Selected Acquisition Report (SAR)

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

AIM-9X Block II Sidewinder (AIM-9X Blk II)

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs

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

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

Program Information

Program Name

AIM-9X Block II Sidewinder (AIM-9X Blk II)

DoD Component

Navy

Joint Participants

Air Force

Responsible Office

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Date Assigned: October 9, 2014

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 (AIM-9X Blk II) 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. 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

During Operational Test (OT) the program identified the AIM-9X Blk II Missile did not satisfy the requirements of Probability of Kill and Maximum Range which resulted in the Block II program being decertified on July 29, 2013. After extensive root cause analysis was conducted, manufacturing process changes and software updates have been implemented. The program resumed OT in June 2014 and completed testing on January 28, 2015.

In June of 2014, the MDA (Assistant Secretary of the Navy (Research, Development and Acquisition)) authorized an LRIP IV procurement. During LRIP, the program continues to procure AIM-9X Blk II All-Up- Round missiles and Captive Air Training Missiles. A FRP decision is anticipated in June 2015.

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

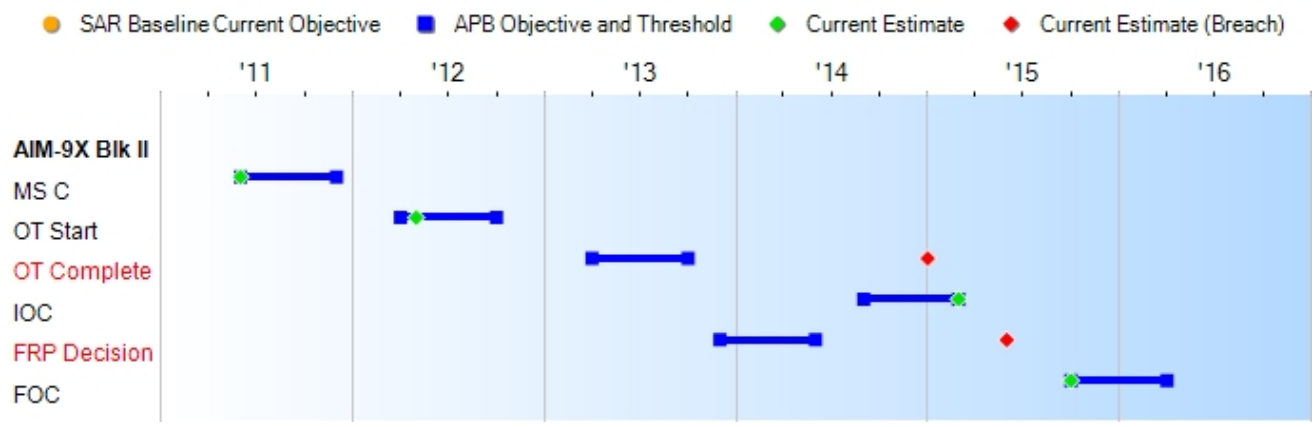
Explanation of Breach

Schedule Breach: The Schedule Breach was previously reported in the December 2013 SAR.

Cost Breach: The Cost Breach was previously reported in the December 2012 SAR.

A Program Deviation Report was anticipated for each of the breaches and will be resolved in the FRP APB, anticipated for June 2015.

Schedule



Schedule Events					
Events	**SAR Baseline Production Estimate**	**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	
OT Complete	Apr 2013	Apr 2013	Oct 2013	**Jan 2015**[1]	(Ch-1)
IOC	Sep 2014	Sep 2014	Mar 2015	Mar 2015	
FRP Decision	Dec 2013	Dec 2013	Jun 2014	**Jun 2015**[1]	
FOC	Oct 2015	Oct 2015	Apr 2016	Oct 2015	

[1] *APB Breach*

Change Explanations

(Ch-1) The Operational Test (OT) Complete current estimate changed from November 2014 to January 2015. This change was made to reflect the program's identification that the AIM-9X Blk II missile did not satisfy the requirements for Probability of Kill and Maximum Range which resulted in the program being decertified on July 29, 2013.

