



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-212



V-22

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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Program Information

Designation And Nomenclature (Popular Name)

V-22 Joint Services Advanced Vertical Lift Aircraft (OSPREY)

DoD Component

Navy

Joint Participants

USMC; USN; USSOCOM; USAF

Responsible Office

Responsible Office

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Date Assigned August 20, 2009

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated September 28, 2005

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated February 29, 2008

Mission and Description

The V-22 Joint Osprey Program is charged by the Department of Defense (DoD) with developing, testing, evaluating, procuring, and fielding a tilt rotor, Vertical/Short Takeoff and Landing (V/STOL) aircraft for Joint Service application. The Navy was designated the Executive Agent with support from the United States Air Force (USAF) in the V-22 Joint Program Office located at the Naval Air Systems Command Headquarters, Naval Air Station Patuxent River, MD. The V-22 Program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the United States Marine Corps (USMC), the strike rescue needs of the Navy, and the special operations needs of the USAF and United States Special Operations Command (USSOCOM). The MV-22 variant is replacing the CH-46E in the Marine Corps and will supplement the H-60 in the Navy. The CV-22 variant provides a new capability and augments the MC-130 in the USAF/USSOCOM inventory for special operations infiltration, exfiltration, and resupply missions. The V-22 is capable of flying over 2100 nautical miles (NM) with a single refueling, giving the Services the advantage of a V/STOL aircraft able to rapidly self-deploy to any location in the world.

Block Descriptions:

V-22 capability is being increased and fielded over time via a Block upgrade acquisition strategy. MV-22 Block A provides a "Safe and Operational Test and Training Asset" configuration that supports developmental and operational flight tests, as well as fleet training. MV-22 Block B provides for correction of previously identified deficiencies and suitability improvements. MV-22 Block C provides mission enhancements, primarily in the areas of environmental control systems upgrades and mission systems improvements. Block 0/10 is a CV-unique configuration including radar and electronic countermeasures upgrades. Block 20 will provide an enhanced CV-unique configuration with communications and aircraft system performance upgrades.

Executive Summary

The V-22 Osprey continues to meet all Key Performance Parameters and excel operationally as it matures into its lifecycle. East coast transition is complete with six MV-22 operational squadrons and one CV-22 operational squadron established at Marine Corps Air Station New River, NC and Hurlburt Field, FL respectively. The program continues its expansion to the west coast with (3) MV squadrons at Marine Corps Air Station Miramar, CA and (1) CV-22 squadron at Cannon Air Force Base, NM now in operation. Combined, the V-22 community has had 14 overseas deployments to date, with the third MV Fleet shipboard deployment and the third MV Operation Enduring Freedom deployment underway. Pre-deployment planning has commenced for the sixth CV deployment, scheduled for spring 2011. As of December 31, 2010, a total of 128 V-22 aircraft are in service. Finally, total flight hours are increasing rapidly and will exceed 100,000 flight hours in the first quarter of calendar year (CY) 2011 -- 46% of these total hours have been flown in the last 2 years.

As the platform continues to excel operationally, the program is working aggressively to improve readiness and reduce operating costs. These efforts are beginning to yield positive results. Cost per Flight Hour (CPFH) was lower than forecast in FY 2010, and continues on a positive, downward trend in the first quarter of FY 2011 while aircraft material availability has increased. Improvements are being achieved through team execution of a comprehensive plan which has included reliability and maintainability improvements, maintenance concept changes, standup of additional repair capability, improved repair turnaround times and repair price reductions, and contract strategy changes. Continued improvements are planned over the next several years.

The program is currently in the fourth year of a five year Multi-Year Procurement (MYP) contract, covering Lots 12-16 (FY 2008-FY 2012). Twenty-six V-22s (21 MV-22/5 CV-22) were delivered from the production line during CY 2010. Production deliveries continue to be on or ahead of schedule and within cost. In November 2010, the program obligated full funding for Lot 15 and long-lead funding for Lot 16; these aircraft will deliver in FY 2013 and FY 2014 respectively. Finally, the program is preparing for a second MYP contract which, upon approval, will cover aircraft purchases from FY 2013-FY 2017. Program budgets for these years currently reflect the savings of a multi-year contract approach.

Development efforts continue to progress well for both Block C and Block 20 (MV and CV configurations respectively) with successful design reviews held in FY 2010. Block C flight testing at Patuxent River is close to completion, with no major issues identified. Block 20 modifications on test aircraft have begun, with the start of flight testing at Hurlburt Field, FL scheduled for the spring of 2011. Flight test on existing Block B and Block 10 configurations continues to play a critical role in delivering additional capability to the fleet. For example, during 2010 we expanded the density altitude landing envelope from 10,000 to 12,000 feet, expanded the nose-up attitude envelope from 20 to 35 degrees to allow quicker egress out of hot zones, and provided additional envelope for shipboard operations. As we go forward with additional testing in 2011, some risk to schedule exists as tests are deferred due to competing priorities amongst very limited test assets.

There are no significant software-related issues on the program.

Threshold Breaches

APB Breaches		
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Schedule		☐
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Performance		☐
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Cost	RDT&E	☐
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	Procurement	☐
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	MILCON	☐
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	Acq O&M	☐
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Unit Cost	PAUC	☐
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	APUC	☐
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Nunn-McCurdy Breaches		
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Current UCR Baseline

PAUC	None
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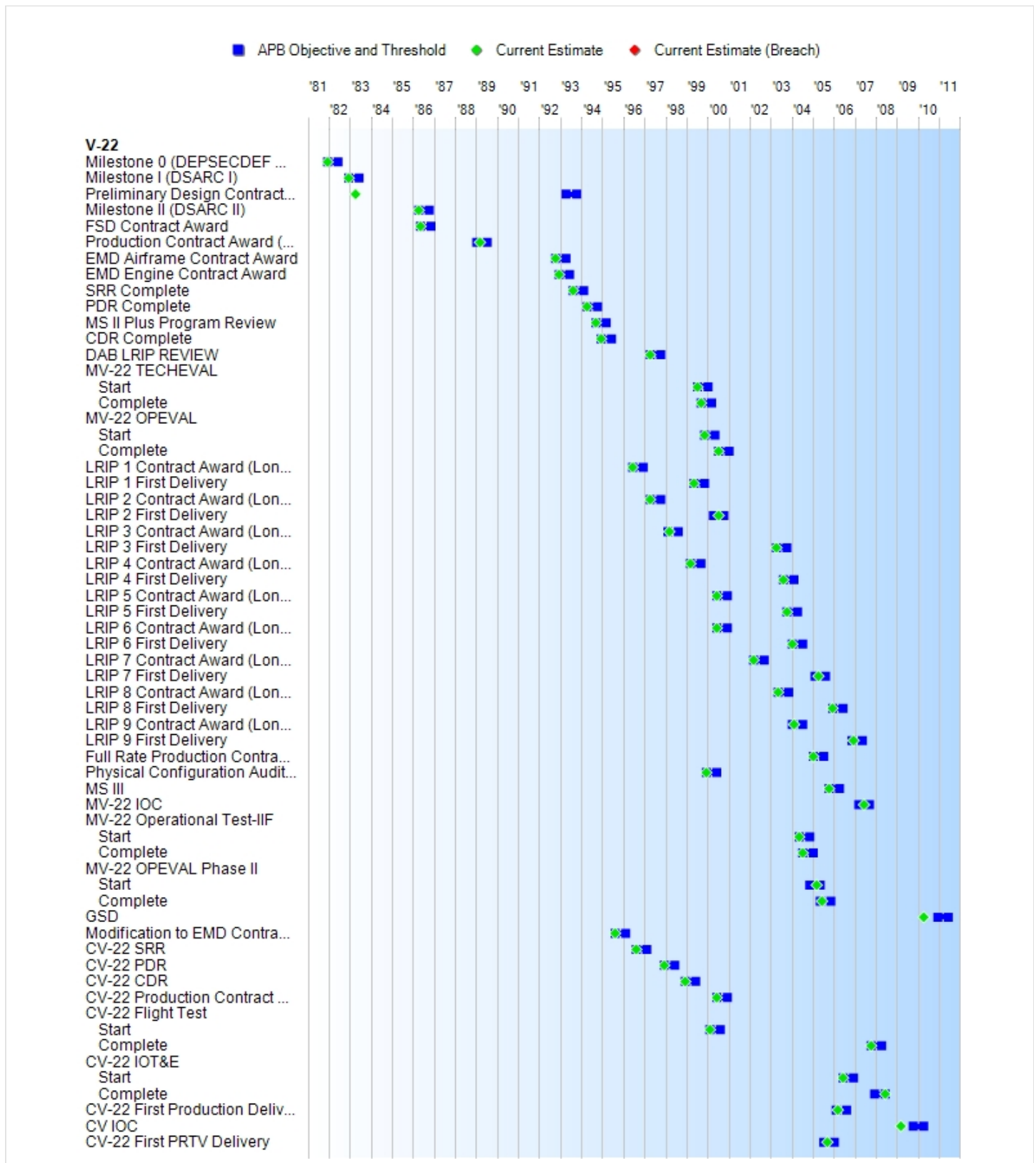
APUC	None
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Original UCR Baseline

