Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-191

MH-60R

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Program Information

Designation And Nomenclature (Popular Name)

MH-60R Multi-Mission Helicopter

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned November 27, 2007

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 22, 2006

Approved APB

Navy Acquisition Executive Approved Acquisition Program Baseline (APB) dated November 29, 2010

Mission and Description

The MH-60R primary mission areas include Anti-Submarine Warfare (ASW) and Surface Warfare (SUW). Secondary mission areas include Search and Rescue (SAR), Vertical Replenishment (VERTREP), Naval Surface Fire Support (NSFS), logistics support, personnel transport, Medical Evacuation (MEDEVAC), and VHF/UHF/Link Communication Relay (COMREL). The MH-60R is the central component of the "Navy Helicopter Master Plan" and the Chief of Naval Operations (CNO) approved Helicopter Concept of Operations (CONOPS) that replaces the aging SH-60B and SH-60F helicopters. The avionics upgrades over the existing SH-60B/F include: a glass cockpit common with the MH-60S; Airborne Low Frequency Sonar (ALFS) as a long range active dipping sonar; Electronic Support Measures (ESM) with expanded frequency coverage and location detection; Multi-Mode Radar (MMR) with long range search, periscope detection, and imaging Inverse Synthetic Aperature Radar (ISAR); Forward Looking Infra-Red (FLIR) for imaging and laser target designation; Acoustic Processor (AP) for processing ALFS and sonobuoys; Integrated Self Defense (ISD); and the Mission Planning System (MPS). MH-60R sensors and real-time exchange of tactical data with the host ship will bring a new dimension of battle space control to the Naval Commander.

Executive Summary

A total of 91 MH-60R aircraft have been delivered to the Fleet as of March 22, 2011. To date, five MH-60R squadrons have been established or transitioned from SH-60Bs. The second MH-60R operational deployment is currently underway. Full Rate Production (FRP) deliveries to the Fleet continue on-schedule in support of additional squadron stand-ups and transitions.

An updated Acquisition Program Baseline (APB) for the MH-60R was approved by Assistant Secretary of the Navy Research, Development and Acquisition (ASN (RD&A)) on November 29, 2010. The APB revised Procurement and Operations & Support (O&S) costs.

A joint Army/Navy Airframe Multiyear Procurement (MYP) 7 contract with Sikorsky Aircraft Corporation (SAC) was awarded on December 12, 2007 covering Fiscal Years (FY) 2007-2011. A Follow-on joint Army/Navy MYP 8 contract is currently in work for FY 2012-2016. Planned contract award is December 2011, pending Congressional approval.

A MYP contract with Lockheed Martin Systems Integration (LMSI) was awarded August 16, 2007 covering FY 2007-2011 for Lots 5-9 for production of the MH-60R Mission Avionics Systems and associated integration efforts. A Follow-on MYP with Lockheed Martin Mission Systems and Sensors (LM MS2) for procurement of the MH-60R/S Common Cockpits, MH-60R Mission Avionics systems and related supplies and services for FY 2012-2016 is in work. Planned contract award is December 2011, pending Congressional approval.

The Airborne Low Frequency Sonar (ALFS) FY 2010 (Lot 8) was awarded to Raytheon on March 26, 2010 for procurement of 18 ALFS units.

The Common Data Link (CDL) Hawklink FY 2010 option was exercised under the L3 Communications Corporation contract on March 15, 2010 for procurement of 51 AN/ARQ-59 airborne terminals and 11 AN/SRQ-4 shipboard terminals.

System Development and Demonstration (SDD) of the Automatic Radar Periscope Detection and Discrimination (ARPDD) program continued. Shore based testing of the demonstration radar completed in January 2010 and flight testing of the demonstration radar completed in December 2010. Contractor flight testing of the SDD radar completed in December 2010.

The FY 2012 President's Budget (PB) added funding to upgrade the current magnesium Gear Box with an aluminum Gear Box to reduce corrosion and improve total ownership cost.