Acronyms and Abbreviations

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

Performance

Performance Characteristics				
SAR Baseline Production Estimate	**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	794.16	>.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 electromagnetic environment of an aircraft	TBD	Threshold= Objective

		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 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	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	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 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 include IT Standards identified in the TV-1 and implementation guidance	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

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, authenticat-ion, confident-iality, and non -repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportabil-ity requirements to include SAASM Spectrum and JTRS requirements	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, authenticat-ion, confidential-ity, and non -repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportabil-ity requirements to include SAASM Spectrum and JTRS requirements	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, authenticat-ion, confidential-ity, and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Supportabil-ity requirements to include SAASM, Spectrum and JTRS necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views		tactical and non-IP communica-tions. 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementa-tion 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, authentica-tion, confidentiality and non-repudiation, and issuance of an IATO or ATO by the DAA and 5) Support-ability requirements to include SAASM Spectrum and JTRS requirements
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

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

Requirements Reference

Capability Production Document (CPD) dated May 20, 2011

Change Explanations

None

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
Mid - Middle
MIL - Military
MTBCCF - Mean Time Between Captive Carry Failure
RFI - Radio Frequency Interference
SAASM - Selective Availability Anti-Spoofing Module
sec - seconds
STD - Standard
TV - Technical View

Track to Budget

General Notes

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

RDT&E

Appn	BA	PE
Navy	07	0207161N

Project	Name
0457	AIM-9X

Appn	BA	PE
Air Force	07	0207161F

Project	Name
674132	AIM-9 Product Improvement

Procurement

Appn	BA	PE
Navy	02	0204162N

Line Item	Name	
2209	Sidewinder	(Shared)

Appn	BA	PE
Navy	02	0206138M

Line Item	Name	
2209	Sidewinder	(Shared)

Notes: USMC funding received as WPN

Appn	BA	PE
Navy	06	0204162N

Line Item	Name	
6120	Spares and Repair Parts	(Shared)

Notes: Initial Spares

Appn	BA	PE
Air Force	04	0207161F

Line Item	Name	
000999	Initial Spares/Repair Parts	(Shared)

Notes: Initial Spares

Appn	BA	PE
Air Force	02	0207161F

Line Item	Name	
M09HAI	Sidewinder (AIM-9X)	(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2011 $M			BY 2011 $M	TY $M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	168.8	168.8	185.7	**509.6**[1]	175.7	175.7	552.8
Procurement	3798.5	3798.5	4178.4	2735.2	4680.4	4680.4	3200.3
Flyaway	--	--	--	2614.6	--	--	3057.4
Recurring	--	--	--	2489.6	--	--	2920.4
Non Recurring	--	--	--	125.0	--	--	137.0
Support	--	--	--	120.6	--	--	142.9
Other Support	--	--	--	62.7	--	--	73.2
Initial Spares	--	--	--	57.9	--	--	69.7
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	3244.8	4856.1	4856.1	3753.1

[1] *APB Breach*

Confidence Level

Confidence Level of cost estimate for current APB: 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.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	6000	6000	6000
Total	6000	6000	6000

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	136.7	67.0	119.4	113.6	50.5	46.4	13.7	5.5	552.8
Procurement	628.7	200.6	299.2	318.7	316.3	194.7	197.4	1044.7	3200.3
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 2016 Total	765.4	267.6	418.6	432.3	366.8	241.1	211.1	1050.2	3753.1
PB 2015 Total	756.3	279.8	333.8	357.4	238.4	243.2	215.1	1622.6	4046.6
Delta	9.1	-12.2	84.8	74.9	128.4	-2.1	-4.0	-572.4	-293.5

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	1098	470	733	722	698	364	363	1552	6000
PB 2016 Total	0	1098	470	733	722	698	364	363	1552	6000
PB 2015 Total	0	1115	470	565	597	430	401	331	2091	6000
Delta	0	-17	0	168	125	268	-37	32	-539	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	--	1.3
2005	--	--	--	--	--	--	3.9
2006	--	--	--	--	--	--	7.7
2007	--	--	--	--	--	--	6.7
2008	--	--	--	--	--	--	0.5
2009	--	--	--	--	--	--	5.4
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.9
2012	--	--	--	--	--	--	8.4
2013	--	--	--	--	--	--	17.9
2014	--	--	--	--	--	--	16.5
2015	--	--	--	--	--	--	37.3
2016	--	--	--	--	--	--	76.0
2017	--	--	--	--	--	--	60.8
2018	--	--	--	--	--	--	36.5
2019	--	--	--	--	--	--	33.2
2020	--	--	--	--	--	--	0.2
2021	--	--	--	--	--	--	0.5
2022	--	--	--	--	--	--	0.5
2023	--	--	--	--	--	--	0.6
2024	--	--	--	--	--	--	0.6
2025	--	--	--	--	--	--	0.6
2026	--	--	--	--	--	--	0.6
2027	--	--	--	--	--	--	0.6
Subtotal	--	--	--	--	--	--	317.2