PAUC	None
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APUC	None
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Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone 0 (DEPSECDEF MEMO)	DEC 1981	DEC 1981	JUN 1982	DEC 1981
Milestone I (DSARC I)	DEC 1982	DEC 1982	JUN 1983	DEC 1982
Preliminary Design Contract Award	APR 1993	APR 1993	OCT 1993	APR 1983
Milestone II (DSARC II)	APR 1986	APR 1986	OCT 1986	APR 1986
FSD Contract Award	MAY 1986	MAY 1986	NOV 1986	MAY 1986
Production Contract Award (Long Lead AAC)	JAN 1989	JAN 1989	JUL 1989	MAR 1989
EMD Airframe Contract Award	OCT 1992	OCT 1992	APR 1993	OCT 1992
EMD Engine Contract Award	DEC 1992	DEC 1992	JUN 1993	DEC 1992
SRR Complete	AUG 1993	AUG 1993	FEB 1994	AUG 1993
PDR Complete	APR 1994	APR 1994	OCT 1994	APR 1994
MS II Plus Program Review	SEP 1994	SEP 1994	MAR 1995	SEP 1994
CDR Complete	DEC 1994	DEC 1994	JUN 1995	DEC 1994
DAB LRIP REVIEW	APR 1997	APR 1997	OCT 1997	APR 1997
MV-22 TECHEVAL				
Start	JUL 1999	JUL 1999	JAN 2000	JUL 1999
Complete	SEP 1999	SEP 1999	MAR 2000	SEP 1999
MV-22 OPEVAL				
Start	NOV 1999	NOV 1999	MAY 2000	NOV 1999
Complete	JUL 2000	JUL 2000	JAN 2001	JUL 2000
LRIP 1 Contract Award (Long lead \$)	JUN 1996	JUN 1996	DEC 1996	JUN 1996
LRIP 1 First Delivery	MAY 1999	MAY 1999	NOV 1999	MAY 1999
LRIP 2 Contract Award (Long lead \$)	APR 1997	APR 1997	OCT 1997	APR 1997
LRIP 2 First Delivery	APR 2000	APR 2000	OCT 2000	JUL 2000
LRIP 3 Contract Award (Long Lead \$)	FEB 1998	FEB 1998	AUG 1998	MAR 1998
LRIP 3 First Delivery	APR 2003	APR 2003	OCT 2003	APR 2003
LRIP 4 Contract Award (Long Lead \$)	MAR 1999	MAR 1999	SEP 1999	MAR 1999
LRIP 4 First Delivery	AUG 2003	AUG 2003	FEB 2004	AUG 2003
LRIP 5 Contract Award (Long Lead \$)	JUN 2000	JUN 2000	DEC 2000	JUN 2000
LRIP 5 First Delivery	OCT 2003	OCT 2003	APR 2004	OCT 2003
LRIP 6 Contract Award (Long Lead \$)	JUN 2000	JUN 2000	DEC 2000	JUN 2000
LRIP 6 First Delivery	JAN 2004	JAN 2004	JUL 2004	JAN 2004
LRIP 7 Contract Award (Long Lead \$)	MAR 2002	MAR 2002	SEP 2002	MAR 2002

cont.				
Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
LRIP 7 First Delivery	FEB 2005	FEB 2005	AUG 2005	APR 2005
LRIP 8 Contract Award (Long Lead \$)	MAY 2003	MAY 2003	NOV 2003	MAY 2003
LRIP 8 First Delivery	DEC 2005	DEC 2005	JUN 2006	DEC 2005
LRIP 9 Contract Award (Long Lead \$)	JAN 2004	JAN 2004	JUL 2004	FEB 2004
LRIP 9 First Delivery	NOV 2006	NOV 2006	MAY 2007	DEC 2006
Full Rate Production Contract Award (Long lead \$)	JAN 2005	JAN 2005	JUL 2005	JAN 2005
Physical Configuration Audit (PCA)	DEC 1999	DEC 1999	JUN 2000	DEC 1999
MS III	OCT 2005	OCT 2005	APR 2006	OCT 2005
MV-22 IOC	MAR 2007	MAR 2007	SEP 2007	JUN 2007
MV-22 Operational Test-II				
Start	MAY 2004	MAY 2004	NOV 2004	MAY 2004
Complete	JUL 2004	JUL 2004	JAN 2005	JUL 2004
MV-22 OPEVAL Phase II				
Start	NOV 2004	NOV 2004	MAY 2005	MAR 2005
Complete	MAY 2005	MAY 2005	NOV 2005	JUN 2005
GSD	DEC 2010	DEC 2010	JUN 2011	APR 2010
Modification to EMD Contract to Include CV-22 Efforts	AUG 1995	AUG 1995	FEB 1996	AUG 1995
CV-22 SRR	AUG 1996	AUG 1996	FEB 1997	AUG 1996
CV-22 PDR	DEC 1997	DEC 1997	JUN 1998	DEC 1997
CV-22 CDR	DEC 1998	DEC 1998	JUN 1999	DEC 1998
CV-22 Production Contract Award (Long lead \$)	JUN 2000	JUN 2000	DEC 2000	JUN 2000
CV-22 Flight Test				
Start	FEB 2000	FEB 2000	AUG 2000	FEB 2000
Complete	OCT 2007	OCT 2007	APR 2008	OCT 2007
CV-22 IOT&E				
Start	JUN 2006	JUN 2006	DEC 2006	JUN 2006
Complete	DEC 2007	DEC 2007	JUN 2008	JUN 2008
CV-22 First Production Delivery	FEB 2006	FEB 2006	AUG 2006	MAR 2006
CV IOC	OCT 2009	OCT 2009	APR 2010	MAR 2009
CV-22 First PRTV Delivery	JUL 2005	JUL 2005	JAN 2006	SEP 2005

(Ch-1)

Acronyms And Abbreviations

AAC - Advanced Acquisition Contract
 CDR - Critical Design Review
 DAB - Defense Acquisition Board
 DEPSECDEF - Deputy Secretary of Defense
 DSARC - Defense Systems Acquisition Review Council
 EMD - Engineering Manufacturing Development

FSD - Full Scale Development
GSD - Government Support Date
IOC - Initial Operational Capability
IOT&E - Initial Operational Test and Evaluation
LRIP - Low Rate Initial Production
MS - Milestone
OPEVAL - Operational Evaluation
PCA - Physical Configuration Audit
PDR - Program Design Review
PRTV - Production Representative Test Vehicle
SRR - System Requirements Review
TECHEVAL - Technical Evaluation

