Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-442

AIM-9X Block II Air-to-Air Missile (AIM-9X Blk II)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Program Information

Program Name

AIM-9X Block II Air-to-Air Missile (AIM-9X Blk II)

DoD Component

Navy

Joint Participants

Air Force

Responsible Office

Responsible Office

Capt John Martins
47123 Buse Road
Unit IPT, Suite 451
Patuxent River, MD 20670-1547
john.k.martins@navy.mil

Phone 301-757-7311
Fax 301-757-6435
DSN Phone 757-7311
DSN Fax 757-6435
Date Assigned September 7, 2010

References

SAR Baseline (Production Estimate)

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated December 23, 2011

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated December 23, 2011

Mission and Description

The AIM-9X Block II Sidewinder short-range air-to-air missile is a long term evolution of the AIM-9 series of fielded missiles. The missile program provides a launch and leave, air combat munitions that uses passive Infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short-range air-to-air missile arena is essential and includes first shot, first kill opportunity against enemy employing IR countermeasures. Anti-Tamper features have been incorporated to protect improvements inherent in this design.

Executive Summary

On June 24, 2011, the Assistant Secretary of the Navy for Research Development and Acquisition (ASN (RD&A)) signed an Acquisition Decision Memorandum (ADM), dated June 30, 2011, which approved MS C and authorized the Program Executive Officer for Unmanned Aviation and Strike Weapons, (PEO(U&W)) AIM-9X Block II program to enter the Production and Deployment Phase, to include, three Low Rate Initial Production (LRIP) procurements: (LRIP I/FY 2011, LRIP II/ FY 2012 and LRIP III/FY 2013). A previous ADM, dated June 16, 2011, had been signed by the Under Secretary of Defense designating the AIM-9X Block II as an Acquisition Category (ACAT) IC program with ASN (RDA), under the Secretary of the Navy, as the Milestone Decision Authority. The Acquisition Program Baseline (APB) was signed on December 23, 2011.

During the three LRIP lots, the program will procure AIM-9X Block II All-Up-Round (AUR) missiles and Captive Air Training Missiles (CATMs). A Full Rate Production (FRP) decision will be sought after successful completion of Initial Operational Test and Evaluation (IOT&E) and following the Beyond-LRIP assessment of system operational effectiveness and suitability.

To date, Operational Test (OT) for AIM-9X Block II has completed 29 of 44 performance captive carry flights (15 of 22 completed by United States Air Force (USAF) and 14 of 22 completed by United States Navy (USN)) and 7 of 17 live fires completed to date. USAF has completed 5 of 8 live fire events (OT-4, 5, 7, 14, and 17). USN has completed 2 of 9 live fire events (OT-1 and OT-15). No deficiencies have been reported by OT to date.

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

Threshold Breaches

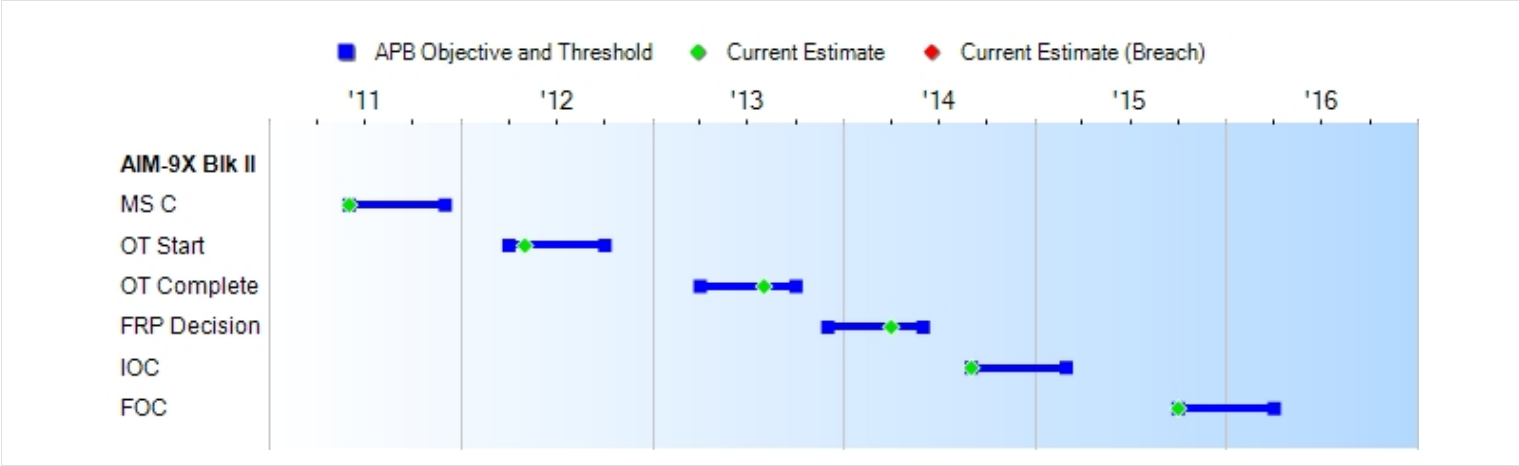
APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☑
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

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

Explanation of Breach

The current Acquisition Program Baseline (APB) does not include additional funding for follow-on 9.400 software development and F-15 improved software integration that was provided to the program. A revised APB is being prepared that reflects the additional Research, Development, Test and Evaluation (RDT&E) funding.