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2011 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	--	1.5
2005	--	--	--	--	--	--	4.3
2006	--	--	--	--	--	--	8.3
2007	--	--	--	--	--	--	7.0
2008	--	--	--	--	--	--	0.5
2009	--	--	--	--	--	--	5.5
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.9
2012	--	--	--	--	--	--	8.1
2013	--	--	--	--	--	--	17.0
2014	--	--	--	--	--	--	15.5
2015	--	--	--	--	--	--	34.5
2016	--	--	--	--	--	--	69.2
2017	--	--	--	--	--	--	54.3
2018	--	--	--	--	--	--	32.0
2019	--	--	--	--	--	--	28.5
2020	--	--	--	--	--	--	0.2
2021	--	--	--	--	--	--	0.4
2022	--	--	--	--	--	--	0.4
2023	--	--	--	--	--	--	0.5
2024	--	--	--	--	--	--	0.5
2025	--	--	--	--	--	--	0.5
2026	--	--	--	--	--	--	0.4
2027	--	--	--	--	--	--	0.4
Subtotal	--	--	--	--	--	--	290.4

Annual Funding 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	5.2
2006	--	--	--	--	--	--	10.9
2007	--	--	--	--	--	--	3.3
2008	--	--	--	--	--	--	5.5
2009	--	--	--	--	--	--	5.5
2010	--	--	--	--	--	--	3.8
2011	--	--	--	--	--	--	7.0
2012	--	--	--	--	--	--	7.9
2013	--	--	--	--	--	--	6.0
2014	--	--	--	--	--	--	12.4
2015	--	--	--	--	--	--	29.7
2016	--	--	--	--	--	--	43.4
2017	--	--	--	--	--	--	52.8
2018	--	--	--	--	--	--	14.0
2019	--	--	--	--	--	--	13.2
2020	--	--	--	--	--	--	13.5
2021	--	--	--	--	--	--	0.5
2022	--	--	--	--	--	--	0.5
2023	--	--	--	--	--	--	0.5
Subtotal	--	--	--	--	--	--	235.6

Annual Funding 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2011 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	5.8
2006	--	--	--	--	--	--	11.8
2007	--	--	--	--	--	--	3.5
2008	--	--	--	--	--	--	5.7
2009	--	--	--	--	--	--	5.6
2010	--	--	--	--	--	--	3.8
2011	--	--	--	--	--	--	6.9
2012	--	--	--	--	--	--	7.7
2013	--	--	--	--	--	--	5.7
2014	--	--	--	--	--	--	11.7
2015	--	--	--	--	--	--	27.6
2016	--	--	--	--	--	--	39.7
2017	--	--	--	--	--	--	47.4
2018	--	--	--	--	--	--	12.3
2019	--	--	--	--	--	--	11.4
2020	--	--	--	--	--	--	11.4
2021	--	--	--	--	--	--	0.4
2022	--	--	--	--	--	--	0.4
2023	--	--	--	--	--	--	0.4
Subtotal	--	--	--	--	--	--	219.2

Annual Funding 1507 | Procurement | Weapons Procurement, Navy							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	0.9	0.9	--	0.9
2010	--	--	--	11.4	11.4	--	11.4
2011	63	46.0	--	3.1	49.1	1.2	50.3
2012	69	39.2	--	7.6	46.8	1.7	48.5
2013	150	60.9	--	2.3	63.2	7.3	70.5
2014	208	83.0	--	6.0	89.0	9.3	98.3
2015	167	66.6	--	0.3	66.9	2.8	69.7
2016	227	86.4	--	5.8	92.2	5.7	97.9
2017	221	92.5	--	6.5	99.0	4.8	103.8
2018	227	95.5	--	8.0	103.5	5.9	109.4
2019	153	71.4	--	1.4	72.8	4.8	77.6
2020	152	72.0	--	1.4	73.4	4.6	78.0
2021	154	76.1	--	2.2	78.3	5.5	83.8
2022	154	78.7	--	1.5	80.2	5.3	85.5
2023	144	80.8	--	1.5	82.3	5.5	87.8
2024	150	99.3	--	1.5	100.8	5.5	106.3
2025	150	102.1	--	1.5	103.6	5.5	109.1
2026	150	119.1	--	1.6	120.7	5.6	126.3
2027	109	97.5	--	1.9	99.4	6.0	105.4
Subtotal	2648	1367.1	--	66.4	1433.5	87.0	1520.5

Annual Funding 1507 | Procurement | Weapons Procurement, Navy							
Fiscal Year	Quantity	BY 2011 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	0.9	0.9	--	0.9
2010	--	--	--	11.3	11.3	--	11.3
2011	63	44.7	--	3.0	47.7	1.2	48.9
2012	69	37.5	--	7.2	44.7	1.7	46.4
2013	150	57.4	--	2.2	59.6	6.8	66.4
2014	208	77.0	--	5.6	82.6	8.5	91.1
2015	167	60.7	--	0.3	61.0	2.5	63.5
2016	227	77.3	--	5.2	82.5	5.1	87.6
2017	221	81.2	--	5.8	87.0	4.2	91.2
2018	227	82.2	--	6.9	89.1	5.1	94.2
2019	153	60.3	--	1.2	61.5	4.0	65.5
2020	152	59.6	--	1.2	60.8	3.8	64.6
2021	154	61.8	--	1.8	63.6	4.4	68.0
2022	154	62.6	--	1.2	63.8	4.2	68.0
2023	144	63.0	--	1.2	64.2	4.3	68.5
2024	150	75.9	--	1.1	77.0	4.3	81.3
2025	150	76.5	--	1.1	77.6	4.2	81.8
2026	150	87.5	--	1.2	88.7	4.1	92.8
2027	109	70.3	--	1.4	71.7	4.2	75.9
Subtotal	2648	1135.5	--	59.8	1195.3	72.6	1267.9