Change Explanations

(Ch-1) The estimated GSD date was revised from Dec 2010 to April 2010 to reflect the actual date GSD was achieved.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
MV-22					
Interoperability	Satisfy all top level IE Rs	Satisfy all top level IERs	Satisfy all top level IERS designated as critical	Satisfy all top level IERs designated as critical	Satisfy all top level IERs designated as critical
Cruise Speed (kts)	270	270	240	255	260.1
Mission Radius (NM)					
Land Trooplift	200X1	200X1	200X1	210X1	230.1
Land External	110X1	110X1	50X1	69X1	58.7
Sea Trooplift	110X2	110X2	50X2	53X2	99.8X2
Sea External	110X1	110X1	50X1	89X1	108.7
Amphibious Pre- Assault/Raid Ops (NM)	200X1	200X1	200X1	230X1	292.4
Payload					
Troops	24	24	24	24	24
External Lift (lbs)	15,000	15,000	10,000	10,000	10,000
Aerial Refuel Capable	yes	yes	yes	yes	yes
Self-Deployment (nm)	2100 w/no refuel	2100 w/no refuel	2100 w/1 refuel	2660 w/1 aerial refuel	2241.7 w/1 aerial refuel
Shipboard Compatible	yes	yes	yes	yes	yes
V/STOL Capable	yes	yes	yes	yes	yes
Survivability (mm API @90%vel)	14.5	14.5	12.7	classified	classified
Reliability					
MFHBF (log)	>=1.2	>=1.2	>=0.9	1.3	>=1.1
MFHBA	17 Hrs	17 Hrs	17 Hrs	21.2	17 Hrs
CV-22					
Interoperability	Satisfy all top level IE Rs	Satisfy all top level IERs	Satisfy all top level IERs designated as critical	Satisfy all top level IERs designated as critical	Satisfy all top level IERs designated as critical
Cruise Speed (kts)	270	270	230	264	234
Mission Radius (nm)	750	750	500	538	531
Payload - Troops	24	24	18	18	18
Aerial Refuel Capable	yes	yes	yes	yes	yes
Self-Deployment (nm)	2100 w/0 aerial refuel	2100 w/0 aerial refuel	2100 w/1 aerial refuel	2144 w/1 aerial refuel	2144 w/1 aerial refuel
Shipboard	yes	yes	yes	yes	yes

Compatible					
Operational Environment	100' TF/TA, Day/Night, VMC/IMC	100' TF/TA, Day/Night, VMC/IMC	300' TF/TA, Day/Night, VMC/IMC	100' TF/TA, Day/Night, VMC/IMC	100' TF/TA, Day/Night, VMC/IMC
Precision Navigation (diameter @ MAX Combat Radius)	Locate LZ W/IN 1 Rotor	Locate LZ W/IN 1 Rotor	Locate LZ W/IN 2X Rotor	Locate LZ W/IN 2X Rotor	Locate LZ W/IN 2X Rotor
Operational Environment					
DECM	SIRFC w/RF Jamming DIRCM	SIRFC w/RF Jamming DIRCM	SIRFC w/RWR, MW, CMDS	SIRFC w/RF, Jamming DIRCM	SIRFC w/RF, Jamming DIRCM
MMR (TF/TA)	100 FT	100 FT	300 FT	100 FT	100 FT
Reliability					
MFHBF (LOG)	>=1.2	>=1.2	>=0.9	1.2	>=1.0
MFHBA	15 Hrs	15 Hrs	15 Hrs	32	16 Hrs

Requirements Source: Capabilities Production Document (CPD), dated September 1, 2010

Acronyms And Abbreviations

API - Armor Piercing Incendiary
CE - Current Estimate
COMOPTEVFOR - Commander, Operational Test and Evaluation Force
DECM - Defensive Electronic Countermeasure
DIRCM - Directed Infrared Countermeasures
Ft - Feet
Hrs - Hours
IERS - Information Exchange Requirements
IOT&E - Initial Operational Test & Evaluation
Kts - Knots
Lbs - Pounds
LZ w/IN - Landing Zone Within
MFHBA - Mean Flight Hours Between Aborts
MFHBF - Mean Flight Hours Between Failures
MMR (TF/TA) - Multi-Mode Radar (Terrain Following/Terrain Avoidance)
NAVAIR - Naval Air Systems Command
NM - Nautical Miles
OSD - Office of the Secretary of Defense
R&M - Reliability and Maintainability
SIRFC - Suite of Integrated Radio Frequency Countermeasures
V/STOL - Vertical/Short Takeoff and Landing
vel - Velocity
VMC/IMC - Visual Meteorological Conditions/Instrument Meteorological Conditions
w/CMDS - with Counter-Measures Dispenser System
w/MW - with Missile Warning
w/RF - with Radio Frequency
w/RWR - with Radar Warning Receiver

Change Explanations

None

Memo

All performance estimates are based on the MV-22 Block B and CV-22 Block 10 configurations.

The estimated V-22 performance parameters listed above were last updated prior to the December 2007 SAR report and were calculated via performance models utilizing real-time aircraft specifications with updates based upon data derived from delivered aircraft. Demonstrated performance continues to satisfy APB requirements.

Demonstrated CV-22 performance results are based upon the CV IOT&E report dated November 26, 2008. Self deployment range has been verified by analysis and has been borne out by several worldwide deployments by operational forces.

Track To Budget**RDT&E**

APPN 1319	BA 05	PE 0604262N	(Navy)
	Project 1425		
APPN 3600	BA 05	PE 0401318F	(Air Force)
	Project 654103		
APPN 0400	BA 07	PE 1160404BB	(DoD)
	Project SF200		(Sunk)
APPN 0400	BA 07	PE 1160421BB	(DoD)
	Project SF200		

Procurement

APPN 1506	BA 01	PE 0206121M	(Navy)
	ICN 0164		
APPN 1506	BA 06	PE 0206121M	(Navy)
	ICN 0605		(Shared)
APPN 3010	BA 06	PE 0401318F	(Air Force)
	ICN 000999		(Shared)
APPN 3010	BA 04	PE 0401318F	(Air Force)
	ICN V022A0		
APPN 0300	BA 02	PE 1160444BB	(DoD)
	ICN 1000CV2200		

Aircraft Procurement, USAF - Budget Activity (BA) 05 for Item Control Number (ICN) V02200, Program Element (PE) 0401318F and Aircraft Procurement, Navy - BA 05 for ICN V0590, PE 0206121M are incorporated into the program as a subset of total Operations and Support.

MILCON

APPN 1205	BA 01	PE 0204696N	(Navy)
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APPN 0500	BA 01	PE 1140494BB	(DoD)
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Multiple MILCON projects are associated with each program element and are too numerous to list.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2005 \$M			BY2005 \$M	TY \$M		
	SAR Baseline Prod Est	Current APB Production Objective/Threshold	Current Estimate		SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	11446.5	11446.5	12591.2	11919.1	9891.7	9891.7	10383.7
Procurement	38562.8	38562.8	42419.1	38180.7	43099.3	43099.3	42773.4
Flyaway	31629.3	--	--	30850.4	35627.8	--	34792.3
Recurring	30407.1	--	--	29393.5	34358.6	--	33245.9
Non Recurring	1222.2	--	--	1456.9	1269.2	--	1546.4
Support	6933.5	--	--	7330.3	7471.5	--	7981.1
Other Support	4954.9	--	--	5441.8	5312.3	--	5941.3
Initial Spares	1978.6	--	--	1888.5	2159.2	--	2039.8
MILCON	241.1	241.1	265.2	108.3	262.4	262.4	118.3
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	50250.4	50250.4	N/A	50208.1	53253.4	53253.4	53275.4

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E		2	2
Procurement		456	457
Total		458	459

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	9739.2	78.8	116.0	87.7	57.7	72.2	67.1	165.0	10383.7
Procurement	22301.6	2858.9	2933.6	2401.3	2198.5	1893.9	1827.5	6358.1	42773.4
MILCON	90.6	0.0	12.0	0.8	14.9	0.0	0.0	0.0	118.3
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	32131.4	2937.7	3061.6	2489.8	2271.1	1966.1	1894.6	6523.1	53275.4
PB 2011 Total	32225.5	2923.3	3079.3	2407.9	2296.4	2015.8	2071.9	5878.9	52899.0
Delta	-94.1	14.4	-17.7	81.9	-25.3	-49.7	-177.3	644.2	376.4

