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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



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

FY 2024 President's Budget

**Defense Acquisition Visibility Environment
(DAVE)**

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Common Acronyms and Abbreviations

\$B - Billions of Dollars
\$K - Thousands of Dollars
\$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
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
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
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
U.S. - United States
UCR - Unit Cost Reporting
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

AIM-9X Block II Sidewinder

DoD Component

Navy

Responsible Office

Program Manager

Name: CAPT Christopher DeBons

Phone: (760) 793-7236

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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

AIM-9X Blk II

Program Highlights Since Last Report

The AIM-9X Block II program awarded the eighth full rate production contract (Option Lot 22) in March 2022. The Lot 22 contract was modified in November to update the missile configuration for domestic customers from the AIM-9X-2 to AIM-9X-4, which incorporates obsolescence redesigns that were developed under the Systems Improvement Program (SIP) III contract. SIP III continued development of hardware to address obsolescence and sustainability and Operational Flight Software (OFS) 10.4, which re-hosts OFS 9.4 on improved hardware and increases performance. Initial flight test of OFS 10.4 was successfully completed. Additionally, the Engineering Change Proposal (ECP) for OFS 9.15 completed which brings additional capability to AIM-9X Foreign Military Sales (FMS) customers. Initial fielding of OFS 9.15 was completed and the AIM-9X team, in conjunction with Raytheon Missiles & Defense (RMD), will continue to facilitate in-country reprogramming for FMS customers. SIP III Follow-On efforts continued with development of OFS 9.5, which will increase capability and reliability. In addition, FMS software development of OFS 10.15, which is required to re-host OFS 9.15 on AIM-9X-4 continued. Finally, SIP IV risk reduction continued which included preliminary efforts associated with updating the AIM-9X sensor and OFS software. The SIP IV contract was awarded in September 2022, which is a five-year effort to increase capability through the modernization of the Guidance Unit (GU) hardware and development software. In CY 2022, the AIM-9X international team added three new Block II customers including Portugal, Jordan and Germany, which make a total of 31 International Partner Countries. The AIM-9X team continued to battle Operational Availability (Ao) of the Tactical AIM-9X-2 and the Captive Air Training Missile (CATM), CATM-9X-2, as a result of decreased reliability of the program's top degrader, the mechanical Inertial Measurement Unit (IMU). Significant Accomplishments: March 2022 - AIM-9X SIDEWINDER's ECP for Field Release of FMS OFS 9.15X was approved. OFS 9.15X brings additional capability to AIM-9X Block II FMS customers. March 2022 - Executed Production Contract modification, valued at \$218M, which awarded options for Lot 22 Production and additional Lot 21 requirements. This modification includes requirements AIM-9X Blk II All-Up-Round (AURs) missiles, Block II+ missiles, CATMs, and all corresponding containers in spares for Department of the Navy (DoN), United States Air Force (USAF), and FMS customers. May 2022 - The SIDEWINDER team awarded a \$98M contract modification to RMD to a previously awarded indefinite-delivery, indefinite-quantity (IDIQ) contract in support of scope for integrated logistics support and repairs for sustainment of all variants of the AIM-9X and has a period of performance through May 2024. This modification supports DoN, USAF, and FMS customers. June 2022 - After completing all Development Testing and Evaluation requirements in 2021, FMS OFS 9.15x was fielded in June 2022. OFS 9.15x will introduce the "true" fifth-generation AIM-9X Block II/II+ missile capabilities of Lock-On-After Launch, Data Link, and Surface Attack, which will enhance and/or improve the Air-to-Air and Air-to-Surface employment potential for all AIM-9X Block II/II+ International Partner countries. With support from RMD and/or China Lake Subject Matter Experts, the Air-to-Air Missiles Program Office (PMA-259) has embarked on the world-wide OFS 9.15x reprogramming effort of all FMS assets, an activity that will take several years to complete. July 2022 - The first flight-worthy developmental release of OFS 10.4X (R0) was completed. July 2022 - The SIDEWINDER FMS team completed the first OFS 9.15X reprogramming event. This was the first country of 22 FMS customers with AIM-9X-2 assets that require reprogramming to OFS 9.15. July 2022 - The AIM-9X team awarded a \$17.5M contract mod for the first 40 SIP III configuration GUs (AIM-9X-4). These GUs will be mated with 9X missile back-ends (target detector, warhead, rocket motor) to round out Lot 21 missile deliveries planned for FY 2024. The award also included production line equipment and set-up that is required to establish the SIP III unique production capabilities. September 2022 - PMA-259 and the Army's Short and Intermediate Effectors for Layered Defense, Indirect Fire Protection Capability Increment 2 (IFPC Inc 2) Product Office finalized a Memorandum of Agreement to facilitate support of the IFPC Inc 2 program. The USAF and United States Navy (USN) stakeholders identified 116 AIM-9X-2 missiles from a combination of production and inventoried assets to support IFPC research, development as well as outfit of an initial operational capability. The IFPC program provided funding to procure replacement missiles transferred from USAF and USN. September 2022 - Successfully awarded the AIM-9X SIP IV contract on September 30, 2022. Over five years, \$250 million dollars of Research, Development, Test & Evaluation funds will be invested to modernize the AIM-9X GU hardware and software. These enhancements will yield a 6th generation sensor that improves the AIM-9X. November 2022 - Captured two new AIM-9X Block II missile International Partners (Portugal and Jordan) for inclusion into the United States Government (USG) Lot 23 AIM-9X Production Contract. Lot 23 will produce 375 FMS missiles for seven AIM-9X Block II/II+ International Partners, exceeding the Program Manager's yearly goal of at least 200 FMS missiles sold. The Lot 23 contribution from the 375 FMS missiles is valued at \$203.9M, while the USG savings from this FMS missile procurement quantity (61% of total missiles procured) is valued at \$23.4M.