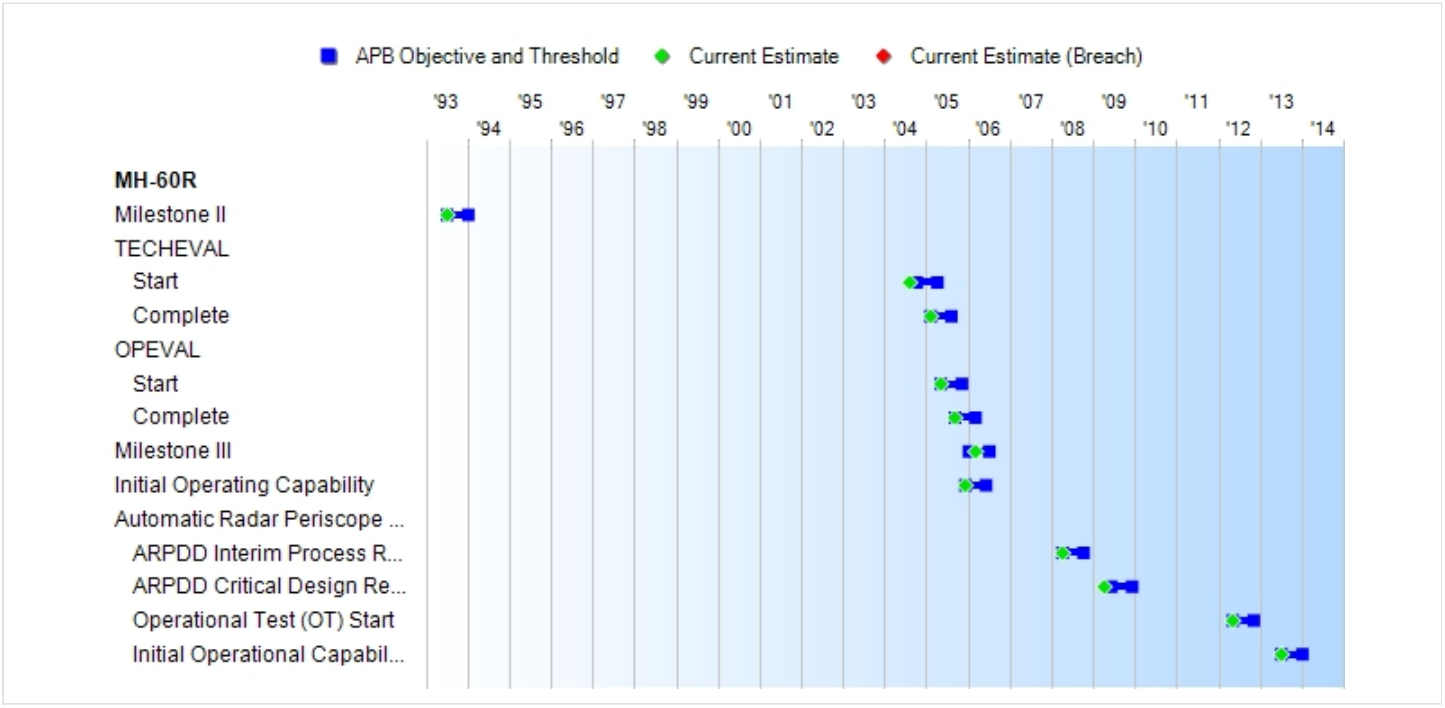
There are no software-related issues for this program at this time.

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

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone II	JUL 1993	JUL 1993	JAN 1994	JUL 1993
TECHEVAL				
Start	OCT 2004	OCT 2004	APR 2005	AUG 2004
Complete	FEB 2005	FEB 2005	AUG 2005	FEB 2005
OPEVAL				
Start	MAY 2005	MAY 2005	NOV 2005	MAY 2005
Complete	SEP 2005	SEP 2005	MAR 2006	SEP 2005
Milestone III	JAN 2006	JAN 2006	JUL 2006	MAR 2006
Initial Operating Capability	DEC 2005	DEC 2005	JUN 2006	DEC 2005
Automatic Radar Periscope Detection and Discriminator (ARPDD)				
ARPDD Interim Process Review (IPR) (System Design Development (SDD) Award)	N/A	APR 2008	OCT 2008	APR 2008
ARPDD Critical Design Review (CDR)	N/A	JUN 2009	DEC 2009	APR 2009
Operational Test (OT) Start	N/A	MAY 2012	NOV 2012	MAY 2012
Initial Operational Capability (IOC)	N/A	JUL 2013	JAN 2014	JUL 2013

Acronyms And Abbreviations

OPEVAL - Operational Evaluation
TECHEVAL - Technical Evaluation

Change Explanations

None

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Availability (%): Mission Capable	82	82	70	82.3%	82%
Net Ready: All interfaces, services, policy-enforcement, controls, and data-sharing of the NCOWRM and GIG-KIPs will be satisfied to the requirements of the specific Joint integrated architecture products (including data correctness, data availability,and data processing), and information assurance accreditation specified in the threshold and objective values.	100% of requirements	100% of requirements	100% of enterprise - level or critical requirements	100% of enterprise - level or critical requirements	100% of enterprise - level or critical requirements
Crew Protection: Crashworthiness, Crew Restraint, and Egress	Crew Seating 35/25/20G, Passenger 20/20/20	Crew Seating 35/25/20G, Passenger 20/20/20	Crew Seating 20/20/20G, Passenger 14/13/12G	Crew Seating 20/20/20G, Passenger 14/13/12G	Crew Seating 20/20/20G, Passenger 14/13/12G

