Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-253

MQ-8 Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle Fire Scout (VTUAV)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Program Name

MQ-8 Vertical Takeoff and Landing Tactical Unmanned Aerial Vehicle Fire Scout (VTUAV)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned June 17, 2011

References

SAR Baseline (Production Estimate)

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated February 2, 2009

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated June 20, 2011

Mission and Description

The VTUAV program supports the Close Range Reconnaissance, Surveillance and Target Acquisition Capability Mission Need Statement, validated January 1990. Additionally, the performance attributes of the VTUAV support the Littoral Combat Ship, the Vertical Unmanned Air Vehicle (UAV), the Assured Maritime Access in the Littorals, the Joint Strike Enable and the Penetrating Intelligence, Surveillance, and Reconnaissance for Area Denial Threat Environments Initial Capabilities Documents.

A VTUAV system is composed of air vehicles, Electro Optic/Infrared/Laser Designator Range Finder payload (one per air vehicle), Ground Control Station (GCS), Tactical Control System software, Tactical Common Data Link, UAV Common Automatic Recovery System for automatic take-offs and landings, and associated spares and support equipment. The VTUAV launches and recovers vertically and can operate from all air capable ships as well as confined area land bases. Other characteristics include autonomous waypoint navigation with command override capability, a heavy fuel engine, and the ability to incorporate future mission packages. Each GCS will perform mission planning, air vehicle and mission payload control, receive incoming payload data and distribute the data to existing shipboard Command, Control, Communication, and Computer Information systems.

Executive Summary

The VTUAV MQ-8B is an Acquisition Category (ACAT) IC program. The program is supporting the Littoral Combat Ship (LCS) Surface Warfare, Mine Countermeasures, and Anti-Submarine Warfare Mission Packages. In addition, the MQ-8B continues early deployments aboard Guided Missile Frigates (FFG) in support of Africa Command (AFRICOM), and for the Intelligence, Surveillance, and Reconnaissance (ISR) Task Force in Afghanistan. This report is based on the VTUAV MQ-8B program of record as of December 31, 2012. The program will be restructured due to requirements clarification, transition of the MQ-8C Rapid Deployment Capabilities (RDC) to a program of record, and changes in the fiscal environment.

No Acquisition Program Baseline changes have occurred since the September 30, 2012, out-of-cycle SAR that was submitted due to schedule breaches for Operational Evaluation (OPEVAL), Initial Operational Capability, and Full-Rate Production. The program is being restructured in FY 2014 to address these delays. Information collected from the FFG and Afghanistan deployments show that the MQ-8B system is meeting the reliability and maintainability performance thresholds, which had previously caused the delays in OPEVAL.

In FY 2012 the VTUAV system was selected to meet an AFRICOM Joint Emergent Operational Needs Statement (JEONS) for a Sea-based maritime ISR system that can provide 24-hour orbits, and a Navy Central Command Urgent Operational Needs Statement (UONS) for a sea-based ISR Unmanned Air System with weapons and radar capability. The JEONS requirement will be met by the MQ-8C Endurance Upgrade RDC acquisition, with production quantities in FY 2012 through FY 2018. The Navy will transition the Endurance Upgrade capability to a program of record pending requirements refinement and approval of an Acquisition Strategy Review. The UONS requirements are being met with weapons and radar RDCs, which will transition to programs of record as appropriate. Funding associated with these RDCs and transitions are not part of the program of record and are not included in this SAR.

A total of up to 168 production and seven development air vehicles are planned to be procured for the VTUAV ACAT IC program in support of LCS. There are no funded aircraft procurements during the Future Years Defense Program for the current VTUAV program of record pending the program restructure.