Annual Funding 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	1.9	1.9	--	1.9
2010	--	--	--	14.2	14.2	--	14.2
2011	106	60.5	--	3.7	64.2	1.4	65.6
2012	127	75.8	--	9.1	84.9	1.7	86.6
2013	150	60.9	--	5.5	66.4	7.4	73.8
2014	225	94.6	--	6.0	100.6	6.1	106.7
2015	303	126.6	--	1.7	128.3	2.6	130.9
2016	506	194.0	--	5.8	199.8	1.5	201.3
2017	501	204.9	--	6.6	211.5	3.4	214.9
2018	471	195.5	--	8.1	203.6	3.3	206.9
2019	211	111.9	--	1.4	113.3	3.8	117.1
2020	211	113.9	--	1.4	115.3	4.1	119.4
2021	211	116.5	--	2.2	118.7	6.7	125.4
2022	209	119.3	--	1.5	120.8	6.9	127.7
2023	121	78.9	--	1.5	80.4	7.0	87.4
Subtotal	3352	1553.3	--	70.6	1623.9	55.9	1679.8

Annual Funding 3020 | Procurement | Missile Procurement, Air Force							
Fiscal Year	Quantity	BY 2011 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	--	--	1.9	1.9	--	1.9
2010	--	--	--	14.2	14.2	--	14.2
2011	106	59.2	--	3.6	62.8	1.4	64.2
2012	127	72.9	--	8.8	81.7	1.6	83.3
2013	150	57.2	--	5.2	62.4	6.9	69.3
2014	225	87.4	--	5.4	92.8	5.7	98.5
2015	303	115.4	--	1.6	117.0	2.3	119.3
2016	506	173.7	--	5.2	178.9	1.3	180.2
2017	501	180.0	--	5.8	185.8	3.0	188.8
2018	471	168.4	--	6.9	175.3	2.9	178.2
2019	211	94.5	--	1.2	95.7	3.2	98.9
2020	211	94.3	--	1.2	95.5	3.4	98.9
2021	211	94.6	--	1.8	96.4	5.4	101.8
2022	209	94.9	--	1.2	96.1	5.5	101.6
2023	121	61.6	--	1.2	62.8	5.4	68.2
Subtotal	3352	1354.1	--	65.2	1419.3	48.0	1467.3

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	6/30/2011	6/5/2014
Approved Quantity	361	1140
Reference	Milestone C ADM	LRIP IV ADM
Start Year	2011	2011
End Year	2012	2014

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the need to maintain the production line.

The Initial LRIP Decision Approved Quantity was authorized for LRIP I and II per the Milestone C ADM dated June 30, 2011.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Description
Japan	12/1/2014	9	8.4	FMS Case JA-P-LZB. 9 Tactical Missiles.
Belgium	1/6/2014	60	24.6	FMS Case BE-P-ACX. 30 Tactical Missiles and 30 Captive Air Training Missiles.
Singapore	12/18/2013	28	9.7	FMS Case SN-P-ADF. 20 Tactical Missiles and 8 Captive Air Training Missiles.
Netherlands	11/1/2013	48	15.4	FMS Case NE-P-AGE. 28 Tactical Missiles and 20 Captive Air Training Missiles.
Turkey	9/3/2013	117	47.0	FMS Case TK-P-AHX-A5. 117 Tactical Missiles.
Oman	3/11/2013	74	20.7	FMS Case MU-P-LAO. 50 Tactical Missiles and 24 Captive Air Training Missiles.
Kuwait	2/28/2013	100	29.1	FMS Case KU-P-ABI. 80 Tactical Missiles and 20 Captive Air Training Missiles.
Malaysia	5/29/2012	28	8.0	FMS Case MF-P-AAD. 20 Tactical Missiles and 8 Captive Air Training Missiles.
Morocco	3/29/2012	30	8.4	FMS Case MO-P-AAK. 20 Tactical Missiles and 10 Captive Air Training Missiles.
Saudi Arabia	12/25/2011	154	85.0	FMS Case SR-D-SAI. 120 Tactical Missiles and 24 Captive Air Training Missiles.
South Korea	12/20/2011	19	9.0	FMS Case KS-P-AKR. 19 Tactical Missiles.