November 2022 - AIM-9X awarded a modification to Lot 22 to procure the first full lot of SIP III variant missiles (AIM-9X-4) for domestic customers (USN, USAF, Army). The procurement totaled \$98.3M and will result in delivery of 423 missiles by November 30, 2025. Notably, the mod included non-recurring equipment required to transition the production line to full-rate of the new configuration, which will result in a capacity of 1400 missiles per lot starting in Lot 24 (FY2024). November 2022 - The AIM-9X test team executed the first captive carry flight tests of OFS 10.4X (R0) at Eglin Air Force Base. Four sorties were completed on a combination of F-15E and F-16C and accumulated a total of 9.4 hours of test data. Ultimately, OFS 10.X will accompany the AIM-9X-4 production assets. December 2022 – Germany joined the AIM-9X International Community, becoming the 31st AIM-9X International Partner country, after signing its Letter of Offer & Acceptance to procure 105 AIM-9X Block II/II+ missiles in Lots 25 & 26 for future Joint Strike Fighter aircraft employment. December 2022 - AIM-9X awarded the Production Lot 23 contract on December 22, 2022. The team obligated \$317,415,034.00 for the procurement of 617 missiles and various kits, spares, and containers in addition to non-recurring engineering costs associated with transitioning to full rate production of SIP III missile variant. The procurement includes 290 AIM-9X Block II missiles (160 for the USAF, 12 for the Army, and 118 for FMS customers), 181 Block II+ missiles for FMS customers, and 146 Block II CATM (70 for the USAF and 76 for FMS customers). Use of the variance in quantity model resulted in a 17.1% cost savings to the government with this award and has a potential for greater savings when DoN missile procurements are added to the contract in March 2023. FY22 Depot Accomplishments: sent 166 AURs to be repaired, completing 165 repairs and processing over 188 Conventional Ordnance Deficiency Report in FY2022. Sustainment Accomplishments: Execution of GU 'sectionalization' training at Naval Airborne Weapons Maintenance Unit One (NAWMU-1), which will improve AO by expediting repairs in-theater. Team also performed a site visit of Fallbrook, CA to determine feasibility of adding a West Coast enhanced I-Level. Once fully implemented, AIM-9X will have repair capability in three Areas of Responsibility which will expedite repairs back to the Fleet. Significant Issues: Sustainment metrics show that both AUR and CATMs are not meeting their threshold Ao requirements: 86% (CATM) and 93% (AUR). AIM-9X CATM Ao decreased to 78% for the USN and 75% for the USAF. AIM-9X AUR Ao is 92%: USN Ao is 95% and USAF is at 90%. The number one failure mode for AIM-9X-2s are IMU failures within the GU. The PMA is mitigating IMU failures via: OFS Software fix and an upgraded GU (SIP III Hardware), which cut into production in Lot 21, with fielding and retrofits planned to begin in FY 2024. GUs to support both the retrofit and sustainment of AIM-9X-4s have been budgeted in FY 2022 through the Future Years Defense Plan. Depot throughput has been adversely impacted by multiple Quality Escape Issues at RMD (ex. Ignition Safety Device, Electronic Safe-Arm-Device and Batteries). In addition, repair turn-around-times have been slowed due to OFS turn-over delays at RMD. There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation

