



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-185



AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM)

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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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-120 Advanced Medium Range Air-to-Air Missile (AMRAAM)

DoD Component

Air Force

Joint Participants

Navy

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Date

Assigned: June 17, 2013

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 17, 1992

Approved APB

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated May 19, 2008

Mission and Description

The Advanced Medium Range Air-to-Air Missile (AMRAAM) AIM-120 program provides for the acquisition of the most advanced all-weather, all-environment medium range air-to-air missile system in response to United States Air Force, United States Navy, North Atlantic Treaty Organization, and other allied operational requirements through 2024. The system is an active radar guided intercept missile with inherent Electronic Protection capabilities for air-to-air applications against massed penetration aircraft and is designed to replace the AIM-7 Sparrow. The AIM-120D, currently being fielded, will have improved accuracy via Global Positioning System aided navigation, improved network compatibility, and enhanced aircrew survivability via a two-way datalink capability.

Executive Summary

AIM-120D Operational Testing (OT): The services completed OT in July 2014. The US Navy declared IOC in January 2015 and the US Air Force authorized operational fielding on January 26, 2015.

AIM-120C Basic Electronic Protection Improvement Program (EPIP): The EPIP Program has separate software configurations for both the AIM-120C7 and AIM-120C-3/4/5/6 missiles. The AIM-120C7 tape completed OT, and fielding is projected in second quarter FY 2015. The software development effort associated with the AIM-120C-3/4/5/6 missiles completed development with a successful Functional Configuration Audit (FCA) in July 2014 and entered OT in September 2014. One (of two) OT shots have been completed. The second shot will be executed late in second quarter FY 2015, and it will take approximately 90 days to generate the test report/complete associated fielding requirements. Anticipate fielding the capability in fourth quarter FY 2015.

AIM-120C7 Advanced Electronic Protection Improvement Program (AEPIP): AEPIP was structured to deliver combat capability via two incremental and complimentary software tapes, Tape 1 and Tape 2. Tape 1 provides enhanced capability to fielded systems as a near term solution. Tape 2 includes the capabilities of Tape 1 in addition to expanding the system's envelope. Development is ongoing for both Tapes. The Tape 1 Critical Design Review (CDR) was successfully conducted in October 2013. The program was subsequently re-baselined in September 2014 due to problems associated with flight test execution and the completion of the China Lake hardware-in-the-loop (HWIL) facility, which resulted in an 18 month slip to the program schedule. An Integrated Baseline Review (IBR) was completed in November 2014 resulting with no changes in scope. The CDR for Tape 2 is anticipated for third quarter FY 2015. Following program rebaseline, planned fielding dates for Tape 1 and Tape 2 are third quarter FY 2017 and third quarter FY 2018 respectively.

AIM-120D System Improvement Program (SIP): SIP is a software capabilities upgrade program structured to deliver evolving combat capability on planned intervals. There are currently two efforts in development, SIP-1 and SIP-2. SIP-1 software development continued with the addition of a \$3.8M contract to complete root cause/corrective action analysis of a data-link multipath anomaly identified during captive flight testing. SIP-1 software will begin OT in fourth quarter FY 2015 with fielding forecast for first quarter FY 2016. The SIP-2 Technology Maturation and Risk Reduction effort continued to implement initial EPIP capabilities into the AIM-120D. During this phase, Raytheon Missile Systems successfully accomplished a System Requirements Review (SRR) and a System Functional Review (SFR). The phase will culminate with a Preliminary Design Review (PDR) forecast for third quarter FY 2015.

Processor Replacement Program (PRP): The AIM-120C7 PRP successfully completed live launches in support of the engineering activities to field the new processor chip for the AIM-120C7 missile. Acceptance of all AIM-120C7 retrofitted PRP missiles was finalized December 2014. Delivery of the final AIM-120D PRP software was completed in January 2015 and will be followed by completion of the Engineering Change Proposal (ECP) and FCA.

Form, Fit, Function Refresh (F3R): F3R is an AMRAAM Diminishing Manufacturing Sources and Material Shortages (DMSMS) project to mitigate obsolescence issues in the AMRAAM guidance sections to enable missile productions beyond Lot 31. F3R is a 5-Phase effort. Phase 1 completed in October 2013. Phase 2 completed in July 2014 with a successful PDR. Phase 3 was awarded in June 2014 as part of the Program Support and Sustainment (PSAS) Contract and an IBR was successfully conducted in November 2014. The Request For Proposal (RFP) for Phases 4 and 5 was released in January 2015.

AIM-120D Production: As of December 31, 2014, Raytheon delivered 1,196 of 1,780 AIM-120D missiles on contract and 1,385 of 2,130 C7 FMS missiles on contract (through Lot 28).

AIM-120 Lot 28-30 Production and PSAS Award: The Lot 28 contract, with priced options for Lots 29 and 30, was awarded on December 22, 2014 for \$491.5M. Lot 29 Contract award is planned for March 2015. The 2014 PSAS contract was awarded June 2014 and included program support, test equipment/tooling, Phase 3 of the F3R program, Contractor Logistics Support and the Service Life Prediction Program. The PSAS 2015 RFP was released in October 2014 and contract award is anticipated for third quarter FY 2015.