Notes

All FMS missiles are the AIM-9X-2 Blk II configuration and were procured under FMS procedures with waivers for non-recurring cost and Yockey (USD (AT&L) approval to offer a weapon system under development). With the exception of Japan, all FMS Purchaser’s missiles are on contract in the FY 2012-2014 (Lots 12-14) missile production contracts.

All FMS Blk II missile deliveries are on hold until the United States Government completes Operational Test (OT). Once the final OT report is released and a positive fielding decision is made then PEO(T) can authorize the release of FMS missiles for delivery. Deliveries, as termed in the Letter of Offer and Acceptance (LOA), are the missile manufacturer's issuance of a Material Inspection and Receiving Report (DD250).

FMS Blk II missile deliveries (Lots 12-13) for Saudi Arabia, South Korea, Kuwait, Malaysia, Morocco, and Oman are expected to start in 3rd quarter CY 2015. The actual respective in-country delivery (i.e., missile quantities and dates they arrive in-country) are dependent upon many factors such as the missile manufacturer’s production plan (i.e., DD250 date), Purchaser's Notice of Availability (NOAs) response, and Purchaser's export and transportation arrangements.

Nuclear Costs

None

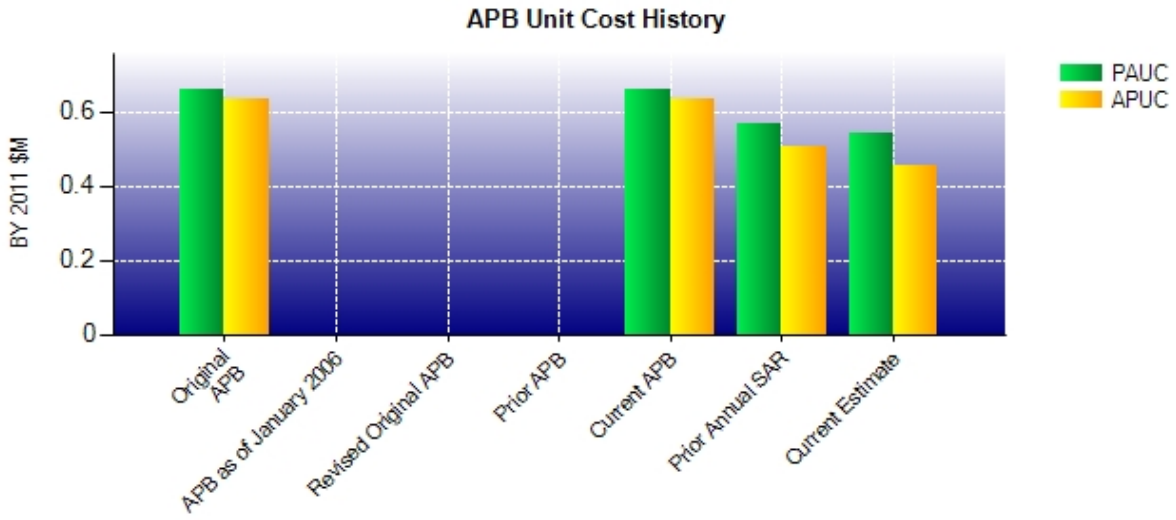
Unit Cost

Unit Cost Report

Item	BY 2011 $M Current UCR Baseline (Dec 2011 APB)	BY 2011 $M Current Estimate (Dec 2014 SAR)	% Change
Program Acquisition Unit Cost			
Cost	3967.3	3244.8	
Quantity	6000	6000	
Item	0.661	0.541	-18.18
Average Procurement Unit Cost			
Cost	3798.5	2735.2	
Quantity	6000	6000	
Unit Cost	0.633	0.456	-27.97

Item	BY 2011 $M Original UCR Baseline (Dec 2011 APB)	BY 2011 $M Current Estimate (Dec 2014 SAR)	% Change
Program Acquisition Unit Cost			
Cost	3967.3	3244.8	
Quantity	6000	6000	
Unit Cost	0.661	0.541	-18.18
Average Procurement Unit Cost			
Cost	3798.5	2735.2	
Quantity	6000	6000	
Unit Cost	0.633	0.456	-27.97

Unit Cost History



Item	Date	BY 2011 $M		TY $M	
		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 2013	0.566	0.508	0.674	0.612
Current Estimate	Dec 2014	0.541	0.456	0.626	0.533

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.809	0.021	0.000	-0.137	0.050	-0.106	0.000	-0.011	-0.183	0.626

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.780	0.021	0.000	-0.137	-0.001	-0.118	0.000	-0.011	-0.246	0.533

