Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-334

P-8A

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

P-8A POSEIDON (P-8A)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned June 26, 2008

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Progam Baseline (APB) dated October 22, 2010.

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated October 22, 2010

Mission and Description

The P-8A Poseidon, formerly known as the Multi-mission Maritime Aircraft (MMA), is based on the 737-800 ERX developed by The Boeing Company. The management of the contracted effort is located at The Boeing Company in Seattle, Washington. The system requirements are based on the P-8A Capability Production Document (CPD) #791-88-09, validated and approved on June 22, 2009. P-8A is the replacement system for the P-3C, Orion. The P-8A system will sustain and improve the armed maritime and littoral Intelligence, Surveillance, and Reconnaissance (ISR) capabilities for U.S. Naval forces in traditional, joint and combined roles to counter changing and emerging threats. The P-8A program is structured on an evolutionary systems replacement approach that aligns the processes employed for requirements definition, acquisition strategy, and system development into a dynamic and flexible means to attain the strategic vision for tomorrow's Naval forces. The P-8A is part of the Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FoS) that also includes the MQ-4C Unmanned Aircraft System (UAS) Broad Area Maritime Surveillance (BAMS), the EP-3, and the Tactical Operations Center (TOC). The primary roles of P-8A are persistent Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASUW). The program will deliver the first increment of capability to the users in the quickest and most cost efficient manner.

Executive Summary

The P-8A System Development & Demonstration (SDD) phase is well into the execution of the flight test program and supporting the fleet transition from the P-3C to P-8A and is on-track to achieve Initial Operational Capability (IOC) in 2013. The P-8A program was selected by Aviation Week as the winner of the 2011 Aviation Week Program Excellence Award in the Research & Development (R&D)/SDD category.

A re-plan of Integrated Test and Evaluation (IT&E) was completed in December 2010 as a result of test execution inefficiencies. Additionally, extensive corrective actions have been implemented this past year, resulting in improved IT&E execution. Although these corrective actions have improved the efficiency of IT&E execution, the program has adjusted the start of Initial Operational Test and Evaluation (IOT&E) from April 2012 to August 2012, retaining two months of margin to the Acquisition Program Baseline (APB) threshold. Specific IT&E achievements include:

- Completed static testing for P-8A and the Advanced Airborne Sensor (AAS) program using the S-1 test aircraft.
- T-1, the fully instrumented airworthiness flight test aircraft, conducted light-weight torpedo (MK-54) captive carriage load flight tests and continues flying qualities, air data, and noise and vibration testing.
- T-2, the initial mission system test platform, executed acoustics testing, communications testing, satellite communications testing, tactical air navigation systems testing, Link-11 testing, radar testing, On-Board Inert Gas Generation System testing, and Identification Friend or Foe testing and conducted localization and tracking test procedures against a cooperative United States submarine off the Atlantic coast.
- T-3, the program safe separation platform, successfully released sonobuoys, flares, and countermeasures. Testing also included weapons delivery accuracy, weapons integration, radar, electro-optical/infrared, electronic support measures, low speed drag, high speed performance, and verified first safe separation test of MK-54 torpedo from a P-8A aircraft.
- T-4, the first of three SDD Stage II production representative aircraft, conducted localization and tracking of an uncooperative submarine target in a fleet exercise.
- T-5 was accepted by the government (DD-250) and arrived on November 3, 2011 at Naval Air Station (NAS) Patuxent River.
- T-6 was accepted by the Government and arrived on January 17, 2012 at NAS Patuxtent River. This aircraft successfully supported P-8A's first participation in an exercise conducted with surface/subsurface fleet forces and P-3C Patrol Squadron assets on February 3-4, 2012. This exercise also served as preparation for the scheduled Operational Test exercise events to begin in the third quarter of FY 2012.
- IT&E conducted 269 test flights, cleared 4,490 test points, and flew 1,162 hours.

The production of P-8A aircraft initiated with the award of the Advance Procurement (AP) contract in April 2009 and the first Low Rate Initial Production (LRIP) lot in January 2011. The six LRIP I aircraft are on schedule for delivery to the fleet this year. Other production accomplishments include:

- LRIP III AP contract awarded September 8, 2011.
- LRIP II contract for seven aircraft awarded November 3, 2011.

Boeing delivered the P-8A LRIP I Training Systems devices to the Navy in December 2011. These devices included one Operational Flight Trainer (OFT) and Weapons Tactics Trainer (WTT), courseware, and the first lot of spares. The systems are now in use by the Fleet Replacement Squadron (FRS) to train the trainers in support of the first P-3C to P-8A squadron transition scheduled to commence July 2012.