Requirements Source:

Capability Production Document (CPD) Approved by JROCM 260-05 on November 28, 2005

Acronyms And Abbreviations

GIG - Global Information Grid
KIPs - Key Interface Profiles
NCOWRM - Net-Centric Operations & Warfare Reference Model
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 05	PE 0604212N	(Navy)	
	Project 2412	ASW & OTHER HELO DEVELOPMENT/MH-60R LAMPS		(Sunk)
	Project H2412	ASW & OTHER HELO DEVELOPMENT/MH-60R LAMPS		(Sunk)
APPN 1319	BA 05	PE 0604216N	(Navy)	
	Project 1707	MULTI-MISSION HELO UPGRADE DEVELOPMENT/MH-60R		
	Project H9215	MULTI-MISSION HELO UPGRADE DEVELOPMENT/MH-60 PMLCC		(Sunk)

Procurement				
APPN 1506	BA 01	PE 0204243N	(Navy)	
	ICN 018200	MH-60R		
APPN 1506	BA 06	PE 0204243N	(Navy)	
	ICN 0605		(Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2006 $M			BY2006 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	1519.0	1718.9	1890.8	1821.3	1375.7	1570.4	1680.8
Procurement	9108.0	11360.2	12495.9	11481.6	10049.0	12573.5	12719.1
Flyaway	7386.3	--	--	9781.6	8176.2	--	10882.2
Recurring	6726.4	--	--	8491.3	7471.0	--	9466.2
Non Recurring	659.9	--	--	1290.3	705.2	--	1416.0
Support	1721.7	--	--	1700.0	1872.8	--	1836.9
Other Support	1535.1	--	--	1423.2	1682.7	--	1547.2
Initial Spares	186.6	--	--	276.8	190.1	--	289.7
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	10627.0	13079.1	N/A	13302.9	11424.7	14143.9	14399.9

The current APB cost estimate provided sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule and programmatic risk and external interference. It was consistent with average resource expenditures on historical efforts of similar size, scope, and complexity and represents a notional 50% confidence level.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	2	2	2
Procurement	252	298	298
Total	254	300	300

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	1591.4	55.8	17.7	6.9	3.8	5.2	0.0	0.0	1680.8
Procurement	5974.3	1105.2	1028.2	979.9	1063.5	1133.2	1351.3	83.5	12719.1
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	7565.7	1161.0	1045.9	986.8	1067.3	1138.4	1351.3	83.5	14399.9
PB 2011 Total	7565.5	1161.0	1046.3	1014.9	1238.6	1268.4	886.4	59.9	14241.0
Delta	0.2	0.0	-0.4	-28.1	-171.3	-130.0	464.9	23.6	158.9

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	134	24	24	24	24	31	37	0	298
PB 2012 Total	2	134	24	24	24	24	31	37	0	300
PB 2011 Total	2	134	24	24	24	30	36	26	0	300
Delta	0	0	0	0	0	-6	-5	11	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
1990	--	--	--	--	--	--	10.2
1991	--	--	--	--	--	--	28.5
1992	--	--	--	--	--	--	53.0
1993	--	--	--	--	--	--	72.7
1994	--	--	--	--	--	--	70.7
1995	--	--	--	--	--	--	70.0
1996	--	--	--	--	--	--	65.1
1997	--	--	--	--	--	--	55.2
1998	--	--	--	--	--	--	85.3
1999	--	--	--	--	--	--	209.0
2000	--	--	--	--	--	--	110.1
2001	--	--	--	--	--	--	77.8
2002	--	--	--	--	--	--	133.7
2003	--	--	--	--	--	--	89.9
2004	--	--	--	--	--	--	81.9
2005	--	--	--	--	--	--	80.1
2006	--	--	--	--	--	--	57.8
2007	--	--	--	--	--	--	28.9
2008	--	--	--	--	--	--	74.2
2009	--	--	--	--	--	--	67.9
2010	--	--	--	--	--	--	69.4
2011	--	--	--	--	--	--	55.8
2012	--	--	--	--	--	--	17.7
2013	--	--	--	--	--	--	6.9
2014	--	--	--	--	--	--	3.8
2015	--	--	--	--	--	--	5.2
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**1680.8**