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	
MS C	JUN 2011	JUN 2011	DEC 2011	JUN 2011	
OT Start	APR 2012	APR 2012	OCT 2012	MAY 2012	(Ch-1)
OT Complete	APR 2013	APR 2013	OCT 2013	AUG 2013	(Ch-2)
FRP Decision	DEC 2013	DEC 2013	JUN 2014	APR 2014	(Ch-3)
IOC	SEP 2014	SEP 2014	MAR 2015	SEP 2014	
FOC	OCT 2015	OCT 2015	APR 2016	OCT 2015	

Acronyms And Abbreviations

FOC - Follow-On Capability
FRP - Full Rate Production
IOC - Initial Operational Capability
MS - Milestone
OT - Operational Test

Change Explanations

(Ch-1) The Current Estimate for Operational Test (OT) Start changed from April 2012 to May 2012 due to administrative schedule conflicts that delayed Operational Test Readiness Review (OTRR).

(Ch-2) The Current Estimate for OT Completion changed from April 2013 to August 2013 due to flight test detachment delays caused by test range and flight test conflicts.

(Ch-3) The Current Estimate for Full Rate Production (FRP) Decision changed from December 2013 to April 2014 based upon the uncertainty of OT completion date. A conservative estimate for FRP was given to allow enough time for report writing. OT is still on track to complete in August 2013 to support a December 2013 FRP decision.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
AIM-9X Day/Night Capability	Yes	Yes	Yes	TBD	Yes
AIM-9X Aircraft Interface/Interoperability Missile Weight (lbs.)	≤ 192	≤ 192	≤ 210	TBD	≤ 192
AIM-9X Aircraft Interface/Interoperability Missile Length (in.)	≤ 115	≤ 115	≤ 123	TBD	≤ 115
AIM-9X Aircraft Interface/Interoperability Missile Box Size (in.)	≤ 12.5 X 12.5	≤ 12.5 X 12.5	≤ 12.5 X 12.5	TBD	≤ 12.5 X 12.5
AIM-9X Aircraft Interface/Interoperability Missile Diameter (in.)	≤ 5	≤ 5	≤ 7	TBD	≤ 5
AIM-9X Aircraft Interface/Interoperability Interface	Mid body umbilical only	Mid body umbilical only	Digital.	TBD	Mid body umbilical only
AIM-9X High Off Boresight Capability Cueing/Verification	Interface with current/ planned aircraft radar systems and planned HMCS.	Interface with current/ planned aircraft radar systems and planned HMCS.	Interface with current/ planned aircraft radar systems and planned HMCS.	TBD	Interface with current/ planned aircraft radar systems and planned-HMCS
AIM-9X Captive Carry Reliability (MTBCCF) (hr.)	>.or.=900	>.or.=900	>.or.=500	TBD	>.or.=900
AIM-9X Detect Non-Operational Missile (BIT) All Components (%)	>.or.=0.80	>.or.=0.80	>.or.=0.60	TBD	>.or.=0.80
AIM-9X Detect Non-Operational Missile (BIT-able Components) (%)	>.or.=0.95	>.or.=0.95	>.or.=0.90	TBD	>.or.=0.95
AIM-9X Mean Time Between False Alarms (hr.)	>.or.=25	>.or.=25	<.or.=16	TBD	>.or.=25
AIM-9X BIT Time (sec.)	≤ 20	≤ 20	≤ 20	TBD	≤ 20
EMI Compatibility	Threshold= Objective	Threshold= Objective	Not incur damage to electrical components while in the	TBD	Threshold= Objective

			electromagnetic environment of an aircraft carried. The AIM-9X Block II missile shall be compatible with representative threshold hose aircraft weapon and sensor load-outs with regard to RFI, EMI, and MIL-STD-1533 or MIL-STD-1760 data bus message throughput constraints.		
Ao- AUR	No less than (.98) after 35,000 flight hours	No less than (.98) after 35,000 flight hours	No less than (.93) after 35,000 flight hours	TBD	No less than (.98) after 35,000 flight hours
Net Readiness	The capability, system, and/or service must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on	The capability, system, and/or service must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on	The capability, system, and/or service must fully support execution of all operational activities and information exchanges identified in DoD Enterprise Architecture and solution architectures based on	TBD	The capability, system, and/or service must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on

	integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products complaint with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting tactical and non-IP communica-tions. 3) Compliant with GIG Technical Guidance to	integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products complaint with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting tactical and non-IP communica-tions. 3) Compliant with GIG Technical Guidance to	integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA , excepting tactical and non-IP communica-tions. 3) Compliant with GIG Technical Guidance to		integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products complaint with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting tactical and non-IP communica-tions. 3) Compliant with GIG Technical Guidance to

	include IT Standards identified in the TV-1 and implementation guidance of GIG GESPs necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportability requirements to include SAASM Spectrum and JTRS requirements	include IT Standards identified in the TV-1 and implementation guidance of GIG GESPs necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportability requirements to include SAASM Spectrum and JTRS requirements	include IT Standards identified in the TV-1 and implementation guidance of GESPs, necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportability requirements to include SAASM, Spectrum and JTRS necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture		include IT Standards identified in the TV-1 and implementation guidance of GIG GESPs necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authentication, confidentiality and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportability requirements to include SAASM Spectrum and JTRS requirements

			views		
Ao- CATM	No less than (.95) after 100,000 flight hours	No less than (.95) after 100,000 flight hours	No less than (.86) after 100,000 flight hours	TBD	No less than (.95) after 100,000 flight hours
Material Availability (Am)	Threshold= Objective	Threshold= Objective	No less than (.82)	TBD	Threshold= Objective