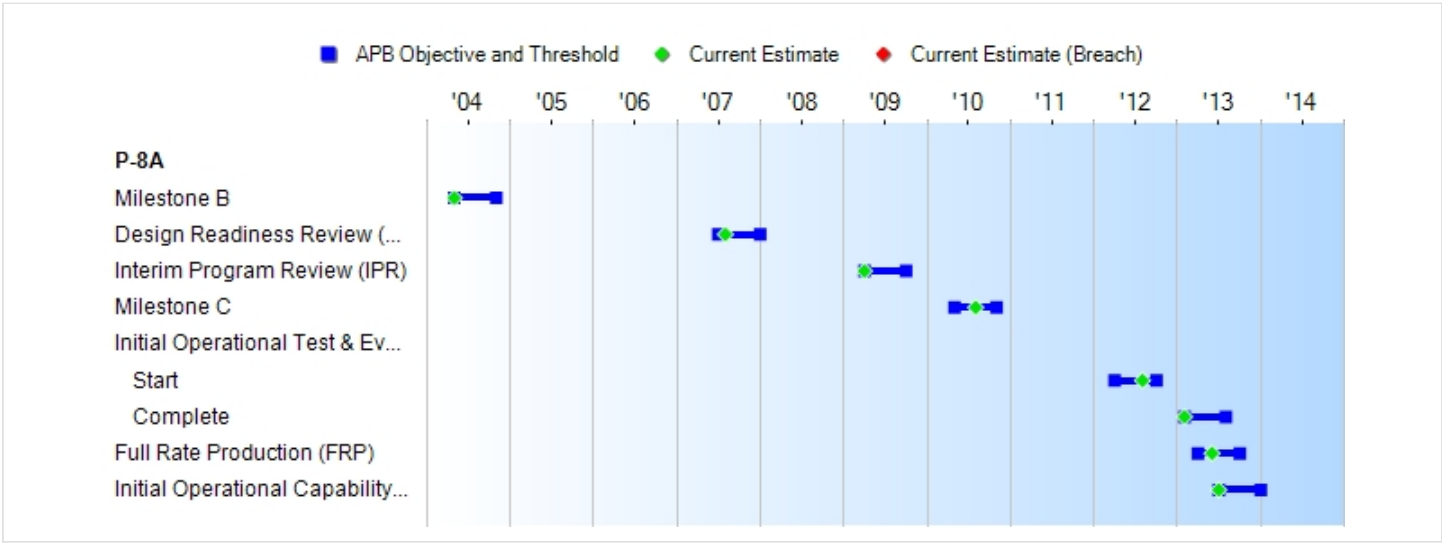
There are no significant software-related issues with this program at this time.

Threshold Breaches

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

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

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	
Milestone B	MAY 2004	MAY 2004	NOV 2004	MAY 2004	
Design Readiness Review (DRR)	JUL 2007	JUL 2007	JAN 2008	AUG 2007	
Interim Program Review (IPR)	APR 2009	APR 2009	OCT 2009	APR 2009	
Milestone C	MAY 2010	MAY 2010	NOV 2010	AUG 2010	
Initial Operational Test & Evaluation (IOT&E)					
Start	APR 2012	APR 2012	OCT 2012	AUG 2012	(Ch-1)
Complete	FEB 2013	FEB 2013	AUG 2013	FEB 2013	
Full Rate Production (FRP)	APR 2013	APR 2013	OCT 2013	JUN 2013	(Ch-2)
Initial Operational Capability (IOC)	JUL 2013	JUL 2013	JAN 2014	JUL 2013	

Change Explanations

(Ch-1) The current estimate for Initial Operational Test and Evaluation (IOT&E) start has changed from April 2012 to August 2012 due to Test and Evaluation execution inefficiencies.