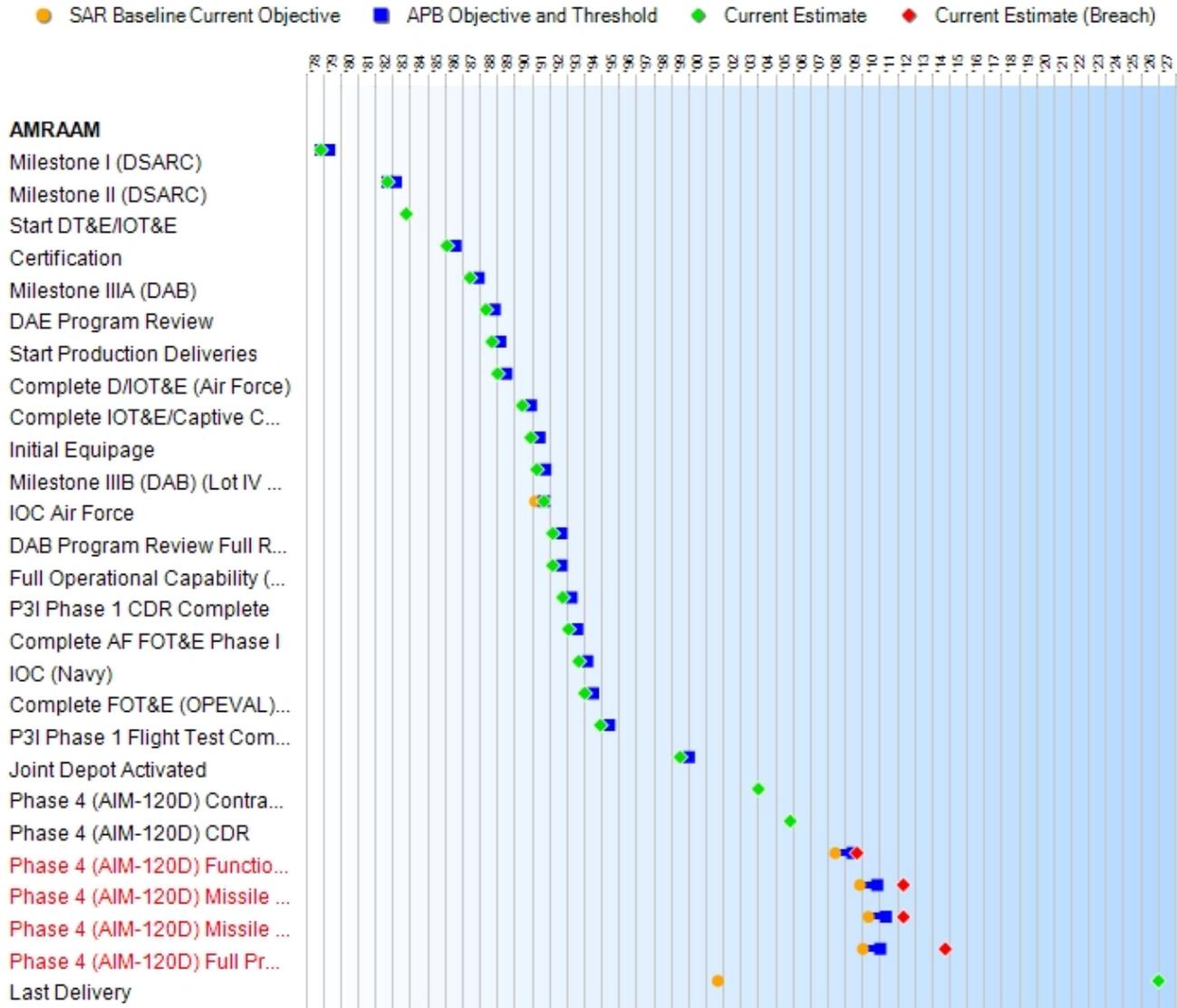
AIM-120 Sustainment: Joint missile availability as of January 1, 2015 is 90% against an APB threshold of 82%.

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

Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input checked="" type="checkbox"/>	The Phase 4 (AIM-120D) Functional Configuration Audit schedule breach was previously reported in the December 2013 SAR.
Performance	<input type="checkbox"/>	
Cost	RDT&E	The Phase 4 (AIM-120D) Missile Deliveries to Meet F/A-18 and F-15C/D Required Assets Available (RAA) schedule breach was previously reported in the December 2013 SAR.
	Procurement	
	MILCON	
	Acq O&M	
O&S Cost	<input type="checkbox"/>	The Phase 4 (AIM-120D) Full Production Go-ahead schedule breach was previously reported in the December 2013 SAR.
Unit Cost	PAUC	An APB breach on the RDT&E appropriation was caused by Joint AMRAAM RDT&E funding increases throughout the future years defense program.
	APUC	
Nunn-McCurdy Breaches		
Current UCR Baseline		The program office is staffing an update to the 2008 APB to address these breaches.
	PAUC None	
	APUC None	
Original UCR Baseline		
	PAUC None	
	APUC None	

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone I (DSARC)	Nov 1978	Nov 1978	May 1979	Nov 1978
Milestone II (DSARC)	Sep 1982	Sep 1982	Mar 1983	Sep 1982
Start DT&E/IOT&E	Oct 1983	N/A	N/A	Oct 1983
Certification	Feb 1986	Feb 1986	Aug 1986	Feb 1986
Milestone IIIA (DAB)	Jun 1987	Jun 1987	Dec 1987	Jun 1987
DAE Program Review	May 1988	May 1988	Nov 1988	May 1988
Start Production Deliveries	Sep 1988	Sep 1988	Mar 1989	Sep 1988
Complete D/IOT&E (Air Force)	Jan 1989	Jan 1989	Jul 1989	Jan 1989
Complete IOT&E/Captive Carry Reliability Program w/Lot 1 Assets (Air Force)	Jun 1990	Jun 1990	Dec 1990	Jun 1990
Initial Equipage	Dec 1990	Dec 1990	Jun 1991	Dec 1990
Milestone IIIB (DAB) (Lot IV Full Go-Ahead Rate Production)	Apr 1991	Apr 1991	Oct 1991	Apr 1991
IOC Air Force	Mar 1991	Mar 1991	Sep 1991	Sep 1991
DAB Program Review Full Rate Production Approval	Mar 1992	Mar 1992	Sep 1992	Mar 1992
Full Operational Capability (FOC) 1st F-16 Unit Fully Operational w/AMRAAMs	Mar 1992	Mar 1992	Sep 1992	Mar 1992
P3I Phase 1 CDR Complete	Oct 1992	Oct 1992	Apr 1993	Oct 1992
Complete AF FOT&E Phase I	Mar 1992	Feb 1993	Aug 1993	Feb 1993
IOC (Navy)	Sep 1992	Sep 1993	Mar 1994	Sep 1993
Complete FOT&E (OPEVAL) (Navy)	Mar 1992	Jan 1994	Jul 1994	Jan 1994
P3I Phase 1 Flight Test Completed	Dec 1994	Dec 1994	Jun 1995	Dec 1994
Joint Depot Activated	Sep 1994	Jul 1999	Jan 2000	Jul 1999
Phase 4 (AIM-120D) Contract Award	N/A	Jan 2004	Jan 2004	Jan 2004
Phase 4 (AIM-120D) CDR	N/A	Nov 2005	Nov 2005	Nov 2005
Phase 4 (AIM-120D) Functional Configuration Audit (FCA)	N/A	Jun 2008	Jun 2009	Sep 2009¹
Phase 4 (AIM-120D) Missile Deliveries to Meet F/A-18 RAA	N/A	Nov 2009	Nov 2010	May 2012¹
Phase 4 (AIM-120D) Missile Deliveries to Meet F-15C/D RAA	N/A	May 2010	May 2011	May 2012¹
Phase 4 (AIM-120D) Full Production Go-ahead	N/A	Jan 2010	Jan 2011	Oct 2014¹
Last Delivery	Sep 2001	N/A	N/A	Jan 2027

¹ APB Breach

Change Explanations

None

Notes

The program office is staffing an update to the 2008 APB to address these schedule deviations.