Requirements Source: Capability Production Document (CPD) dated May 20, 2011

Acronyms And Abbreviations

Ao - Operational Availability
ATO - Authorization To Operate
AUR - All Up Round
BIT - Built In Test
CATM - Captive Air Training Missile
DAA - Designated Accrediting Authority
DoDAF - Department of Defense Architecture Framework
EMI - Electromagnetic Interference
GESP - GIG Enterprise Service Profile
GIG - Global Information Grid
HMCS - Helmet Mounted Cueing System
hr - hour
IATO - Interim Authorization to Operate
IEA - Information Enterprise Architecture
in - Inches
IP - Internet Protocol
IT - Information Technology
JTRS - Joint Test Requirement System
lbs - Pounds
MIL - Military
MTBCCF - Mean Time Between Captive Carry Failure
RFI - Radio Frequency Interference
SAASM - Selective Availability Anti-Spoofing Module
SE/PM - Systems Engineering and Program Management
sec - seconds
STD - Standard
TBD - To Be Determined
TV - Technical View

Change Explanations

None

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

Track To Budget

General Memo

Block III funding (Project Unit 0458) is not included in this Block II SAR.

RDT&E

APPN 1319	BA 07	PE 0207161N	(Navy)
	Project 0457	Tactical Air Intercept/AIM-9X	(Shared)
APPN 3600	BA 07	PE 0207161F	(Air Force)
	Project 4132	Tactical Air Intercept/AIM-9X	(Shared)

Procurement

APPN 1507	BA 02	PE 0206138M	(Navy)
	ICN 2209 USMC funding received as WPN	AIM-9X Block II Sidewinder	(Shared)
APPN 1507	BA 02	PE 0204162N	(Navy)
	ICN 2209	AIM-9X Block II Sidewinder	(Shared)
APPN 1507	BA 06	PE 0204162N	(Navy)
	ICN 6120 Initial Spares	AIM-9X Block II Sidewinder	(Shared)
APPN 3020	BA 02	PE 0207161F	(Air Force)
	ICN 20221M	AIM-9X Block II Sidewinder	(Shared)
APPN 3020	BA 06	PE 0207161G	(Air Force)
	ICN M09HAI Initial Spares	AIM-9X Block II Sidewinder	(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2011 $M			BY2011 $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	168.8	168.8	185.7	**212.0** [1]	175.7	175.7	223.4
Procurement	3798.5	3798.5	4178.4	3368.9	4680.4	4680.4	4112.3
Flyaway	3633.8	--	--	3247.0	4475.4	--	3959.8
Recurring	3460.0	--	--	3102.5	4279.0	--	3799.8
Non Recurring	173.8	--	--	144.5	196.4	--	160.0
Support	164.7	--	--	121.9	205.0	--	152.5
Other Support	37.9	--	--	28.8	45.2	--	34.9
Initial Spares	126.8	--	--	93.1	159.8	--	117.6
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	3967.3	3967.3	N/A	3580.9	4856.1	4856.1	4335.7

[1] ***APB Breach***

Confidence Level for Current APB Cost 50% - The current Acquisition Program Baseline (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.

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	0	0	0
Procurement	6000	6000	6000
Total	6000	6000	6000

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	83.8	19.4	22.1	36.6	23.5	13.6	13.8	10.6	223.4
Procurement	285.4	171.0	240.4	263.4	261.2	273.8	254.0	2363.1	4112.3
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	369.2	190.4	262.5	300.0	284.7	287.4	267.8	2373.7	4335.7
PB 2013 Total	360.6	190.4	190.4	240.5	191.9	200.2	205.9	3158.4	4738.3
Delta	8.6	0.0	72.1	59.5	92.8	87.2	61.9	-784.7	-402.6

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.