(Ch-2) The current estimate for Full Rate Production (FRP) has changed from April 2013 to June 2013. This change is the result of delaying the start of Live Fire Test and Evaluation (LFT&E) by two months to ensure adequate test asset support of Advanced Airborne Sensor (AAS) static testing.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate	
Mission Radius/Endurance Subsurface attack (nm)	>=1,600/>=4	>=1,600/>=4	1,200/4	TBD	1,250	
Mixed Stores Loadout (ASW)(lbs)	12,500	12,500	10,000	TBD	22,000	
Initial On-station Altitude (ft)	49,000	49,000	25,000	39,000	39,000	(Ch-1)
Operational Availability (ASW)	.8	.8	.8	TBD	.8 at IOC plus 2 years	
Force Protection (%)	100	100	100	TBD	100	
Net-Ready	Fully support execution of joint operational activities	Fully support execution of joint operational activities	Fully support execution of joint critical operational activities	Fully support execution of joint operational activities	Fully support execution of joint operational activities	

Requirements Source: Joint Requirements Oversight Council Memorandum 111-09 dated June 22, 2009 approved the P-8A Multi-mission Maritime Aircraft Increment 1 Capabilities Production Document (Serial # 791-88-09). In the Milestone C Acquisition Decision Memorandum, the USD(AT&L) authorized the following capabilities to be acquired as Engineering Change Proposals (ECPs) within the baseline program: Automatic Identification System, Multi-static Active Coherent, High Altitude Anti-Submarine Warfare (ASW) Weapon Capability and Sensors, Aircraft Rapid Capability Insertion (ARCI) Acoustics Algorithms, and Tactical Operations Center updates. These ECPs provide additional capabilities beyond the P-8A Increment 1 capability and will be incorporated in-line with production or via retrofit, subsequent to the program's Full Rate Production decision.

Acronyms And Abbreviations

% - Percentage
ASW - Anti-Submarine Warfare
ft - Feet
IOC - Initial Operational Capability
IT&E - Integrated Test and Evaluation
lbs - Pounds
nm - Nautical miles
TBD - To be determined

Change Explanations

(Ch-1) The current estimate has changed from 36,000 to 39,000 as a result of Integrated Test and Evaluation (IT&E) actual performance achievements.

Memo

The Net-Ready Demonstrated Performance has changed from TBD to fully support execution of joint operational activities as a result of Integrated Test and Evaluation (IT&E) actual performance achievements.

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

Track To Budget

General Memo

The Research, Development, Test and Evaluation (RDT&E) cost parameters include the costs associated with Project Unit 2696 (Increment 1 System Development and Demonstration (SDD)) and Project Unit 3181 (Increment 2 next Phase of Capabilities (previously called Spiral One)). Project Unit 3181 capabilities will be integrated into the P-8A through Engineering Change Proposals (ECPs) as approved in the Milestone C (MS C) Acquisition Decision Memorandum (ADM) dated August 27, 2010. These ECPs are: Automatic Identification System, Multi-static Active Coherent, High Altitude Anti-submarine Warfare (ASW) Weapon Capability and Sensors, Aircraft Rapid Capability Insertion (ARCI) Acoustics Algorithms, and Tactical Operations Center updates. Project Unit 3218 (P-8A Increment 3 (previously called Spiral Two)) was not included in the Acquisition Program Baseline cost parameters established at Milestone C and are excluded from the funding reported in this SAR.

RDT&E

APPN 1319	BA 05	PE 0605500N	(Navy)
	Project 2696	P-8A Multi-mission Maritime Aircraft SDD	
	Project 3181	P-8A Spiral One Development	
	P-8A Multi-mission Maritime Aircraft Increment 2 (formerly Spiral 1)		

Procurement

APPN 1506	BA 01	PE 0204251N	(Navy)
	ICN 019300	P-8A Poseidon	
APPN 1506	BA 06	PE 0204251N	(Navy)
	ICN 060500	Spares and Repair Parts	

MILCON

APPN 1205	BA 01	PE 0212176N	(Navy)
	Project 659	P-8 Training and Parking Apron Expansion	
	Naval Air Station Jacksonville Integrated Training Center		
APPN 1205	BA 01	PE 0703676N	(Navy)
	Project 630	P-8/MMA Facilities Modification	
	Naval Air Station Jacksonville (Facilities Modifications)		
	Project 654	P-8A Hangar Upgrades	
	Naval Air Station Jacksonville		

APPN 1205	BA 01	PE 0712876N	(Navy)
	Project 049	P-8A Hangar & Training Facility Phase 1	
	Joint Base Pearl Harbor Hickam		
	Project 067	P-8A Hangar & Training Facility Phase 2	
	Joint Base Pearl Harbor Hickam		
	Project 655	P-8A Hangar & Training Facility	
	Naval Air Station Sigonella		
	Project 955	P-8A Hangar & Training Facility	
	Naval Support Activity Bahrain		
APPN 1205	BA 01	PE 0805376N	(Navy)
	Project 146	MMA Test Facilities, Renovation & Modn	
	Multi-mission Maritime Hangar Test Facility Modifications Naval Air Station Patuxent River		
	Project 147	MMA Technical Supt Facs, Pax River MD	
	Multi-mission Maritime Hangar Test Facility Build Naval Air Station Patuxent River		
APPN 1205	BA 01	PE 0805976N	(Navy)
	Project 623	MMA Simulator Training Building	
	Naval Air Station Jacksonville (Build of Integrated Training Center)		
APPN 1205	BA 01	PE 0815976N	(Navy)
	Project 624	P-8A Training Facility	
	Naval Air Station Jacksonville		

