Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-341

UH-60M Black Hawk Helicopter (UH-60M Black Hawk)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President’s Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

BLACK HAWK (UH-60M) (BLACK HAWK UH-60M)

DoD Component

Army

Responsible Office

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References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 31, 2005

Approved APB

Defense Acquisition Excecutive (DAE) Approved Acquisition Program Baseline (APB) dated February 26, 2007

Mission and Description

This Selected Acquisition Report (SAR) includes the Black Hawk Upgrade (UH-60M) Program. It does not include any cost associated with the UH-60A or UH-60L Programs.

The UH-60M is an improved version of the existing UH-60 BLACK HAWK utility helicopter designed/developed to meet evolving warfighting concepts and ensure the system is equipped/capable of meeting operational requirements beginning in 2007. Improvements will enhance the future division commander's ability to conduct simultaneous and integrated operations to decisively increase the effects of warfighting assets.

As a critical system of systems, the UH-60M helicopter will provide networked digital connectivity for enhanced situational awareness and information exchange, improved external lift capability, increased range, and improved survivability to meet the maneuver commander's need to conduct distributed multidimensional operations throughout the entire spectrum of the future battlespace.

Additionally, a requirement exists for an improved evacuation platform for tactical, en route patient care and evacuation. The UH-60M, with the integrated Medical Evacuation (MEDEVAC) Mission Equipment Package (MEP) kit, will provide day/night and adverse weather emergency evacuation of casualties. The integration of the MEDEVAC MEP onto the UH-60M changes the nomenclature to HH-60M.

The UH-60M is a key element of the US Army Modernization Plan, which in turn has its basis in the Army Vision and overarching modernization plan. The Modernization Plan provides a proactive course of continuous improvement supporting the National Military Strategy and the Army Vision. The UH-60M modernization strategy reflects the Army Vision and Army modernization goals, 2010 war fighting requirements, and emerging structure changes to meet the Army's new vision. The UH-60M is a new build aircraft.

Executive Summary

The following significant accomplishments occurred during this period for the Black Hawk Upgrade (UH-60M) Program:

On December 17, 2008 the UH-60M Upgrade Office of the Secretary of Defense (OSD) Overarching Integrated Product Team (OIPT) met to review the Army's recommendation to phase shift the upgrade programs planned production cut-in of its pre-planned product improvements. The OIPT acknowledged that the Army's recommendation of the shift would allow for planned additional flight test data to be collected for use in the cut-in decision. This shift resulted in a move of Initial Operational Test and Evaluation (IOT&E) to early Fiscal Year (FY) 2012 and a First Unit Equipped shift of six months to FY2013. A Program Deviation Report (Phase Shift) was accepted as satisfactory explanation for June 30, 2009 breach of the Acquisition Program Baseline (APB) schedule.

On August 7, 2009 the Army three star Budget Requirements and Planning Board (BRP) met and provided a recommendation to be carried to an August 13, 2009 OSD OIPT that the program continue the developmental testing and continue the UH-60M production without cutting in the Pre-Planned Product Improvements (P3I) activities into the production line. This allowed the Army to keep the UH-60M production rate higher to meet the emerging increase operational requirements for additional aircraft. This decision also allowed for the continuation of the technology development to make it available for future applications. The August 13, 2009 OSD OIPT tasked the program to present this Course of Action to a Configuration Steering Board (CSB) in late October 2009 and report back to an OSD OIPT in early November 2009.

On October 15, 2009, based on increasing demands for helicopters to support Army Force Generation (ARFORGEN) requirements, the CSB recommended the restructure of the Black Hawk Upgrade (UH-60M) Program. The recommendation included three parts: 1) produce UH-60M baseline aircraft only; 2) complete development testing (DT) on Upgrade aircraft; and 3) migrate selected technologies from the upgrade development efforts to the baseline configuration. The recommendation has been formally submitted to the DAE and the program will be restructured if the recommendation is approved.

The Acquisition Decision Memorandum (ADM) was signed on February 18, 2010, accepting all Army recommendations resulting in the Black Hawk program pursuing a strategy of procuring less costly UH-60M Baseline helicopters with migration of selected technologies cut into the UH-60 production as Engineering Change Proposals (ECPs). These selected modifications to be cut-in are as follows: Global Air Traffic Management (GATM); Battlefield Graphics; Performance Planning; Mission Management; Tactical Situational Awareness (TSA) Processor Upgrade; MEDEVAC Mission Sensor (MMS); Stabilator Actuator; Two pallet Environmental Control System (ECS); Improved Medical Interior (IMI); Generator Improvements; and Integrated Processor Controller (IPC) General Purpose Processing Units (GPPU) Lite Integration.

In November 2008, the 159th Combat Aviation Brigade (CAB) became the first UH-60M baseline unit deployed to a combat zone. A successful first flight on the second UH-60M Upgrade prototype (Mu2) was flown on November 10, 2008.

In November 2009, the Upgrade flight test program completed its required 244 flight hours, which was its last commitment for interim test milestone set out in the December 2008 phase shift. The 244 flight hours were successfully completed ahead of the December 2008 program phase shift schedule.

From January 2008 through December 2009 Sikorsky Aircraft Company (SAC) delivered 119 aircraft to the Army.