Quantity	Undistributed	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	365	314	450	468	468	470	429	3036	6000
PB 2014 Total	0	365	314	450	468	468	470	429	3036	6000
PB 2013 Total	0	365	314	300	398	303	303	300	3717	6000
Delta	0	0	0	150	70	165	167	129	-681	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
2004	--	--	--	--	--	--	1.3
2005	--	--	--	--	--	--	3.9
2006	--	--	--	--	--	--	7.7
2007	--	--	--	--	--	--	6.7
2008	--	--	--	--	--	--	0.5
2009	--	--	--	--	--	--	5.4
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.9
2012	--	--	--	--	--	--	8.5
2013	--	--	--	--	--	--	11.2
2014	--	--	--	--	--	--	6.6
2015	--	--	--	--	--	--	6.5
2016	--	--	--	--	--	--	0.6
2017	--	--	--	--	--	--	0.6
2018	--	--	--	--	--	--	0.6
2019	--	--	--	--	--	--	0.5
2020	--	--	--	--	--	--	0.5
2021	--	--	--	--	--	--	0.5
2022	--	--	--	--	--	--	0.5
2023	--	--	--	--	--	--	0.6
2024	--	--	--	--	--	--	0.6
2025	--	--	--	--	--	--	0.6
2026	--	--	--	--	--	--	0.6
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**65.4**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2011 $M	Non End Item Recurring Flyaway BY 2011 $M	Non Recurring Flyaway BY 2011 $M	Total Flyaway BY 2011 $M	Total Support BY 2011 $M	Total Program BY 2011 $M
2004	--	--	--	--	--	--	1.5
2005	--	--	--	--	--	--	4.3
2006	--	--	--	--	--	--	8.3
2007	--	--	--	--	--	--	7.0
2008	--	--	--	--	--	--	0.5
2009	--	--	--	--	--	--	5.5
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.9
2012	--	--	--	--	--	--	8.2
2013	--	--	--	--	--	--	10.5
2014	--	--	--	--	--	--	6.1
2015	--	--	--	--	--	--	5.9
2016	--	--	--	--	--	--	0.5
2017	--	--	--	--	--	--	0.5
2018	--	--	--	--	--	--	0.5
2019	--	--	--	--	--	--	0.4
2020	--	--	--	--	--	--	0.4
2021	--	--	--	--	--	--	0.4
2022	--	--	--	--	--	--	0.4
2023	--	--	--	--	--	--	0.5
2024	--	--	--	--	--	--	0.5
2025	--	--	--	--	--	--	0.5
2026	--	--	--	--	--	--	0.4
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**63.7**

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
2005	--	--	--	--	--	--	5.1
2006	--	--	--	--	--	--	10.9
2007	--	--	--	--	--	--	3.3
2008	--	--	--	--	--	--	5.5
2009	--	--	--	--	--	--	5.5
2010	--	--	--	--	--	--	3.7
2011	--	--	--	--	--	--	7.0
2012	--	--	--	--	--	--	7.9
2013	--	--	--	--	--	--	8.2
2014	--	--	--	--	--	--	15.5
2015	--	--	--	--	--	--	30.1
2016	--	--	--	--	--	--	22.9
2017	--	--	--	--	--	--	13.0
2018	--	--	--	--	--	--	13.2
2019	--	--	--	--	--	--	0.5
2020	--	--	--	--	--	--	0.5
2021	--	--	--	--	--	--	0.5
2022	--	--	--	--	--	--	0.5
2023	--	--	--	--	--	--	0.6
2024	--	--	--	--	--	--	0.6
2025	--	--	--	--	--	--	0.6
2026	--	--	--	--	--	--	0.6
2027	--	--	--	--	--	--	0.6
2028	--	--	--	--	--	--	0.6
2029	--	--	--	--	--	--	0.6
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**158.0**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2011 $M	Non End Item Recurring Flyaway BY 2011 $M	Non Recurring Flyaway BY 2011 $M	Total Flyaway BY 2011 $M	Total Support BY 2011 $M	Total Program BY 2011 $M
2005	--	--	--	--	--	--	5.7
2006	--	--	--	--	--	--	11.8
2007	--	--	--	--	--	--	3.5
2008	--	--	--	--	--	--	5.7
2009	--	--	--	--	--	--	5.6
2010	--	--	--	--	--	--	3.7
2011	--	--	--	--	--	--	6.9
2012	--	--	--	--	--	--	7.7
2013	--	--	--	--	--	--	7.8
2014	--	--	--	--	--	--	14.4
2015	--	--	--	--	--	--	27.5
2016	--	--	--	--	--	--	20.5
2017	--	--	--	--	--	--	11.4
2018	--	--	--	--	--	--	11.4
2019	--	--	--	--	--	--	0.4
2020	--	--	--	--	--	--	0.4
2021	--	--	--	--	--	--	0.4
2022	--	--	--	--	--	--	0.4
2023	--	--	--	--	--	--	0.5
2024	--	--	--	--	--	--	0.5
2025	--	--	--	--	--	--	0.5
2026	--	--	--	--	--	--	0.4
2027	--	--	--	--	--	--	0.4
2028	--	--	--	--	--	--	0.4
2029	--	--	--	--	--	--	0.4
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**148.3**