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2010 $M			BY2010 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	8019.1	8019.1	8821.0	8080.7	7951.7	7951.7	8063.2
Procurement	23519.1	23519.1	25871.0	23242.7	25654.7	25654.7	25814.9
Flyaway	19403.5	--	--	19736.6	21213.3	--	21940.7
Recurring	19128.2	--	--	19408.9	20917.2	--	21575.4
Non Recurring	275.3	--	--	327.7	296.1	--	365.3
Support	4115.6	--	--	3506.1	4441.4	--	3874.2
Other Support	3435.4	--	--	3139.0	3723.2	--	3484.7
Initial Spares	680.2	--	--	367.1	718.2	--	389.5
MILCON	807.7	807.7	888.5	497.9	894.3	894.3	552.5
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	32345.9	32345.9	N/A	31821.3	34500.7	34500.7	34430.6

Confidence Level For the Current APB Cost 50% -

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

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	5	5	5
Procurement	117	117	117
Total	122	122	122

Cost and Funding

Funding Summary

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

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	6635.7	604.5	399.8	191.3	170.4	50.7	10.8	0.0	8063.2
Procurement	3917.4	2316.0	2837.1	3702.5	4276.8	3872.2	2516.2	2376.7	25814.9
MILCON	76.1	32.1	0.0	111.3	263.7	69.3	0.0	0.0	552.5
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2013 Total	10629.2	2952.6	3236.9	4005.1	4710.9	3992.2	2527.0	2376.7	34430.6
PB 2012 Total	10820.6	3010.4	3184.4	3993.7	5041.8	5808.7	2340.9	0.0	34200.5
Delta	-191.4	-57.8	52.5	11.4	-330.9	-1816.5	186.1	2376.7	230.1

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	5	0	0	0	0	0	0	0	0	5
Production	0	13	11	13	17	20	20	13	10	117
PB 2013 Total	5	13	11	13	17	20	20	13	10	122
PB 2012 Total	5	13	11	13	17	21	30	12	0	122
Delta	0	0	0	0	0	-1	-10	1	10	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
2002	--	--	--	--	--	--	37.0
2003	--	--	--	--	--	--	65.3
2004	--	--	--	--	--	--	66.3
2005	--	--	--	--	--	--	470.9
2006	--	--	--	--	--	--	927.0
2007	--	--	--	--	--	--	1100.0
2008	--	--	--	--	--	--	860.2
2009	--	--	--	--	--	--	1089.7
2010	--	--	--	--	--	--	1125.7
2011	--	--	--	--	--	--	893.6
2012	--	--	--	--	--	--	604.5
2013	--	--	--	--	--	--	399.8
2014	--	--	--	--	--	--	191.3
2015	--	--	--	--	--	--	170.4
2016	--	--	--	--	--	--	50.7
2017	--	--	--	--	--	--	10.8
Subtotal	**5**	**--**	**--**	**--**	**--**	**--**	**8063.2**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2002	--	--	--	--	--	--	43.1
2003	--	--	--	--	--	--	75.0
2004	--	--	--	--	--	--	74.1
2005	--	--	--	--	--	--	512.8
2006	--	--	--	--	--	--	979.0
2007	--	--	--	--	--	--	1134.0
2008	--	--	--	--	--	--	870.9
2009	--	--	--	--	--	--	1089.2
2010	--	--	--	--	--	--	1108.4
2011	--	--	--	--	--	--	863.3
2012	--	--	--	--	--	--	573.9
2013	--	--	--	--	--	--	373.4
2014	--	--	--	--	--	--	175.6
2015	--	--	--	--	--	--	153.7
2016	--	--	--	--	--	--	44.9
2017	--	--	--	--	--	--	9.4
Subtotal	**5**	**--**	**--**	**--**	**--**	**--**	**8080.7**