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
1990	--	--	--	--	--	--	13.7
1991	--	--	--	--	--	--	36.8
1992	--	--	--	--	--	--	66.6
1993	--	--	--	--	--	--	89.2
1994	--	--	--	--	--	--	85.2
1995	--	--	--	--	--	--	82.7
1996	--	--	--	--	--	--	75.7
1997	--	--	--	--	--	--	63.4
1998	--	--	--	--	--	--	97.1
1999	--	--	--	--	--	--	235.3
2000	--	--	--	--	--	--	122.1
2001	--	--	--	--	--	--	85.1
2002	--	--	--	--	--	--	144.9
2003	--	--	--	--	--	--	96.0
2004	--	--	--	--	--	--	85.1
2005	--	--	--	--	--	--	81.1
2006	--	--	--	--	--	--	56.7
2007	--	--	--	--	--	--	27.7
2008	--	--	--	--	--	--	69.8
2009	--	--	--	--	--	--	63.1
2010	--	--	--	--	--	--	63.8
2011	--	--	--	--	--	--	50.6
2012	--	--	--	--	--	--	15.8
2013	--	--	--	--	--	--	6.1
2014	--	--	--	--	--	--	3.3
2015	--	--	--	--	--	--	4.4
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**1821.3**

Annual Funding TY$
1506 | Procurement | Aircraft Procurement, 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
2000	5	175.9	--	25.8	201.7	35.3	237.0
2001	--	--	--	44.7	44.7	7.3	52.0
2002	--	--	--	11.2	11.2	3.8	15.0
2003	--	32.5	--	36.5	69.0	52.4	121.4
2004	4	168.4	--	68.4	236.8	108.7	345.5
2005	6	204.0	--	71.4	275.4	155.4	430.8
2006	12	394.8	--	58.2	453.0	204.0	657.0
2007	25	714.7	--	71.9	786.6	131.3	917.9
2008	28	864.1	--	96.3	960.4	115.7	1076.1
2009	30	904.8	--	115.3	1020.1	145.0	1165.1
2010	24	679.9	--	97.4	777.3	179.2	956.5
2011	24	763.8	--	117.1	880.9	224.3	1105.2
2012	24	826.8	--	93.8	920.6	107.6	1028.2
2013	24	867.9	--	52.5	920.4	59.5	979.9
2014	24	900.7	--	102.1	1002.8	60.7	1063.5
2015	31	983.9	--	97.1	1081.0	52.2	1133.2
2016	37	984.0	--	256.3	1240.3	111.0	1351.3
2017	--	--	--	--	--	83.5	83.5
Subtotal	**298**	**9466.2**	**--**	**1416.0**	**10882.2**	**1836.9**	**12719.1**

Annual Funding BY$
1506 | Procurement | Aircraft Procurement, 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
2000	5	192.9	--	28.3	221.2	38.7	259.9
2001	--	--	--	48.4	48.4	7.9	56.3
2002	--	--	--	12.0	12.0	4.1	16.1
2003	--	34.1	--	38.3	72.4	55.0	127.4
2004	4	172.1	--	69.9	242.0	111.2	353.2
2005	6	202.8	--	71.0	273.8	154.5	428.3
2006	12	382.0	--	56.3	438.3	197.3	635.6
2007	25	675.9	--	68.0	743.9	124.2	868.1
2008	28	805.8	--	89.8	895.6	107.9	1003.5
2009	30	834.0	--	106.3	940.3	133.7	1074.0
2010	24	618.7	--	88.6	707.3	163.0	870.3
2011	24	684.8	--	105.0	789.8	201.1	990.9
2012	24	729.5	--	82.8	812.3	94.9	907.2
2013	24	753.1	--	45.6	798.7	51.6	850.3
2014	24	768.5	--	87.1	855.6	51.8	907.4
2015	31	825.4	--	81.5	906.9	43.8	950.7
2016	37	811.7	--	211.4	1023.1	91.6	1114.7
2017	--	--	--	--	--	67.7	67.7
Subtotal	**298**	**8491.3**	**--**	**1290.3**	**9781.6**	**1700.0**	**11481.6**

Cost Quantity Information
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2006 $M
2000	5	192.9
2001	--	--
2002	--	--
2003	--	--
2004	4	169.2
2005	6	170.6
2006	12	326.7
2007	25	686.9
2008	28	777.7
2009	30	840.8
2010	24	645.8
2011	24	647.2
2012	24	690.0
2013	24	762.0
2014	24	718.2
2015	31	918.6
2016	37	944.7
2017	--	--
Subtotal	**298**	**8491.3**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	5/10/1999	4/5/2005
Approved Quantity	21	15
Reference	ADM	ADM
Start Year	2002	2002
End Year	2007	2007

In May 1999, Low Rate Initial Production (LRIP) was approved by Assistant Secretary of the Navy Research, Development and Acquisition ASN(RDA) for a total LRIP quantity of 21, which was 8.6% of the total procurement (243). In April 2005, an Acquisition Decision Memorandum was approved to reduce the LRIP quantity from 21 to 15 which was 5.0% of the total procurement (298). Program is now in Full Rate Production (FRP).