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	Jun 2011	Jun 2011
IOC	N/A	N/A	N/A	Mar 2015
Total Cost (TY $M)	N/A	N/A	4856.1	3753.1
Total Quantity	N/A	N/A	6000	6000
PAUC	N/A	N/A	0.809	0.626

Cost Variance

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	175.7	4680.4	--	4856.1
Previous Changes				
Economic	+1.3	+159.3	--	+160.6
Quantity	--	--	--	--
Schedule	--	-673.2	--	-673.2
Engineering	+154.1	-7.8	--	+146.3
Estimating	+45.6	-425.2	--	-379.6
Other	--	--	--	--
Support	--	-63.6	--	-63.6
Subtotal	+201.0	-1010.5	--	-809.5
Current Changes				
Economic	-2.7	-33.6	--	-36.3
Quantity	--	--	--	--
Schedule	--	-150.7	--	-150.7
Engineering	+153.7	--	--	+153.7
Estimating	+25.1	-280.0	--	-254.9
Other	--	--	--	--
Support	--	-5.3	--	-5.3
Subtotal	+176.1	-469.6	--	-293.5
Total Changes	+377.1	-1480.1	--	-1103.0
CE - Cost Variance	552.8	3200.3	--	3753.1
CE - Cost & Funding	552.8	3200.3	--	3753.1

Summary BY 2011 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Production Estimate)	168.8	3798.5	--	3967.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	-348.5	--	-348.5
Engineering	+138.3	-7.4	--	+130.9
Estimating	+43.6	-353.3	--	-309.7
Other	--	--	--	--
Support	--	-43.2	--	-43.2
Subtotal	+181.9	-752.4	--	-570.5
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	-59.1	--	-59.1
Engineering	+136.0	--	--	+136.0
Estimating	+22.9	-250.9	--	-228.0
Other	--	--	--	--
Support	--	-0.9	--	-0.9
Subtotal	+158.9	-310.9	--	-152.0
Total Changes	+340.8	-1063.3	--	-722.5
CE - Cost Variance	509.6	2735.2	--	3244.8
CE - Cost & Funding	509.6	2735.2	--	3244.8

Previous Estimate: December 2013

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-2.7
Software improvements and redesign of component hardware due to obsolescence (Navy). (Engineering)	+126.7	+142.9
Software improvements and redesign of component hardware due to obsolescence (Air Force). (Engineering)	+9.3	+10.8
Increase due to additional integration requirements (Navy). (Estimating)	+22.2	+24.4
Adjustment for current and prior escalation. (Estimating)	+0.7	+0.7
RDT&E Subtotal	+158.9	+176.1

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-33.6
Stretch-out of procurement buy profile of 15 missiles from FY 2015 through FY 2020 to FYDP, FY 2024 through FY 2027 (Navy). (Schedule)	0.0	+1.2
Acceleration of procurement buy profile of 554 missiles from FY 2021 through FY 2027 to FY 2015 through FY 2020 (Air Force). (Schedule)	0.0	-54.5
Additional Schedule Variance due to economies of scale associated with accelerated procurement buy profile (Air Force). (Schedule)	-59.1	-97.4
Adjustment for current and prior escalation. (Estimating)	+3.5	+3.0
Decrease due to updated hardware estimates based on contract negotiation data (Navy). (Estimating)	-66.5	-77.5
Decrease due to updated hardware estimates based on contract negotiation data (Air Force). (Estimating)	-187.9	-205.5
Adjustment for current and prior escalation. (Support)	-0.4	+0.2
Increase in Other Support due to increased requirements of Special Air Trainers (Navy). (Support)	+11.7	+13.0
Increase in Other Support due to increased requirements of Special Air Trainers (Air Force). (Support)	+11.5	+13.4
Decrease in Initial Spares due to reduction in requirements (Navy). (Support)	-1.9	-2.5
Decrease in Initial Spares due to acceleration of procurement profile (Air Force). (Support)	-21.8	-29.4
Procurement Subtotal	-310.9	-469.6

Contracts

Contract Identification

Appropriation: RDT&E

Contract Name: AIM-9X Block II System Improvement Program

Contractor: Raytheon Missiles Systems

Contractor Location: 1151 E Hermans Rd
Tucson, AZ 85756

Contract Number: N00019-11-C-0026

Contract Type: Cost Plus Fixed Fee (CPFF)

Award Date: March 31, 2011

Definitization Date: March 31, 2011

Contract Price							
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	88.9	N/A	1	88.9	88.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional effort for Active Optical Target Detector 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.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (9/28/2014)	-1.4	0.0
Previous Cumulative Variances	-0.4	-0.5
Net Change	-1.0	+0.5

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to additional efforts needed to support the return to Operational Test Readiness Review. The continued development of various software builds and additional lab and field tests needed to support the Failure Review Board resulted in an increase in labor, which drove the cost variances to date.