Annual Funding TY$
3020 | Procurement | Missile 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
2009	--	--	--	1.9	1.9	--	1.9
2010	--	--	--	14.2	14.2	--	14.2
2011	106	56.0	--	8.2	64.2	1.4	65.6
2012	127	67.8	--	20.5	88.3	1.8	90.1
2013	164	85.8	--	2.1	87.9	1.8	89.7
2014	225	117.1	--	2.7	119.8	1.8	121.6
2015	243	131.7	--	2.7	134.4	1.8	136.2
2016	243	131.5	--	1.5	133.0	1.8	134.8
2017	244	135.1	--	1.5	136.6	1.9	138.5
2018	204	113.8	--	1.4	115.2	1.9	117.1
2019	206	115.8	--	1.4	117.2	5.6	122.8
2020	150	104.8	--	1.1	105.9	5.7	111.6
2021	160	114.6	--	1.9	116.5	5.8	122.3
2022	160	115.3	--	1.2	116.5	6.0	122.5
2023	160	117.2	--	1.2	118.4	6.0	124.4
2024	160	118.4	--	1.2	119.6	6.4	126.0
2025	160	120.7	--	1.2	121.9	6.6	128.5
2026	160	125.9	--	1.2	127.1	6.7	133.8
2027	160	150.6	--	1.3	151.9	6.8	158.7
2028	160	155.3	--	1.3	156.6	6.9	163.5
2029	160	158.5	--	1.3	159.8	7.0	166.8
Subtotal	**3352**	**2235.9**	**--**	**71.0**	**2306.9**	**83.7**	**2390.6**

Annual Funding BY$
3020 | Procurement | Missile Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2011 $M	Non End Item Recurring Flyaway BY 2011 $M	Non Recurring Flyaway BY 2011 $M	Total Flyaway BY 2011 $M	Total Support BY 2011 $M	Total Program BY 2011 $M
2009	--	--	--	1.9	1.9	--	1.9
2010	--	--	--	14.2	14.2	--	14.2
2011	106	54.6	--	8.0	62.6	1.4	64.0
2012	127	64.8	--	19.7	84.5	1.7	86.2
2013	164	79.6	--	1.9	81.5	1.7	83.2
2014	225	106.6	--	2.5	109.1	1.6	110.7
2015	243	117.7	--	2.4	120.1	1.6	121.7
2016	243	115.3	--	1.3	116.6	1.6	118.2
2017	244	116.2	--	1.3	117.5	1.7	119.2
2018	204	96.1	--	1.2	97.3	1.6	98.9
2019	206	95.9	--	1.2	97.1	4.6	101.7
2020	150	85.2	--	0.9	86.1	4.6	90.7
2021	160	91.4	--	1.5	92.9	4.7	97.6
2022	160	90.3	--	0.9	91.2	4.7	95.9
2023	160	90.1	--	0.9	91.0	4.6	95.6
2024	160	89.3	--	0.9	90.2	4.8	95.0
2025	160	89.3	--	0.9	90.2	4.9	95.1
2026	160	91.4	--	0.9	92.3	4.9	97.2
2027	160	107.3	--	0.9	108.2	4.9	113.1
2028	160	108.6	--	0.9	109.5	4.9	114.4
2029	160	108.8	--	0.9	109.7	4.8	114.5
Subtotal	**3352**	**1798.5**	**--**	**65.2**	**1863.7**	**65.3**	**1929.0**

Annual Funding TY$
1507 | Procurement | Weapons 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	--	--	--	0.9	0.9	--	0.9
2010	--	--	--	11.4	11.4	--	11.4
2011	63	40.6	--	8.5	49.1	1.2	50.3
2012	69	36.6	--	12.0	48.6	2.4	51.0
2013	150	76.8	--	1.4	78.2	3.1	81.3
2014	225	109.2	--	6.2	115.4	3.4	118.8
2015	225	114.0	--	9.3	123.3	3.9	127.2
2016	225	121.2	--	1.4	122.6	3.8	126.4
2017	226	128.3	--	2.7	131.0	4.3	135.3
2018	225	125.0	--	7.3	132.3	4.6	136.9
2019	225	127.5	--	7.2	134.7	5.0	139.7
2020	150	93.8	--	8.7	102.5	5.0	107.5
2021	150	87.9	--	6.3	94.2	5.2	99.4
2022	150	89.7	--	1.1	90.8	5.2	96.0
2023	150	96.6	--	1.2	97.8	5.3	103.1
2024	150	111.3	--	1.2	112.5	5.4	117.9
2025	150	113.5	--	1.2	114.7	5.4	120.1
2026	115	91.9	--	1.0	92.9	5.6	98.5
Subtotal	**2648**	**1563.9**	**--**	**89.0**	**1652.9**	**68.8**	**1721.7**

Annual Funding BY$
1507 | Procurement | Weapons Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2011 $M	Non End Item Recurring Flyaway BY 2011 $M	Non Recurring Flyaway BY 2011 $M	Total Flyaway BY 2011 $M	Total Support BY 2011 $M	Total Program BY 2011 $M
2009	--	--	--	0.9	0.9	--	0.9
2010	--	--	--	11.3	11.3	--	11.3
2011	63	39.3	--	8.1	47.4	1.2	48.6
2012	69	34.7	--	11.4	46.1	2.3	48.4
2013	150	71.5	--	1.3	72.8	2.9	75.7
2014	225	99.7	--	5.7	105.4	3.1	108.5
2015	225	102.2	--	8.3	110.5	3.5	114.0
2016	225	106.6	--	1.2	107.8	3.4	111.2
2017	226	110.7	--	2.4	113.1	3.7	116.8
2018	225	105.9	--	6.2	112.1	3.9	116.0
2019	225	106.0	--	6.0	112.0	4.1	116.1
2020	150	76.5	--	7.1	83.6	4.1	87.7
2021	150	70.4	--	5.1	75.5	4.1	79.6
2022	150	70.5	--	0.9	71.4	4.0	75.4
2023	150	74.5	--	0.9	75.4	4.1	79.5
2024	150	84.2	--	0.9	85.1	4.1	89.2
2025	150	84.3	--	0.9	85.2	4.0	89.2
2026	115	67.0	--	0.7	67.7	4.1	71.8
Subtotal	**2648**	**1304.0**	**--**	**79.3**	**1383.3**	**56.6**	**1439.9**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	6/30/2011	8/15/2012
Approved Quantity	361	679
Reference	ADM	ADM
Start Year	2011	2011
End Year	2012	2013