Acronyms and Abbreviations

AF - Air Force
CDR - Critical Design Review
D/IOT&E - Development / Initial Operational Test & Evaluation
DSARC - Defense Systems Acquisition Review Council
DT&E - Development Test and Evaluation
FOT&E - Follow-on Test and Evaluation
IOT&E - Initial Operational Test and Evaluation
OPEVAL - Operational Evaluation
OT - Operational Test
P3I - Pre-Planned Product Improvement
RAA - Required Assets Available

Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate	
Weight (lbs)				
327	327	350	344	345
Reliability				
Ready Storage (hrs) (mature msl - 90K operational flight hours)				
60000	60000	45000	45000	45000
Availability (%)				
86	86	82	91.5	90
Captive-Carry (MTBM-Type I) (hrs)				
600	600	450	1312	1,200
On Alert Storage MTBM				
30000	30000	22500	N/A	30000
Aircraft Configure/ Load - 3 Man Load Crew				
Install 4 Rail Launchers (mins)				
20	20	25	21	21
Load 4 Missiles from trailer (mins)				
15	15	20	18	18
Load 4 Missiles from container (mins)				
20	20	30	22	22
Missile checks (mins)				
1	1	5	1	1
All Weather Capability				
Day, Night, Rain, Clouds	Day, Night, Rain, Clouds	Day, Night, Rain, Clouds	Day, Night, Rain, Clouds	Day, Night, Rain, Clouds
Aircraft Compatibility				
F-15, F-16, F-14, F/A-18	F-15, F-16, F-14, F/A-18	F-15, F-16, F-14, F/A-18	F-15, F-16, F-14, F/A-18	F-15, F-16, F/A-18, F-22
All-Up Round				
Control Surfaces field installed	Control Surfaces field installed	Control Surfaces field installed	Control Surfaces field installed	Control Surfaces field installed
Net Ready				
N/A	Satisfies NCOW-RM and GIG Information	Satisfies 100% of enterprise level or	Satisfies NCOW-RM and GIG Information	Satisfies 100% of enterprise level or

	assurance reqmts	critical information reqmts	assurance reqmts	critical information reqmts
Shipboard Survivability				
N/A	Compatible in aircraft carrier electro-magnetic environment			

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

Requirements Reference

Joint Service Operational Requirement (JSOR) dated May 22, 1991, Operational Requirements Document (ORD) (Combat Air Forces (CAF) 009-76-I/II/III-A) dated March 10, 1997 (revised January 21, 2004), and Capability Production Document (CPD) Phase 4 (AIM-120D) dated June 16, 2005

Change Explanations

None

Acronyms and Abbreviations

GIG - Global information Grid
HRS - Hours
K - Thousands
LBS - Pounds
MINS - Minutes
MSL - Missile
MTBM - Mean Time Between Maintenance
NCOW-RM - Net Centric Operations Warfare - Reference Model

Track to Budget

RDT&E			
Appn	BA	PE	
Navy	1319	07	0207163N
	Project	Name	
	0981	AMRAAM	
Navy	1319	07	0603370N
	Project	Name	
	UNK	Beyond Visual Range, Air-to-Air Missile (BVRAAM), FY 1978-1981. (Sunk)	
Navy	1319	07	0604314N
	Project	Name	
	W0981	(AMRAAM), FY 1982-1992 (Sunk)	
Air Force	3600	07	0207163F
	Project	Name	
	673777	AMRAAM	
Air Force	3600	07	0603370F
	Project	Name	
	2437	(AMRAAM), FY 1978-1982 (Sunk)	
Air Force	3600	07	0604314F
	Project	Name	
	3096	(AMRAAM), FY 1982-1992 (Sunk)	

Procurement			
Appn	BA	PE	
Navy	1507	02	0204162N
	Line Item	Name	
	2206	AMRAAM	
Navy	1507	02	0206138M
	Line Item	Name	
	2206	AMRAAM	
Navy	1507	06	0204162N
	Line Item	Name	
	6120	Spares and Repair Parts (Shared)	
Air Force	3020	04	0207163F
	Line Item	Name	
	000999	Initial Spares / Repair Parts (Shared)	
	00099A	Initial Spares / Repair Parts (Sunk)	
	00099K	Initial Spares / Repair Parts (Sunk)	
Air Force	3020	01	0207163F

Line Item		Name	
00099L		Missile Replacement Equipment - Ballistic	(Shared) (Sunk)
Air Force	3020 02	0207163F	
Line Item		Name	
MAMRAO		AMRAAM	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 1992 \$M			BY 1992 \$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	1725.7	2481.6	2729.8	2966.7 ¹	1350.6	2355.4	3124.5
Procurement	10552.5	13231.6	14554.8	13604.1	11761.8	17061.9	17476.4
Flyaway	--	--	--	12751.4	--	--	16332.9
Recurring	--	--	--	10872.1	--	--	14434.0
Non Recurring	--	--	--	1879.3	--	--	1898.9
Support	--	--	--	852.7	--	--	1143.5
Other Support	--	--	--	732.1	--	--	998.2
Initial Spares	--	--	--	120.6	--	--	145.3
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	12278.2	15713.2	N/A	16570.8	13112.4	19417.3	20600.9

¹ APB Breach

Cost Notes

The Initial APB was approved on September 27, 1996. The current APB was signed by Secretary of the Air Force/Acquisition on May 19, 2008.