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

Threshold Breaches

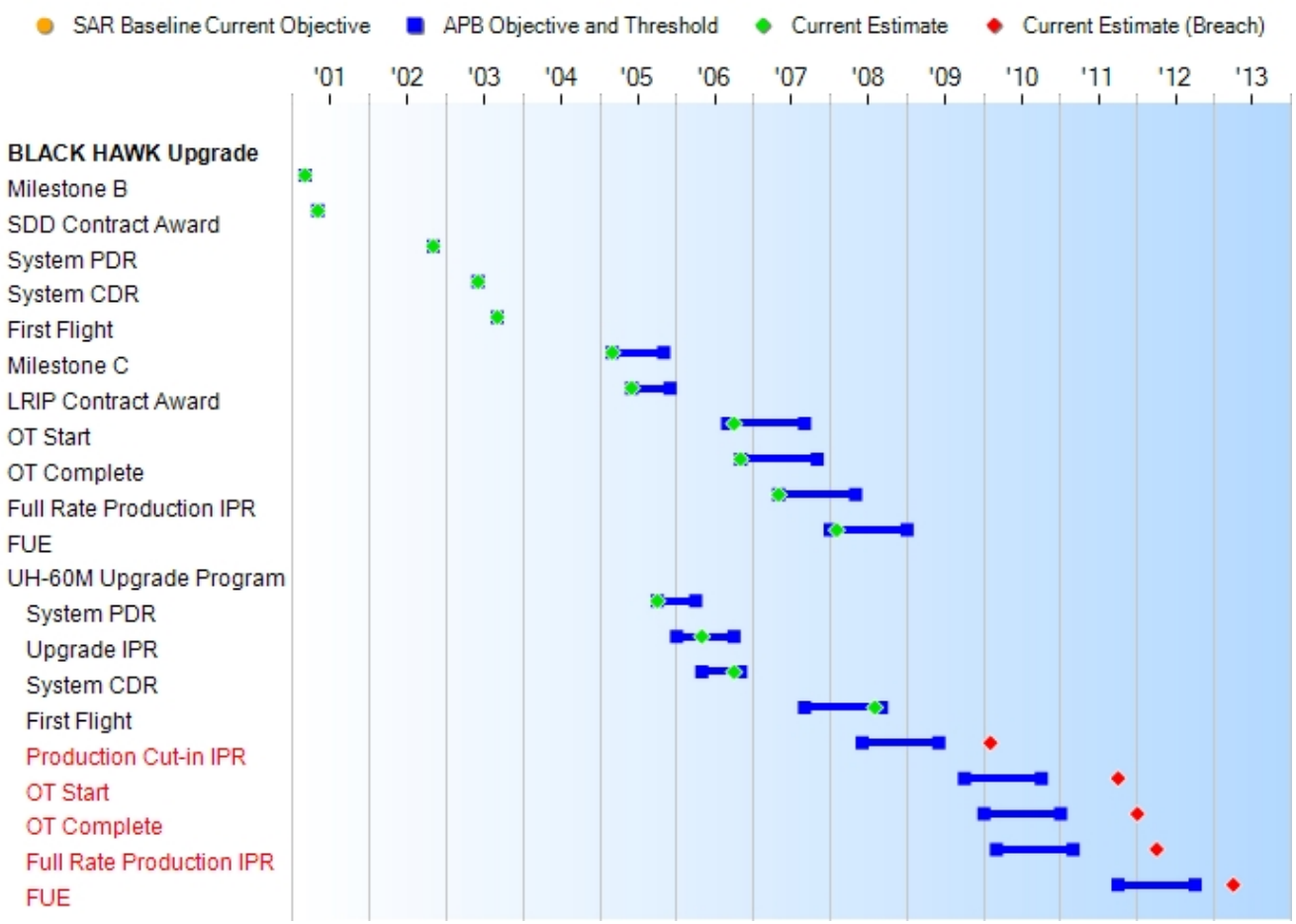
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☑
Unit Cost	PAUC	☐
	APUC	☐

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

Explanation of Breach

On December 17, 2008 the Office of the Secretary of Defense (OSD) Overarching Integrated Product Team (OIPT) met to review the Army's recommendation to phase shift the upgrade program's planned production cut-in of its pre-planned product improvements. The OIPT acknowledged that the Army's recommendation of the shift would allow for planned additional flight test data to be collected for use in the decision. This shift results in a move of Initial Operational Test and Evaluation (IOT&E) to early FY2012 and a First Unit Equipped shift of six months to FY2013. A Program Deviation Report (Phase Shift) was accepted as satisfactory explanation for June 30, 2009 breach of the Acquisition Program Baseline (APB) schedule.

Schedule


SAR Baseline Current Objective
APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'01
'02
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
BLACK HAWK Upgrade
Milestone B
SDD Contract Award
System PDR
System CDR
First Flight
Milestone C
LRIP Contract Award
OT Start
OT Complete
Full Rate Production IPR
FUE
UH-60M Upgrade Program
System PDR
Upgrade IPR
System CDR
First Flight
Production Cut-in IPR
OT Start
OT Complete
Full Rate Production IPR
FUE

Schedule Events					
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	
Milestone B	Mar 2001	Mar 2001	Mar 2001	Mar 2001	
SDD Contract Award	May 2001	May 2001	May 2001	May 2001	
System PDR	Nov 2002	Nov 2002	Nov 2002	Nov 2002	
System CDR	Jun 2003	Jun 2003	Jun 2003	Jun 2003	
First Flight	Sep 2003	Sep 2003	Sep 2003	Sep 2003	
Milestone C	Feb 2005	Mar 2005	Nov 2005	Mar 2005	
LRIP Contract Award	Mar 2005	Jun 2005	Dec 2005	Jun 2005	
OT Start	Sep 2006	Sep 2006	Sep 2007	Oct 2006	
OT Complete	Nov 2006	Nov 2006	Nov 2007	Nov 2006	
Full Rate Production IPR	May 2007	May 2007	May 2008	May 2007	
FUE	Jan 2008	Jan 2008	Jan 2009	Feb 2008	
UH-60M Upgrade Program					
System PDR	N/A	Oct 2005	Apr 2006	Oct 2005	
Upgrade IPR	N/A	Jan 2006	Oct 2006	May 2006	
System CDR	N/A	May 2006	Nov 2006	Oct 2006	
First Flight	N/A	Sep 2007	Sep 2008	Aug 2008	(Ch-1)
Production Cut-in IPR	N/A	Jun 2008	Jun 2009	**Feb 2010**[1]	(Ch-2)
OT Start	N/A	Oct 2009	Oct 2010	**Oct 2011**[1]	(Ch-2)
OT Complete	N/A	Jan 2010	Jan 2011	**Jan 2012**[1]	(Ch-2)
Full Rate Production IPR	N/A	Mar 2010	Mar 2011	**Apr 2012**[1]	(Ch-2)
FUE	N/A	Oct 2011	Oct 2012	**Apr 2013**[1]	(Ch-2)

[1] *APB Breach*

Change Explanations

(Ch-1) Current estimate reflects actual date. Changed from MAR 2008 to AUG 2008.
(Ch-2) On December 17, 2008 the Office of the Secretary of Defense (OSD) Overarching Integrated Product Team (OIPT) met to review the Army's recommendation to phase shift the upgrade program's planned production cut-in of its pre-planned product improvements. The OIPT acknowledged that the Army's recommendation of the shift would allow for planned additional flight test data to be collected for use in the decision. This shift results in a move of Initial Operational Test and Evaluation (IOT&E) to early FY2012 and a First Unit Equipped shift of six months to FY2013. A Program Deviation Report (Phase Shift) was accepted as satisfactory explanation for June 30, 2009 breach of the Acquisition Program Baseline (APB) schedule.