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	216	35	36	27	26	23	23	71	457
PB 2012 Total	2	216	35	36	27	26	23	23	71	459
PB 2011 Total	2	216	35	35	28	27	24	24	67	458
Delta	0	0	0	1	-1	-1	-1	-1	4	1

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
1982	--	--	--	--	--	--	1.3
1983	--	--	--	--	--	--	34.4
1984	--	--	--	--	--	--	83.1
1985	--	--	--	--	--	--	169.5
1986	--	--	--	--	--	--	525.1
1987	--	--	--	--	--	--	421.7
1988	--	--	--	--	--	--	404.8
1989	--	--	--	--	--	--	269.9
1990	--	--	--	--	--	--	204.2
1991	--	--	--	--	--	--	212.2
1992	--	--	--	--	--	--	758.0
1993	--	--	--	--	--	--	713.3
1994	--	--	--	--	--	--	8.7
1995	--	--	--	--	--	--	451.8
1996	--	--	--	--	--	--	716.4
1997	--	--	--	--	--	--	605.5
1998	--	--	--	--	--	--	487.5
1999	--	--	--	--	--	--	335.8
2000	--	--	--	--	--	--	175.9
2001	--	--	--	--	--	--	217.9
2002	--	--	--	--	--	--	391.6
2003	--	--	--	--	--	--	387.4
2004	--	--	--	--	--	--	357.2
2005	--	--	--	--	--	--	248.2
2006	--	--	--	--	--	--	192.3
2007	--	--	--	--	--	--	251.6
2008	--	--	--	--	--	--	125.2
2009	--	--	--	--	--	--	66.0
2010	--	--	--	--	--	--	78.9
2011	--	--	--	--	--	--	46.1
2012	--	--	--	--	--	--	84.5
2013	--	--	--	--	--	--	65.0
2014	--	--	--	--	--	--	36.7
2015	--	--	--	--	--	--	51.6
2016	--	--	--	--	--	--	53.0
2017	--	--	--	--	--	--	54.4

2018	--	--	--	--	--	--	39.3
2019	--	--	--	--	--	--	27.5
2020	--	--	--	--	--	--	18.0
2021	--	--	--	--	--	--	10.8
2022	--	--	--	--	--	--	6.7
2023	--	--	--	--	--	--	4.6
2024	--	--	--	--	--	--	3.7
Subtotal	--	--	--	--	--	--	9397.3

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1982	--	--	--	--	--	--	2.2
1983	--	--	--	--	--	--	56.7
1984	--	--	--	--	--	--	132.1
1985	--	--	--	--	--	--	261.3
1986	--	--	--	--	--	--	786.9
1987	--	--	--	--	--	--	613.8
1988	--	--	--	--	--	--	570.1
1989	--	--	--	--	--	--	364.7
1990	--	--	--	--	--	--	265.1
1991	--	--	--	--	--	--	266.0
1992	--	--	--	--	--	--	923.2
1993	--	--	--	--	--	--	849.1
1994	--	--	--	--	--	--	10.2
1995	--	--	--	--	--	--	517.9
1996	--	--	--	--	--	--	807.6
1997	--	--	--	--	--	--	674.3
1998	--	--	--	--	--	--	538.5
1999	--	--	--	--	--	--	366.6
2000	--	--	--	--	--	--	189.3
2001	--	--	--	--	--	--	231.3
2002	--	--	--	--	--	--	411.5
2003	--	--	--	--	--	--	401.2
2004	--	--	--	--	--	--	359.9
2005	--	--	--	--	--	--	243.7
2006	--	--	--	--	--	--	183.1
2007	--	--	--	--	--	--	233.8
2008	--	--	--	--	--	--	114.3
2009	--	--	--	--	--	--	59.5
2010	--	--	--	--	--	--	70.4
2011	--	--	--	--	--	--	40.5
2012	--	--	--	--	--	--	73.2
2013	--	--	--	--	--	--	55.4
2014	--	--	--	--	--	--	30.7
2015	--	--	--	--	--	--	42.5
2016	--	--	--	--	--	--	42.9
2017	--	--	--	--	--	--	43.3
2018	--	--	--	--	--	--	30.8
2019	--	--	--	--	--	--	21.2
2020	--	--	--	--	--	--	13.6
2021	--	--	--	--	--	--	8.0
2022	--	--	--	--	--	--	4.9

2023	--	--	--	--	--	--	3.3
2024	--	--	--	--	--	--	2.6
Subtotal	--	--	--	--	--	--	10917.2

FY 1983 dollars reflect \$29.9M of Army funds (PE 0604222A). Funding totals include that received for Overseas Contingency Operations (OCO).

Annual Funding TY\$

3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

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
1985	--	--	--	--	--	--	0.6
1986	--	--	--	--	--	--	2.2
1987	--	--	--	--	--	--	2.9
1988	--	--	--	--	--	--	25.0
1989	--	--	--	--	--	--	3.8
1990	--	--	--	--	--	--	--
1991	--	--	--	--	--	--	--
1992	--	--	--	--	--	--	--
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	--
1996	--	--	--	--	--	--	--
1997	--	--	--	--	--	--	--
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	--	--	--	--	--	--	144.2
2003	--	--	--	--	--	--	5.8
2004	--	--	--	--	--	--	49.7
2005	--	--	--	--	--	--	14.1
2006	--	--	--	--	--	--	30.2
2007	--	--	--	--	--	--	12.8
2008	--	--	--	--	--	--	22.0
2009	--	--	--	--	--	--	18.0
2010	--	--	--	--	--	--	19.0
2011	--	--	--	--	--	--	18.3
2012	--	--	--	--	--	--	20.7
2013	--	--	--	--	--	--	22.7
2014	--	--	--	--	--	--	21.0
2015	--	--	--	--	--	--	20.6
2016	--	--	--	--	--	--	14.1
Subtotal	2	--	--	--	--	--	467.7

Annual Funding BY\$**3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force**

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1985	--	--	--	--	--	--	0.9
1986	--	--	--	--	--	--	3.3
1987	--	--	--	--	--	--	4.2
1988	--	--	--	--	--	--	35.0
1989	--	--	--	--	--	--	5.1
1990	--	--	--	--	--	--	--
1991	--	--	--	--	--	--	--
1992	--	--	--	--	--	--	--
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	--
1996	--	--	--	--	--	--	--
1997	--	--	--	--	--	--	--
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	--	--	--	--	--	--	151.6
2003	--	--	--	--	--	--	6.0
2004	--	--	--	--	--	--	50.3
2005	--	--	--	--	--	--	13.9
2006	--	--	--	--	--	--	28.9
2007	--	--	--	--	--	--	11.9
2008	--	--	--	--	--	--	20.1
2009	--	--	--	--	--	--	16.3
2010	--	--	--	--	--	--	17.0
2011	--	--	--	--	--	--	16.1
2012	--	--	--	--	--	--	18.0
2013	--	--	--	--	--	--	19.4
2014	--	--	--	--	--	--	17.7
2015	--	--	--	--	--	--	17.0
2016	--	--	--	--	--	--	11.5
Subtotal	2	--	--	--	--	--	464.2

The FY 2002 Appropriations Act provided funding for two CV Production Representative Test Vehicles.