An APB breach on the RDT&E appropriation was caused by Joint AMRAAM RDT&E funding increases for increased capabilities throughout the FYDP. An update to the current APB is in progress.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	15450	17024	16540
Total	15450	17024	16540

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	2323.6	92.4	78.4	99.5	107.6	97.9	99.7	225.4	3124.5
Procurement	10622.7	334.7	586.0	584.2	720.2	766.3	751.1	3111.2	17476.4
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	12946.3	427.1	664.4	683.7	827.8	864.2	850.8	3336.6	20600.9
PB 2015 Total	12960.1	457.1	644.8	716.2	836.1	878.9	721.1	3238.0	20452.3
Delta	-13.8	-30.0	19.6	-32.5	-8.3	-14.7	129.7	98.6	148.6

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	11267	200	429	407	595	634	608	2400	16540
PB 2016 Total	0	11267	200	429	407	595	634	608	2400	16540
PB 2015 Total	0	11223	200	380	424	602	662	522	2414	16427
Delta	0	44	0	49	-17	-7	-28	86	-14	113

Cost and Funding

Annual Funding By Appropriation

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
1977	--	--	--	--	--	--	4.8
1978	--	--	--	--	--	--	6.7
1979	--	--	--	--	--	--	16.1
1980	--	--	--	--	--	--	26.2
1981	--	--	--	--	--	--	22.9
1982	--	--	--	--	--	--	137.9
1983	--	--	--	--	--	--	212.9
1984	--	--	--	--	--	--	197.3
1985	--	--	--	--	--	--	206.6
1986	--	--	--	--	--	--	91.1
1987	--	--	--	--	--	--	37.7
1988	--	--	--	--	--	--	26.7
1989	--	--	--	--	--	--	--
1990	--	--	--	--	--	--	11.9
1991	--	--	--	--	--	--	17.9
1992	--	--	--	--	--	--	30.3
1993	--	--	--	--	--	--	38.9
1994	--	--	--	--	--	--	64.8
1995	--	--	--	--	--	--	63.8
1996	--	--	--	--	--	--	44.2
1997	--	--	--	--	--	--	9.7
1998	--	--	--	--	--	--	39.2
1999	--	--	--	--	--	--	33.5
2000	--	--	--	--	--	--	49.4
2001	--	--	--	--	--	--	50.4
2002	--	--	--	--	--	--	53.5
2003	--	--	--	--	--	--	39.3
2004	--	--	--	--	--	--	31.0
2005	--	--	--	--	--	--	31.9
2006	--	--	--	--	--	--	25.1
2007	--	--	--	--	--	--	33.4
2008	--	--	--	--	--	--	36.4
2009	--	--	--	--	--	--	39.5
2010	--	--	--	--	--	--	49.8
2011	--	--	--	--	--	--	62.0

2012	--	--	--	--	--	--	69.4
2013	--	--	--	--	--	--	68.7
2014	--	--	--	--	--	--	68.6
2015	--	--	--	--	--	--	82.2
2016	--	--	--	--	--	--	46.2
2017	--	--	--	--	--	--	55.4
2018	--	--	--	--	--	--	61.6
2019	--	--	--	--	--	--	65.7
2020	--	--	--	--	--	--	66.9
2021	--	--	--	--	--	--	21.0
2022	--	--	--	--	--	--	21.4
2023	--	--	--	--	--	--	21.8
2024	--	--	--	--	--	--	21.8
Subtotal	--	--	--	--	--	--	2513.5

Annual Funding 3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 1992 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1977	--	--	--	--	--	--	10.3
1978	--	--	--	--	--	--	13.2
1979	--	--	--	--	--	--	29.5
1980	--	--	--	--	--	--	43.2
1981	--	--	--	--	--	--	34.1
1982	--	--	--	--	--	--	192.0
1983	--	--	--	--	--	--	283.2
1984	--	--	--	--	--	--	252.7
1985	--	--	--	--	--	--	255.9
1986	--	--	--	--	--	--	110.2
1987	--	--	--	--	--	--	43.6
1988	--	--	--	--	--	--	30.1
1989	--	--	--	--	--	--	--
1990	--	--	--	--	--	--	12.4
1991	--	--	--	--	--	--	18.0
1992	--	--	--	--	--	--	29.6
1993	--	--	--	--	--	--	37.2
1994	--	--	--	--	--	--	60.9
1995	--	--	--	--	--	--	58.9
1996	--	--	--	--	--	--	40.1
1997	--	--	--	--	--	--	8.7
1998	--	--	--	--	--	--	34.8
1999	--	--	--	--	--	--	29.5
2000	--	--	--	--	--	--	42.8
2001	--	--	--	--	--	--	43.1
2002	--	--	--	--	--	--	45.2
2003	--	--	--	--	--	--	32.8
2004	--	--	--	--	--	--	25.2
2005	--	--	--	--	--	--	25.3
2006	--	--	--	--	--	--	19.3
2007	--	--	--	--	--	--	25.1
2008	--	--	--	--	--	--	26.8
2009	--	--	--	--	--	--	28.7
2010	--	--	--	--	--	--	35.7
2011	--	--	--	--	--	--	43.6
2012	--	--	--	--	--	--	48.0
2013	--	--	--	--	--	--	46.7
2014	--	--	--	--	--	--	45.9
2015	--	--	--	--	--	--	54.3
2016	--	--	--	--	--	--	30.0

2017	--	--	--	--	--	--	35.3
2018	--	--	--	--	--	--	38.5
2019	--	--	--	--	--	--	40.3
2020	--	--	--	--	--	--	40.2
2021	--	--	--	--	--	--	12.4
2022	--	--	--	--	--	--	12.4
2023	--	--	--	--	--	--	12.4
2024	--	--	--	--	--	--	12.1
Subtotal	--	--	--	--	--	--	2450.2

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
1978	--	--	--	--	--	--	6.0
1979	--	--	--	--	--	--	18.3
1980	--	--	--	--	--	--	27.3
1981	--	--	--	--	--	--	24.2
1982	--	--	--	--	--	--	3.3
1983	--	--	--	--	--	--	4.3
1984	--	--	--	--	--	--	7.3
1985	--	--	--	--	--	--	7.8
1986	--	--	--	--	--	--	4.2
1987	--	--	--	--	--	--	5.0
1988	--	--	--	--	--	--	22.3
1989	--	--	--	--	--	--	12.4
1990	--	--	--	--	--	--	6.9
1991	--	--	--	--	--	--	3.5
1992	--	--	--	--	--	--	2.5
1993	--	--	--	--	--	--	3.1
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	7.8
1996	--	--	--	--	--	--	4.3
1997	--	--	--	--	--	--	2.1
1998	--	--	--	--	--	--	5.5
1999	--	--	--	--	--	--	4.5
2000	--	--	--	--	--	--	12.8
2001	--	--	--	--	--	--	11.3
2002	--	--	--	--	--	--	9.7
2003	--	--	--	--	--	--	7.7
2004	--	--	--	--	--	--	8.7
2005	--	--	--	--	--	--	8.5
2006	--	--	--	--	--	--	3.4
2007	--	--	--	--	--	--	6.1
2008	--	--	--	--	--	--	2.5
2009	--	--	--	--	--	--	6.7
2010	--	--	--	--	--	--	3.6
2011	--	--	--	--	--	--	2.5
2012	--	--	--	--	--	--	2.7
2013	--	--	--	--	--	--	2.7
2014	--	--	--	--	--	--	2.6
2015	--	--	--	--	--	--	10.2
2016	--	--	--	--	--	--	32.2
2017	--	--	--	--	--	--	44.1