Notes

First Unit Equipped was achieved on February 29, 2008 with 10 UH-60M Baseline aircraft fielded to the 159th Combat Aviation Brigade (CAB).

Acronyms and Abbreviations

CDR - Critical Design Review
FUE - First Unit Equipped
IBR - Integrated Baseline Review
IPR - In-Process Review
LRIP - Low Rate Initial Production
OT - Operational Test
PDR - Preliminary Design Review
PM - Program Manager
SDD - System Design & Development

Performance

Performance Characteristics					
SAR Baseline Production Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**	
Key Performance Parameters (KPPs)					
Interoperability (meet IERs)					
All	N/A	N/A	All/Critical	All/Critical	
Net-Ready					
All	All	All Critical	All	All	
Survivability IR Signature					
N/A	Existing	Existing	Existing	Existing	
Aircraft Survivability Equipment					
N/A	Existing	Existing	Existing	Existing	
Survivability Fuel Cells					
N/A	14.5mm	7.62mm	7.62mm	7.62mm	
Force Protection Armor Plating					
N/A	14.5mm	7.62mm	7.62mm	7.62mm	
External Lift					
Payload					
10,000	10,000	4,500	4888	4888	(Ch-1)
Non-KPPs					
Troop Movement					
Airspeed (Sustained Cruise) (KTAS)					
175	175	145	141.0	141.0	(Ch-1)
One Engine Inoperative (KTAS)					
100	100	100	TBD	100.0	
Combat Radius (w/20 min reserve) (KM)					
500	500	225	TBD	225.6	(Ch-1)
Vertical Rate of Climb (fpm)					
750	750	500	725	725	
Vertical Rate of Climb w/ One Engine Inoperative (fpm)					
200	200	100	TBD	82.8	(Ch-1)
Internal Lift Capability (290 lbs each)					
11	11	11	11	11	
Self-Deploy Range (nautical miles)					

1260	1260	1056	TBD	1071	(Ch-1)
Ballistic Protection (ground fired armor piercing (mm))					
14.5	14.5	7.62	14.5	14.5	
Maintainability (mhrs per flight hr)					
4.6	4.6	5.4	TBD	4.1	(Ch-1)
Unscheduled mhrs per flight hr					
1.3	1.3	2.1	TBD	1.1	
External Lift					
Vertical Rate of Climb (fpm)					
500	500	200	200	200	
Combat Radius (w/20 min reserve) (KM)					
275	275	135	135	135	

Requirements Reference

Operational Requirements Document (ORD), dated July 11, 2006 and Acquisition Decision Memorandum (ADM), dated February 18, 2010

Change Explanations

(Ch-1) The PM's Current Estimate changed from the following parameters to reflect current reporting for the UH-60M Upgrade.

External Lift Payload (From 4973 to 4888)
Airspeed (Sustained Cruise) (KTAS) (From 145 to 141)
Combat Radius (w/20 min reserve) (KM) (From 226.4 to 225.6)
Vertical Rate of Climb w/One Engine Inoperative (fpm) (From 100 to 82.8)
Self-Deploy Range (nautical miles) (From 1083 to 1071)
Maintainability (mhrs per flight hr) (From 4.3 to 4.1)

Notes

On August 7, 2009 the Army three star Budget Requirements and Program Board (BRP) met and provided a recommendation to be carried to a August 13, 2009 Office of the Secretary of Defense (OSD) Overarching Integrated Product Team (OIPT) that the program continue the developmental testing of the UH-60M Upgrade effort and continue the UH-60M production without cutting in the Pre-Planned Product Improvements (P3I) activities into the production line. This allows the Army to keep the UH-60M production rate higher to meet the emerging increase in operational requirements for additional aircraft. This recommendation also allowed for the continuation of the technology development to make it available for future applications. This course of action was determined to be the most cost effective given the expected termination costs associated with not completing the developmental testing activities. The August 13, 2009 OSD OIPT tasked the program to present this Course of Action to a Configuration Steering Board (CSB) scheduled for late October 2009 and report back to an OSD OIPT in early November 2009.

The UH-60M Upgrade Program is represented in the Demonstrated Performance and Current Estimate columns and will be updated after the re-baselining of the Acquisition Program Baseline (APB).

On October 15, 2009, based on increasing demands for helicopters to support Army Force Generation (ARFORGEN) requirements, the CSB recommended to the Defense Acquisition Executive (DAE) to restructure the Black Hawk Upgrade

(UH-60M) Program. The recommendation included three parts: 1) produce UH-60M baseline aircraft only; 2) complete development testing (DT) on Upgrade aircraft; and 3) migrate selected technologies from the upgrade development efforts to the baseline configuration. The recommendation has been formally submitted to the DAE and the program will be restructured if the recommendation is approved.

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Acronyms and Abbreviations

fpm - feet per minute
hr - hour
IER - Information Exchange Requirement
IR - Infra-Red
KM - Kilometer
KPP - Key Performance Parameters
KTAS - Knots True Air Speed
lbs - Pounds
mhrs - Man Hours
min - Minutes
mm - Millimeter
nm - Nautical Mile
rqmts - Requirements
TBD - To Be Determined
w - With

Track to Budget

General Notes

The Research Development Test & Evaluation (RDT&E) Program Element (PE) 0203744A is shared with the UH-60M program, Integrated Mechanical Diagnostic - Health and Usage Monitoring System (IMD-HUMS), Maintenance Analysis Safety Training (MAST), Helicopter Autonomous Landing System (HALS), Operator Situational Awareness System - MEDEVAC, Aircraft Component Remediation, UH-60M Upgrade program, Army Component Improvement Program (ACIP), Improved Turbine Engine Program (ITEP) and Future Utility Rotorcraft (FUR). The UH-60M Upgrade Program includes Common Avionics Architecture System (CAAS), Fly-By-Wire (FBW), and Full Authority Digital Engine Control (FADEC) development and integration on the UH-60M aircraft. Funds beginning in FY2012 and out are for the Improved Turbine Engine Program (ITEP).

