live Fire Test & Evaluation/LHA (R) DESIGN	(Shared)	(Sunk)
	Project 9236	Ship Contract Design/Live Fire Test & Evaluation/LHA(R) DESIGN	(Shared)	(Sunk)
Procurement				
APPN 1611	BA 05	PE 0204411N	(Navy)	
	ICN 3041	LHA Replacement		
	ICN 5110	Outfitting	(Shared)	
	ICN 5300	Completion of Prior Year Shipbuilding Programs	(Shared)	
Acq O&M				
APPN 1804	BA 01	PE 0204411N	(Navy)	
	Subactivity Group 6C	LHA(R) TADTAR	(Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2006 $M			BY2006 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	199.9	199.9	219.9	**334.4** [1]	197.5	197.5	348.7
Procurement	2677.5	2677.5	2945.2	**8605.4** [1]	2896.0	2896.0	11052.9
Flyaway	2677.5	--	--	8605.4	2896.0	--	11052.9
Recurring	2501.5	--	--	8605.4	2710.0	--	11052.9
Non Recurring	176.0	--	--	0.0	186.0	--	0.0
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	1.6	0.0	0.0	1.6
Total	2877.4	2877.4	N/A	8941.4	3093.5	3093.5	11403.2

[1] ***APB Breach***

LHA 6 is the first LHA Replacement Ship of the LHA 6 AMERICA Class. The Acquisition Program Baseline (APB) reflects the LHA 6 only. The Current Estimate reflects funding for the LHA 6, LHA 7 and LHA 8.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	0	0	0
Procurement	1	1	3
Total	1	1	3

Procurement reflects a quantity of three units: LHA 6 (2007), LHA 7 (2011) and LHA 8 (2017).

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2013 President's Budget / December 2011 SAR (TY$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	225.8	26.7	33.7	31.2	17.9	6.6	6.8	0.0	348.7
Procurement	4295.8	2024.7	162.9	10.3	96.3	254.0	2113.0	2095.9	11052.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.0	1.6
PB 2013 Total	4522.0	2051.6	196.8	41.7	114.4	260.8	2120.0	2095.9	11403.2
PB 2012 Total	4543.3	2071.2	104.3	46.0	159.9	1661.4	2739.2	0.0	11325.3
Delta	-21.3	-19.6	92.5	-4.3	-45.5	-1400.6	-619.2	2095.9	77.9

Current funding reflects the LHA 6, LHA 7 and LHA 8.

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	2	0	0	0	0	0	1	0	3
PB 2013 Total	0	2	0	0	0	0	0	1	0	3
PB 2012 Total	0	2	0	0	0	0	1	0	0	3
Delta	0	0	0	0	0	0	-1	1	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2001	--	--	--	--	--	--	15.2
2002	--	--	--	--	--	--	4.9
2003	--	--	--	--	--	--	38.1
2004	--	--	--	--	--	--	52.9
2005	--	--	--	--	--	--	43.0
2006	--	--	--	--	--	--	21.6
2007	--	--	--	--	--	--	12.9
2008	--	--	--	--	--	--	10.9
2009	--	--	--	--	--	--	7.6
2010	--	--	--	--	--	--	8.7
2011	--	--	--	--	--	--	10.0
2012	--	--	--	--	--	--	26.7
2013	--	--	--	--	--	--	33.7
2014	--	--	--	--	--	--	31.2
2015	--	--	--	--	--	--	17.9
2016	--	--	--	--	--	--	6.6
2017	--	--	--	--	--	--	6.8
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**348.7**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2001	--	--	--	--	--	--	16.6
2002	--	--	--	--	--	--	5.3
2003	--	--	--	--	--	--	40.7
2004	--	--	--	--	--	--	55.0
2005	--	--	--	--	--	--	43.5
2006	--	--	--	--	--	--	21.2
2007	--	--	--	--	--	--	12.4
2008	--	--	--	--	--	--	10.3
2009	--	--	--	--	--	--	7.1
2010	--	--	--	--	--	--	8.0
2011	--	--	--	--	--	--	9.0
2012	--	--	--	--	--	--	23.6
2013	--	--	--	--	--	--	29.2
2014	--	--	--	--	--	--	26.6
2015	--	--	--	--	--	--	15.0
2016	--	--	--	--	--	--	5.4
2017	--	--	--	--	--	--	5.5
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**334.4**