2018	--	--	--	--	--	--	46.0
2019	--	--	--	--	--	--	32.2
2020	--	--	--	--	--	--	32.8
2021	--	--	--	--	--	--	33.6
2022	--	--	--	--	--	--	34.6
2023	--	--	--	--	--	--	35.3
2024	--	--	--	--	--	--	35.9
Subtotal	--	--	--	--	--	--	611.0

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 1992 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1978	--	--	--	--	--	--	11.7
1979	--	--	--	--	--	--	32.3
1980	--	--	--	--	--	--	43.5
1981	--	--	--	--	--	--	35.4
1982	--	--	--	--	--	--	4.6
1983	--	--	--	--	--	--	5.7
1984	--	--	--	--	--	--	9.4
1985	--	--	--	--	--	--	9.7
1986	--	--	--	--	--	--	5.1
1987	--	--	--	--	--	--	5.9
1988	--	--	--	--	--	--	25.3
1989	--	--	--	--	--	--	13.5
1990	--	--	--	--	--	--	7.2
1991	--	--	--	--	--	--	3.5
1992	--	--	--	--	--	--	2.5
1993	--	--	--	--	--	--	3.0
1994	--	--	--	--	--	--	--
1995	--	--	--	--	--	--	7.2
1996	--	--	--	--	--	--	3.9
1997	--	--	--	--	--	--	1.9
1998	--	--	--	--	--	--	4.9
1999	--	--	--	--	--	--	4.0
2000	--	--	--	--	--	--	11.1
2001	--	--	--	--	--	--	9.7
2002	--	--	--	--	--	--	8.2
2003	--	--	--	--	--	--	6.4
2004	--	--	--	--	--	--	7.1
2005	--	--	--	--	--	--	6.7
2006	--	--	--	--	--	--	2.6
2007	--	--	--	--	--	--	4.6
2008	--	--	--	--	--	--	1.8
2009	--	--	--	--	--	--	4.9
2010	--	--	--	--	--	--	2.6
2011	--	--	--	--	--	--	1.7
2012	--	--	--	--	--	--	1.9
2013	--	--	--	--	--	--	1.8
2014	--	--	--	--	--	--	1.7
2015	--	--	--	--	--	--	6.7
2016	--	--	--	--	--	--	20.9
2017	--	--	--	--	--	--	28.1

2018	--	--	--	--	--	--	--	28.7
2019	--	--	--	--	--	--	--	19.7
2020	--	--	--	--	--	--	--	19.7
2021	--	--	--	--	--	--	--	19.8
2022	--	--	--	--	--	--	--	20.0
2023	--	--	--	--	--	--	--	20.0
2024	--	--	--	--	--	--	--	19.9
Subtotal	--	--	--	--	--	--	--	516.5

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
1989	26	26.0	--	2.7	28.7	2.5	31.2
1990	85	61.5	--	18.7	80.2	4.9	85.1
1991	300	191.5	--	52.9	244.4	17.5	261.9
1992	191	115.3	--	38.0	153.3	41.2	194.5
1993	165	72.5	--	20.3	92.8	12.4	105.2
1994	75	26.7	--	21.5	48.2	8.6	56.8
1995	106	40.5	--	24.6	65.1	9.9	75.0
1996	115	35.2	--	28.5	63.7	10.0	73.7
1997	100	30.4	--	16.3	46.7	6.0	52.7
1998	120	38.1	--	10.1	48.2	6.3	54.5
1999	100	36.5	--	9.0	45.5	5.4	50.9
2000	91	33.5	--	10.0	43.5	2.5	46.0
2001	63	25.3	--	9.1	34.4	3.4	37.8
2002	55	20.4	--	12.9	33.3	3.5	36.8
2003	76	34.4	--	12.5	46.9	3.5	50.4
2004	42	18.5	--	15.0	33.5	3.8	37.3
2005	37	16.4	--	9.4	25.8	3.0	28.8
2006	48	40.4	--	30.2	70.6	3.2	73.8
2007	42	60.4	--	25.0	85.4	3.4	88.8
2008	52	75.8	--	7.5	83.3	2.7	86.0
2009	57	80.3	--	2.4	82.7	2.6	85.3
2010	71	135.3	--	--	135.3	3.3	138.6
2011	101	134.2	--	--	134.2	5.0	139.2
2012	67	93.3	--	--	93.3	5.5	98.8
2013	67	81.1	--	--	81.1	6.4	87.5
2014	54	69.7	--	1.5	71.2	11.8	83.0
2015	--	--	2.2	--	2.2	0.8	3.0
2016	167	190.5	--	--	190.5	3.4	193.9
2017	154	205.4	--	--	205.4	2.9	208.3
2018	233	261.7	--	2.0	263.7	3.2	266.9
2019	238	270.0	--	--	270.0	7.4	277.4
2020	233	266.5	--	--	266.5	7.3	273.8
2021	263	310.1	--	8.0	318.1	7.0	325.1
2022	293	344.8	--	--	344.8	7.4	352.2
2023	296	351.6	--	4.5	356.1	7.6	363.7
2024	278	357.0	--	--	357.0	22.6	379.6
Subtotal	4461	4150.8	2.2	392.6	4545.6	257.9	4803.5