The Aircraft Procurement Appropriation (APA) ICN AA0492 is shared with other BLACK HAWK modifications such as Crashworthy External Fuel System, Medical Equipment Package, and other safety modifications. No funds from the AA0492 line are included in this Selected Acquisition Report.

The APA ICN A05002 is shared with the Multi-Year (MY) VI Procurement of UH-60L aircraft. With this being a shared funding line, only UH-60M Baseline and UH-60M Upgrade Program costs are included. Procurement of UH-60L aircraft was completed in FY2006.

Only UH-60M and UH-60M Upgrade funds are included in this Selected Acquisition Report (SAR).

RDT&E

Appn		BA	PE	
Army	2040	07	0203744A	
Project		**Name**		
504		UH-60M Recapitalization/Modifications		(Shared)

Procurement

Appn		BA	PE	
Army	2031	01	11206772	
Line Item		**Name**		
A05002		BLACK HAWK UH-60M (MYP)		(Shared)
Army	2031	02	12106949	
Line Item		**Name**		
AA0492		BLACK HAWK UH-60M Upgrade/Recap		(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2005 $M			BY 2005 $M	TY $M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	717.5	774.5	852.0	803.6	739.3	790.5	828.3
Procurement	16084.2	17592.7	19352.0	18736.8	20107.8	22477.0	22853.4
Flyaway	--	--	--	17782.9	--	--	21696.0
Recurring	--	--	--	17592.9	--	--	21476.5
Non Recurring	--	--	--	190.0	--	--	219.5
Support	--	--	--	953.9	--	--	1157.4
Other Support	--	--	--	813.8	--	--	983.6
Initial Spares	--	--	--	140.1	--	--	173.8
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	16801.7	18367.2	N/A	19540.4	20847.1	23267.5	23681.7

Total Quantity			
Quantity	**SAR Baseline Production Estimate**	**Current APB Production**	**Current Estimate**
RDT&E	8	8	8
Procurement	1227	1227	1227
Total	1235	1235	1235

Quantity Notes

The total procurement quantity of 1227 consists of 924 Baseline UH configured aircraft (with 14 of the UH-60M baseline aircraft being converted to COMHAWKS (previously CINCHAWKS)) and 303 Baseline HH configured aircraft. The HH-60M configuration is a UH-60M with an integrated Medical Evacuation (MEDEVAC) Mission Equipment Package installed. The UH/HH-60M Upgrade configuration included the Common Avionics Architecture System (CAAS), the Fly-By-Wire (FBW), and the Full Authority Digital Engine Control (FADEC) hardware and integration on the UH/HH-60M baseline aircraft. On October 15, 2009, based on increasing demands for helicopters to support Army Force Generation (ARFORGEN) requirements, the Configuration Steering Board (CSB) recommended to the Defense Acquisition Executive (DAE) to restructure the Black Hawk Upgrade (UH-60M) Program to produce Baseline configured aircraft only.

The Acquisition Decision Memorandum (ADM) was signed on February 18, 2010, accepting all Army recommendations resulting in the Black Hawk program pursuing a strategy of procuring less costly UH-60M Baseline helicopters with migration of selected technologies cut into the UH-60 production as Engineering Change Proposals (ECPs). These selected modifications to be cut-in are as follows: Global Air Traffic Management (GATM); Battlefield Graphics; Performance Planning; Mission Management; Tactical Situational Awareness (TSA) Processor Upgrade; MEDEVAC Mission Sensor (MMS); Stabilator Actuator; Two pallet Environmental Control System (ECS); Improved Medical Interior (IMI); Generator Improvements; and Integrated Processor Controller (IPC) General Purpose Processing Units (GPPU) Lite Integration.

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	775.4	32.3	20.6	0.0	0.0	0.0	0.0	0.0	828.3
Procurement	4116.8	1390.8	1352.0	1576.0	1422.9	1439.1	1441.7	10114.1	22853.4
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 2011 Total	4892.2	1423.1	1372.6	1576.0	1422.9	1439.1	1441.7	10114.1	23681.7
PB 2009 Total	4850.2	1259.8	951.5	1058.2	1154.4	1379.4	1410.2	11979.0	24042.7
Delta	42.0	163.3	421.1	517.8	268.5	59.7	31.5	-1864.9	-361.0

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	8	0	0	0	0	0	0	0	0	8
Production	0	237	81	72	75	78	74	77	533	1227
PB 2011 Total	8	237	81	72	75	78	74	77	533	1235
PB 2009 Total	8	235	72	46	52	60	74	76	612	1235
Delta	0	2	9	26	23	18	0	1	-79	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding 2040 | RDT&E | Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	--	--	--	--	--	--	9.5
2001	--	--	--	--	--	--	28.8
2002	--	--	--	--	--	--	55.9
2003	--	--	--	--	--	--	96.8
2004	--	--	--	--	--	--	144.8
2005	--	--	--	--	--	--	99.8
2006	--	--	--	--	--	--	106.6
2007	--	--	--	--	--	--	117.5
2008	--	--	--	--	--	--	84.9
2009	--	--	--	--	--	--	30.8
2010	--	--	--	--	--	--	32.3
2011	--	--	--	--	--	--	20.6
Subtotal	8	--	--	--	--	--	828.3

Annual Funding 2040 | RDT&E | Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2005 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	--	--	--	--	--	--	10.2
2001	--	--	--	--	--	--	30.5
2002	--	--	--	--	--	--	58.6
2003	--	--	--	--	--	--	99.6
2004	--	--	--	--	--	--	145.5
2005	--	--	--	--	--	--	97.4
2006	--	--	--	--	--	--	101.2
2007	--	--	--	--	--	--	109.0
2008	--	--	--	--	--	--	77.3
2009	--	--	--	--	--	--	27.7
2010	--	--	--	--	--	--	28.6
2011	--	--	--	--	--	--	18.0
Subtotal	8	--	--	--	--	--	803.6