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

Threshold Breaches

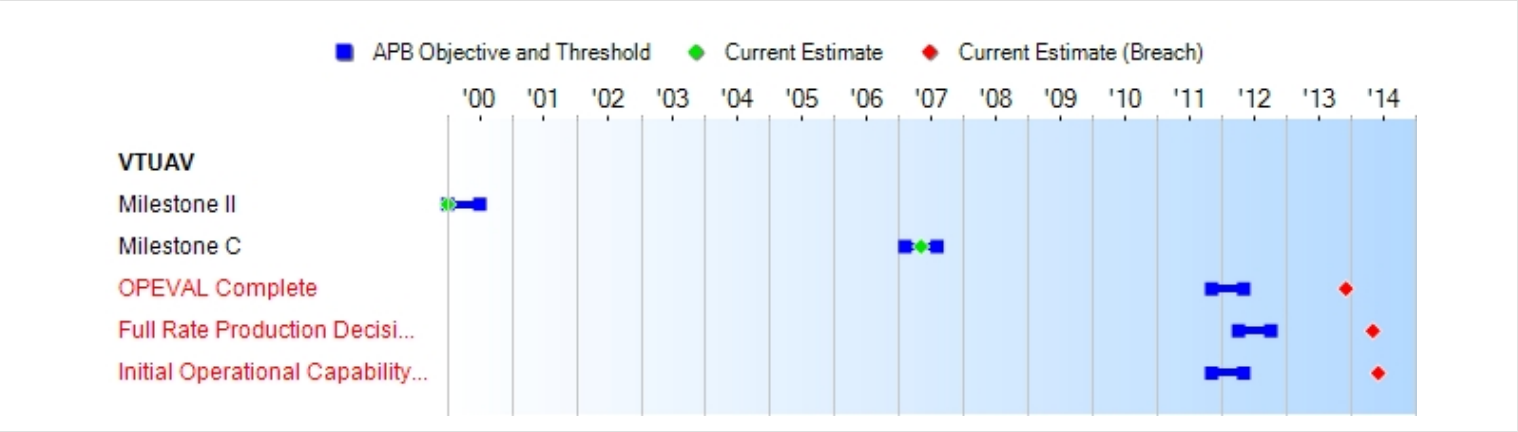
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

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

Explanation of Breach

This breach was previously reported in a September 30, 2012, Out-of-Cycle SAR.

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone II	JAN 2000	JAN 2000	JUL 2000	JAN 2000
Milestone C	FEB 2007	FEB 2007	AUG 2007	MAY 2007
OPEVAL Complete	SEP 2009	NOV 2011	MAY 2012	**DEC 2013**[1]
Full Rate Production Decision Review	NOV 2009	APR 2012	OCT 2012	**MAY 2014**[1]
Initial Operational Capability (IOC)	SEP 2009	NOV 2011	MAY 2012	**JUN 2014**[1]

[1] *APB Breach*

Acronyms And Abbreviations

OPEVAL - Operational Evaluation

Change Explanations

None

Memo

The current estimates are based on having an additional ship available and adequate VTUAV sparing to support Operational Testing during the required timeframe. The current estimate is also at risk because VTUAV sparing levels are being stressed by on-going deployments in Afghanistan and Africa.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Automatic Launch/Recovery (Ship Operations)					
Deck Pitch (degrees)	+/- 5	+/- 5	+/-3	+/-2 at seas; +/-5 land	+/-5
Deck Roll (degrees)	+/- 8	+/- 8	+/- 5	+/-5 at seas; +/-10 land	+/- 8
Target Identification					
Slant Range (km)	16	16	6	10	16
Operational Availability	>= 0.95	>= 0.95	>= 0.85	0.88	>= 0.85
Net-Ready	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric Military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1. 2) DISR mandated	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric Military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1. 2) DISR mandated	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric Military operations to include 1) ISR mandated GIG IT standards and profiles identified in the TV-1. 2) DISR mandated	The system has demonstra-ted all Net Ready Capabilities that have been implemented in the host FFG and LCS class ships.	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric Military operations to include 1) ISR mandated GIG IT standards and profiles identified in the TV-1. 2) DISR mandated