Annual Funding 1507 Procurement Weapons Procurement, Navy							
Fiscal Year	Quantity	BY 1992 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1989	26	27.1	--	2.9	30.0	2.6	32.6
1990	85	62.0	--	18.9	80.9	4.9	85.8
1991	300	188.4	--	52.0	240.4	17.2	257.6
1992	191	110.6	--	36.5	147.1	39.5	186.6
1993	165	68.3	--	19.1	87.4	11.7	99.1
1994	75	24.7	--	19.9	44.6	7.9	52.5
1995	106	36.8	--	22.4	59.2	9.0	68.2
1996	115	31.6	--	25.6	57.2	9.0	66.2
1997	100	27.0	--	14.6	41.6	5.3	46.9
1998	120	33.5	--	8.9	42.4	5.5	47.9
1999	100	31.7	--	7.8	39.5	4.7	44.2
2000	91	28.7	--	8.5	37.2	2.2	39.4
2001	63	21.4	--	7.7	29.1	2.9	32.0
2002	55	17.1	--	10.7	27.8	3.0	30.8
2003	76	28.2	--	10.3	38.5	2.8	41.3
2004	42	14.7	--	12.0	26.7	3.0	29.7
2005	37	12.7	--	7.3	20.0	2.3	22.3
2006	48	30.6	--	22.8	53.4	2.4	55.8
2007	42	44.7	--	18.5	63.2	2.5	65.7
2008	52	55.2	--	5.6	60.8	1.9	62.7
2009	57	57.7	--	1.7	59.4	1.9	61.3
2010	71	95.5	--	--	95.5	2.4	97.9
2011	101	92.9	--	--	92.9	3.5	96.4
2012	67	63.6	--	--	63.6	3.8	67.4
2013	67	54.4	--	--	54.4	4.3	58.7
2014	54	46.1	--	1.0	47.1	7.8	54.9
2015	--	--	1.4	--	1.4	0.5	1.9
2016	167	121.6	--	--	121.6	2.1	123.7
2017	154	128.6	--	--	128.6	1.8	130.4
2018	233	160.6	--	1.2	161.8	2.0	163.8
2019	238	162.5	--	--	162.5	4.4	166.9
2020	233	157.2	--	--	157.2	4.4	161.6
2021	263	179.4	--	4.7	184.1	4.0	188.1
2022	293	195.5	--	--	195.5	4.2	199.7
2023	296	195.5	--	2.5	198.0	4.2	202.2
2024	278	194.6	--	--	194.6	12.3	206.9
Subtotal	4461	2800.7	1.4	343.1	3145.2	203.9	3349.1

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
1984	--	--	--	29.2	29.2	--	29.2
1985	--	--	--	74.1	74.1	--	74.1
1986	--	--	--	193.8	193.8	4.1	197.9
1987	180	405.2	--	170.4	575.6	20.5	596.1
1988	400	535.5	--	160.6	696.1	15.2	711.3
1989	874	667.3	--	102.6	769.9	16.3	786.2
1990	803	576.3	--	88.4	664.7	17.9	682.6
1991	600	397.5	--	190.2	587.7	24.2	611.9
1992	700	438.5	--	73.2	511.7	18.1	529.8
1993	1000	422.2	--	140.5	562.7	30.6	593.3
1994	983	347.1	--	81.5	428.6	18.4	447.0
1995	412	123.3	--	75.5	198.8	31.7	230.5
1996	291	146.2	--	21.7	167.9	11.9	179.8
1997	133	93.6	--	10.8	104.4	8.2	112.6
1998	173	53.6	--	44.6	98.2	4.8	103.0
1999	180	67.0	--	22.4	89.4	1.0	90.4
2000	163	68.4	--	6.2	74.6	9.2	83.8
2001	170	75.3	--	9.4	84.7	10.6	95.3
2002	190	80.5	--	7.1	87.6	12.6	100.2
2003	124	69.9	--	4.1	74.0	11.0	85.0
2004	159	84.6	--	--	84.6	13.8	98.4
2005	159	87.7	--	--	87.7	19.2	106.9
2006	84	99.9	--	--	99.9	2.2	102.1
2007	59	103.9	--	--	103.9	11.6	115.5
2008	133	167.2	--	--	167.2	27.2	194.4
2009	133	161.3	--	--	161.3	45.8	207.1
2010	170	248.4	--	--	248.4	29.1	277.5
2011	246	311.9	--	--	311.9	28.2	340.1
2012	112	146.7	--	--	146.7	20.9	167.6
2013	113	176.5	--	--	176.5	24.9	201.4
2014	217	297.3	--	--	297.3	14.8	312.1
2015	200	297.5	--	--	297.5	34.2	331.7
2016	262	358.0	--	--	358.0	34.1	392.1
2017	253	345.2	--	--	345.2	30.7	375.9
2018	362	415.8	--	--	415.8	37.5	453.3
2019	396	452.2	--	--	452.2	36.7	488.9
2020	375	435.2	--	--	435.2	42.1	477.3
2021	308	366.3	--	--	366.3	40.7	407.0
2022	317	376.9	--	--	376.9	39.6	416.5
2023	323	387.6	--	--	387.6	40.3	427.9

2024	322	393.5	--	--	393.5	45.7	439.2
Subtotal	12079	10281.0	--	1506.3	11787.3	885.6	12672.9

Annual Funding 3020 Procurement Missile Procurement, Air Force							
Fiscal Year	Quantity	BY 1992 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1984	--	--	--	36.0	36.0	--	36.0
1985	--	--	--	88.9	88.9	--	88.9
1986	--	--	--	222.1	222.1	4.7	226.8
1987	180	445.0	--	187.1	632.1	22.6	654.7
1988	400	567.6	--	170.2	737.8	16.1	753.9
1989	874	677.3	--	104.0	781.3	16.6	797.9
1990	803	574.4	--	88.1	662.5	17.8	680.3
1991	600	384.9	--	184.2	569.1	23.4	592.5
1992	700	419.5	--	70.0	489.5	17.3	506.8
1993	1000	395.9	--	131.8	527.7	28.7	556.4
1994	983	319.1	--	75.0	394.1	16.9	411.0
1995	412	112.3	--	68.7	181.0	28.9	209.9
1996	291	131.4	--	19.5	150.9	10.7	161.6
1997	133	83.0	--	9.5	92.5	7.3	99.8
1998	173	47.1	--	39.1	86.2	4.2	90.4
1999	180	58.1	--	19.4	77.5	0.9	78.4
2000	163	58.6	--	5.3	63.9	8.0	71.9
2001	170	63.9	--	8.0	71.9	8.9	80.8
2002	190	67.2	--	5.9	73.1	10.5	83.6
2003	124	57.6	--	3.4	61.0	9.1	70.1
2004	159	68.3	--	--	68.3	11.1	79.4
2005	159	68.8	--	--	68.8	15.1	83.9
2006	84	76.2	--	--	76.2	1.7	77.9
2007	59	77.3	--	--	77.3	8.6	85.9
2008	133	122.2	--	--	122.2	19.8	142.0
2009	133	116.2	--	--	116.2	33.0	149.2
2010	170	176.4	--	--	176.4	20.7	197.1
2011	246	217.0	--	--	217.0	19.6	236.6
2012	112	100.3	--	--	100.3	14.3	114.6
2013	113	117.7	--	--	117.7	16.6	134.3
2014	217	195.2	--	--	195.2	9.7	204.9
2015	200	192.8	--	--	192.8	22.1	214.9
2016	262	227.8	--	--	227.8	21.7	249.5
2017	253	215.5	--	--	215.5	19.2	234.7
2018	362	254.6	--	--	254.6	22.9	277.5
2019	396	271.4	--	--	271.4	22.1	293.5
2020	375	256.1	--	--	256.1	24.8	280.9
2021	308	211.3	--	--	211.3	23.5	234.8
2022	317	213.2	--	--	213.2	22.4	235.6
2023	323	214.9	--	--	214.9	22.4	237.3