Foreign Military Sales

None

Nuclear Cost

None

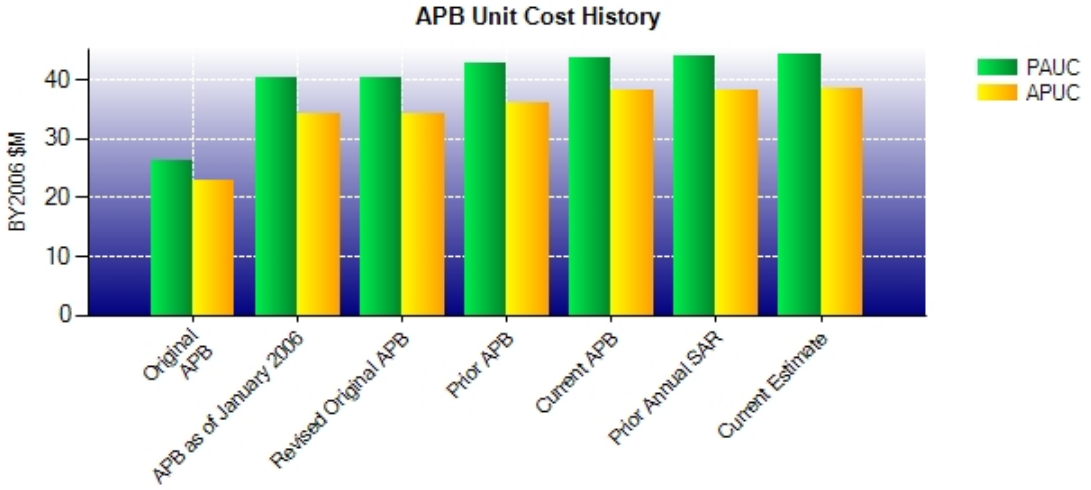
Unit Cost

Unit Cost Report

Unit Cost	BY2006 $M Current UCR Baseline (NOV 2010 APB)	BY2006 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	13079.1	13302.9	
Quantity	300	300	
Unit Cost	43.597	44.343	+1.71
Average Procurement Unit Cost (APUC)			
Cost	11360.2	11481.6	
Quantity	298	298	
Unit Cost	38.121	38.529	+1.07

Unit Cost	BY2006 $M Revised Original UCR Baseline (MAY 2004 APB)	BY2006 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	9894.9	13302.9	
Quantity	243	300	
Unit Cost	40.720	44.343	+8.90
Average Procurement Unit Cost (APUC)			
Cost	8361.1	11481.6	
Quantity	241	298	
Unit Cost	34.693	38.529	+11.06

Unit Cost History



		BY2006 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JUN 1995	26.155	22.846	29.981	27.062
APB as of January 2006	MAY 2004	40.208	34.255	41.427	36.090
Revised Original APB	MAY 2004	40.208	34.255	41.427	36.090
Prior APB	SEP 2008	42.626	36.143	45.746	39.877
Current APB	NOV 2010	43.597	38.121	47.146	42.193
Prior Annual SAR	DEC 2009	43.900	38.120	47.470	42.192
Current Estimate	DEC 2010	44.343	38.529	48.000	42.682

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
44.979	-1.370	-18.295	0.747	3.963	11.669	0.000	3.286	0.000	44.979

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
44.979	-0.620	-2.278	0.366	0.843	4.749	0.000	-0.039	3.021	48.000

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
39.877	-1.249	-15.767	0.753	3.098	10.132	0.000	3.033	0.000	39.877

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
39.877	-0.591	-1.506	0.369	0.158	4.414	0.000	-0.039	2.805	42.682

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	JUL 1993	JUL 1993	JUL 1993
Milestone III	N/A	OCT 2001	JAN 2006	MAR 2006
IOC	N/A	MAR 2001	DEC 2005	DEC 2005
Total Cost (TY $M)	N/A	11424.7	11424.7	14399.9
Total Quantity	N/A	254	254	300
Prog. Acq. Unit Cost (PAUC)	N/A	44.979	44.979	48.000