Annual Funding TY\$

0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

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	--	--	--	--	--	--	36.1
1991	--	--	--	--	--	--	8.0
1992	--	--	--	--	--	--	15.0
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	14.7
1995	--	--	--	--	--	--	--
1996	--	--	--	--	--	--	--
1997	--	--	--	--	--	--	--
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	33.5
2001	--	--	--	--	--	--	40.1
2002	--	--	--	--	--	--	104.1
2003	--	--	--	--	--	--	32.2
2004	--	--	--	--	--	--	68.4
2005	--	--	--	--	--	--	53.1
2006	--	--	--	--	--	--	23.7
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	21.9
2009	--	--	--	--	--	--	30.5
2010	--	--	--	--	--	--	12.2
2011	--	--	--	--	--	--	14.4
2012	--	--	--	--	--	--	10.8
Subtotal	--	--	--	--	--	--	518.7

Annual Funding BY\$

0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1990	--	--	--	--	--	--	46.9
1991	--	--	--	--	--	--	10.0
1992	--	--	--	--	--	--	18.2
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	17.2
1995	--	--	--	--	--	--	--
1996	--	--	--	--	--	--	--
1997	--	--	--	--	--	--	--
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	36.0
2001	--	--	--	--	--	--	42.5
2002	--	--	--	--	--	--	109.3
2003	--	--	--	--	--	--	33.3
2004	--	--	--	--	--	--	69.1
2005	--	--	--	--	--	--	52.1
2006	--	--	--	--	--	--	22.6
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	20.0
2009	--	--	--	--	--	--	27.5
2010	--	--	--	--	--	--	10.9
2011	--	--	--	--	--	--	12.7
2012	--	--	--	--	--	--	9.4
Subtotal	--	--	--	--	--	--	537.7

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
1989	--	--	--	--	--	231.4	231.4
1990	--	--	--	--	--	--	--
1991	--	--	--	--	--	--	--
1992	--	--	--	--	--	--	--
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	--
1996	--	41.1	--	--	41.1	--	41.1
1997	5	541.8	--	55.7	597.5	111.9	709.4
1998	7	604.9	--	21.9	626.8	81.9	708.7
1999	7	560.6	--	23.4	584.0	99.5	683.5
2000	11	769.9	--	29.3	799.2	188.1	987.3
2001	9	719.7	--	89.7	809.4	200.8	1010.2
2002	9	569.7	--	51.7	621.4	265.4	886.8
2003	11	807.0	--	111.6	918.6	148.5	1067.1
2004	9	662.2	--	44.6	706.8	174.6	881.4
2005	8	605.6	--	111.4	717.0	314.5	1031.5
2006	12	863.7	--	144.3	1008.0	373.7	1381.7
2007	14	1092.1	--	222.8	1314.9	281.9	1596.8
2008	23	1654.6	--	150.2	1804.8	310.1	2114.9
2009	30	1874.5	--	37.8	1912.3	329.8	2242.1
2010	30	1916.3	--	21.4	1937.7	353.4	2291.1
2011	30	1932.3	--	11.0	1943.3	278.5	2221.8
2012	30	1958.4	--	71.8	2030.2	287.0	2317.2
2013	23	1665.4	--	16.5	1681.9	212.7	1894.6
2014	23	1581.2	--	20.7	1601.9	246.7	1848.6
2015	23	1606.5	--	29.2	1635.7	253.2	1888.9
2016	23	1646.9	--	16.7	1663.6	163.9	1827.5
2017	23	1735.6	--	34.4	1770.0	279.8	2049.8
2018	24	1902.7	--	23.9	1926.6	286.7	2213.3
2019	24	1859.0	--	23.8	1882.8	212.2	2095.0
Subtotal	408	29171.7	--	1363.8	30535.5	5686.2	36221.7

Annual Funding BY\$

1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1989	--	--	--	--	--	299.8	299.8
1990	--	--	--	--	--	--	--
1991	--	--	--	--	--	--	--
1992	--	--	--	--	--	--	--
1993	--	--	--	--	--	--	--
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	--
1996	--	45.8	--	--	45.8	--	45.8
1997	5	598.3	--	61.5	659.8	123.5	783.3
1998	7	660.3	--	23.9	684.2	89.4	773.6
1999	7	604.2	--	25.2	629.4	107.2	736.6
2000	11	818.8	--	31.2	850.0	200.1	1050.1
2001	9	756.4	--	94.3	850.7	211.1	1061.8
2002	9	591.3	--	53.7	645.0	275.4	920.4
2003	11	821.2	--	113.6	934.8	151.1	1085.9
2004	9	656.5	--	44.2	700.7	173.1	873.8
2005	8	584.0	--	107.4	691.4	303.3	994.7
2006	12	810.5	--	135.4	945.9	350.7	1296.6
2007	14	1001.8	--	204.4	1206.2	258.6	1464.8
2008	23	1496.6	--	135.9	1632.5	280.5	1913.0
2009	30	1676.0	--	33.8	1709.8	294.8	2004.6
2010	30	1691.3	--	18.9	1710.2	311.8	2022.0
2011	30	1680.4	--	9.6	1690.0	242.1	1932.1
2012	30	1676.0	--	61.4	1737.4	245.7	1983.1
2013	23	1401.6	--	13.9	1415.5	179.0	1594.5
2014	23	1308.5	--	17.1	1325.6	204.2	1529.8
2015	23	1307.3	--	23.8	1331.1	205.9	1537.0
2016	23	1317.7	--	13.4	1331.1	131.1	1462.2
2017	23	1365.5	--	27.1	1392.6	220.1	1612.7
2018	24	1471.9	--	18.5	1490.4	221.8	1712.2
2019	24	1414.1	--	18.1	1432.2	161.4	1593.6
Subtotal	408	25756.0	--	1286.3	27042.3	5241.7	32284.0

Funding totals include that received for Overseas Contingency Operations (OCO).

Cost Quantity Information**1506 | Procurement | Aircraft Procurement, Navy**

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2005 \$M
1989	--	--
1990	--	--
1991	--	--
1992	--	--
1993	--	--
1994	--	--
1995	--	--
1996	--	--
1997	5	644.1
1998	7	660.3
1999	7	604.2
2000	11	818.8
2001	9	756.4
2002	9	591.3
2003	11	821.2
2004	9	656.5
2005	8	584.0
2006	12	810.5
2007	14	1001.8
2008	23	1496.6
2009	30	1676.0
2010	30	1691.3
2011	30	1680.4
2012	30	1676.0
2013	23	1401.6
2014	23	1308.5
2015	23	1307.3
2016	23	1317.7
2017	23	1365.5
2018	24	1471.9
2019	24	1414.1
Subtotal	408	25756.0

Annual Funding TY\$

3010 | Procurement | Aircraft Procurement, Air Force

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
1999	--	--	--	--	--	21.9	21.9
2000	--	--	--	19.5	19.5	21.3	40.8
2001	--	--	--	26.7	26.7	22.5	49.2
2002	--	--	--	--	--	--	--
2003	--	9.8	--	--	9.8	79.1	88.9
2004	2	147.6	--	--	147.6	42.0	189.6
2005	3	209.1	--	7.2	216.3	113.9	330.2
2006	2	136.6	--	18.6	155.2	94.2	249.4
2007	3	219.6	--	9.3	228.9	156.2	385.1
2008	10	659.4	--	7.0	666.4	272.4	938.8
2009	6	352.5	--	16.4	368.9	103.4	472.3
2010	5	314.3	--	18.8	333.1	239.9	573.0
2011	5	324.1	--	6.9	331.0	184.3	515.3
2012	6	400.7	--	7.2	407.9	79.5	487.4
2013	4	270.3	--	3.9	274.2	116.8	391.0
2014	3	196.5	--	3.1	199.6	67.4	267.0
Subtotal	49	3240.5	--	144.6	3385.1	1614.8	4999.9

Annual Funding BY\$**3010 | Procurement | Aircraft Procurement, Air Force**

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1999	--	--	--	--	--	23.6	23.6
2000	--	--	--	20.7	20.7	22.6	43.3
2001	--	--	--	28.0	28.0	23.7	51.7
2002	--	--	--	--	--	--	--
2003	--	10.0	--	--	10.0	80.9	90.9
2004	2	147.0	--	--	147.0	41.8	188.8
2005	3	202.3	--	7.0	209.3	110.2	319.5
2006	2	128.8	--	17.5	146.3	88.8	235.1
2007	3	201.7	--	8.5	210.2	143.5	353.7
2008	10	596.7	--	6.3	603.0	246.5	849.5
2009	6	314.4	--	14.6	329.0	92.3	421.3
2010	5	276.2	--	16.5	292.7	210.8	503.5
2011	5	280.5	--	6.0	286.5	159.5	446.0
2012	6	341.2	--	6.1	347.3	67.8	415.1
2013	4	226.4	--	3.3	229.7	97.7	327.4
2014	3	161.8	--	2.6	164.4	55.5	219.9
Subtotal	49	2887.0	--	137.1	3024.1	1465.2	4489.3

Funding totals include that received for Overseas Contingency Operations (OCO).