Date	Significant Development Description
Oct - 2016	The Program declared FOC for AIM-9X Block II.
Sep - 2016	The U.S. Air Force declared IOC for AIM-9X Block II.
Aug - 2015	AIM-9X Block II received approval to enter FRP.
Mar - 2015	The U.S. Navy declared IOC for AIM-9X Block II.
Jun - 2014	AIM-9X Block II received approval for LRIP IV.
Aug - 2012	AIM-9X Block II received LRIP III approval

Jun - 2011	AIM-9X Block II received approval for Milestone C LRIP I & II.
Jun - 2011	AIM-9X Block II was designated a separate ACAT IC program entering the acquisition process at Milestone C.

Schedule

AIM-9X Blk II

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
FRP Decision	Dec 2013	Aug 2015	Aug 2015	Aug 2015	
FOC	Oct 2015	Oct 2016	Oct 2016	Oct 2016	
IOC	Sep 2014	Mar 2015	Mar 2015	Mar 2015	
OT Start	Apr 2012	May 2012	May 2012	May 2012	
OT Complete	Apr 2013	Jan 2015	Jan 2015	Jan 2015	
MS C	Jun 2011	Jun 2011	Dec 2011	Jun 2011	

Notes

Acronyms and Abbreviations:
 FOC - Full Operational Capability
 FRP - Full Rate Production
 MS - Milestone
 OT - Operational Test

Performance

AIM-9X Blk II

Performance Characteristics					
Milestone Baseline	Current Baseline Objective/Threshold	Demonstrated Performance	Current Estimate/Actual	Deviation	
(KPP) - AIM-9X Aircraft Interface/Interoperability Interface (1)					
	Mid body umbilical only	Digital.	Digital	Mid body umbilical only	
(KSA) - AIM-9X Aircraft Interface/Interoperability Missile Box Size (in.) (1)					
	<= 12.5 X 12.5	<= 12.5 X 12.5	12.5X12.5	</= 12.5X12.5	
(APA) - AIM-9X Aircraft Interface/Interoperability Missile Diameter (in.) (2)					
	<= 5	<= 7	</= 5	</= 5	
(KPP) - AIM-9X Aircraft Interface/Interoperability Missile Length (in.) (1)					
(KPP) - AIM-9X Aircraft Interface/Interoperability Missile Length (in.) (2)					
	<= 115	<= 123	119.2	</= 123	
(APA) - AIM-9X Aircraft Interface/Interoperability Missile Weight (lbs.) (2)					
	<= 192	<= 210	186.2	</= 192	
(APA) - AIM-9X BIT Time (sec.) (2)					
	<= 20	<= 20	</= 15	</= 20	
(KPP) - AIM-9X Captive Carry Reliability (MTBCCF) (hr.) (2)					
	>.or.=900	>.or.=500	1567	>.or.=900	
(KPP) - AIM-9X Day/Night Capability (1)					
	Yes	Yes	Yes	Yes	
(KPP) - AIM-9X Detect Non-Operational Missile (BIT-able Components) (%) (2)					
	>.or.=0.95	>.or.=0.90	0.92	>.or.=0.90	
(KSA) - AIM-9X Detect Non-Operational Missile (BIT) All Components (%) (1)					
	>.or.=0.80	>.or.=0.60	0.81	>.or.=0.60	
(KPP) - AIM-9X High Off Boresight Capability Cueing/Verification (2)					
	Interface with current/ planned aircraft radar systems and planned HMCS.	Interface with current/ planned aircraft radar systems and planned HMCS.	Yes	Interface with current/ planned aircraft radar systems and planned HMCS	
(APA) - AIM-9X Mean Time Between False Alarms (hr.) (1)					
	>.or.=25	<.or.=16	>.or.=18	>.or.=16	