Annual Funding 2031 | Procurement | Aircraft Procurement, Army							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	13.5	--	--	13.5	--	13.5
2005	5	82.4	6.1	5.6	94.1	2.8	96.9
2006	17	241.2	7.5	4.5	253.2	15.2	268.4
2007	72	1088.5	83.4	45.4	1217.3	54.6	1271.9
2008	77	1152.4	79.3	63.3	1295.0	59.6	1354.6
2009	66	985.1	70.9	9.0	1065.0	46.5	1111.5
2010	81	1195.3	96.2	4.4	1295.9	94.9	1390.8
2011	72	1126.4	102.4	3.0	1231.8	120.2	1352.0
2012	75	1350.6	120.0	6.0	1476.6	99.4	1576.0
2013	78	1201.1	134.0	12.3	1347.4	75.5	1422.9
2014	74	1227.8	127.9	15.3	1371.0	68.1	1439.1
2015	77	1248.8	114.9	6.2	1369.9	71.8	1441.7
2016	72	1232.9	122.1	4.6	1359.6	69.9	1429.5
2017	72	1316.9	127.2	4.7	1448.8	68.9	1517.7
2018	72	1094.5	123.1	4.7	1222.3	47.5	1269.8
2019	72	1258.2	134.8	13.7	1406.7	47.9	1454.6
2020	72	1144.7	129.8	4.3	1278.8	49.0	1327.8
2021	72	1154.9	132.8	4.4	1292.1	49.6	1341.7
2022	72	1049.2	132.7	4.4	1186.3	50.5	1236.8
2023	29	331.3	112.1	3.7	447.1	51.0	498.1
2024	--	--	23.6	--	23.6	14.5	38.1
Subtotal	1227	19495.7	1980.8	219.5	21696.0	1157.4	22853.4

Annual Funding 2031 | Procurement | Aircraft Procurement, Army							
Fiscal Year	Quantity	BY 2005 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	13.4	--	--	13.4	--	13.4
2005	5	79.5	5.9	5.4	90.8	2.7	93.5
2006	17	226.5	7.0	4.2	237.7	14.4	252.1
2007	72	1002.2	76.8	41.8	1120.8	50.3	1171.1
2008	77	1044.7	71.9	57.4	1174.0	54.1	1228.1
2009	66	882.3	63.4	8.1	953.8	41.7	995.5
2010	81	1056.8	85.1	3.9	1145.8	83.9	1229.7
2011	72	979.3	89.0	2.6	1070.9	104.5	1175.4
2012	75	1154.7	102.6	5.1	1262.4	85.0	1347.4
2013	78	1009.7	112.7	10.3	1132.7	63.5	1196.2
2014	74	1014.9	105.8	12.6	1133.3	56.3	1189.6
2015	77	1015.0	93.4	5.0	1113.4	58.4	1171.8
2016	72	985.4	97.5	3.7	1086.6	55.9	1142.5
2017	72	1034.9	99.9	3.7	1138.5	54.2	1192.7
2018	72	845.7	95.2	3.6	944.5	36.7	981.2
2019	72	956.0	102.4	10.4	1068.8	36.4	1105.2
2020	72	855.2	97.0	3.2	955.4	36.6	992.0
2021	72	848.4	97.6	3.2	949.2	36.4	985.6
2022	72	757.9	95.8	3.2	856.9	36.5	893.4
2023	29	235.3	79.7	2.6	317.6	36.2	353.8
2024	--	--	16.4	--	16.4	10.2	26.6
Subtotal	1227	15997.8	1595.1	190.0	17782.9	953.9	18736.8

Cost Quantity Information 2031 | Procurement | Aircraft Procurement, Army		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2005 $M**
2004	--	--
2005	5	69.9
2006	17	173.9
2007	72	916.8
2008	77	1111.7
2009	66	862.4
2010	81	1086.9
2011	72	976.5
2012	75	1051.2
2013	78	1067.6
2014	74	1009.3
2015	77	1025.9
2016	72	956.0
2017	72	955.9
2018	72	952.8
2019	72	955.2
2020	72	857.2
2021	72	819.1
2022	72	820.4
2023	29	329.1
2024	--	--
Subtotal	1227	15997.8

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	3/31/2005	3/31/2005
Approved Quantity	40	40
Reference		
Start Year	2005	2005
End Year	2007	2007

The Acquisition Decision Memorandum dated March 31, 2005, contains approval for up to 40 Low Rate Initial Production (LRIP) aircraft units and approval to award Advance Procurement Contract for the first lot of Full Rate Production (FRP) aircraft. Forty (40) LRIP aircraft were procured in FY2005 - FY2007. The LRIP aircraft quantity of 40 is less than 10 percent of the total aircraft to be procured.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Description
Bahrain	12/12/2007	9	155142407.0	
United Arab Emirates	12/12/2007	40	575018387.0	