The favorable net change in the schedule variance is due to the completion of some flight test events that were previously delayed.

Notes

This contract includes FMS and Other Customer Funds (OCF). FMS and OCF funding is reflected in the above data.

The September 2014 month-end was the last Earned Value report based on the program's percent complete, assessment of risk and management reserve. At that time, the program maintained favorable cost and schedule performance as the team continued through Operational Test (OT) with successful OT live fires and captive flight testing. This trend is expected to continue through the program end.

Contract Identification

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: N00019-11-C-0001

Contract Type: Firm Fixed Price (FFP), Fixed Price Incentive(Firm Target) (FPIF)

Award Date: September 29, 2011

Definitization Date: September 29, 2011

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
61.9	61.9	120	539.2	543.4	1070	539.2	539.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to procurement of additional FY 2011 assets, the awards of Lot 12 and Lot 13 Contracts, addition of Programmable Advanced System Interface Simulator Test Set, increased Spares requirement, Inertial Measurement Unit investigation to include retrofits and upgrades, and Belgium Block II procurement. Additional Spares was authorized in December 2014 for United States Navy, United States Air Force, and FMS.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because an EVM waiver was granted by the Department of Navy, Office of the Assistant Secretary, Research, Development and Acquisition (ASN(RDA) 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.

Notes

This contract includes FMS and Other Customer Funds.

Contract Identification

Appropriation: Procurement

Contract Name: AIM-9X Obsolescence, S/W Development & Platform Integration

Contractor: Raytheon Company

Contractor Location: 1151 East Hermans Road
Tucson, AZ 85756

Contract Number: N00019-12-C-2002/1

Contract Type: Cost Plus Fixed Fee (CPFF)

Award Date: May 11, 2012

Definitization Date: May 11, 2012

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1.4	N/A	N/A	58.2	N/A	N/A	58.2	58.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the addition of the following efforts: Engineering Investigations and Missile Software Correction for F-16 Wing Twist, Flight Test Support, Production Software Support, Deficiency Analysis, Engineering Analysis of subsystem hardware, Engineering Change Proposal Preparation, AIM-9X EA-18G HERO and E3 Testing, Air Force Seek Eagle Phase II, AIM-9X Block II Prototype Development, Integration and Flight Test and associated contract fees.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (10/25/2014)	-0.8	-0.5
Previous Cumulative Variances	+1.5	-1.1
Net Change	-2.3	+0.6

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to labor inefficiencies and complexities in the Control Actuation System (CAS) efforts related to the design and routing, CAS testing, and mechanical housing trades for the electronics module.

The favorable net change in the schedule variance is due to completing Dome Assembly tasks that were previously delayed.

General Contract Variance Explanation

Earned Value Management (EVM) requirements for this Effort (1) applies only to Contract Line Item Numbers (CLINs) 103, 105 and 107. This is the final EVM report for CLINs 103, 105 and 107 because the Period of Performance for these CLINs ended on December 31, 2014.

Contract Identification

Appropriation: Procurement

Contract Name: AIM-9X Block II Lot 14 Production

Contractor: Raytheon Company

Contractor Location: 1151 East Hermans Road
Tucson, AZ 85756

Contract Number: N00019-14-C-0053

Contract Type: Fixed Price Incentive(Firm Target) (FPIF)

Award Date: June 26, 2014

Definitization Date: June 26, 2014

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
223.1	229.7	677	227.6	234.5	689	227.6	227.6

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the United States Air Force procuring additional missiles.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date	0.0	0.0
Previous Cumulative Variances	--	--
Net Change	+0.0	+0.0

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because an EVM waiver was granted by the Department of Navy, Office of the Assistant Secretary, Research, Development and Acquisition (DASN (AP)) on June 20, 2014 due to NAVAIR utilizing other methods of management control (i.e., quarterly limitation on payments reporting as required by Federal Acqusition Regulation 52.16-16 (g)). In addition, Contractor Cost and Software Data Reporting is a contract deliverable.

Notes

This is the first time this contract is being reported.

Contract Identification

Appropriation: RDT&E

Contract Name: AIM-9X Obsolescence, S/W Development & Platform Integration (CLIN 0113)

Contractor: Raytheon Missile Systems

Contractor Location: 1151 East Hermans Road
Tucson, AZ 85756

Contract Number: N00019-12-C-2002/2

Contract Type: Cost Plus Fixed Fee (CPFF)

Award Date: August 05, 2014

Definitization Date: August 05, 2014

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
43.8	N/A	N/A	43.8	N/A	N/A	43.8	43.8

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2014)	+1.1	-2.1
Previous Cumulative Variances	--	--
Net Change	+1.1	-2.1

Cost and Schedule Variance Explanations

The favorable cumulative cost variance is due to leveraging mature algorithms from the previous contract; therefore, less effort was required to support the algorithm development.