(KPP) - Ao- AUR (1)					
	No less than (.98) after 35,000 flight hours	No less than (.93) after 35,000 flight hours	0.92	>=0.93	Yes
(KPP) - Ao- CATM (1)					
	No less than (.95) after 100,000 flight hours	No less than (.86) after 100,000 flight hours	0.78	>=0.86	Yes
(KPP) - EMI Compatibility (2)					
	Threshold= Objective	Not incur damage to electrical components while in the 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.	Yes	Threshold= Objective	
(APA) - Material Availability (Am) (1)					
	Threshold= Objective	No less than (.82)	0.84	0.88	

Requirement Reference

Validated:

CPD dated May 20, 2011

Deviation Explanation

Depot throughput has been adversely impacted by multiple Quality Escape Issues at RMD (ex. ISDs, ESAD and Batteries). In addition, repair turn-around-times have been slowed due to OFS turn-over delays at RMD. AIM-9X CATM Ao decreased to 78% for the USN and 75.1% for the USAF. AIM-9X AUR Ao is 92%: USN Ao is 94.5 and USAF is at 90%. Anticipate Ao recovery by May 2023.

Notes

Material Availability - Per the CPD, this requirement only pertains to AUR requirements.

Source: 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

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

Acquisition Budget Estimate

AIM-9X Blk II

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	Base Year	Objective (BY\$M)	Objective (BY\$M)	Threshold (BY\$M)	BY\$M	TY\$M	Deviation
RDT&E	2011	168.8	777.7	855.5	819.1	1,007.2	
Procurement	2011	3,798.5	4,811.5	5,292.7	4,374.4	6,034	
MILCON	2011	0	0	0			
Acq. O&M	2011	0	0	0			
Total		3,967.3	5,589.2		5,193.5	7,041.2	
PAUC	2011	.661	.480	.528	.446	.605	
APUC	2011	.633	.414	.455	.376	.519	

Appropriation Category Deviation Explanations**PAUC Deviation Explanation****APUC Deviation Explanation****Budget Notes**

None.

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	0	
Procurement	11635	11635
O&M-Acquired		

Quantity Notes

None.

Unit Cost

AIM-9X Blk II

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2011	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	5,589.2	5,193.5	
Quantity	11,635	11635	
Unit Cost	.480	.446	-7.01%
Average Procurement Unit Cost			
Cost	4,811.5	4,374.4	
Quantity	11,635	11,635	
Unit Cost	.414	.376	-9.19%

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2011	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	3,967.3	5,193.5	
Quantity	6,000	11635	
Unit Cost	.661	.446	-32.47%
Average Procurement Unit Cost			
Cost	3,798.0	4,374.4	
Quantity	6,000	11,635	
Unit Cost	.633	.376	-40.61%

Cost Growth Details

Current Baseline PAUC Breach Explanation

Current Baseline APUC Breach Explanation

Original Baseline PAUC Breach Explanation

Original Baseline APUC Breach Explanation

Impacts of Schedule Changes on Unit Cost

None.

Impacts of Performance Changes on Unit Cost

None.

Actions Taken or Proposed to Control Future Cost Growth

None.

Risk and Sensitivity Analysis**AIM-9X Blk II**

Risk and Sensitivity Analysis
Current Procurement Cost(December - 2022)
Supplier base shortages due to long lasting COVID issues and staffing shortages as well as increasing long lead times and inflation have been identified as potential schedule and cost risks industry wide.
Original Baseline Estimate (December - 2011)
The original Total Acquisition Cost was \$3967.3M (BY 2011).
Current Baseline Estimate (February - 2019)

Schedule Risk		
Current	2021-12-31	1. System Improvement Program Application Specific Integrated Circuit Processor delivery for Production may not meet Lot 21 cut-in.
Current	2021-12-31	2. Long Term Sustainment of Mechanical Inertial Measurement Unit.
Technical Risks		

Low Rate Initial Production

AIM-9X Blk II

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	06/30/2011	06/05/2014
Approved Quantity	361	1,140
Reference	Milestone C ADM	LRIP IV ADM
Start Year	2011	2011
End Year	2012	2014

Rationale if quantity exceeds 10% of the total number of articles to be procured:

Not Applicable.