	GIG IPs identified in the KIP declaration table. 3) NCOW RW Enterprise Services. 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and issuance of an ATO by the DAA. 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architectural views.	GIG IPs identified in the KIP declaration table. 3) NCOW RW Enterprise Services. 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and issuance of an ATO by the DAA. 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architectural views.	GIG KIPs identified in the KIP declaration table. 3) NCOW RW Enterprise Services. 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and issuance of an IATO by the DAA. 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architectural views.		GIG KIPs identified in the KIP declaration table. 3) NCOW RW Enterprise Services. 4) IA requirements including availability, integrity, authentica-tion, confidential-ity, and issuance of an IATO by the DAA. 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architectural views.

Requirements Source: Capability Production Document (CPD) dated May 15, 2009

Acronyms And Abbreviations

ATO - Authority to Operate
DAA - Designated Approving Authority
DISR - Defense Information Standards Registry
FFG - Guided Missile Frigate
GIG - Global Information Grid
IA - Information Assurance
IATO - Interim Authority to Operate
IP - Information Protocol
ISR - Information Standards Registry
IT - Information Technology
KIP - Key Information Protocol
km - Kilometer
LCS - Littoral Combat Ship
NCOW RM - Net-Centric Operational Warfare Reference Model
TV - Technical View

Change Explanations

None

Track To Budget

RDT&E				
APPN 1319	BA 07	PE 0305204N	(Navy)	
	Project 2768	Tactical Unmanned Aerial Vehicles/VTUAV	(Shared)	(Sunk)
	PU2768, VTUAV			
APPN 1319	BA 07	PE 0305231N	(Navy)	
	Project 2768	MQ-8 UAV	(Shared)	(Sunk)
	PU2768, MQ-8 UAV			

In FY 2010, VTUAV was moved from Program Element (PE) 0305204N to PE 0305231N.

The Research, Development, Test and Evaluation (RDT&E) funding included in PE 00305231N in FY 2013, and a majority of the FY 2012 & FY 2014 funding is associated with the Endurance Upgrade Rapid Deployment Capability (RDC) and is not included in this SAR.

The RDT&E FY 2016 - FY 2018 funding is associated with the transition of the Endurance Upgrade capability to a Program of Record and is not included in this SAR.

Procurement				
APPN 1506	BA 04	PE 0305231N	(Navy)	
	ICN 044300	MQ-8 UAV	(Shared)	
APPN 1506	BA 04	PE 0305204N	(Navy)	
	ICN 044300	Vertical Take-off UAV (VTUAV)		(Sunk)
APPN 1506	BA 06	PE 0305231N	(Navy)	
	ICN 0605	MQ-8 UAV	(Shared)	

In FY 2010, VTUAV was moved from PE 0305204N to PE 0305231N.

The majority of the funding included in PE 00305231N in FY 2012 - FY 2018 is associated with the Endurance Upgrade RDC and is not included in this SAR.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2006 $M			BY2006 $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	541.1	617.1	678.8	612.4	530.3	614.4	609.4
Procurement	1522.4	1748.9	1923.8	1806.1	1821.5	2226.1	2547.4
Flyaway	1170.1	--	--	1279.1	1410.8	--	1815.2
Recurring	1136.9	--	--	1225.0	1372.0	--	1740.1
Non Recurring	33.2	--	--	54.1	38.8	--	75.1
Support	352.3	--	--	527.0	410.7	--	732.2
Other Support	183.6	--	--	466.8	217.2	--	663.9
Initial Spares	168.7	--	--	60.2	193.5	--	68.3
MILCON	119.6	0.0	--	0.0	126.0	0.0	0.0
Acq O&M	183.3	0.0	--	0.0	309.3	0.0	0.0
Total	2366.4	2366.0	N/A	2418.5	2787.1	2840.5	3156.8

Confidence Level for Current APB Cost 60% - The current estimate aims to provide sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule and programmatic risk, and external interference. It is consistent with average resource expenditures on historical efforts of similar size, scope, and complexity.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	9	7	7
Procurement	168	168	168
Total	177	175	175