Cost Quantity Information**3010 | Procurement | Aircraft Procurement, Air Force**

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2005 \$M
1999	--	--
2000	--	--
2001	--	--
2002	--	--
2003	--	--
2004	2	157.0
2005	3	202.3
2006	2	128.8
2007	3	201.7
2008	10	596.7
2009	6	314.4
2010	5	276.2
2011	5	280.5
2012	6	341.2
2013	4	226.4
2014	3	161.8
Subtotal	49	2887.0

Annual Funding TY\$

0300 | Procurement | Procurement, Defense-Wide

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
1999	--	--	--	--	--	4.0	4.0
2000	--	--	--	--	--	2.0	2.0
2001	--	--	--	--	--	6.8	6.8
2002	--	--	--	--	--	15.9	15.9
2003	--	5.0	--	--	5.0	36.9	41.9
2004	--	41.9	--	--	41.9	35.5	77.4
2005	--	54.5	--	0.2	54.7	58.6	113.3
2006	--	40.7	--	1.9	42.6	55.0	97.6
2007	--	113.9	--	--	113.9	79.9	193.8
2008	--	177.5	--	2.1	179.6	138.7	318.3
2009	--	89.9	--	6.7	96.6	30.0	126.6
2010	--	56.4	--	8.0	64.4	35.4	99.8
2011	--	65.8	--	9.4	75.2	46.6	121.8
2012	--	74.5	--	3.9	78.4	50.6	129.0
2013	--	63.7	--	3.3	67.0	48.7	115.7
2014	--	49.9	--	2.5	52.4	30.5	82.9
2015	--	--	--	--	--	5.0	5.0
Subtotal	--	833.7	--	38.0	871.7	680.1	1551.8

Annual Funding BY\$**0300 | Procurement | Procurement, Defense-Wide**

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
1999	--	--	--	--	--	4.3	4.3
2000	--	--	--	--	--	2.1	2.1
2001	--	--	--	--	--	7.2	7.2
2002	--	--	--	--	--	16.5	16.5
2003	--	5.1	--	--	5.1	37.6	42.7
2004	--	41.5	--	--	41.5	35.2	76.7
2005	--	52.5	--	0.2	52.7	56.5	109.2
2006	--	38.2	--	1.8	40.0	51.7	91.7
2007	--	104.9	--	--	104.9	73.5	178.4
2008	--	161.0	--	1.9	162.9	125.8	288.7
2009	--	80.6	--	6.0	86.6	26.9	113.5
2010	--	50.0	--	7.1	57.1	31.3	88.4
2011	--	57.4	--	8.2	65.6	40.7	106.3
2012	--	64.0	--	3.4	67.4	43.5	110.9
2013	--	53.8	--	2.8	56.6	41.2	97.8
2014	--	41.5	--	2.1	43.6	25.3	68.9
2015	--	--	--	--	--	4.1	4.1
Subtotal	--	750.5	--	33.5	784.0	623.4	1407.4

Quantities for the CV-22 are shown under appropriation 3010. In accordance with the approved program plan, the Air Force is funding the majority of the procurement cost for the CV-22. USSOCOM is funding delta costs above the baseline (MV-22) aircraft for Special Operations Forces (SOF) unique equipment.

Funding totals include that received for Overseas Contingency Operations (OCO).

Annual Funding TY\$
1205 | MILCON | Military Construction,
Navy and Marine Corps

Fiscal Year	Total Program TY \$M
2003	0.8
2004	10.9
2005	14.5
2006	22.4
2007	--
2008	--
2009	--
2010	7.2
2011	--
2012	12.0
2013	--
2014	6.1
Subtotal	73.9

Annual Funding BY\$
1205 | MILCON | Military Construction,
Navy and Marine Corps

Fiscal Year	Total Program BY 2005 \$M
2003	0.8
2004	10.8
2005	13.9
2006	21.0
2007	--
2008	--
2009	--
2010	6.3
2011	--
2012	10.2
2013	--
2014	5.0
Subtotal	68.0

Annual Funding TY\$
0500 | MILCON | Military Construction,
Defense-Wide

Fiscal Year	Total Program TY \$M
2000	0.2
2001	0.3
2002	8.5
2003	1.9
2004	--
2005	--
2006	1.8
2007	1.9
2008	0.7
2009	7.9
2010	11.6
2011	--
2012	--
2013	0.8
2014	8.8
Subtotal	44.4

Annual Funding BY\$
0500 | MILCON | Military Construction,
Defense-Wide

Fiscal Year	Total Program BY 2005 \$M
2000	0.2
2001	0.3
2002	8.8
2003	1.9
2004	--
2005	--
2006	1.7
2007	1.7
2008	0.6
2009	7.0
2010	10.2
2011	--
2012	--
2013	0.7
2014	7.2
Subtotal	40.3

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	4/25/1997	4/25/2002
Approved Quantity	25	58
Reference	ADM dated April 25, 1997	DAB review on April 25, 2002. USD approved APB which reflects restructured program.
Start Year	1997	1997
End Year	2001	2009

LRIP is more than 10% of the total program buy because of the Milestone (MS) III slip caused by the December 2000 mishap and the subsequent program restructure. MS III was achieved September 28, 2005.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

Unit Cost Report

	BY2005 \$M	BY2005 \$M	
Unit Cost	Current UCR Baseline (FEB 2008 APB)	Current Estimate (DEC 2010 SAR)	BY % Change

Program Acquisition Unit Cost (PAUC)

Cost	50250.4	50208.1	
Quantity	458	459	
Unit Cost	109.717	109.386	-0.30

Average Procurement Unit Cost (APUC)

Cost	38562.8	38180.7	
Quantity	456	457	
Unit Cost	84.568	83.546	-1.21

	BY2005 \$M	BY2005 \$M	
Unit Cost	Revised Original UCR Baseline (SEP 2005 APB)	Current Estimate (DEC 2010 SAR)	BY % Change

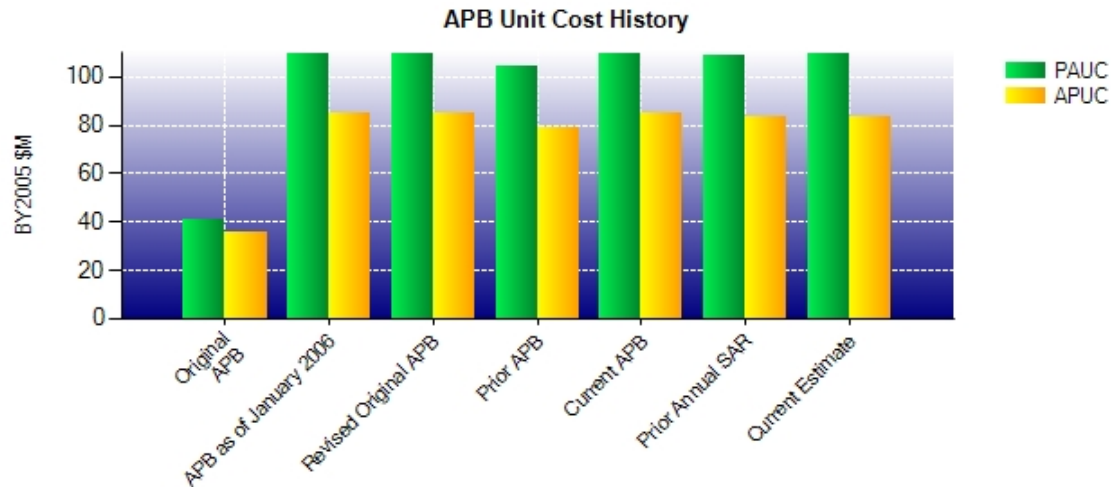
Program Acquisition Unit Cost (PAUC)

Cost	50250.4	50208.1	
Quantity	458	459	
Unit Cost	109.717	109.386	-0.30

Average Procurement Unit Cost (APUC)