The Current Total LRIP Quantity is more than 10% of the total production quantity due to approval of LRIP III per the Acquisition Decision Memorandum (ADM) dated August 15, 2012. LRIP III was approved in order to maintain the production line.

The Initial LRIP Decsion Approved Quantity was updated to reflect the correct quantity authorized for LRIP I and II per the June 30, 2011 Acquisition Decision Memorandum (ADM).

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
Saudi Arabia	12/25/2011	154	95.0	Foreign Military Sales (FMS) Case SR-D-SAI. Obligational Authority (OA) pending.
South Korea	12/20/2011	19	22.5	Foreign Military Sales (FMS) Case KS-P-AKR. Case also includes approximately $2.3M in integration and missile technical assistance.

Nuclear Cost

None

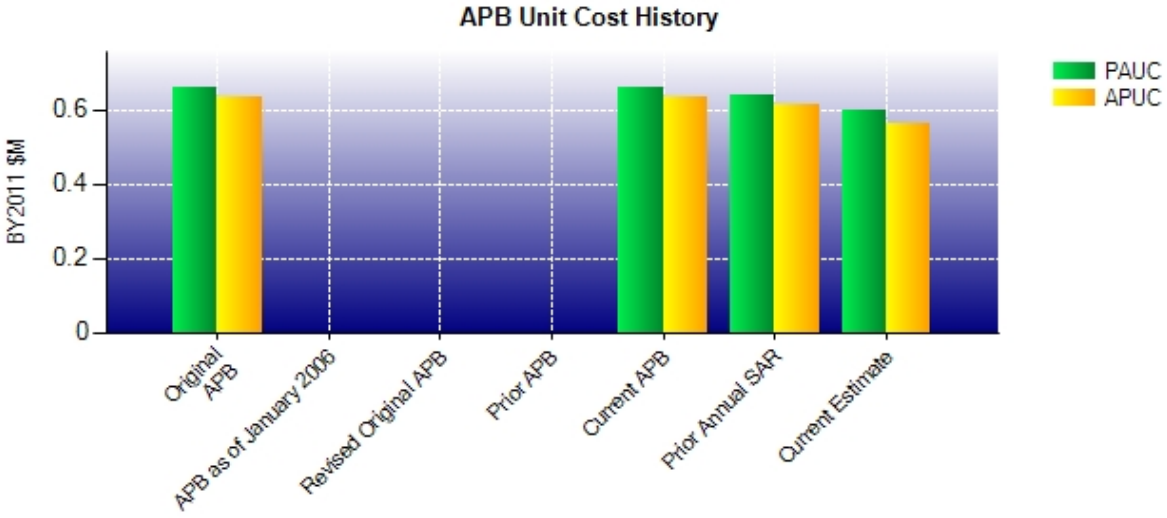
Unit Cost

Unit Cost Report

Unit Cost	BY2011 $M Current UCR Baseline (DEC 2011 APB)	BY2011 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3967.3	3580.9	
Quantity	6000	6000	
Unit Cost	0.661	0.597	-9.71
Average Procurement Unit Cost (APUC)			
Cost	3798.5	3368.9	
Quantity	6000	6000	
Unit Cost	0.633	0.561	-11.39

Unit Cost	BY2011 $M Original UCR Baseline (DEC 2011 APB)	BY2011 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3967.3	3580.9	
Quantity	6000	6000	
Unit Cost	0.661	0.597	-9.71
Average Procurement Unit Cost (APUC)			
Cost	3798.5	3368.9	
Quantity	6000	6000	
Unit Cost	0.633	0.561	-11.39

Unit Cost History



		BY2011 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	DEC 2011	0.661	0.633	0.809	0.780
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	N/A	N/A	N/A	N/A	N/A
Current APB	DEC 2011	0.661	0.633	0.809	0.780
Prior Annual SAR	DEC 2011	0.642	0.613	0.790	0.760
Current Estimate	DEC 2012	0.597	0.561	0.723	0.685

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.809	0.030	0.000	-0.095	-0.001	-0.010	0.000	-0.010	-0.086	0.723

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.780	0.030	0.000	-0.096	-0.001	-0.017	0.000	-0.010	-0.094	0.685

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	N/A	N/A	N/A
Milestone C	N/A	N/A	JUN 2011	JUN 2011
IOC	N/A	N/A	N/A	N/A
Total Cost (TY $M)	N/A	N/A	4856.1	4335.7
Total Quantity	N/A	N/A	6000	6000
Prog. Acq. Unit Cost (PAUC)	N/A	N/A	0.809	0.723