The unfavorable cumulative schedule variance is due to complexities with the algorithm installation related to the 9.4 software efforts. Raytheon plans to work tasks in parallel to recover schedule. In addition, the delayed receipt of documentation needed to complete BSP related tasks has also driven unfavorable schedule variance.

General Contract Variance Explanation

The Prototype Development CLIN (0113) was awarded in August 2014. An Integrated Baseline Review (IBR) was successfully conducted on January 27, 2015.

Notes

This is the first time this contract is being reported.

Deliveries and Expenditures

Deliveries				
Delivered to Date	**Planned to Date**	**Actual to Date**	**Total Quantity**	**Percent Delivered**
Development	0	0	0	--
Production	0	542	6000	9.03%
Total Program Quantity Delivered	0	542	6000	9.03%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	3753.1	Years Appropriated	12
Expended to Date	565.8	Percent Years Appropriated	50.00%
Percent Expended	15.08%	Appropriated to Date	1033.0
Total Funding Years	24	Percent Appropriated	27.52%

The above data is current as of February 18, 2015.

Operating and Support Cost

Cost Estimate Details

Date of Estimate: January 13, 2015
Source of Estimate: POE
Quantity to Sustain: 6000
Unit of Measure: Total Quantity
Service Life per Unit: 20.00 Years
Fiscal Years in Service: FY 2014 - FY 2049

The sustaining support consists of systems engineering, program management support, failure analysis, and Surveillance/quality/obsolescence evaluation program. The cost estimate considers a service life stated in the service life letter 8810 dated July 24, 2013 for the All Up Round (AUR) and letter dated September 15, 2010 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	All	310
	USAF	All	297
AUR	USN	188	226
	USAF	225	33

Sustainment Strategy

The sustainment strategy for the AIM-9X-2 is essentially the same as the previous AIM-9X missile configurations. The key focus areas include maintenance of key performance requirements, decreasing life cycle costs and ensuring asset availability for warfighters. Specific sustainment initiatives include depot maintenance and repairs, sustaining/systems engineering, program management support, failure analysis and ordnance assessment and continuing system improvement, primarily software support. The cost estimate considers a 20-year sustainment period after delivery of the final production lot. The estimate assumes operational utilization of CATMs and AURs based on historical annual average flight hours for each branches current total inventory of AIM-9X CATMs and AURs.

Antecedent Information

The AIM-9X Block I is the antecedent system to the AIM-9X Block II. Antecedent costs were derived based on historical data collected via the Visibility and Management of Operating and Support Costs database and estimated through the remainder of the life (FY 2032). A total of 3,097 AIM-9X Block I missiles were procured. The last year of procurement was FY 2010. There is a 20-year service life assumption for the AIM-9X Block I AUR and a 13-year service life assumption for the CATM. The AIM-9X Block I system included a warranty period that accounted for missile repair costs. The AIM-9X Block II system did not include a warranty and was estimated accordingly.

Annual O&S Costs BY2011 $M		
Cost Element	**AIM-9X Blk II Average Annual Cost Per Total Quantity**	**AIM-9X (Antecedent) Average Annual Cost Per Total Quantity**
Unit-Level Manpower	0.000	0.000
Unit Operations	0.600	2.200
Maintenance	11.390	5.300
Sustaining Support	6.370	5.800
Continuing System Improvements	3.660	5.000
Indirect Support	0.000	0.100
Other	0.000	0.000
Total	22.020	18.400

Item	Total O&S Cost $M			
	AIM-9X Blk II			AIM-9X (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	977.5	1075.3	770.8	531.9
Then Year	1593.6	N/A	1018.9	N/A

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 35 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 estimate is lower than the APB values as the program was plussed up over 600 missiles from FY 2014 through FY 2019. This change enabled the program to procure more missiles earlier than planned so the total years of sustainment is reduced.

Equation to Translate Annual Cost to Total Cost

Average Annual Cost is calculated using the total cost divided by the number of years for sustainment.
Total Cost $770.8M divided by 35 years for maintenance equals $22.0M average annual cost per total quantity.

O&S Cost Variance		
Category	**BY 2011 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2013 SAR	700.4	
Programmatic/Planning Factors	70.4	Increase due to adjusted service life from 20 years AURs and 13 years CATMs to no fixed time limit but based on

		successful completion of maintenance actions specified in the service life letters or before specified number of operating hours.
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	70.4	
Current Estimate	770.8	

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2011 $M):

Disposal costs are not identified at this time.