Annual Funding TY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2005	--	149.3	--	--	149.3	--	149.3
2006	--	350.4	--	--	350.4	--	350.4
2007	1	1131.1	--	--	1131.1	--	1131.1
2008	--	1365.8	--	--	1365.8	--	1365.8
2009	--	192.1	--	--	192.1	--	192.1
2010	--	169.5	--	--	169.5	--	169.5
2011	1	937.6	--	--	937.6	--	937.6
2012	--	2024.7	--	--	2024.7	--	2024.7
2013	--	162.9	--	--	162.9	--	162.9
2014	--	10.3	--	--	10.3	--	10.3
2015	--	96.3	--	--	96.3	--	96.3
2016	--	254.0	--	--	254.0	--	254.0
2017	1	2113.0	--	--	2113.0	--	2113.0
2018	--	2095.9	--	--	2095.9	--	2095.9
Subtotal	**3**	**11052.9**	**--**	**--**	**11052.9**	**--**	**11052.9**

Annual Funding BY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2005	--	141.7	--	--	141.7	--	141.7
2006	--	321.3	--	--	321.3	--	321.3
2007	1	993.1	--	--	993.1	--	993.1
2008	--	1162.4	--	--	1162.4	--	1162.4
2009	--	159.2	--	--	159.2	--	159.2
2010	--	137.1	--	--	137.1	--	137.1
2011	1	744.0	--	--	744.0	--	744.0
2012	--	1579.2	--	--	1579.2	--	1579.2
2013	--	124.9	--	--	124.9	--	124.9
2014	--	7.8	--	--	7.8	--	7.8
2015	--	71.3	--	--	71.3	--	71.3
2016	--	184.6	--	--	184.6	--	184.6
2017	1	1508.7	--	--	1508.7	--	1508.7
2018	--	1470.1	--	--	1470.1	--	1470.1
Subtotal	**3**	**8605.4**	**--**	**--**	**8605.4**	**--**	**8605.4**

Cost Quantity Information
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2006 $M
2005	--	--
2006	--	--
2007	1	2787.0
2008	--	--
2009	--	--
2010	--	--
2011	1	2633.9
2012	--	--
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	1	3184.5
2018	--	--
Subtotal	**3**	**8605.4**

Annual Funding TY$
1804 | Acq O&M | Operation and Maintenance, Navy

Fiscal Year	Total Program TY $M
2010	0.2
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
2016	0.2
2017	0.2
Subtotal	**1.6**

Annual Funding BY$
1804 | Acq O&M | Operation and Maintenance, Navy

Fiscal Year	Total Program BY 2006 $M
2010	0.2
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
2016	0.2
2017	0.2
Subtotal	**1.6**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	2/14/2006	2/14/2006
Approved Quantity	1	1
Reference	LHA(R)/LHA-6 ADM	LHA(R)/LHA-6 ADM
Start Year	2007	2007
End Year	2013	2013

The current total Low Rate Initial Production (LRIP) quantity is more than 10% of the total production quantity.

An LRIP quantity not to exceed one ship was approved in the February 14, 2006 Acquisition Decision Memorandum (ADM).