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2014 President's Budget / December 2012 SAR (TY$ M)

Appropriation	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
RDT&E	609.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	609.4
Procurement	367.6	27.7	19.4	34.7	37.0	22.6	18.9	2019.5	2547.4
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 2014 Total	977.0	27.7	19.4	34.7	37.0	22.6	18.9	2019.5	3156.8
PB 2013 Total	992.7	21.7	25.5	77.9	150.1	106.2	142.5	1353.8	2870.4
Delta	-15.7	6.0	-6.1	-43.2	-113.1	-83.6	-123.6	665.7	286.4

Program funding and production quantities listed in this SAR are consistent with the FY 2014 President's Budget (PB). The FY 2014 PB did not reflect the enacted DoD appropriation for FY 2013, nor sequestration; it reflected the President's requested amounts for FY 2013.

Funding associated with Rapid Deployment Capabilities and Endurance Upgrade Capabilities are not part of the VTUAV Program Of Record and are not included in this SAR; therefore, the SAR does not match the budget exhibits for this Program Element.

Quantity	Undistributed	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
Development	7	0	0	0	0	0	0	0	0	7
Production	0	23	0	0	0	0	0	0	145	168
PB 2014 Total	7	23	0	0	0	0	0	0	145	175
PB 2013 Total	7	23	0	0	4	8	6	10	117	175
Delta	0	0	0	0	-4	-8	-6	-10	28	0

Cost and Funding

Annual Funding By Appropriation

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

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2000	--	--	--	--	--	--	34.8
2001	--	--	--	--	--	--	66.2
2002	--	--	--	--	--	--	47.8
2003	--	--	--	--	--	--	39.3
2004	--	--	--	--	--	--	36.0
2005	--	--	--	--	--	--	59.1
2006	--	--	--	--	--	--	93.2
2007	--	--	--	--	--	--	100.0
2008	--	--	--	--	--	--	62.8
2009	--	--	--	--	--	--	22.5
2010	--	--	--	--	--	--	25.5
2011	--	--	--	--	--	--	19.7
2012	--	--	--	--	--	--	2.5
Subtotal	**7**	**--**	**--**	**--**	**--**	**--**	**609.4**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2000	--	--	--	--	--	--	38.6
2001	--	--	--	--	--	--	72.4
2002	--	--	--	--	--	--	51.8
2003	--	--	--	--	--	--	42.0
2004	--	--	--	--	--	--	37.4
2005	--	--	--	--	--	--	59.8
2006	--	--	--	--	--	--	91.5
2007	--	--	--	--	--	--	95.8
2008	--	--	--	--	--	--	59.1
2009	--	--	--	--	--	--	20.9
2010	--	--	--	--	--	--	23.3
2011	--	--	--	--	--	--	17.6
2012	--	--	--	--	--	--	2.2
Subtotal	**7**	**--**	**--**	**--**	**--**	**--**	**612.4**

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
2007	3	32.2	--	3.9	36.1	11.5	47.6
2008	3	32.4	--	1.4	33.8	11.6	45.4
2009	3	31.6	--	3.2	34.8	22.3	57.1
2010	11	109.8	--	5.8	115.6	28.6	144.2
2011	3	31.3	--	1.3	32.6	14.6	47.2
2012	--	0.3	--	1.0	1.3	24.8	26.1
2013	--	11.8	--	--	11.8	15.9	27.7
2014	--	--	--	--	--	19.4	19.4
2015	--	15.0	--	--	15.0	19.7	34.7
2016	--	24.6	--	--	24.6	12.4	37.0
2017	--	10.8	--	--	10.8	11.8	22.6
2018	--	11.1	--	--	11.1	7.8	18.9
2019	7	79.0	--	3.6	82.6	42.8	125.4
2020	10	103.3	--	4.1	107.4	34.8	142.2
2021	10	97.9	--	4.0	101.9	35.2	137.1
2022	10	99.2	--	4.0	103.2	35.3	138.5
2023	10	92.1	--	3.8	95.9	36.1	132.0
2024	10	93.5	--	3.8	97.3	34.8	132.1
2025	11	102.1	--	4.1	106.2	35.6	141.8
2026	11	103.7	--	4.2	107.9	35.8	143.7
2027	11	105.3	--	4.3	109.6	38.6	148.2
2028	11	107.0	--	4.4	111.4	39.0	150.4
2029	11	108.8	--	4.4	113.2	40.0	153.2
2030	11	110.6	--	4.5	115.1	40.5	155.6
2031	11	112.4	--	4.6	117.0	41.4	158.4
2032	11	114.3	--	4.7	119.0	41.9	160.9
Subtotal	**168**	**1740.1**	**--**	**75.1**	**1815.2**	**732.2**	**2547.4**