Notes

Nuclear Costs

None

Unit Cost

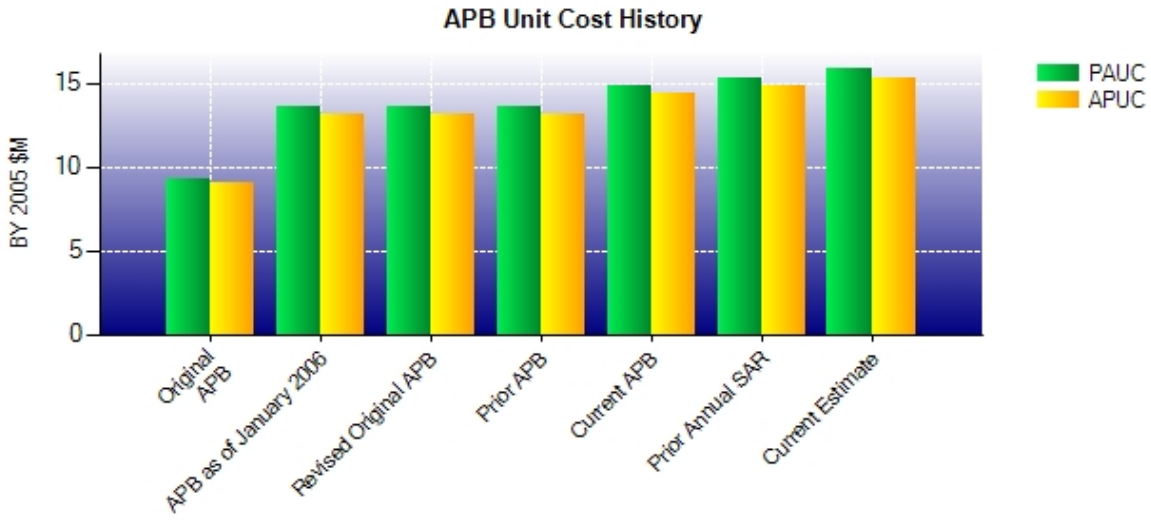
Unit Cost Report

Item	BY 2005 $M Current UCR Baseline (Feb 2007 APB)	BY 2005 $M Current Estimate (Dec 2009 SAR)	% Change
Program Acquisition Unit Cost			
Cost	18367.2	19540.4	
Quantity	1235	1235	
Item	14.872	15.822	+6.39
Average Procurement Unit Cost			
Cost	17592.7	18736.8	
Quantity	1227	1227	
Unit Cost	14.338	15.270	+6.50

Item	BY 2005 $M Revised Original UCR Baseline (Mar 2005 APB)	BY 2005 $M Current Estimate (Dec 2009 SAR)	% Change
Program Acquisition Unit Cost			
Cost	16801.7	19540.4	
Quantity	1235	1235	
Unit Cost	13.605	15.822	+16.30
Average Procurement Unit Cost			
Cost	16084.2	18736.8	
Quantity	1227	1227	
Unit Cost	13.109	15.270	+16.48

Pursuant to FY 2006 National Defense Authorization Act changes to Section 2433, Title 10, United States Code, the Original Unit Cost Report (UCR) Baseline has been revised to the Acquisition Program Baseline (APB) in effect as of January 2006 (the March 2005 APB), because the unit cost exceeded the original APB by 50 percent.

Unit Cost History



Item	Date	BY 2005 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Feb 2002	9.250	9.042	12.008	11.812
APB as of January 2006	Mar 2005	13.605	13.109	16.880	16.388
Revised Original APB	Mar 2005	13.605	13.109	16.880	16.388
Prior APB	Mar 2005	13.605	13.109	16.880	16.388
Current APB	Feb 2007	14.872	14.338	18.840	18.319
Prior Annual SAR	Dec 2007	15.332	14.797	19.468	18.942
Current Estimate	Dec 2009	15.822	15.270	19.175	18.625

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
12.008	-0.325	4.705	-0.262	0.996	-0.326	0.000	0.084	4.872	16.880

Current SAR Baseline to Current Estimate (TY $M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
16.880	-0.577	0.000	0.270	0.598	1.624	0.000	0.380	2.295	19.175

Initial SAR Baseline to Current SAR Baseline (TY $M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
11.812	-0.324	4.469	-0.287	0.987	-0.354	0.000	0.085	4.576	16.388

Current SAR Baseline to Current Estimate (TY $M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
16.388	-0.584	0.000	0.249	0.565	1.625	0.000	0.382	2.237	18.625

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Apr 2001	Mar 2001	Mar 2001
Milestone C	N/A	Mar 2004	Feb 2005	Mar 2005
FUE	N/A	Sep 2006	Jan 2008	Feb 2008
Total Cost (TY $M)	N/A	14662.0	20847.1	23681.7
Total Quantity	N/A	1221	1235	1235
PAUC	N/A	12.008	16.880	19.175

Cost Variance

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	739.3	20107.8	--	20847.1
Previous Changes				
Economic	+4.6	+80.4	--	+85.0
Quantity	--	--	--	--
Schedule	--	+585.6	--	+585.6
Engineering	+45.8	+1066.3	--	+1112.1
Estimating	+11.1	+1247.6	--	+1258.7
Other	--	--	--	--
Support	--	+154.2	--	+154.2
Subtotal	+61.5	+3134.1	--	+3195.6
Current Changes				
Economic	-0.6	-797.5	--	-798.1
Quantity	--	--	--	--
Schedule	+27.5	-280.0	--	-252.5
Engineering	--	-373.3	--	-373.3
Estimating	+0.6	+747.3	--	+747.9
Other	--	--	--	--
Support	--	+315.0	--	+315.0
Subtotal	+27.5	-388.5	--	-361.0
Total Changes	+89.0	+2745.6	--	+2834.6
Current Estimate	828.3	22853.4	--	23681.7

Summary BY 2005 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	717.5	16084.2	--	16801.7
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	+112.1	--	+112.1
Engineering	+51.9	+841.9	--	+893.8
Estimating	+9.6	+1001.9	--	+1011.5
Other	--	--	--	--
Support	--	+116.1	--	+116.1
Subtotal	+61.5	+2072.0	--	+2133.5
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+24.1	--	--	+24.1
Engineering	--	-280.8	--	-280.8
Estimating	+0.5	+607.4	--	+607.9
Other	--	--	--	--
Support	--	+254.0	--	+254.0
Subtotal	+24.6	+580.6	--	+605.2
Total Changes	+86.1	+2652.6	--	+2738.7
Current Estimate	803.6	18736.8	--	19540.4

Previous Estimate: December 2007

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.6
Phase shift and restructure of development program. (Schedule)	+24.1	+27.5
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.6
RDT&E Subtotal	+24.6	+27.5