Foreign Military Sales

None

Nuclear Cost

None

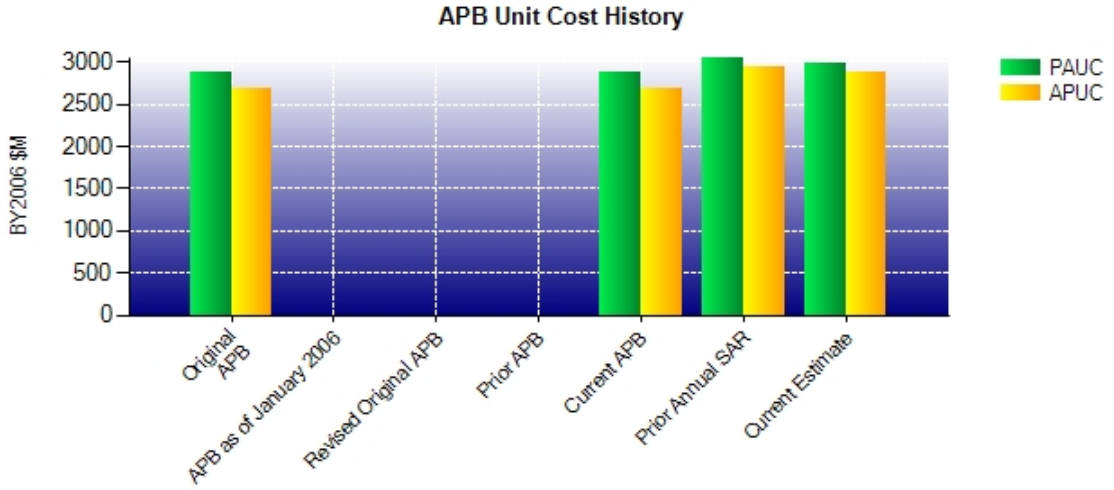
Unit Cost

Unit Cost Report

Unit Cost	BY2006 $M Current UCR Baseline (JAN 2006 APB)	BY2006 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2877.4	8941.4	
Quantity	1	3	
Unit Cost	2877.400	2980.467	+3.58
Average Procurement Unit Cost (APUC)			
Cost	2677.5	8605.4	
Quantity	1	3	
Unit Cost	2677.500	2868.467	+7.13

Unit Cost	BY2006 $M Original UCR Baseline (JAN 2006 APB)	BY2006 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2877.4	8941.4	
Quantity	1	3	
Unit Cost	2877.400	2980.467	+3.58
Average Procurement Unit Cost (APUC)			
Cost	2677.5	8605.4	
Quantity	1	3	
Unit Cost	2677.500	2868.467	+7.13

Unit Cost History



		BY2006 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JAN 2006	2877.400	2677.500	3093.500	2896.000
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	JAN 2006	2877.400	2677.500	3093.500	2896.000
Prior Annual SAR	DEC 2010	3044.700	2938.433	3775.100	3665.600
Current Estimate	DEC 2011	2980.467	2868.467	3801.067	3684.300

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
3093.500	167.833	566.567	5.800	0.000	-123.300	90.667	0.000	707.567	3801.067

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2896.000	167.933	698.233	5.800	0.000	-174.333	90.667	0.000	788.300	3684.300

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	JUL 2001	N/A	JUL 2001
Milestone B	N/A	JAN 2006	N/A	JAN 2006
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	SEP 2013	N/A	APR 2016
Total Cost (TY $M)	N/A	3093.5	N/A	11403.2
Total Quantity	N/A	1	N/A	3
Prog. Acq. Unit Cost (PAUC)	N/A	3093.500	N/A	3801.067

Cost Variance

Cost Variance Summary

Summary Then Year $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Dev Est)	197.5	2896.0	--	--	3093.5
Previous Changes					
Economic	-1.5	+231.6	--	--	+230.1
Quantity	--	+7886.7	--	--	+7886.7
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+131.2	-289.5	--	+1.3	-157.0
Other	--	+272.0	--	--	+272.0
Support	--	--	--	--	--
Subtotal	+129.7	+8100.8	--	+1.3	+8231.8
Current Changes					
Economic	+1.2	+272.2	--	--	+273.4
Quantity	--	--	--	--	--
Schedule	--	+17.4	--	--	+17.4
Engineering	--	--	--	--	--
Estimating	+20.3	-233.5	--	+0.3	-212.9
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+21.5	+56.1	--	+0.3	+77.9
Total Changes	+151.2	+8156.9	--	+1.6	+8309.7
CE - Cost Variance	348.7	11052.9	--	1.6	11403.2
CE - Cost & Funding	348.7	11052.9	--	1.6	11403.2