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
2009	--	109.1	--	--	109.1	--	109.1
2010	6	1409.4	--	24.3	1433.7	373.4	1807.1
2011	7	1539.8	--	--	1539.8	461.4	2001.2
2012	11	1939.8	--	73.8	2013.6	302.4	2316.0
2013	13	2336.1	--	48.1	2384.2	452.9	2837.1
2014	17	3055.1	--	45.7	3100.8	601.7	3702.5
2015	20	3585.3	--	68.6	3653.9	622.9	4276.8
2016	20	3513.0	--	--	3513.0	359.2	3872.2
2017	13	2366.1	--	--	2366.1	150.1	2516.2
2018	10	1721.7	--	104.8	1826.5	550.2	2376.7
Subtotal	**117**	**21575.4**	**--**	**365.3**	**21940.7**	**3874.2**	**25814.9**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2009	--	107.8	--	--	107.8	--	107.8
2010	6	1367.1	--	23.6	1390.7	362.1	1752.8
2011	7	1467.0	--	--	1467.0	439.6	1906.6
2012	11	1816.9	--	69.1	1886.0	283.3	2169.3
2013	13	2151.3	--	44.3	2195.6	417.1	2612.7
2014	17	2764.5	--	41.4	2805.9	544.4	3350.3
2015	20	3186.9	--	61.0	3247.9	553.6	3801.5
2016	20	3067.4	--	--	3067.4	313.6	3381.0
2017	13	2029.4	--	--	2029.4	128.8	2158.2
2018	10	1450.6	--	88.3	1538.9	463.6	2002.5
Subtotal	**117**	**19408.9**	**--**	**327.7**	**19736.6**	**3506.1**	**23242.7**

Cost Quantity Information
1506 | Procurement | Aircraft Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M
2009	--	--
2010	6	1321.6
2011	7	1461.3
2012	11	1746.5
2013	13	2080.8
2014	17	2711.8
2015	20	3187.2
2016	20	3190.9
2017	13	2082.4
2018	10	1626.4
Subtotal	**117**	**19408.9**

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

Fiscal Year	Total Program TY $M
2006	5.7
2007	16.3
2008	--
2009	48.2
2010	5.9
2011	--
2012	32.1
2013	--
2014	111.3
2015	263.7
2016	69.3
Subtotal	**552.5**

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

Fiscal Year	Total Program BY 2010 $M
2006	5.9
2007	16.6
2008	--
2009	47.5
2010	5.7
2011	--
2012	29.8
2013	--
2014	99.9
2015	232.5
2016	60.0
Subtotal	**497.9**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	6/4/2004	8/27/2010
Approved Quantity	34	24
Reference	ADM (MS B)	ADM (MS C)
Start Year	2010	2010
End Year	2012	2012

The current total Low Rate Initial Production (LRIP) quantity is more than 10% of the total production quantity due to the necessity to establish the initial production base and to achieve an orderly and efficient increase in both the production rate and industry workforce.

The Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) approved an LRIP quantity of 24 aircraft at Milestone (MS) C.