2024	322	213.9	--	--	213.9	24.9	238.8
Subtotal	12079	8070.0	--	1536.2	9606.2	648.8	10255.0

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	6/4/1987	5/23/1991
Approved Quantity	810	4159
Reference	Milestone IIIA ADM	Milestone IIIB ADM
Start Year	1987	1987
End Year	1989	1992

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the LRIP extension to include 6 lots, FY 1987 through FY 1992. The follow-on DAB Program Review, held on April 23, 1992, approved FRP for Lot VII (FY 1993) procurement. The original LRIP decision during the Milestone IIIA review by the DAB in June 1987 to procure 810 LRIP missiles which covered 2 lots. On May 23, 1991, the DAB for Milestone IIIB approved a procurement quantity of 4,159 missiles.

Foreign Military Sales

Classified FMS information is provided in the classified annex to this submission.
None

Nuclear Costs

None

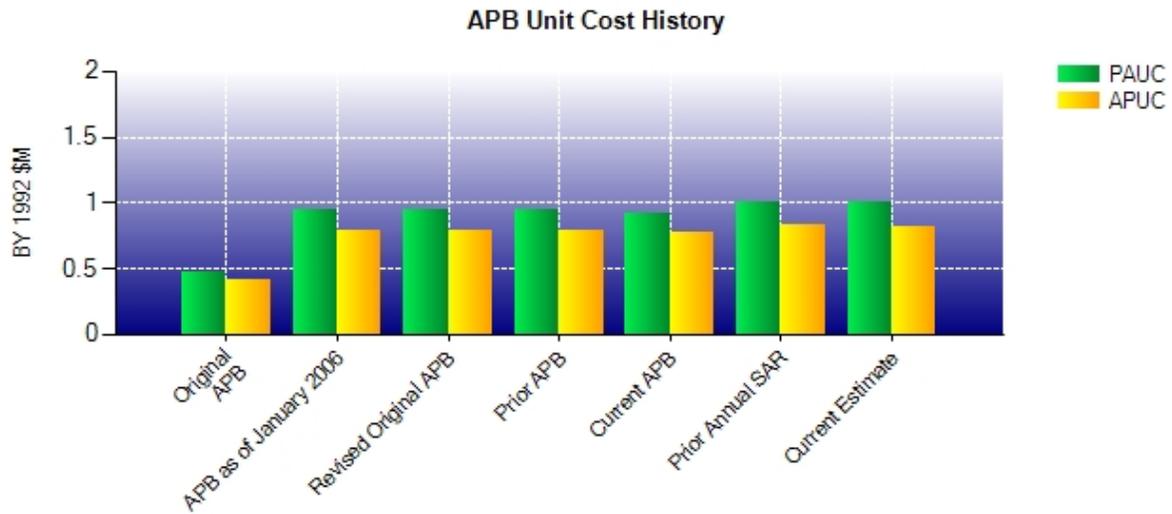
Unit Cost

Unit Cost Report

Item	BY 1992 \$M	BY 1992 \$M	% Change
	Current UCR Baseline (May 2008 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	15713.2	16570.8	
Quantity	17024	16540	
Item	0.923	1.002	+8.56
Average Procurement Unit Cost			
Cost	13231.6	13604.1	
Quantity	17024	16540	
Unit Cost	0.777	0.822	+5.79

Item	BY 1992 \$M	BY 1992 \$M	% Change
	Revised Original UCR Baseline (Sep 1996 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	12302.9	16570.8	
Quantity	13038	16540	
Unit Cost	0.944	1.002	+6.14
Average Procurement Unit Cost			
Cost	10205.7	13604.1	
Quantity	13038	16540	
Unit Cost	0.783	0.822	+4.98

Unit Cost History



Item	Date	BY 1992 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 1988	0.471	0.409	0.460	0.413
APB as of January 2006	Sep 1996	0.944	0.783	1.022	0.883
Revised Original APB	Sep 1996	0.944	0.783	1.022	0.883
Prior APB	Sep 1996	0.944	0.783	1.022	0.883
Current APB	May 2008	0.923	0.777	1.141	1.002
Prior Annual SAR	Dec 2013	1.001	0.826	1.245	1.065
Current Estimate	Dec 2014	1.002	0.822	1.246	1.057

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	
0.849	-0.015	0.000	0.157	0.070	0.149	0.000	0.036	0.397	1.246

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.761	-0.012	0.005	0.156	0.031	0.080	0.000	0.036	0.296	1.057

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	Nov 1978	Nov 1978	Nov 1978
Milestone II	N/A	Nov 1982	Sep 1982	Sep 1982
Milestone III	N/A	Dec 1984	Apr 1991	Apr 1991
IOC	N/A	Sep 1986	Sep 1992	Sep 1993
Total Cost (TY \$M)	N/A	11591.6	13112.4	20600.9
Total Quantity	N/A	24335	15450	16540
PAUC	N/A	0.476	0.849	1.246

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1350.6	11761.8	--	13112.4
Previous Changes				
Economic	-37.4	-128.0	--	-165.4
Quantity	--	+848.7	--	+848.7
Schedule	+26.5	+2699.1	--	+2725.6
Engineering	+643.8	+507.7	--	+1151.5
Estimating	+969.0	+1201.1	--	+2170.1
Other	--	--	--	--
Support	--	+609.4	--	+609.4
Subtotal	+1601.9	+5738.0	--	+7339.9
Current Changes				
Economic	-7.7	-77.8	--	-85.5
Quantity	--	+76.5	--	+76.5
Schedule	--	-123.9	--	-123.9
Engineering	--	+4.4	--	+4.4
Estimating	+179.7	+115.8	--	+295.5
Other	--	--	--	--
Support	--	-18.4	--	-18.4
Subtotal	+172.0	-23.4	--	+148.6
Total Changes	+1773.9	+5714.6	--	+7488.5
CE - Cost Variance	3124.5	17476.4	--	20600.9
CE - Cost & Funding	3124.5	17476.4	--	20600.9