Summary Base Year 2006 $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Dev Est)	199.9	2677.5	--	--	2877.4
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	+6142.3	--	--	+6142.3
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+117.6	-254.2	--	+1.3	-135.3
Other	--	+249.7	--	--	+249.7
Support	--	--	--	--	--
Subtotal	+117.6	+6137.8	--	+1.3	+6256.7
Current Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	-33.3	--	--	-33.3
Engineering	--	--	--	--	--
Estimating	+16.9	-176.6	--	+0.3	-159.4
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+16.9	-209.9	--	+0.3	-192.7
Total Changes	+134.5	+5927.9	--	+1.6	+6064.0
CE - Cost Variance	334.4	8605.4	--	1.6	8941.4
CE - Cost & Funding	334.4	8605.4	--	1.6	8941.4

Previous Estimate: December 2010

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+1.2
Change reflects revised estimate for LHA 8 preliminary design efforts. (Estimating)	+17.2	+20.6
Adjustment for current and prior escalation. (Estimating)	-0.3	-0.3
RDT&E Subtotal	+16.9	+21.5

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+272.2
LHA 8 slipped one year in the schedule. Advanced Procurement funding was split from FY 2015 into FY 2015 and FY 2016. Split funding was moved from FY 2016 and FY 2017 to FY 2017 and FY 2018. (Schedule)	-33.3	+17.4
Adjustment for current and prior escalation. (Estimating)	-94.7	-118.1
Additional funding required for cost-to-complete on LHA 6. (Estimating)	+69.6	+90.6
Decrease due to the revised economic assumptions and working capital funds. (Estimating)	-5.7	-7.4
Revised estimates for LHA 6 and 7 Outfitting and Post Delivery costs. (Estimating)	-124.9	-171.9
Decrease due to Congressional marks in FY 2011 and FY 2012. (Estimating)	-20.9	-26.7
Procurement Subtotal	-209.9	+56.1

Acq O&M	$M	
Current Change Explanations	**Base Year**	**Then Year**
Refined estimate for LHA 7. (Estimating)	+0.3	+0.3
Acq O&M Subtotal	+0.3	+0.3

Contracts

Appropriation: Procurement

Contract Name	**LHA 6 Detail Design & Construction**
Contractor	Huntington Ingalls Incorporated
Contractor Location	Pascagoula, MS 39567
Contract Number, Type	N00024-05-C-2221, FPIF
Award Date	July 15, 2005
Definitization Date	June 01, 2007

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2340.0	2521.6	1	2372.8	2542.1	1	2541.7	2546.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-324.0	-205.7
Previous Cumulative Variances	-193.1	-164.8
Net Change	-130.9	-40.9

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to changes in rate sets, engineering change papers, and the restructuring/spin-off of the contractor.

The unfavorable net change in the schedule variance is due to schedule delays, shipyard production portfolio, and degradation in contractor performance.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to changes in build strategy and Engineering Change Proposals.

The LHA Replacement Advance Procurement (AP) Contract was subsumed by the LHA Replacement Detail Design and Construction (DD&C) Contract on June 1, 2007.

Appropriation: Procurement

Contract Name	**LHA 7 Advanced Procurement (AP)**
Contractor	Huntington Ingalls Incorporated
Contractor Location	Pascagoula, MS 39567
Contract Number, Type	N00024-10-C-2229, CPFF
Award Date	June 30, 2010
Definitization Date	

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
175.5	N/A	1	252.5	N/A	1	252.5	252.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	+1.1	-10.5
Previous Cumulative Variances	+0.8	-7.7
Net Change	+0.3	-2.8

Cost And Schedule Variance Explanations

The favorable net change in the cost variance is due to the extension of the original spend plan to accommodate the delay in the Detail Design and Construction Contract award.