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	175.7	4680.4	--	4856.1
Previous Changes				
Economic	+0.7	+68.8	--	+69.5
Quantity	--	--	--	--
Schedule	--	-99.2	--	-99.2
Engineering	--	-7.8	--	-7.8
Estimating	+2.7	-68.2	--	-65.5
Other	--	--	--	--
Support	--	-14.8	--	-14.8
Subtotal	+3.4	-121.2	--	-117.8
Current Changes				
Economic	+1.8	+108.7	--	+110.5
Quantity	--	--	--	--
Schedule	--	-476.4	--	-476.4
Engineering	--	--	--	--
Estimating	+42.5	-34.4	--	+8.1
Other	--	--	--	--
Support	--	-44.8	--	-44.8
Subtotal	+44.3	-446.9	--	-402.6
Total Changes	+47.7	-568.1	--	-520.4
CE - Cost Variance	223.4	4112.3	--	4335.7
CE - Cost & Funding	223.4	4112.3	--	4335.7

Summary Base Year 2011 $M				
	RDT&E	**Proc**	**MILCON**	**Total**
SAR Baseline (Prod Est)	168.8	3798.5	--	3967.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	-48.7	--	-48.7
Engineering	--	-7.4	--	-7.4
Estimating	+3.7	-53.8	--	-50.1
Other	--	--	--	--
Support	--	-11.2	--	-11.2
Subtotal	+3.7	-121.1	--	-117.4
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	-254.4	--	-254.4
Engineering	--	--	--	--
Estimating	+39.5	-22.5	--	+17.0
Other	--	--	--	--
Support	--	-31.6	--	-31.6
Subtotal	+39.5	-308.5	--	-269.0
Total Changes	+43.2	-429.6	--	-386.4
CE - Cost Variance	212.0	3368.9	--	3580.9
CE - Cost & Funding	212.0	3368.9	--	3580.9

Previous Estimate: December 2011

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+1.8
Adjustment for current and prior escalation. (Estimating)	-0.3	-0.3
Revised estimate of program being completed earlier than initially planned (Navy). (Estimating)	-1.4	-2.5
Revised estimate of program being completed earlier than initially planned (Air Force). (Estimating)	-2.1	-2.7
Directive to reduce Contractor Support (Navy). (Estimating)	-0.8	-0.8
Increase in funding for Aircraft Integration and software improvements (Air Force). (Estimating)	+44.1	+48.8
RDT&E Subtotal	+39.5	+44.3

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+108.7
Acceleration of procurement buy profile of 377 missiles from FY 2014 through FY 2018 (Navy). (Schedule)	0.0	-71.9
Acceleration of procurement buy profile of 307 missiles from FY 2014 through FY 2018 (Air Force). (Schedule)	0.0	-85.5
Additional Schedule Variance due to economies of scale associated with accelerated procurement buy profile (Navy). (Schedule)	-108.2	-128.9
Additional Schedule Variance due to economies of scale associated with accelerated procurement buy profile (Air Force). (Schedule)	-146.2	-190.1
Adjustment for current and prior escalation. (Estimating)	-3.2	-3.4
Revised estimate of Systems Engineering and Program Management (SE/PM) due to earlier than planned program completion (Navy). (Estimating)	-11.9	-18.0
Revised estimate of SE/PM due to earlier than planned program completion (Air Force). (Estimating)	-7.4	-13.0
Decrease in Other Support for Telemetry requirements (Navy). (Support)	-5.0	-7.0
Decrease in Other Support for Telemetry requirements (Air Force). (Support)	-0.7	-0.7
Decrease in Initial Spares due to accelerated procurement buy profile (Navy). (Support)	-5.9	-8.5
Decrease in Initial Spares due to accelerated procurement buy profile (Air Force). (Support)	-20.0	-28.6
Procurement Subtotal	-308.5	-446.9

Contracts

Appropriation: RDT&E	
Contract Name	**AIM-9X Block II System Improvement Program**
Contractor	Raytheon Missiles Systems
Contractor Location	1151 E Herman Rd Tucson, AZ 85756
Contract Number, Type	N00019-11-C-0026, CPFF
Award Date	March 31, 2011
Definitization Date	March 31, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
19.9	N/A	1	77.4	N/A	1	77.4	77.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/31/2013)	+2.8	-1.4
Previous Cumulative Variances	0.0	0.0
Net Change	+2.8	-1.4

Cost And Schedule Variance Explanations

The favorable net change in the cost variance is due to overhead and general and administrative rates.

The unfavorable net change in the schedule variance is due to Large Target Data Link MODEM Design Verification Testing (DVT) test asset hardware failures. These failures have caused a pause in DVT until the failures can be determined and corrected. The Large Target Data Link effort is funded by Other Customer Funds (OCF) and does not impact the current program objective (9.300). Another contributing factor was the requirement for an additional flight test conducted at Eglin and associated analysis to gather system performance data.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional effort for Active Optical Target Detector (AOTD) obsolescence, system development and integration, algorithm development, F-22 integration, as well as replacement of Aircraft Interface and Cryo-Cooler Circuit card assemblies which are being driven by obsolescence.