Foreign Military Sales

None

Nuclear Cost

None

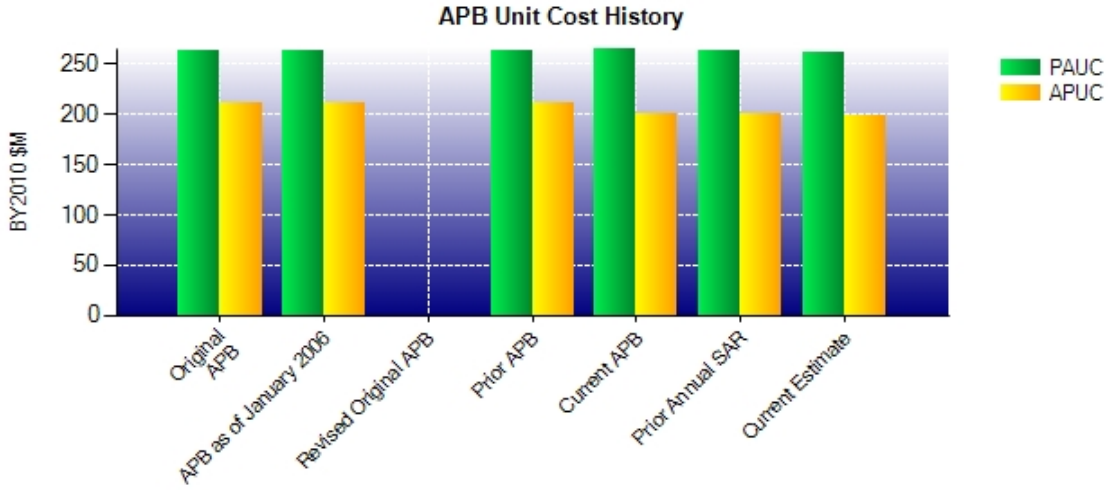
Unit Cost

Unit Cost Report

Unit Cost	BY2010 $M Current UCR Baseline (OCT 2010 APB)	BY2010 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	32345.9	31821.3	
Quantity	122	122	
Unit Cost	265.130	260.830	-1.62
Average Procurement Unit Cost (APUC)			
Cost	23519.1	23242.7	
Quantity	117	117	
Unit Cost	201.018	198.656	-1.18

Unit Cost	BY2010 $M Original UCR Baseline (JUN 2004 APB)	BY2010 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	30271.9	31821.3	
Quantity	115	122	
Unit Cost	263.234	260.830	-0.91
Average Procurement Unit Cost (APUC)			
Cost	22791.2	23242.7	
Quantity	108	117	
Unit Cost	211.030	198.656	-5.86

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JUN 2004	263.234	211.030	273.292	225.149
APB as of January 2006	JUN 2004	263.234	211.030	273.292	225.149
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	JUN 2004	263.234	211.030	273.292	225.149
Current APB	OCT 2010	265.130	201.018	282.793	219.271
Prior Annual SAR	DEC 2010	263.079	201.000	280.332	219.038
Current Estimate	DEC 2011	260.830	198.656	282.218	220.640

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	
273.292	3.671	-4.044	5.221	10.630	-17.830	0.000	11.853	9.501	282.793

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
282.793	3.358	0.000	1.963	-2.123	1.315	0.000	-5.088	-0.575	282.218

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	
225.149	1.793	-3.468	5.332	0.000	-21.894	0.000	12.359	-5.878	219.271

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
219.271	3.059	0.000	1.424	0.000	2.191	0.000	-5.305	1.369	220.640

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	MAY 2004	MAY 2004	MAY 2004
Milestone C	N/A	MAY 2010	MAY 2010	AUG 2010
IOC	N/A	JUL 2013	JUL 2013	JUL 2013
Total Cost (TY $M)	N/A	31428.6	34500.7	34430.6
Total Quantity	N/A	115	122	122
Prog. Acq. Unit Cost (PAUC)	N/A	273.292	282.793	282.218

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	7951.7	25654.7	894.3	34500.7
Previous Changes				
Economic	+8.7	-18.0	-0.4	-9.7
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	-9.7	--	-256.1	-265.8
Estimating	-12.9	+509.0	-2.6	+493.5
Other	--	--	--	--
Support	--	-518.2	--	-518.2
Subtotal	-13.9	-27.2	-259.1	-300.2
Current Changes				
Economic	+31.6	+375.9	+11.9	+419.4
Quantity	--	--	--	--
Schedule	+72.9	+166.6	--	+239.5
Engineering	+86.0	--	-79.2	+6.8
Estimating	-65.1	-252.6	-15.4	-333.1
Other	--	--	--	--
Support	--	-102.5	--	-102.5
Subtotal	+125.4	+187.4	-82.7	+230.1
Total Changes	+111.5	+160.2	-341.8	-70.1
CE - Cost Variance	8063.2	25814.9	552.5	34430.6
CE - Cost & Funding	8063.2	25814.9	552.5	34430.6

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	8019.1	23519.1	807.7	32345.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	-9.2	--	-226.4	-235.6
Estimating	-12.3	+492.6	-0.3	+480.0
Other	--	--	--	--
Support	--	-494.7	--	-494.7
Subtotal	-21.5	-2.1	-226.7	-250.3
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+68.1	+78.4	--	+146.5
Engineering	+77.6	--	-69.2	+8.4
Estimating	-62.6	-237.9	-13.9	-314.4
Other	--	--	--	--
Support	--	-114.8	--	-114.8
Subtotal	+83.1	-274.3	-83.1	-274.3
Total Changes	+61.6	-276.4	-309.8	-524.6
CE - Cost Variance	8080.7	23242.7	497.9	31821.3
CE - Cost & Funding	8080.7	23242.7	497.9	31821.3

Previous Estimate: December 2010

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+31.6
Increase due to delay in start of Initial Operational Test and Evaluation. (Schedule)	+68.1	+72.9
Increase due to expanded scope of fatigue test. (Engineering)	+77.6	+86.0
Adjustment for current and prior escalation. (Estimating)	-22.4	-23.2
Revised estimate to reflect actuals. (Estimating)	-40.2	-41.9
RDT&E Subtotal	+83.1	+125.4