Notes

None.

Contracts & Efforts

Contract Data	
Contract Number	N00019-18-C-1068
Effort Number	1
Modification Number	P00037
Award Date	09/13/2018
Definitization Date	04/15/2019
Order Number	
CAGE Code/CAGE Legal Name	15090/Raytheon Company
Contract Title	AIM-9X Block II Lots 18-20 Production
Contract Address	Tucson, AZ
Contracting Office	NAVAIRSYSCOM
Supported Phase	Production
Contract Strategy	
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	November 18, 2022
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$20.3	\$1,338.2	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
\$1,338.2	\$1,338.2	
Initial Quantity	Current Quantity	Delivered Quantity
0	3388	1553
BAC	BCWP	ACWP

BCWS	Cost Variance	Schedule Variance

Contract Notes:

Cost and schedule variances are not reported for this contract, because an EVM waiver was granted by Office of the Assistant Secretary of the Navy (Research, Development and Acquisition) Deputy Assistant of the Navy (Acquisition and Procurement) on June 07, 2018 due to the utilization of other methods to monitor contract performance (i.e., a Cost and Software Data Reporting requirement).

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00019-21-C-0723
Effort Number	1
Modification Number	P00009
Award Date	06/30/2021
Definitization Date	06/30/2021
Order Number	
CAGE Code/CAGE Legal Name	15090/Raytheon Company
Contract Title	AIM-9X Block II Lots 21-23
Contract Address	Tucson, AZ
Contracting Office	NAVAIRSYSCOM
Supported Phase	Production
Contract Strategy	
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	December 22, 2022
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
\$328.2	\$328.2	
Initial Ceiling Price	Current Ceiling Price	
\$328.2	\$328.2	
Contractor EAC	PM EAC	
\$328.2	\$328.2	
Initial Quantity	Current Quantity	Delivered Quantity
729	1225	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

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Contract Notes:

Cost and schedule variance is not reported for this contract, because an EVM waiver was granted via Deviation No. 20-N-904 dated 19 January 2020 signed by Office of the Assistant Secretary of the Navy (Research, Development and Acquisition) Deputy Assistant of the Navy (Acquisition and Procurement) due to the utilization of other methods to monitor contract performance (i.e., a Cost and Software Data Reporting requirement).

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00019-15-C-0121
Effort Number	1
Modification Number	P00104
Award Date	09/29/2015
Definitization Date	09/29/2015
Order Number	
CAGE Code/CAGE Legal Name	15090/Raytheon Company
Contract Title	AIM-9X Block II System Improvement Plan III
Contract Address	Tucson, AZ
Contracting Office	NAVAIRSYSCOM
Supported Phase	Development
Contract Strategy	
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	January 30, 2023
Work Start Date	
Technical Data Rights	
Work Completed	97.41%

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
\$264.8	\$343.4	
Initial Ceiling Price	Current Ceiling Price	
\$264.8	\$340.3	
Contractor EAC	PM EAC	
\$314.1	\$320.3	
Initial Quantity	Current Quantity	Delivered Quantity
0	0	0
BAC	BCWP	ACWP
\$284.6	\$277.2	\$305.2
BCWS	Cost Variance	Schedule Variance

\$278.8	-\$28	-\$1.6
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Contract Notes:

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

Factors Contributing to Cost Variance and Projected Effects on Program Costs

The unfavorable net change in the cost variance is due to overall Application Specific Integrated Circuit (ASIC) supplier delays of hardware, software, and tools.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

The unfavorable net change in the schedule variance is due to overall ASIC supplier delays of hardware, software, and tools.