Initial Contract Price Target was updated to reflect Foreign Military Sales (FMS) funding that was not reflected in the previous SAR.

This contract includes FMS and OCF. FMS and OCF funding is reflected in the above data. FMS/OCF: $29.9M.

Appropriation: Procurement

Contract Name	**AIM-9X Block II Production**
Contractor	Raytheon Missile Systems
Contractor Location	1151 E Hermans Road Tucson, AZ 85756-9367
Contract Number, Type	N00019-11-C-0001, FFP/FPIF
Award Date	September 29, 2011
Definitization Date	September 29, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
61.9	N/A	120	285.1	N/A	538	285.1	285.1

Cost And Schedule Variance Explanations

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

General Contract Variance Explanation

The requirement for Earned Value Management (EVM) on this Fixed Price Incentive Firm (FPIF) contract was waived by the Department of Navy, Office of the Assistant Secretary, Research, Development and Acquisition (ASN (RD&A)) on January 23, 2012. This requirement was waived because the contract will contain other cost and program reporting requirements such as Federal Acquisition Regulation Clause 52.216-16, Incentive Price Revision-Firm target, Integrated Master Program Schedule, and Government access to the Contractor's Internal Material Requirements Plan, an on-line tool that assesses schedule and technical performance.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to procurement of additional FY 2011 assets as well as the Lot 12 Contract Award.

This contract includes Foreign Military Sales (FMS) and Other Customer Funds (OCF). Funding and Quantities are included above as follows: FMS/OCF: $104M FMS QTY: 173

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	72	6000	1.20%
Total Program Quantities Delivered	0	72	6000	1.20%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	4335.7	Years Appropriated	10
Expenditures To Date	222.7	Percent Years Appropriated	38.46%
Percent Expended	5.14%	Appropriated to Date	559.6
Total Funding Years	26	Percent Appropriated	12.91%

The above data is current as of 3/14/2013.

Operating and Support Cost

AIM-9X Blk II

Assumptions and Ground Rules

Cost Estimate Reference:

The estimate assumes 10 carriers (worst case) deployed per year (beginning in the third year of operations). Unit level consumption primarily relates to the annual training firings (Non Combat Expenditures Allowances (NCEA)) for the Navy and Weapon System Evaluation Program (WSEP) for the Air Force) and transportation cycle time of failed assets to and from the Depot. The estimate spans a period of 38 years, beginning with FY 2013 and ending with FY 2051. Contractor support is required to repair AUR/CATM/container failures as a result of normal use, combat damage, catastrophic events, government misuse, abuse, or failure to exercise due diligence in testing, storing, or maintaining the item in accordance with approved procedures and specifications. This cost includes the required repair for out of AUR/CATM containers, software support, and technical publication revisions.

Sustainment Strategy:

The sustaining support consists of systems engineering, failure analysis, and program management support and surveillance/quality/obsolescence evaluation program. Intermediate maintenance and indirect costs are as noted. The cost estimate considers a 20-year service life for All-Up-Round (AUR) and a 13 year service life for the Captive Air Training Missile (CATM). The estimate assumes operational utilization AURs and CATMs as indicated in the following table:

Type	Service	Yearly Qty In-Use	Yearly Flight Hours
CATM	USN	549	300
	USAF	All	300
AUR	USN	250	100
	USAF	299	30

Antecedent Information:

The AIM-9X Block I is the antecendent system. The AIM-9X Block I missiles last year of production was FY 2010.

Unitized O&S Costs BY2011 $M		
Cost Element	**AIM-9X Blk II Average Annual Cost of all Missiles**	**AIM-9X (Antecedent) Average Annual Cost of all Missiles**
Unit-Level Manpower	0.0	0.0
Unit Operations	8.0	5.7
Maintenance	0.1	1.1
Sustaining Support	13.9	11.5
Continuing System Improvements	0.0	0.0
Indirect Support	0.1	0.1
Other	0.0	0.0
Total	22.1	18.4

Unitized Cost Comments:

Average Annual Cost is calculated using the total cost divided by the number of years for sustainment.

	Total O&S Cost $M			
	Current Production APB Objective/Threshold		Current Estimate	
	AIM-9X Blk II		AIM-9X Blk II	AIM-9X (Antecedent)
Base Year	977.5	1075.3	838.8	531.9
Then Year	1593.6	N/A	1274.5	620.0

Total O&S Costs Comments:

The increase in sustainment cost for the AIM-9X Block II missile from the AIM-9X Block I missile is that the sustainment period went from 29 years for Navy only missile sustainment for Block I to 38 years for Block II based on the quantity of 3,097 Navy missiles being sustained for the Block I program versus the remaining 6,000 Navy and Air Force missiles that will be sustained for the Block II program. The other reason for the increase is using a different Mean-Time-Between-Failure (MTBF) to calculate repair costs. The specification MTBF was used for Block II and the actual MTBF was used to calculate the Block I.

The current Program Office estimate is based in the PB14 budget submission dated January 2013. The current estimate is lower than the APB values as the program was plussed up over 600 missiles from FY 2014 through FY2018. This causes a reduction in sustainment years and lower cost to maintain the missile in earlier years.

Disposal Costs

Disposal costs are not identified at this time.