The unfavorable net change in the schedule variance is due to the adjustment in time phasing of purchase orders for major procurements to accommodate the delay in the award of the Detail Design and Construction Contract.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to increased contract scope for engineering and material.

The LHA 7 AP Contract consists of Systems Engineering, Detailed Design Engineering, and Long Lead Time Material (LLTM) Procurement. The LLTM Contract Line Item Number (CLIN) will be subsumed by the LHA 7 Detail Design and Construction (DD&C) Contract when awarded. A definitization date will be finalized and promulgated when the DD&C Contract is awarded. The current award date is tentatively planned for the third Quarter of FY 2012. Contract negotiations are ongoing.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	3	0.00%
Total Program Quantities Delivered	0	0	3	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	11403.2	Years Appropriated	12
Expenditures To Date	2424.9	Percent Years Appropriated	66.67%
Percent Expended	21.27%	Appropriated to Date	6573.6
Total Funding Years	18	Percent Appropriated	57.65%

Deliveries and Expenditures are current through January 23, 2012.

Operating and Support Cost

Assumptions And Ground Rules

The Operating and Support (O&S) Cost Estimate was published in October 2005. The Operating and Support Cost Analysis Model (OSCAM) Naval Suite V7.0 was used for the LHA(R)/LHA 6 Milestone B Program Life Cycle Cost Estimate (PLCCE). OSCAM provides a means of analyzing O&S costs of Navy ships and shipboard systems and provides a tool for estimating O&S costs over a ship's service life. The OSCAM model comes with annually updated datasets based on historical data extracted from the Visibility and Management of Operating and Support Costs (VAMOSC) database. The FY 2004 Historical VAMOSC dataset for the LHD 1 Class serves as the baseline for the LHA 6 O&S estimate.

1. O&S costs for the LHA 6 were estimated as an annual cost based on one ship with an expected service life of 40 years while operating and supporting the ship in typical peacetime operations.
2. Potential costs of currently unplanned and unknown future upgrades or configuration changes are assumed to occur in the same proportion as modernization work that has occurred on the LHA 1 and LHD 1 ship classes.
3. OSCAM builds the O&S costs by month, and the results show the estimated cost by year based on the Operational Tempo (OPTEMPO) and maintenance cycle. Nominal OPTEMPO is assumed to be 2,700 hours steaming underway and 1,200 hours steaming not underway, based on the fuel burn rates and time profiles provided by the LHA 6 design team.
4. The average annual O&S cost for the LHA 6 only is estimated at $110.16 million (Base Year (BY) 06$) without disposal costs included.
5. LHA 7 O&S costs are in development.
6. The total O&S cost for one ship over the 40 year life is estimated to be $4.452 billion (BY06$), including disposal costs.
7. The average annual O&S Costs for the LHA 6 are based on a 40 year Life Cycle.
8. The average annual O&S Costs for an LHD 1 Class ship are based on a 35 year Life Cycle.

The antecedent system for LHA 6 is LHD 1.

Costs BY2006 $M		
Cost Element	**LHA 6 AMERICA CLASS Average Annual Cost Per Ship**	**LHD 1 Average Annual Cost Per Ship**
Unit-Level Manpower	65.0	69.4
Unit Operations	11.8	15.6
Maintenance	14.6	14.7
Sustaining Support	15.7	12.1
Continuing System Improvements	0.0	0.0
Indirect Support	3.1	3.5
Other	0.0	0.0
Total Unitized Cost (Base Year 2006 $)	110.2	115.3

Total O&S Costs $M	LHA 6 AMERICA CLASS	LHD 1
Base Year	4452.0	4097.1
Then Year	9114.8	7929.2

The Program Life Cycle Cost Estimate for America Class ships is under review. Total O&S cost estimates will be updated in a subsequent SAR.