Contract Data	
Contract Number	N00019-20-C-0071
Effort Number	1
Modification Number	P000017
Award Date	09/10/2020
Definitization Date	09/10/2020
Order Number	
CAGE Code/CAGE Legal Name	15090/Raytheon Company
Contract Title	AIM-9X Block II System Improvement Plan III Follow On
Contract Address	Tucson, AZ
Contracting Office	NAVAIRSYSCOM
Supported Phase	Production
Contract Strategy	
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	December 22, 2022
Work Start Date	
Technical Data Rights	None
Work Completed	47.27%

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
\$53.2	\$111.4	
Initial Ceiling Price	Current Ceiling Price	
\$53.2	\$111.4	
Contractor EAC	PM EAC	
\$94.8	\$101.3	
Initial Quantity	Current Quantity	Delivered Quantity
0	0	0
BAC	BCWP	ACWP
\$93.4	\$44.2	\$43.3
BCWS	Cost Variance	Schedule Variance

\$48.5	\$0.8	-\$4.4
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Contract Notes:**Factors Contributing to Cost Variance and Projected Effects on Program Costs**

The favorable net change in the cost variance is due to less than expected labor usage for Supply Chain Management, Supervision, Quality Management Support, Chief Engineer, Finance, and Program Management Support.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

The unfavorable net change in the schedule variance is mainly due to delays with guidance software development and delayed hardware deliveries.

Contract Data	
Contract Number	N00019-22-C-0067
Effort Number	1
Modification Number	P0003
Award Date	09/30/2022
Definitization Date	09/30/2022
Order Number	
CAGE Code/CAGE Legal Name	15090/Raytheon Company
Contract Title	AIM-9X Block II System Improvement Plan IV
Contract Address	Tucson, AZ
Contracting Office	NAVAIRSYSCOM
Supported Phase	Development
Contract Strategy	
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	December 22, 2022
Work Start Date	
Technical Data Rights	
Work Completed	0.23%

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$225.6	\$225.6	
Initial Ceiling Price	Current Ceiling Price	
\$225.6	\$225.6	
Contractor EAC	PM EAC	
\$185.4	\$205.2	
Initial Quantity	Current Quantity	Delivered Quantity
0	0	
BAC	BCWP	ACWP
\$185.4	\$0.4	\$0.6
BCWS	Cost Variance	Schedule Variance

\$0.4	-\$0.1	\$0
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Contract Notes:

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Unfavorable cost performance is a result of the early stages of the contract.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

External Government Activities

Activity Title		Government Entity	Supported Phase
CAGE		Work Start Date	
City		State/Province:	
Notes			

Deliveries and Expenditures

AIM-9X Blk II

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development				
Production	4,215	3,684	11,635	35.40%
Total Program Quantity Delivered	4215	4119	11,635	35.40%

Expended and Appropriated (TY \$M)				
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Years Appropriated to date: 18

Total Years Appropriated Funding (Current Baseline): 33

Percent Years Appropriated: 54.55%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 43.88%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 39.15%

Total Acquisition Cost: 7,041.18

Deliveries & Expenditures Notes:

Data reflects PB24 Budget. Planned deliveries reflects contractual obligation for U.S. Navy and U.S. Air Force Tactical and Captive Air Training Missiles through February 2023. The delta between planned to date and actual to date is that Raytheon is delivering Lot 18, 19, 20 missiles ahead of contract requirement.

Operating and Support Costs

AIM-9X Blk II

O&S Cost Breakdown:

Category (BY\$ Million)	AIM-9X Block II
Unit-Level Manpower	.0
Unit Operations	.0
Maintenance	603.8
Sustaining Support	368.4
Continued System Improvements	255.4
Other	
Total	1,227.6

Cost Estimate Source: POE dated February 27, 2023

O&S Cost Notes:

The last estimate Milestone approval by Center for Naval Analyses was 2018. Current Program Office estimate was completed 2/27/2023.