Cost	38562.8	38180.7	
Quantity	456	457	
Unit Cost	84.568	83.546	-1.21

Unit Cost History



	Date	BY2005 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	FEB 1988	41.101	35.309	34.657	30.541
APB as of January 2006	SEP 2005	109.717	84.568	116.274	94.516
Revised Original APB	SEP 2005	109.717	84.568	116.274	94.516
Prior APB	JUN 2006	104.161	78.889	109.927	88.033
Current APB	FEB 2008	109.717	84.568	116.274	94.516
Prior Annual SAR	DEC 2009	109.040	83.667	115.500	93.630
Current Estimate	DEC 2010	109.386	83.546	116.068	93.596

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	
40.180	-12.793	50.391	-4.762	8.157	30.121	0.000	4.980	76.094	116.274

Current SAR Baseline to Current Estimate (TY \$M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
116.274	-1.600	-0.097	1.863	0.464	-1.875	0.000	1.039	-0.206	116.068

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	
36.641	-12.349	47.964	-4.862	5.134	16.986	0.000	5.002	57.875	94.516

Current SAR Baseline to Current Estimate (TY \$M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
94.516	-1.607	-0.050	1.871	0.467	-2.645	0.000	1.044	-0.920	93.596

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	DEC 1982	DEC 1982	DEC 1982	DEC 1982
Milestone II	MAY 1985	APR 1986	APR 1986	APR 1986
Milestone III	JUL 1989	N/A	OCT 2005	OCT 2005
IOC	DEC 1991	N/A	MAR 2007	JUN 2007
Total Cost (TY \$M)	24467.0	29662.3	53253.4	53275.4
Total Quantity	609	919	458	459
Prog. Acq. Unit Cost (PAUC)	40.176	32.277	116.274	116.068

Cost Variance

Cost Variance Summary

Summary Then Year \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	9891.7	43099.3	262.4	53253.4
Previous Changes				
Economic	+0.9	-695.5	-0.8	-695.4
Quantity	--	--	--	--
Schedule	--	+796.4	--	+796.4
Engineering	--	+213.2	--	+213.2
Estimating	+197.9	-979.9	-148.4	-930.4
Other	--	--	--	--
Support	--	+261.8	--	+261.8
Subtotal	+198.8	-404.0	-149.2	-354.4
Current Changes				
Economic	--	-38.8	--	-38.8
Quantity	--	+71.8	--	+71.8
Schedule	--	+58.6	--	+58.6
Engineering	--	--	--	--
Estimating	+293.2	-228.7	+5.1	+69.6
Other	--	--	--	--
Support	--	+215.2	--	+215.2
Subtotal	+293.2	+78.1	+5.1	+376.4
Total Changes	+492.0	-325.9	-144.1	+22.0
CE - Cost Variance	10383.7	42773.4	118.3	53275.4
CE - Cost & Funding	10383.7	42773.4	118.3	53275.4

Summary Base Year 2005 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	11446.5	38562.8	241.1	50250.4
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	+425.2	--	+425.2
Engineering	--	+157.1	--	+157.1
Estimating	+237.4	-1225.9	-136.8	-1125.3
Other	--	--	--	--
Support	--	+233.1	--	+233.1
Subtotal	+237.4	-410.5	-136.8	-309.9
Current Changes				
Economic	--	--	--	--
Quantity	--	+59.1	--	+59.1
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+235.2	-194.4	+4.0	+44.8
Other	--	--	--	--
Support	--	+163.7	--	+163.7
Subtotal	+235.2	+28.4	+4.0	+267.6
Total Changes	+472.6	-382.1	-132.8	-42.3
CE - Cost Variance	11919.1	38180.7	108.3	50208.1
CE - Cost & Funding	11919.1	38180.7	108.3	50208.1

Previous Estimate: December 2009

RDT&E	\$M	
	Base Year	Then Year
Current Change Explanations		
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
Increase due to instrumentation of test aircraft and associated sustainment cost (NAVY). (Estimating)	+67.4	+78.4
Decrease due to revised estimate for follow on test and evaluation (FOT&E) (NAVY). (Estimating)	-3.3	-4.0
Increase due to adding estimated cost beyond the Future Year Defense Program (FYDP) and Test Aircraft sustainment support (NAVY). (Estimating)	+169.4	+216.6
Increase due to revised estimate for completion of development schedule (DoD). (Estimating)	+0.1	+0.2
Increase due to revised estimate for follow on test and evaluation. (FOT&E) (AIR FORCE). (Estimating)	+1.8	+2.2
RDT&E Subtotal	+235.2	+293.2

Procurement	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	-38.8
Quantity variance resulting from an increase of 1 combat replacement aircraft from 48 to 49 (Air Force) (Quantity)	+59.1	+71.8
Revision to procurement buy profile to allocate aircraft to future years. Inflation and rate curve impacts due to removal of 1 aircraft a year from 2013 to 2017. Aircraft rephased to 2018 (NAVY). (Schedule)	0.0	+61.0
Allocation to Schedule resulting from increase in Aircraft buy profile in FY 2012 (Air Force). (Schedule)	0.0	-2.4
Adjustment for current and prior escalation. (Estimating)	+4.5	+4.7
Adjusted Cost Reduction Initiative savings to account for current actuals and future estimated savings (NAVY). (Estimating)	-210.9	-266.1
Variance due to Above Threshold Reprogramming for emerging requirement (DoD). (Estimating)	-12.0	-13.0
Overseas Contingency Operations funds to replace equipment lost in operations (DoD). (Estimating)	+9.8	+11.4
Additional Schedule Variance associated with the shifting out of the Annual Procurement profile and its Advance Procurement impacts. Rephased Procurement to realign quantities in 2017-2018 to 2017-2019. (Estimating)	+217.2	+289.1
Estimating methodology changes and inflation adjustments (NAVY). (Estimating)	-47.4	-68.7
Estimating methodology changes (Air Force). (Estimating)	-23.9	-27.8
Estimating methodology model changes (DoD). (Estimating)	+9.5	+10.7
Labor rate change (NAVY) (Estimating)	-99.7	-119.2
Decrease due to realignment of Government Furnished Equipment funds to another program for execution (NAVY). (Estimating)	-41.5	-49.8
Adjustment for current and prior escalation. (Support)	+0.9	+1.4
Increase in Other Support due to funding the Trainers and Support Equipment contained in the program of record as well as Program Office personnel (NAVY). (Support)	+240.0	+299.1
Decrease in Initial Spares due to refinement of cost estimate (NAVY). (Support)	-46.2	-52.5

Decrease in Other Support due to adjusted estimate for program support and realigned funds (Air Force). (Support)	-10.5	-9.6
Decrease in Initial Spares due to revised estimate requirement (Air Force). (Support)	-31.0	-36.6
Increase in Initial Spares due to revised estimate. (Support)	+7.5	+8.5
Increase in Other Support (Support Equipment) due to revised estimate requirement (Air Force). (Support)	+3.0	+4.9
Procurement Subtotal	+28.4	+78.1

MILCON	\$M	
Current Change Explanations	Base Year	Then Year
Increase due to revised estimate for completion of facilities (SOCOM). (Estimating)	+4.0	+5.1
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
Revised estimate. (Estimating)	+0.1	+0.1
MILCON Subtotal	+4.0	+5.1

Contracts

Appropriation: Procurement

Contract Name	FY08 FRP Lot 12 Airframe
Contractor	Bell-Boeing, JPO
Contractor Location	Amarillo, TX 79111
Contract Number, Type	N00019-07-C-0001/1, FPIF
Award Date	April 02, 2007
Definitization Date	March 28, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
84.9	N/A	26	2216.8	2350.1	33	2145.8	2166.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	+21.3	-20.4
Previous Cumulative Variances	+15.5	-30.3
Net Change	+5.8	+9.9

Cost And Schedule Variance Explanations

Favorable net change in Cost Variance is due to rate performance and material being received or issued at a cost less than budget.

Unfavorable net change in Schedule Variance is due to special test equipment and special tooling that are late to the baseline schedule. The remaining effort is for the supplemental Aircraft. No other cost or schedule impact is expected.

Contract Comments

The initial contract price reflects the value of advance procurement funded items only. The current contract price reflects the full airframe value.