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-797.5
Acceleration of procurement buy profile. (Schedule)	0.0	-280.0
Correction to align support and flyaway. (Subtotal)	0.0	0.0
(Estimating)	(+0.6)	(+0.6)
(Support)	(-0.6)	(-0.6)
Adjustment for current and prior escalation. (Estimating)	+35.4	+39.8
Deletion of Upgrade Components: Common Avionics Architecture System (CAAS), Fly-BY-Wire, Full Authority Digital Engine Control (FADEC) and Composite Tailcone. (Engineering)	-994.5	-1254.1
Technology migration from Upgrade Program to Baseline Aircraft. (Engineering)	+713.7	+880.8
Revised estimate for cabin and cockpit. (Estimating)	+436.9	+497.2
Revised estimates for aircraft components. (Estimating)	+76.2	+141.9
Additional Government Furnished Equipment (GFE) required to support supplemental aircraft. (Estimating)	+58.3	+67.8
Adjustment for current and prior escalation. (Support)	+2.5	+2.8
Addition of Deployment Support Kits, additional trainers; revised cost estimates. (Support)	+358.7	+449.9
Decrease in cost and quantity of Initial Spares. (Support)	-106.6	-137.1
Procurement Subtotal	+580.6	-388.5

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: UH-60M Upgrade
Contractor: Sikorsky Aircraft Corp
Contractor Location: Stratford, CT 06615
Contract Number: DAAH23-00-D-0148
Contract Type: Cost Plus Fixed Fee (CPFF)
Award Date: June 01, 2005
Definitization Date: June 01, 2005

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
46.5	N/A	N/A	81.9	N/A	N/A	85.3	87.6

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2009)	-5.6	-5.1
Previous Cumulative Variances	-3.3	-9.7
Net Change	-2.3	+4.6

Cost and Schedule Variance Explanations

General Contract Variance Explanation

The net unfavorable cost variance is due to the following:

Additional costs were incurred in the design phase for Avionics and for Program support. Subcontractor costs grew due to the complexity of the Integrated Vehicle Health Monitoring Unit (IVHMU) Phase 2 and Common Avionics Architecture System (CAAS) integration. Other areas of cost variance relate to matters related to Work In Process on Main Rotor and Tail Rotor Servos; CAAS software test and documentation; and Flight Control Computer (FCC) Qualification Test. When these matters are resolved, the associated cost variance is projected to diminish.

The net unfavorable schedule variance is due to the following:

Schedule slips driven primarily by Subcontractor delays in Active Inceptor System (AIS) Qualification Test, CAAS software test & documentation, Qualification and Ballistic tests, supply transfer module, FCC Qualification Test and approved phase shift of the program.

This contract is over 90% complete and will not be reported next submission.

Notes

Contract DAAH23-00-D0148, Delivery Order 0054, originated as an engineering services contract that covered the initial development and integration engineering work for the UH-60M Upgrade Program. This labor effort is now complete. The Delivery Order is now the main vehicle used to procure the Non-Recurring Engineering (NRE) materials needed for the UH-60M Upgrade Program. The addition of the NRE material increased the original contract value from $46.5M to the current $81.9M. The material is firm fixed price but the contract is cost plus fixed fee.

Contract Identification

Appropriation: RDT&E
Contract Name: UH-60M Upgrade RDTE
Contractor: Sikorsky Aircraft Corp
Contractor Location: Stratford, CT 06615
Contract Number: W58RGZ-06-D-0045
Contract Type: Cost Plus Award Fee (CPAF)
Award Date: December 22, 2005
Definitization Date: December 22, 2005

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
170.4	N/A	2	171.1	N/A	2	195.9	193.2

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2009)	-17.8	-11.8
Previous Cumulative Variances	+3.5	-9.8
Net Change	-21.3	-2.0

Cost and Schedule Variance Explanations

General Contract Variance Explanation

The increase in contract value from $170.4 to $171.1 was due to incorporation of contract modification for the Interceptor Control Units.

The net unfavorable cost variance is due to the following:

Additional costs were incurred to support design changes necessary for major and final assembly. Also, greater resources were required to address design changes identified on Aircraft #1 and Aircraft #2. Flight Controls algorithm design was driven by software design complexity and resolution of issues encountered during test. Additional Flight Controls support was required during the aircraft build as well as for resolution of hydraulic plumbing issues. Avionics cost overruns are primarily due to the complexity of the Common Avionics Architecture System (CAAS) software partitioning and the Contractor's support of the interface issue resolution between the Integrated Vehicle Health Monitoring Unit (IVHMU) and CAAS, as well as a high level of engineering parts coordination support. Complexities of the program have extended the projected period of performance beyond planned Level Of Effort durations thereby further increasing costs.

Flight Control System Integration Laboratory (FCSIL) testing continues with an extended work week and accelerated pace for the development of the next version of flight software and to support flight test issues that arise. Additional personnel were added to staff the software testing teams to assure maximum schedule efficiency as the software modules moved through the test phases. FCSIL support labor exceeded the planned values because of the extensive dry run and formal software testing required. Aircraft instrumentation system installation costs were impacted by acceleration of work to compensate for delays in aircraft build activities. The incorporation of Lilliput displays on Aircraft #2 required for pilot safety in the event of a stick failure during passive flight mode and unplanned maintenance activities on aircraft hardware have contributed to added costs. Other costs above plan were incurred due to the installation of additional instrumentation on both aircraft to enable in-flight monitoring required as a result of component qualification test restrictions.

The net unfavorable schedule variance is due to the following:

Schedule slips driven primarily by Aircraft #1 Qualification Flight Test and reporting. Aircraft #1 and Aircraft #2 Shakedown Flights, Avionics Flight Testing on Aircraft #2, and Flight Control Systems (FCS) Software Engineering Test Plans and Formal Qualification tests have also contributed to the variance. Delays in flight test activities, including shakedown flights, have been caused by late aircraft completion activities and completion of Flight Control software versions. Primary drivers to the late aircraft build were initial FCS software, servo issues, and parts availability for retrofit. Although initial phases are now complete, variances have carried through to the flight test schedule. The start of FCSIL testing was delayed due to completion and lock down of the initial flight code required for formal testing. This was due to technical issues which caused delays in both Prime Contractor and Subcontractor Application Flight Control Computer (FCC) code. Additional delays have been experienced due to technical problems with the flight control servos and a need to change the Electro Hydraulic Servo Valve (EHSV) components of the flight units. Delays are also being experienced in flight test report activities.