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	1375.7	10049.0	--	11424.7
Previous Changes				
Economic	-10.1	-164.0	--	-174.1
Quantity	--	+1385.4	--	+1385.4
Schedule	--	+100.7	--	+100.7
Engineering	+188.7	+46.9	--	+235.6
Estimating	+113.5	+1238.6	--	+1352.1
Other	--	--	--	--
Support	--	-83.4	--	-83.4
Subtotal	+292.1	+2524.2	--	+2816.3
Current Changes				
Economic	+0.2	-12.2	--	-12.0
Quantity	--	--	--	--
Schedule	--	+9.2	--	+9.2
Engineering	+17.0	+0.3	--	+17.3
Estimating	-4.2	+76.8	--	+72.6
Other	--	--	--	--
Support	--	+71.8	--	+71.8
Subtotal	+13.0	+145.9	--	+158.9
Total Changes	+305.1	+2670.1	--	+2975.2
CE - Cost Variance	1680.8	12719.1	--	14399.9
CE - Cost & Funding	1680.8	12719.1	--	14399.9

Summary Base Year 2006 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	1519.0	9108.0	--	10627.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	+1152.2	--	+1152.2
Schedule	--	+47.8	--	+47.8
Engineering	+172.1	+40.3	--	+212.4
Estimating	+119.2	+1094.5	--	+1213.7
Other	--	--	--	--
Support	--	-83.0	--	-83.0
Subtotal	+291.3	+2251.8	--	+2543.1
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	+0.4	--	+0.4
Engineering	+14.9	+0.3	--	+15.2
Estimating	-3.9	+59.8	--	+55.9
Other	--	--	--	--
Support	--	+61.3	--	+61.3
Subtotal	+11.0	+121.8	--	+132.8
Total Changes	+302.3	+2373.6	--	+2675.9
CE - Cost Variance	1821.3	11481.6	--	13302.9
CE - Cost & Funding	1821.3	11481.6	--	13302.9

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.2
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
Increase for new capability for Aluminum Gear Box. (Engineering)	+14.9	+17.0
Decrease in revised estimate for Automatic Radar Periscope Detection and Discrimination (ARPDD) and MODE 5 Information Friend or Foe (IFF). (Estimating)	-3.7	-4.0
RDT&E Subtotal	+11.0	+13.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-12.2
Schedule variance resulting from moving six helicopters from FY 2014 and five helicopters in FY 2015 into FY 2016. (Schedule)	0.0	+9.2
Additional Schedule Variance associated with the stretch-out of the annual procurement profile and its Advance Procurement impacts. (Schedule)	+0.4	0.0
Increase in enginering costs due to incorporation of Sikorsky Airframe Engineering Change Proposals (ECPs). (Engineering)	+0.3	+0.3
Adjustment for current and prior escalation. (Estimating)	+1.7	+1.5
Increase in revised cost estimate for Sikorsky Airframe follow-on multi-year costs. (Estimating)	+169.5	+201.1
Decrease in revised cost estimate for Lockheed Martin Mission Systems and Common Cockpit follow-on multi-year costs and re-phasing of associated contract Advance Procurement. (Estimating)	-23.9	-28.0
Decrease in revised cost estimate for Government Furnished Equipment (GFE) requirements and prior year actuals. (Estimating)	-66.9	-75.5
Increase in revised cost estimate for Engineering costs and obsolescence associated with Ku Band Common Data Link (CDL), Airborne Low Frequency Sonar (ALFS), Automatic Radar Periscope Detection and Discrimination (ARPDD), and Production Line Shutdown. (Estimating)	+70.7	+85.3
Decrease in revised cost estimate for ALFS costs and Ancillary kit quantity re-phase. (Estimating)	-91.3	-107.6
Adjustment for current and prior escalation. (Support)	+0.2	+0.5
Increase in Other Support as a result of change in procurement profile. (Support)	+40.9	+49.0
Increase in Initial Spares due to fleet introduction of ARPDD configuration of Multi-Mode Radar (MMR) and CDL. (Support)	+20.2	+22.3
Procurement Subtotal	+121.8	+145.9

Contracts

Appropriation: Procurement	
Contract Name	**Common Data Link (CDL) FY08**
Contractor	Harris Corporation
Contractor Location	Melbourne, FL 32902
Contract Number, Type	N00019-04-C-0130, CPIF/CPAF
Award Date	November 30, 2006
Definitization Date	November 30, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
73.5	N/A	0	145.2	N/A	0	131.3	143.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-10.4	-0.6
Previous Cumulative Variances	-5.5	-0.7
Net Change	-4.9	+0.1

Cost And Schedule Variance Explanations

The unfavorable net change in cost variance was primarily driven by both the Prime and subcontractor adding additional staff and higher skill sets to the program to correct problems found during testing and to recover schedule.