Annual Funding BY$
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2007	3	30.4	--	3.7	34.1	10.9	45.0
2008	3	30.2	--	1.3	31.5	10.8	42.3
2009	3	29.0	--	2.9	31.9	20.5	52.4
2010	11	98.6	--	5.2	103.8	25.6	129.4
2011	3	27.4	--	1.1	28.5	12.9	41.4
2012	--	0.3	--	0.9	1.2	21.2	22.4
2013	--	10.0	--	--	10.0	13.4	23.4
2014	--	--	--	--	--	16.1	16.1
2015	--	12.2	--	--	12.2	16.0	28.2
2016	--	19.6	--	--	19.6	9.9	29.5
2017	--	8.5	--	--	8.5	9.2	17.7
2018	--	8.5	--	--	8.5	6.0	14.5
2019	7	59.5	--	2.7	62.2	32.3	94.5
2020	10	76.4	--	3.0	79.4	25.8	105.2
2021	10	71.0	--	2.9	73.9	25.6	99.5
2022	10	70.6	--	2.8	73.4	25.2	98.6
2023	10	64.4	--	2.7	67.1	25.2	92.3
2024	10	64.1	--	2.6	66.7	23.9	90.6
2025	11	68.7	--	2.8	71.5	23.9	95.4
2026	11	68.5	--	2.8	71.3	23.6	94.9
2027	11	68.3	--	2.8	71.1	25.0	96.1
2028	11	68.1	--	2.8	70.9	24.8	95.7
2029	11	67.9	--	2.7	70.6	25.0	95.6
2030	11	67.8	--	2.8	70.6	24.7	95.3
2031	11	67.6	--	2.8	70.4	24.8	95.2
2032	11	67.4	--	2.8	70.2	24.7	94.9
Subtotal	**168**	**1225.0**	**--**	**54.1**	**1279.1**	**527.0**	**1806.1**

This note is related to the Cost Quantity Information Table: The procurement funding in FY 2012 - FY 2018 is

associated with the purchase of Ground Control Stations, ship's ancillary equipment, and spares required to support ship installations and deployments in those years. It is accounted for with the aircraft quantity in FY 2019 - FY 2022, although other aircraft may be used to support those ships.

Cost Quantity Information
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2006 $M
2007	3	30.4
2008	3	30.2
2009	3	29.0
2010	11	98.6
2011	3	27.4
2012	--	--
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	7	75.4
2020	10	92.3
2021	10	86.9
2022	10	82.0
2023	10	64.4
2024	10	64.1
2025	11	68.7
2026	11	68.5
2027	11	68.3
2028	11	68.1
2029	11	67.9
2030	11	67.8
2031	11	67.6
2032	11	67.4
Subtotal	**168**	**1225.0**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	5/29/2007	7/22/2010
Approved Quantity	4	23
Reference	Milestone C ADM	Congressional Emergency Supplemental Appropriation HR-4899
Start Year	2007	2007
End Year	2007	2012

The Current Total LRIP Quantity is more than 10% of the total production quantity due to August 4, 2010, Congressional Emergency Supplemental Appropriation HR-4899 which funded Overseas Contingency Operations to convert eight Army airframes bought under the Army's Future Combat System program into Navy Fire Scouts.