Notes

Contract W58RGZ-06-D-0045, Delivery Order 0001, is an engineering services contract for the development of the UH-60M Upgrade Program. The contract scope includes the design and production of two prototypes, developmental flight tests and full system airworthiness qualification.

On October 15, 2009, based on increasing demands for helicopters to support Army Force Generation (ARFORGEN) requirements, the Configuration Steering Board (CSB) has recommended to the Defense Acquisition Executive (DAE) to restructure the Black Hawk Upgrade (UH-60M) Program. The recommendation included three parts: 1) produce UH-60M baseline aircraft only; 2) complete development test (DT) on upgrade aircraft; and 3) migrate selected technologies from the upgrade development efforts to the baseline configuration. The recommendation has been formally submitted to the DAE and the program will be restructured if the recommendation is approved.

The Acquisition Decision Memorandum (ADM) was signed on February 18, 2010, accepting all Army recommendations resulting in the Black Hawk program pursuing a strategy of procuring less costly UH-60M Baseline helicopters with migration of selected technologies cut into the UH-60 production as Engineering Change Proposals (ECPs). These selected modifications to be cut-in are as follows: Global Air Traffic Management (GATM); Battlefield Graphics; Performance Planning; Mission Management; Tactical Situational Awareness (TSA) Processor Upgrade; MEDEVAC Mission Sensor (MMS); Stabilator Actuator; Two pallet Environmental Control System (ECS); Improved Medical Interior (IMI); Generator Improvements; and Integrated Processor Controller (IPC) General Purpose Processing Units (GPPU) Lite Integration.

This contract will be modified to limit the performance to complete the two UH-60M Upgrade prototype aircraft testing.

Contract Identification

Appropriation: Procurement
Contract Name: Multiyear/MultiService H-60 Production Contract
Contractor: Sikorsky Aircraft Corp
Contractor Location: Stratford, CT 06614-1378
Contract Number: W58RGZ-08-C-0003
Contract Type: Firm Fixed Price (FFP)
Award Date: December 12, 2007
Definitization Date: December 12, 2007

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
3938.8	N/A	308	4308.4	N/A	353	4308.4	4308.4

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

On December 12, 2007, the Army awarded the Multiyear/MultiService H-60 Production contract, W58RGZ-08-C-0003, to Sikorsky Aircraft Corporation. This is a Firm Fixed Price contract valued at approximately $7.4B which procures H-60 aircraft for the Army and Navy. In FY2007 a total of 72 aircraft were procured (67 UH and 5 HH); in FY2008 a total of 77 aircraft were procured (37 UH and 40 HH); in FY2009 a total of 66 aircraft were procured (53 UH and 13 HH); in FY2010 a total of 81 aircraft are planned to be procured (59 UH and 22 HH) and in FY2011 a total of 72 aircraft are planned to be procured (48 UH and 24 HH).

Original Contract Value increased from $3,938.8 to $4,308.4 due to the addition of supplemental aircraft.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	8	8	8	100.00%
Production	160	155	1227	12.63%
Total Program Quantity Delivered	168	163	1235	13.20%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	23681.7	Years Appropriated	11
Expended to Date	4781.0	Percent Years Appropriated	44.00%
Percent Expended	20.19%	Appropriated to Date	6315.3
Total Funding Years	25	Percent Appropriated	26.67%

Deliveries to Date are through December 31, 2009. First Unit Equipped was achieved on February 29, 2008 with 10 UH-60M Baseline aircraft fielded to the 159th Combat Aviation Brigade (CAB).

Operating and Support Cost

Assumptions and Ground Rules

The latest estimate was approved by the Army Cost Position on April 26, 2007. The maintenance concept for the UH-60M is organic, two-level maintenance with the exception of the training base. The training base will continue to be Contractor Logistics Support. The Active Army (AA) Operational TEMPO (OPTEMPO) for each aircraft is 239 annual flight hours. The National Guard (NG) OPTEMPO for each aircraft is 168 annual flight hours. The estimated service life for each aircraft is 20 years. The total number of flight hours (including all AA and NG aircraft in operation for 20 years service life) is 5,443,800 hours. The 5,443,800 hours are calculated as the Active Army aircraft (954) x the AA OPTEMPO (239) x service life (20 years) plus the National Guard aircraft (263) x the NG OPTEMPO (168) x service life (20 years). Aircraft production began in FY 2005 and Operations and Support (O&S) began in FY 2006 for the UH-60M.

The total O&S Costs are derived by multiplying the associated O&S cost per flight hour by the sum of Active Army and National Guard total flight hours. Equation: Cost per flight hour x AA and NG flight hours.

The total O&S Costs for UH-60L were not reported in the last UH-60L SAR dated December 31, 1999. The information in the table below is based on Operation and Support Management Information System (OSMIS) data for the UH-60L (excluding Concept of Operations (CONOPS)). Sustaining support costs for the UH-60L aircraft are not included in the table because the costs (software maintenance, system specific base operations, systems engineering/program management and transportation) are not collected in the OSMIS database.

The contractor support cost for the UH-60M aircraft includes the maintenance of the training simulators necessary to support the program. The UH-60L cost for contractor support does not include the simulator maintenance cost since those costs are not tracked in the OSMIS database.

Cost Estimate Reference:
None

Sustainment Strategy:
None

Antecedent Information:
None

Unitized O&S Costs BY2005 $M		
Cost Element	**BLACK HAWK Upgrade Avg Cost Per 1,000 Flying Hrs**	**UH-60L (Antecedent) Avg Cost Per 1,000 Flying Hrs**
Mission Pay & Allowance	--	--
Unit Level Consumption	0.817	0.817
Intermediate Maintenance	0.036	0.036
Depot Maintenance	2.458	1.844
Contractor Support	0.121	0.114
Sustaining Support	0.693	--
Indirect	--	--
Other	--	--
Total	4.125	2.811

Unitized Cost Comments:
None

Item	Total O&S Cost $M			
	BLACK HAWK Upgrade			UH-60L (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	16313.2	17944.5	**22457.9**[1]	N/A
Then Year	0.0	N/A	32645.5	N/A

[1] *APB O&S Cost Breach*

Total O&S Cost Comment
None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2005 $M):