Appropriation: Procurement

Contract Name	FY09 FRP Lot 13 Airframe
Contractor	Bell-Boeing, JPO
Contractor Location	Amarillo, TX 79111
Contract Number, Type	N00019-07-C-0001/2, FPIF
Award Date	March 28, 2008
Definitization Date	March 28, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
81.4	N/A	36	2205.3	2335.3	36	2151.5	2219.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	-1.5	-71.7
Previous Cumulative Variances	+4.5	-20.2
Net Change	-6.0	-51.5

Cost And Schedule Variance Explanations

Unfavorable net change in Cost Variance due to material not received or issued to the shop floor as planned.

Current unfavorable Cost Variance due to rate tooling.

Contract Comments

Initial contract price reflects the value of advance procurement funded items only. The current contract price reflects the full airframe value.

Increase in Initial Target Price is due to correction of error from previous SAR (2009).

Appropriation: Procurement

Contract Name	FY10 FRP Lot 14 Airframe
Contractor	Bell-Boeing, JPO
Contractor Location	Amarillo, TX 79111
Contract Number, Type	N00019-07-C-0001/3, FPIF
Award Date	March 28, 2008
Definitization Date	March 28, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
81.5	N/A	35	2110.9	2235.7	35	2092.6	2110.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	-3.8	-35.4
Previous Cumulative Variances	--	--
Net Change	-3.8	-35.4

Cost And Schedule Variance Explanations

Cumulative unfavorable Schedule Variance due to Aft Fuselage rework resulting from introducing new material adhesive and concurrent Block C start-up issues and associated rework .

Cumulative unfavorable Cost Variance due to material price for various parts being received at cost higher than budgeted.

Contract Comments

This is the first time this lot of this contract is being reported.

Initial contract price reflects the value of advance procurement funded items only. The current contract price reflects the full airframe value.

Appropriation: RDT&E

Contract Name **FY07 MV-22 Block C Increments II & III**
 Contractor Bell-Boeing JPO
 Contractor Location Amarillo, TX 79111
 Contract Number, Type N00019-07-C-0040, CPAF
 Award Date August 23, 2007
 Definitization Date August 30, 2007

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
49.3	N/A	N/A	79.0	N/A	N/A	76.2	79.3

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	+2.6	-1.1
Previous Cumulative Variances	+0.5	-6.5
Net Change	+2.1	+5.4

Cost And Schedule Variance Explanations

Favorable net change to Cost Variance is due to less LOE support being required than planned.

Contract Comments

Block C Increment 2 & 3 consists of ECS (Environmental Control System) and Weather Radar to update two unique configurations: the MV-22 for the United States Marine Corps (USMC) and the CV-22 for the United States Special Operations Command (USSOCOM).

The ECS effort is to design, develop, test and qualify a subfreezing air cycle system that replaces the existing air cycle system. The system includes changes mainly to improve and/or insulate the distribution system in the cabin and cockpit, improve duct forced air cooled avoidance equipment in the cabin overboard, provide dedicated cooling to the Medevac kit installation, and implement JASS changes to integrate new ECS controller.

The Weather Radar effort is to perform the necessary design, development, integration, documentation, qualification, characterization, and test to install the weather radar system into LOT 14 production MV-22 aircraft. The commercial off the shelf (COTS) weather radar and lightning detector system will be utilized to meet the contractual requirements: video interface, radome design and JASS development.

This contract is more than 90% complete. This is the last time this contract will be reported.

Appropriation: Procurement

Contract Name	V-22 AE 1107C Turboshaft Engine
Contractor	Rolls Royce
Contractor Location	Indianapolis, IN 46206-0420
Contract Number, Type	N00019-07-C-0060, FFP
Award Date	September 25, 2007
Definitization Date	September 25, 2007

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
84.1	N/A	41	850.2	N/A	399	850.2	850.2

Cost And Schedule Variance Explanations

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

Contract Comments

The engine contract provides for a base year and four option years for procurement of engines for production install and spares requirements through FY 2011, for both the MV and CV-22 weapons systems. This contract is a commercial Federal Acquisition Regulation Part 12 contract.

The initial contract price reflects the value of the base year award. The current contract price represents the sum of the base year award plus the sum of the first, second and third options.

Appropriation: RDT&E

Contract Name	CV-22 Block 20
Contractor	Bell-Boeing, JPO
Contractor Location	Amarillo, TX 79111
Contract Number, Type	N00019-08-C-0025, CPFF
Award Date	December 21, 2007
Definitization Date	December 21, 2007

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
8.5	N/A	N/A	165.3	N/A	N/A	143.4	158.9

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	+6.5	-3.5
Previous Cumulative Variances	+7.0	-3.2
Net Change	-0.5	-0.3

Cost And Schedule Variance Explanations

Unfavorable net change to Schedule Variance is due to Supplier tasks that are behind schedule on the Communication Co-Site Efforts.

Favorable net change to Cost Variance due to Development Test and Evaluation Efforts.

Contract Comments

The initial contract price reflects the value of Block 20 Increment I. The current contract price reflects the value of Block 20 Increment I & II.

Appropriation: Acq O&M

Contract Name	PBL Phase 1/1.5
Contractor	Bell-Boeing, JPO
Contractor Location	Amarillo, TX 79111
Contract Number, Type	N00019-09-D-0008, CPIF
Award Date	January 22, 2009
Definitization Date	January 22, 2009

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
581.4	N/A	N/A	581.4	N/A	N/A	581.4	581.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2011)	+0.4	-1.4
Previous Cumulative Variances	+9.5	-1.2
Net Change	-9.1	-0.2

Cost And Schedule Variance Explanations

The favorable net cost variance is due to less materials being used than planned, expenditure of less travel dollars than planned and lower relocation expenses than planned.

The unfavorable net schedule variance is due to staffing and resource issues due to unfilled vacancies. The contractor has since rectified the staffing shortages.

Contract Comments

The initial contract price reflects the cumulative total value of orders that can be placed for Integrated Logistics Support efforts only. The current contract price includes the addition of non-recurring work in support of reliability improvements to that cumulative value. Supply chain management efforts will be added to the contract price pending the outcome of ongoing negotiations.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	143	143	457	31.29%
Total Program Quantities Delivered	145	145	459	31.59%

Expenditures and Appropriations (TY \$M)			
Total Acquisition Cost	53275.4	Years Appropriated	30
Expenditures To Date	26856.3	Percent Years Appropriated	69.77%
Percent Expended	50.41%	Appropriated to Date	35069.1
Total Funding Years	43	Percent Appropriated	65.83%

Actual Production deliveries to date reflect deliveries through February 28, 2011.

Operating and Support Cost

Assumptions And Ground Rules

Ground Rules and Assumptions The following Ground Rules and Assumptions are based on the Milestone III Operating and Support costs estimate as of October 2005 combined with updates from the latest programmatic inputs where available:

	MV-22	HV-22	CV-22
Aircraft Service Life (hrs)	10,000hrs	10,000hrs	10,000hrs
Aircraft Attrition Rate	1%	1%	0.6%
Aircraft Pipeline Rate	5%	10%	8%
Total Aircraft Inventory (TAI)	360	48	50
Primary Authorized Aircraft (PAA)	299	37	46
Flight Hours per Month	35	35	36
Flight Hours per Year	420	420	432
Total Aircraft Operating Years	7467	1031	905

There is no antecedent for the V-22 program. The Average Annual Cost Per Aircraft represents total O&S costs minus Demilitarization costs of \$28.8 Million divided by total aircraft operating years.

Costs BY2005 \$M		
Cost Element	V-22 Average Annual Cost Per Aircraft	N/A
Unit-Level Manpower	1412.3	--
Unit Operations	333.2	--
Maintenance	4742.2	--
Sustaining Support	521.8	--
Continuing System Improvements	218.1	--
Indirect Support	747.8	--
Other	--	--
Total Unitized Cost (Base Year 2005 \$)	7975.4	--

Total O&S Costs \$M	V-22	N/A
Base Year	75022.5	--
Then Year	121543.7	--