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+375.9
Schedule variance associated with shifting 11 aircraft from FY 2015 - FY 2016 to FY 2017 - FY 2018, which also extended the production profile an additional year. (Schedule)	+78.4	+166.6
Adjustment for current and prior escalation. (Estimating)	-59.1	-62.2
Increase to non-recurring cost estimate due to obsolescence. (Estimating)	+65.5	+73.6
Decrease to recurring flyaway cost estimate to reflect prior and current year actuals. (Estimating)	-110.4	-115.0
Decrease to labor estimate to account for impacts on labor rates. (Estimating)	-135.8	-154.5
Increase in Advance Procurement cost estimate due to increase in long lead procurement items. (Estimating)	+1.9	+5.5
Adjustment for current and prior escalation. (Support)	-13.5	-14.1
Decrease of Other Support costs due to revised estimate for Production Engineering and Peculiar Ground Support Equipment. (Support)	-33.4	-10.9
Decrease in Initial Spares costs due to revised estimate. (Support)	-67.9	-77.5
Procurement Subtotal	-274.3	+187.4

MILCON	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+11.9
Decrease in scope of requirements for Bahrain facilities; adjusted based on planned usage. (Engineering)	-27.4	-31.0
Decrease in scope of requirements for Sigonella, Italy facilities; adjusted based on planned usage. (Engineering)	-41.8	-48.2
Adjustment for current and prior escalation. (Estimating)	-0.9	-0.9
Decrease of cost estimate for hangar modification at Joint Base Pearl Harbor Hickam. (Estimating)	-13.0	-14.5
MILCON Subtotal	-83.1	-82.7

Contracts

Appropriation: RDT&E

Contract Name	**MMA SDD**
Contractor	The Boeing Company
Contractor Location	Seattle, WA 98124-2499
Contract Number, Type	N00019-04-C-3146, CPAF
Award Date	June 14, 2004
Definitization Date	June 14, 2004

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
3890.0	N/A	3	4994.9	N/A	6	6455.1	6652.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2012)	-272.5	-25.6
Previous Cumulative Variances	-225.0	-34.5
Net Change	-47.5	+8.9

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to higher than planned costs in Aircraft Integration and Testing to support aircraft troubleshooting, ground testing, instrumentation, and personnel overtime required to recover the flight test schedule.

The favorable net change in the schedule variance is due to the single point baseline adjustments to schedule made in December 2011 and January 2012 during re-plan actions. This adjustment reset $19M in schedule variances to re-align the remaining flight test schedule to a more realistic plan. Prior to the re-plan, unfavorable schedule variances were driven by Flight Test delays and late Qual Test related supplier deliveries.

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

The difference between the initial contract price target and the current contract price target is due to contract modifications that addressed software development risks identified during Component Advanced Development and the addition of three Stage II aircraft to support Initial Operational Test and Evaluation (IOT&E).

The difference between the current contract price and the Program Manager's estimated price at completion is due to planned increases in contract scope (e.g., fatigue testing to third lifetime) and Over Target Baselines (OTB) that increased contract cost. The causes of these OTBs include design drawing delays, Labor Union strike, and inefficiencies realized in executing Integrated Test and Evaluation.

Appropriation: Procurement

Contract Name	**P-8A Production Contract for LRIP**
Contractor	The Boeing Company
Contractor Location	Kent, WA 98032-2316
Contract Number, Type	N00019-09-C-0022, FPIF/FFP
Award Date	April 13, 2009
Definitization Date	January 21, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
109.1	109.1	N/A	2693.5	2797.0	13	2504.6	2504.6

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2012)	+7.4	-5.5
Previous Cumulative Variances	--	--
Net Change	+7.4	-5.5

Cost And Schedule Variance Explanations

The favorable cumulative cost variance is due to less support realized than originally planned in Low Rate Initial Production (LRIP) I Airframe Interiors, Wiring, Payloads, Specialty Engineering, and Technical Subcontract Management (TSM) for Airframe and Sensors procurements.