The Initial Milestone C Acquisition Decision Memorandum approved the program to purchase up to four aircraft, and to buy-to-budget. This guidance resulted in a purchase of three aircraft.

An LRIP decision on September 30, 2008 authorized purchase of three aircraft for LRIP 2 and three aircraft for LRIP 3.

An LRIP decision on July 22, 2010, authorized purchase of five aircraft for LRIP 4 and three aircraft for LRIP 5. Only three new aircraft were purchased under LRIP 4.

Foreign Military Sales

None

Nuclear Cost

None

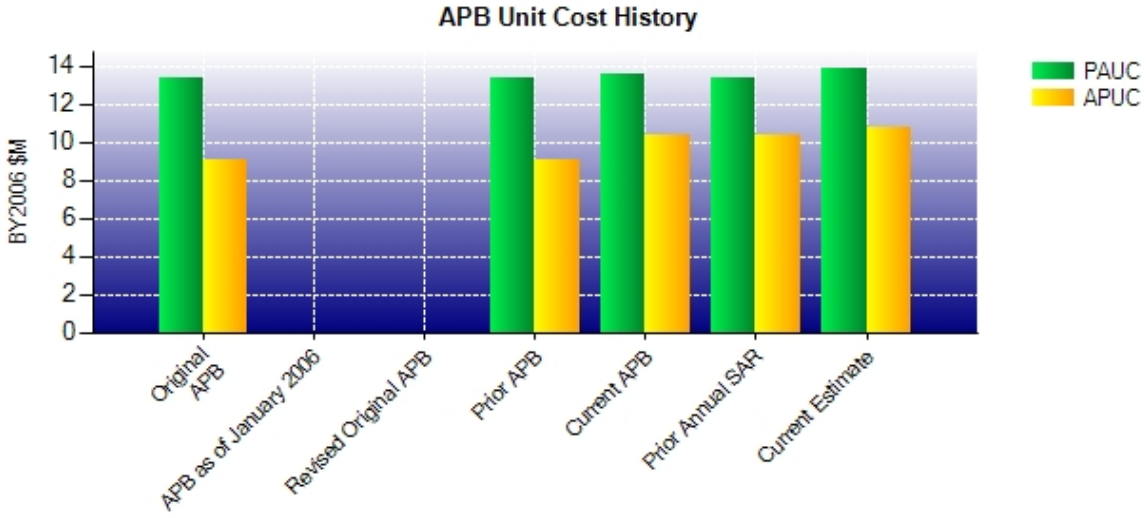
Unit Cost

Unit Cost Report

	BY2006 $M	BY2006 $M	
Unit Cost	**Current UCR Baseline (JUN 2011 APB)**	**Current Estimate (DEC 2012 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2366.0	2418.5	
Quantity	175	175	
Unit Cost	13.520	13.820	+2.22
Average Procurement Unit Cost (APUC)			
Cost	1748.9	1806.1	
Quantity	168	168	
Unit Cost	10.410	10.751	+3.28

	BY2006 $M	BY2006 $M	
Unit Cost	**Original UCR Baseline (DEC 2006 APB)**	**Current Estimate (DEC 2012 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2366.4	2418.5	
Quantity	177	175	
Unit Cost	13.369	13.820	+3.37
Average Procurement Unit Cost (APUC)			
Cost	1522.4	1806.1	
Quantity	168	168	
Unit Cost	9.062	10.751	+18.64

Unit Cost History



		BY2006 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	DEC 2006	13.369	9.062	15.746	10.842
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	FEB 2009	13.369	9.062	15.746	10.842
Current APB	JUN 2011	13.520	10.410	16.231	13.251
Prior Annual SAR	DEC 2011	13.411	10.324	16.402	13.458
Current Estimate	DEC 2012	13.820	10.751	18.039	15.163