Total Program O&S Cost Compared with Baseline					
	Current Baseline				
	Objective (BY\$M)	Threshold (BY\$M)	Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
Total O&S	1,343.8	1,478.2	1,227.6	2,438.8	

Note:

- a. Disposal/Demilitarization Cost Estimate and Source of Estimate: Total Cost BY 2011\$ \$4.82M
- b. Sustainment Strategy: The sustainment strategy for the AIM-9X Block II is essentially the same as the previous AIM-9X missile configurations. Raytheon Missile and Defense Systems is the sole source of Depot repairs of the AIM-9X-2 missile. The average turnaround time for Raytheon Depot repairs is over 370 days. In order to reduce turnaround times and decrease the Raytheon Depot backlog, and proved through a follow-on Product Support Business Case Analysis (BCA), Program Manager funded the stand up and training of AIM-9X Intermediate Plus (I+) Sectionalization repair capability forward in the 7th Fleet Area of Responsibility (AOR) (NAWMU-1) and Organic Intermediate Repair Capability at Letterkenny Munitions Center (LEMC). NAWMU-1 and LEMC have the ability to perform sectionalization maintenance to remove and replace AIM-9X-2 Guidance Units and return AIM-9X-2 missiles back to a Ready For Issue status. Consistent throughput of missiles back to the Fleet is dependent on an adequate spares pool for major 8E Cognizant Code (COG) assemblies - of which the Guidance Unit accounts for 95% of all failures.

For Each Acquired System or System Variant:

- i. Quantity to Sustain: 11635
- ii. First Operational Fiscal Year: 2014
- iii. Final Operational Fiscal Year: 2067
- iv. Unit Expected Service Life: 20 years

- c. Antecedent System(s) O&S Costs: The antecedent system is AIM-9X Block I. AIM-9X Block I costs were derived based on historical data collected via the Naval 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 and a 13-year service life assumption for the Captive Air Training Missiles. The AIM-9X Block I system included a warranty period that accounted for missile repair costs.

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs**AIM-9X Blk II****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Sustainment Factors	System Name: AIM-9X Block II	Antecedent System Name: AIM-9X Block I
Quantity to Sustain	AIM-9X Block II	AIM-9X Block I
Unit of Measure	Missile	Missile
Unit Expected Service Life	20	20

Base Year:

Annual Unitized O&S Cost by Category Base Year \$ Unit:(\$M)	System Name: AIM-9X Block II	Antecedent System Name: AIM-9X Block I
Unit-Level Manpower	0.0	0.0
Unit Operations	0.0	2.2
Maintenance	12.0	5.3
Sustaining Support	7.3	5.8
Continued System Improvements	5.1	5.1
Other	0.0	0.0
Total O&S	24.4	18.4

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: AIM-9X Block II	Antecedent System Name: AIM-9X Block I
Total Disposal	5.25	

Cost Estimate Source - Disposal	
Type:	Program Office Estimate
Approval Authority and Date:	Naval Center for Cost Analyses 2018
Note:	
The last estimate Milestone Approval by Naval Center for Cost Analyses was 2018. The Program Office estimate is dated February 27, 2023.	
Disposal Cost Notes:	
None.	

Additional O&S Estimate Assumptions:

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:

Yearly	Yearly		Qty In-Use	Flight Hours		CATM	USN	
All	279	USAF	All	275 AUR	USN	200	148	USAF
200	75							

Sustainment Strategy:

The sustainment strategy for the AIM-9X Block II is essentially the same as the previous AIM-9X missile configurations. Raytheon Missile and Defense Systems is the sole source of Depot repairs of the AIM-9X-2 missile. The average turnaround time for Raytheon Depot repairs is over 370 days. In order to reduce turnaround times and decrease the Raytheon Depot backlog, and proved through a follow-on Product Support Business Case Analysis (BCA), Program Manager funded the stand up and training of AIM-9X Intermediate Plus (I+) Sectionalization repair capability forward in the 7th Fleet Area of Responsibility (AOR) (NAWMU-1) and Organic Intermediate Repair Capability at Letterkenny Munitions Center (LEMC). NAWMU-1 and LEMC have the ability to perform sectionalization maintenance to remove and replace AIM-9X-2 Guidance Units and return AIM-9X-2 missiles back to a Ready For Issue status. Consistent throughput of missiles back to the Fleet is dependent on an adequate spares pool for major 8E Cognizant Code (COG) assemblies - of which the Guidance Unit accounts for 95% of all failures.

Antecedent Estimate Assumptions:

AIM-9X Block I costs were derived based on historical data collected via the Naval 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 and a 13-year service life assumption for the Captive Air Training Missiles. The AIM-9X Block I system included a warranty period that accounted for missile repair costs. Military Personnel (MP) and disposal costs are not included in this estimate.