The unfavorable cumulative schedule variance is due to late LRIP-II Mission Systems supplier deliveries.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to additional awards for Advance Procurement (AP) and LRIP lots. Specifically, as of March 2012, a total of $3560.7M has been awarded to Boeing on the LRIP contract. Six LRIP I aircraft were awarded under Fixed Price Incentive Fee (FPIF) Contract Line Item Number (CLINs) for $1315.7M and is reporting Earned Value Management (EVM) data. Seven LRIP II aircraft FPIF CLINS were awarded for $1377.8M and is also reporting EVM data. In addition, $867.2M was awarded on Firm Fixed Price (FFP) CLINs for LRIP spares, support equipment, technical data/publications, tools, training devices, and long lead materials. No EVM data is reported on the FFP CLINs.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	4	4	5	80.00%
Production	0	0	117	0.00%
Total Program Quantities Delivered	4	4	122	3.28%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	34430.6	Years Appropriated	11
Expenditures To Date	7865.8	Percent Years Appropriated	64.71%
Percent Expended	22.85%	Appropriated to Date	13581.8
Total Funding Years	17	Percent Appropriated	39.45%

Deliveries and expenditures are current as of January 31, 2012.

Operating and Support Cost

Assumptions And Ground Rules

All costs were estimated in constant FY 2010 dollars, the Base Year (BY) of the estimate. The Operations and Support (O&S) estimate is dated January 30, 2012 and is based on the FY 2013 President's Budget (PB 2013) quantity profile. The source of the estimate is Naval Air Systems Command (NAVAIR) 4.2 O&S cost estimate.

1. P-8A O&S costs are based on two-level maintenance. P-3C O&S costs are based on a three-level maintenance system.
2. P-3C data was pulled from Aircraft Type Model Series Report (ATMSR) on January 3, 2012 (BY 2010 dollars).
3. Indirect support for P-3C was estimated based on a ratio of mission personnel and intermediate maintenance government labor.
4. Life cycle is phase-in plus 25 years, plus phase out years of operation per aircraft.
5. Aircraft quantities are: P-8A = 117 (Total Aircraft Inventory (TAI)) and 96 (Primary Authorized Aircraft (PAA) less test assets);
P-3C = 142 (TAI) and 138 (PAA) (P-3C Source: Aircraft Program Data file (APDF)).
6. Flight hours per aircraft per year are: P-8A = 620; P-3C = 486. The calculation is based on summing the total operational flight hours and dividing by total number of operational aircraft.
7. The P-3C flight hours are artificially restricted due to Health of Naval Aviation (HONA) decisions to manage P-3C operational service life.
8. P-8A operations are based on one Fleet Replacement Squadron (FRS) squadron (12 aircraft) and 12 Fleet squadrons (seven aircraft each).
9. Estimate duration: start year = 2012, end year = 2045, total years = 34.
10. Estimate uses November 2009 Manpower Estimate Report (MER); MER requirement was adjusted to an authorized level, based on P-3C actual manpower by work center.
11. The annual P-3C sustainment cost is $1.87B (BY 2010), while the P-8A sustainment cost is $1.28B (BY 2010), resulting in an annual cost avoidance of $590M (BY 2010).

This estimate that has been reviewed and updated as follows:
1. PB 2013 quantity profile.
2. Update to Interim Support Items List (ISIL) update dated July 2011 and unit price updates from Low Rate Initial Production (LRIP) II contract.
3. Updated with 2011 inflation rates, mission personnel labor rates, and indirect labor rates.
4. Cost Estimating Relationships (CER) updated to include FY 2010 data.
5. Flight hours per aircraft per year calculation reflects phase-in and phase-out of aircraft.

The dollars per aircraft are derived by taking the total O&S cost by element and dividing it by the total operating aircraft years (P-8A: 2,485 aircraft years).

The Total O&S Cost for the P-3C is not included because of insufficient historical data necessary to establish a comparable, credible Total O&S cost.

Disposal:
As defined by the Cost Assessment and Program Evaluation (CAPE) O&S Cost-Estimating Guide (October 2007), disposal costs are not part of O&S. Current estimate for disposal is $12.636M (BY 2010) /$24.188M (Then Year).

Costs BY2010 $M		
Cost Element	**P-8A Average Annual Cost Per Aircraft**	**P-3C Average Annual Cost Per Aircraft**
Unit-Level Manpower	3.604	4.853
Unit Operations	2.616	1.596
Maintenance	4.324	3.155
Sustaining Support	0.993	0.224
Continuing System Improvements	1.107	2.812
Indirect Support	1.303	1.155
Other	0.000	0.000
Total Unitized Cost (Base Year 2010 $)	13.947	13.795

Total O&S Costs $M	P-8A	P-3C
Base Year	34658.4	0.0
Then Year	53406.4	0.0