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	
15.746	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.746

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
15.746	0.135	0.000	1.577	0.000	-1.397	0.000	1.978	2.293	18.039

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	
10.842	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.842

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
10.842	0.145	0.000	1.643	0.000	0.662	0.000	1.871	4.321	15.163

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	JAN 2000	JAN 2000	JAN 2000
Milestone C	N/A	FEB 2007	FEB 2007	MAY 2007
IOC	N/A	N/A	SEP 2009	JUN 2014
Total Cost (TY $M)	N/A	2787.1	2787.1	3156.8
Total Quantity	N/A	177	177	175
Prog. Acq. Unit Cost (PAUC)	N/A	15.746	15.746	18.039

Cost Variance

Summary Then Year $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Prod Est)	530.3	1821.5	126.0	309.3	2787.1
Previous Changes					
Economic	-0.7	-13.3	--	--	-14.0
Quantity	--	--	--	--	--
Schedule	--	+174.9	--	--	+174.9
Engineering	--	--	--	--	--
Estimating	+79.8	+180.5	-126.0	-309.3	-175.0
Other	--	--	--	--	--
Support	--	+97.5	--	--	+97.5
Subtotal	+79.1	+439.6	-126.0	-309.3	+83.4
Current Changes					
Economic	+0.1	+37.6	--	--	+37.7
Quantity	--	--	--	--	--
Schedule	--	+101.1	--	--	+101.1
Engineering	--	--	--	--	--
Estimating	-0.1	-69.3	--	--	-69.4
Other	--	--	--	--	--
Support	--	+216.9	--	--	+216.9
Subtotal	--	+286.3	--	--	+286.3
Total Changes	+79.1	+725.9	-126.0	-309.3	+369.7
CE - Cost Variance	609.4	2547.4	--	--	3156.8
CE - Cost & Funding	609.4	2547.4	--	--	3156.8

Summary Base Year 2006 $M					
	RDT&E	Proc	MILCON	Acq O&M	Total
SAR Baseline (Prod Est)	541.1	1522.4	119.6	183.3	2366.4
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	-2.5	--	--	-2.5
Engineering	+0.2	--	--	--	+0.2
Estimating	+71.2	+160.9	-119.6	-183.3	-70.8
Other	--	--	--	--	--
Support	--	+48.1	--	--	+48.1
Subtotal	+71.4	+206.5	-119.6	-183.3	-25.0
Current Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	-0.1	-49.4	--	--	-49.5
Other	--	--	--	--	--
Support	--	+126.6	--	--	+126.6
Subtotal	-0.1	+77.2	--	--	+77.1
Total Changes	+71.3	+283.7	-119.6	-183.3	+52.1
CE - Cost Variance	612.4	1806.1	--	--	2418.5
CE - Cost & Funding	612.4	1806.1	--	--	2418.5

Previous Estimate: September 2012

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.1
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
RDT&E Subtotal	-0.1	0.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+37.6
Adjustment to correct the calculated estimate for the schedule impact on the Material Cost and Ground Control Station procurement profile changes. (Estimating)	-26.3	-35.1
Adjustment for current and prior escalation. (Estimating)	-0.3	-0.5
Increase due to the stretch out of the air vehicle procurement buy profile from FY 2012 - FY 2017 to FY 2019 - FY 2032. (Schedule)	0.0	+101.1
Revised estimate to reflect the appliation of new inflation indices (Estimating)	-22.8	-33.7
Adjustment for current and prior escalation. (Support)	-0.6	-0.5
Increase in Other Support due to updated estimates for engineering support, publication and technical data support, and integrated logistics support. (Support)	+229.1	+354.3
Decrease in Initial Spares due to realignment of sparing requirements to the Aviation Outfitting Account. (Support)	-101.9	-136.9
Procurement Subtotal	+77.2	+286.3