The unfavorable net change in schedule variance was due to the subcontractor's difficulties in the development and testing of the Multiplexer (MUX) and Data Processor Assemblies (DPAs) on the program.

Contract Comments

The current contract price has increased by $71.7M. The FY 2008 Common Data Link Contract (CDL) Hawklink procurement contract was awarded on August 29, 2008 for procurement of 14 Airborne Radio Multipurpose/Special Equipment (ARQ-58's) and five Shipboard Radio Multi-purpose/Special Equipment (SRQ-4(Ku)) which increased the contract price by $53M. Additional increase of $15.7M consists of scope growth in production test equipment, Test and Evaluation delays and obsolescence and $3M funding cost overrun.

A partial stop work order was issued on November 12, 2010, to remain within budget while providing a critical Ku band data link capability to the Fleet on schedule. AN/SRQ shipboard terminal deliveries were approximately six months behind schedule and would not make the required shipboard installation dates. Harris was contractually required to deliver five shipboard terminals and 14 airborne terminals. The partial stop work order terminated the AN/SRQ-4 shipboard terminal efforts in order to focus on delivery of AN/ARQ-58 airborne terminals.

This contract effort is over 90% complete and will no longer be reported.

Appropriation: Procurement

Contract Name	**LM MS2 MY Production Lots (5-9)**
Contractor	Lockheed Martin Mission Systems & Sensors (LM MS2)
Contractor Location	Owego, NY 13827-3998
Contract Number, Type	N00019-06-C-0098, FFP
Award Date	August 16, 2007
Definitization Date	August 16, 2007

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1065.0	N/A	139	1101.0	N/A	131	1101.1	1101.1

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this FFP contract.

Contract Comments

Lockheed Martin Mission Systems & Sensors (LM MS2) is responsible for the integration of the Mission Avionics Systems into the MH-60R. All aircraft procured under the Lot 5 and Lot 6 production contracts were delivered to the Fleet. As of March 22, 2011 LM MS2 has deliverednine aircraft under the Lot 7 production contract.

Initial contract quantity of 138 previously reported was in error. The initial contract quantity was 139. Subsequently MH-60R program quantities were reduced by eight from139 to 131, four each in FY 2010 and FY 2011.

The current contract price target was increased due to a contract modification awarded in December 2009 for additional scope for procurement of the Common Cockpit (CC) for FY 2010 and FY 2011.

Appropriation: RDT&E

Contract Name	**LM MS2 ARPDD**
Contractor	Lockheed Martin Mission Systems & Sensors (LM MS2)
Contractor Location	Owego, NY 13827-3998
Contract Number, Type	N00019-08-C-0005, CPIF
Award Date	June 26, 2008
Definitization Date	June 26, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
144.0	N/A	N/A	146.4	N/A	N/A	147.5	148.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-4.0	-0.8
Previous Cumulative Variances	-1.3	-2.9
Net Change	-2.7	+2.1

Cost And Schedule Variance Explanations

The unfavorable net change in cost variance is primarily attributed to platform integration and subcontractor efforts. The largest portion of the overruns can be directly traced to continued corporate rate increases.

The favorable net change in schedule variance was due to insertion of multiple Product Test Assurance (PTA) events into the schedule as risk reduction.

Contract Comments

The current contract price has increased by $2.4M. A contract modification was issued for procurement of one additional AN/APS-147 Multi-Mode Radar (MMR) for $2.6M required to support detailed performance comparison testing. Another contract modification to add scope for additional hardware needed to support System Design and Development (SDD) was issued increasing the contract price by $0.4M. Additionally, a contract modification was issued to descope Joint Mission Planning System (JMPS) related efforts from this contract, which decreased the contract price by $0.6M

Appropriation: Procurement

Contract Name	**Common Data Link (CDL) FY09**
Contractor	L3 Communications Corporation
Contractor Location	Salt Lake City, UT 84116-0850
Contract Number, Type	N00019-09-C-0059, FPIF
Award Date	June 12, 2009
Definitization Date	June 12, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
59.8	65.0	N/A	101.4	101.4	N/A	101.4	101.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-8.0	-1.2
Previous Cumulative Variances	-0.3	-0.5
Net Change	-7.7	-0.7

Cost And Schedule Variance Explanations

The unfavorable net change in cost variance is due to more staffing being added to the program to help with software coding and engineering in an effort to recover delayed schedule activities.

The unfavorable net change in schedule variance is due to delays in software design and coding, delays in Initial Critical Design Review (ICDR) and delayed starts of some testing due to late schedule material deliveries. L3 is attempting to mitigate slips.