Contracts

Appropriation: Procurement	
Contract Name	**LRIP**
Contractor	Northrop Grumman Corporation
Contractor Location	San Diego, CA 92150-9066
Contract Number, Type	N00019-07-C-0041, FFP
Award Date	June 21, 2007
Definitization Date	April 24, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
40.3	N/A	3	213.7	N/A	23	213.7	213.7

Cost And Schedule Variance Explanations

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

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the additional Contract Line Item Numbers (CLIN) added to the contract for the additional Low Rate Initial Production buys authorized by various Acquisition Decision Memoranda from FY 2008 - FY 2010. This resulted in the addition of 20 aircraft to the total contract quantity.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	7	7	7	100.00%
Production	17	17	168	10.12%
Total Program Quantities Delivered	24	24	175	13.71%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	3156.8	Years Appropriated	14
Expenditures To Date	938.1	Percent Years Appropriated	42.42%
Percent Expended	29.72%	Appropriated to Date	1004.7
Total Funding Years	33	Percent Appropriated	31.83%

The above data is current as of 3/25/2013.

Total expenditures reported in the last two reports incorrectly included expenditures related to the MQ-8C, Weapons, and Radar Rapid Deployment Capabilities. The input this year correctly reports the expenditures associated with the Acquisition Category IC program exclusively.

Operating and Support Cost

VTUAV

Assumptions and Ground Rules

Cost Estimate Reference:

The Operating and Support (O&S) costs are based on the most current Program Life Cycle Cost Estimate from January 2011 and will be updated during the program restructure in the first quarter of FY 2014. All costs are estimated in Base Year (BY) 2006.

Sustainment Strategy:

The VTUAV Sustainment strategy supports 168 aircraft and 55 ship-based ground control segments. The strategy includes a mixture of both Organic and Contractor Organizational to Depot sustainment support. Upon further Business Case Analyses the anticipated mix of sustainment is to optimize Organic and Contractor solutions. The air vehicle has a design life, which minimizes the air vehicle Total Ownership Costs over 6,000 flight hours and 20 years. The VTUAV system will be operated and maintained from FY 2010 – FY 2035, with an Initial Operational Capability of FY 2014. This estimate includes attrition of 7.09 aircraft for every 100,000 flight hours. The system is expected to meet that attrition rate after the system has accumulated 100,000 flight hours. The current estimate is based upon 1,624 total operational aircraft years.

Antecedent Information:

There is no antecedent for this system.

Unitized O&S Costs BY2006 $K		
Cost Element	**VTUAV Average Annual Cost per Air Vehicle**	**No Antecedent (Antecedent) N/A**
Unit-Level Manpower	348.0	0.0
Unit Operations	32.0	0.0
Maintenance	1326.0	0.0
Sustaining Support	198.0	0.0
Continuing System Improvements	158.0	0.0
Indirect Support	175.0	0.0
Other	0.0	0.0
Total	2237.0	--

Unitized Cost Comments:

The Average Annual Cost per Air Vehicle of $2.273 million (M) is calculated by dividing Total O&S cost of $3,631.4M by the total number of operational aircraft years of 1,624.

	Total O&S Cost $M			
	Current Production APB Objective/Threshold		Current Estimate	
	VTUAV		VTUAV	No Antecedent (Antecedent)
Base Year	3307.0	3637.7	3631.4	N/A
Then Year	5131.3	N/A	5537.3	N/A

Total O&S Costs Comments:

As defined by the Cost Assessment and Program Evaluation Department O&S Cost Estimating Guide of October 2007, Total O&S Costs for the VTUAV represents the program office's current estimate for 168 procured aircraft with a Primary Aircraft Authorized of 114 over the estimate duration of FY 2010 - FY 2035. This estimate includes attrition of 7.09 aircraft for every 100,000 flight hours. The system is expected to meet that attrition rate after the system has accumulated 100,000 flight hours.

Disposal Costs

The VTUAV disposal costs are estimated to be $21.1M (BY06$).