Contract Comments

The current contract price has increased by $41.6M. The FY 2010 Option for CDL Hawklink contract was awarded on March 15, 2010 for $37.5M and procured 51 ARQ-59 airborne terminals and eleven SRQ-4 shipboard terminals. Previously, a $4.1M contract was awarded for the procurement of three additional Airborne Radio Multipurpose/Special Equipment (ARQ) terminals and two Shipboard Radio Multipurpose/Special Equipment (SRQ) terminals.

Appropriation: Procurement

Contract Name	**Raytheon Integrated Defense Systems ALFS Lots 7 - 8**
Contractor	Raytheon Integrated Defense Systems
Contractor Location	Portsmouth, RI 02871-1087
Contract Number, Type	N00019-09-C-0096, FFP
Award Date	September 22, 2009
Definitization Date	September 22, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
81.1	N/A	23	140.8	N/A	41	140.8	140.8

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this FFP contract.

Contract Comments

The current contract price has increased by $59.7M. A Contract Line Item Number (CLIN) was added on March 28, 2010 for the Lot 8 procurement of 18 Airborne Low Frequency Sonar (ALFS) systems and two Sonar Transmitter Receivers (ST/R).

Appropriation: Procurement

Contract Name	**SAC MY Production Lots (5-9)**
Contractor	Sikorsky Aircraft Corporation (SAC)
Contractor Location	Stratford, CT 06614-1378
Contract Number, Type	W58RGZ-08-C-0003, FFP
Award Date	December 12, 2007
Definitization Date	December 12, 2007

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2090.0	N/A	139	1979.9	N/A	131	1979.9	1979.9

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this FFP contract.

Contract Comments

Sikorsky Aircraft Corporation (SAC) delivered the final aircraft under the Lot 6 procurement contract on August 10, 2010 to Lockheed Martin Mission Systems & Sensors (LM MS2). As of December 20, 2010 SAC has delivered nine of 30 aircraft under the Lot 7 procurement contract.

Initial contract quantity of 138 previously reported in SAR was in error. The initial contract quantity was 139. Subsequently MH-60R program quantities were reduced by eight from 139 to 131, four each in FY 2010 and FY 2011.

The current contract price target was decreased due to the reduction of aircraft quantities.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	89	89	298	29.87%
Total Program Quantities Delivered	91	91	300	30.33%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	14399.9	Years Appropriated	22
Expenditures To Date	6002.0	Percent Years Appropriated	78.57%
Percent Expended	41.68%	Appropriated to Date	8726.7
Total Funding Years	28	Percent Appropriated	60.60%

Total program quantities delivered as of March 22, 2011.

Operating and Support Cost

Assumptions And Ground Rules

Estimated Duration = Fiscal Year (FY) 2006 to 2038
MH-60R Fatigue Life = 10,000 Hours or approximately 22 years
Aircraft Attrition Rate = 0.6% of TAI per Year
Aircraft Pipeline Rate = 15% of TAI per
Total Procured MH-60R Aircraft = 300 (298 + 2 RDT&E)
Aircraft per Fleet Squadron = 12
Aircraft per Fleet Replacement Squadron = 13
Average Flight Hours per Month per Aircraft = 37.9
Total Operating Aircraft Years = 5409

The Base Year (BY) cost is based on the approved Acquisition Program Baseline (APB) and the Service Cost Position (SCP) approved November 2010. Reporting format has changed from the 1992 Cost Analysis Improvement Group (CAIG) O&S to the 2007 Cost Assessment and Program Evaluation (CAPE) format.

The antecedent system is the SH-60B/F aircraft. All costs are from the FY 2008 Navy Visibility and Management of Operating and Support Costs (VAMOSC) Aviation Type Model Series Report (ATMSR) database and the FY 2008 Aircraft Program Data File (APDF) Primary Authorized Aircraft (PAA). ATMSR (1.0) Unit-Level Manpower was adjusted to account for composite pay rate burdening deficiencies. (6.0) Indirect Support is a function of Unit-Level Manpower costs.

Costs BY2006 $M		
Cost Element	**MH-60R Dollars/per (A/C)**	**SH-60B/F Dollars/Per (A/C)**
Unit-Level Manpower	2.09	2.04
Unit Operations	0.25	0.19
Maintenance	2.88	1.97
Sustaining Support	0.14	0.12
Continuing System Improvements	0.37	0.11
Indirect Support	0.38	0.42
Other	0.00	0.00
Total Unitized Cost (Base Year 2006 $)	6.11	4.85

Total O&S Costs $M	MH-60R	SH-60B/F
Base Year	36067.5	--
Then Year	49181.0	--