Summary BY 1992 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1725.7	10552.5	--	12278.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	+555.6	--	+555.6
Schedule	+13.6	+1199.4	--	+1213.0
Engineering	+510.9	+374.8	--	+885.7
Estimating	+612.6	+542.4	--	+1155.0
Other	--	--	--	--
Support	--	+350.0	--	+350.0
Subtotal	+1137.1	+3022.2	--	+4159.3
Current Changes				
Economic	--	--	--	--
Quantity	--	+41.6	--	+41.6
Schedule	--	-73.4	--	-73.4
Engineering	--	+2.4	--	+2.4
Estimating	+103.9	+70.3	--	+174.2
Other	--	--	--	--
Support	--	-11.5	--	-11.5
Subtotal	+103.9	+29.4	--	+133.3
Total Changes	+1241.0	+3051.6	--	+4292.6
CE - Cost Variance	2966.7	13604.1	--	16570.8
CE - Cost & Funding	2966.7	13604.1	--	16570.8

Previous Estimate: December 2013

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-7.7
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.7
Revised estimate to reflect the application of escalation indices (Navy). (Estimating)	+0.8	+1.8
Revised estimate to reflect the application of escalation indices (Air Force). (Estimating)	+1.5	+2.5
Increases to System Improvement Program (SIP) software capability upgrade (Navy). (Estimating)	+89.3	+154.7
Increase due to baseline extension (Air Force). (Estimating)	+13.2	+22.0
Decrease due to Small Business Innovation Research (SBIR) (Air Force). (Estimating)	-1.4	-2.0
RDT&E Subtotal	+103.9	+172.0

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-77.8
Acceleration of procurement buy profile within the FYDP due to funding increases within FY 2016 PB (Navy). (Schedule)	0.0	-2.4
Acceleration of procurement buy profile within the FYDP due to funding increases within FY 2016 PB (Air Force). (Schedule)	0.0	-12.8
Additional Schedule variance resulting from realignment of missile buy profile from FY 2015 through FY 2024 (Air Force). (Schedule)	-45.1	-68.1
Additional Schedule variance resulting from realignment of missile buy profile from FY 2015 through FY 2024 (Navy). (Schedule)	-41.1	-64.1
Quantity variance resulting from an increase of 113 missiles from 11,966 to 12,079 (Air Force). (Subtotal)	+62.5	+115.0
Quantity variance resulting from an increase of 113 missiles from 11,966 to 12,079 (Air Force). (Quantity)	(+41.6)	(+76.5)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+12.8)	(+23.5)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+2.4)	(+4.4)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+5.7)	(+10.6)
Adjustment for current and prior escalation. (Estimating)	+3.9	+5.4
Increase in Production test and technical support requirements (Air Force). (Estimating)	+1.1	+1.8
Increase in Diminishing Manufacturing Sources (DMS) costs due to updated estimate and realization of actual costs (Air Force). (Estimating)	+43.4	+67.4
Decrease in Production test and technical support requirements and realization of actual costs (Navy). (Estimating)	-9.7	-16.2
Decrease in DMS costs due to updated estimate and realization of actual costs (Navy). (Estimating)	-17.2	-27.5
Increase in Factory Tooling and Test Equipment due to realization of actual costs (Navy). (Estimating)	+2.2	+3.6
Revised estimate to reflect application of new out-year escalation indices (Air Force). (Estimating)	+27.8	+48.1
Revised estimate to reflect application of new out-year escalation indices (Navy). (Estimating)	+13.1	+22.6
Adjustment for current and prior escalation. (Support)	+0.3	+0.8

Decrease in Other Support due to reduction of training equipment requirements (Air Force). (Support)	-12.6	-19.4
Decrease in Initial Spares (Air Force). (Support)	+0.1	-0.2
Increase in Other Support due to increase of training equipment requirements (Navy). (Support)	+9.4	+15.6
Decrease in Initial Spares due to reduction of spares requirements (Navy). (Support)	-8.7	-15.2
Procurement Subtotal	+29.4	-23.4

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Lot 24
Contractor: Raytheon Company
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85706
Contract Number: FA8675-10-C-0014
Contract Type: Firm Fixed Price (FFP)
Award Date: August 05, 2010
Definitization Date: August 05, 2010

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
492.4	N/A	505	564.9	N/A	523	564.9	564.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the addition of AIM-120D missiles for United States, a guidance section test asset, and additional telemetry devices. AIM-120D production completed February 2014.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

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

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Lot 25
Contractor: Raytheon Company
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85706
Contract Number: FA8675-11-C-0030
Contract Type: Firm Fixed Price (FFP)
Award Date: August 31, 2011
Definitization Date: August 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
569.0	N/A	469	664.3	N/A	550	664.3	664.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional telemetry devices and the addition of AIM-120C7 missiles for FMS. Additionally, other contract modifications were performed as needed and were within scope. AIM-120D production is anticipated to complete in third quarter FY 2015.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Lot 26
Contractor: Raytheon Company
Contractor Location: 1151 East Hermans Road
 Tuscon, AZ 85706
Contract Number: FA8675-12-C-0011
Contract Type: Firm Fixed Price (FFP)
Award Date: March 30, 2012
Definitization Date: March 30, 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
497.1	N/A	404	527.9	N/A	404	527.9	527.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to addition of a Lean Cost Reduction Initiative, Life-of-Type buys for the Shortened Control Actuation System and a Final Assembly Test Station in CY 2012. Additionally, other contract modifications were performed as needed and were within scope. AIM-120D production is anticipated to complete in third quarter FY 2015.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Lot 27
Contractor: Raytheon Company
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85706
Contract Number: FA8675-13-C-0003
Contract Type: Firm Fixed Price (FFP)
Award Date: June 17, 2013
Definitization Date: June 17, 2013

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
534.7	N/A	464	578.2	N/A	464	578.2	578.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to FMS offsets, second source warhead and Life of Type Buys. Additionally, other contract modifications were performed as needed and were within scope. AIM-120D production is anticipated to complete in January 2016.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Contract Identification

Appropriation: Procurement
Contract Name: Program Support and Sustainment (PSAS)
Contractor: Raytheon Company
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85706
Contract Number: FA8675-14-C-0026
Contract Type: Firm Fixed Price (FFP)
Award Date: June 27, 2014
Definitization Date: June 27, 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
166.4	N/A	N/A	166.8	N/A	N/A	166.8	166.8

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional repairs added to the contract.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Lot 28
Contractor: Raytheon Company
Contractor Location: 1151 E Hermans Road
 Tucson, AZ 85756
Contract Number: FA8675-15-C-0022
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: December 22, 2014
Definitization Date: December 22, 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
491.5	491.5	571	491.5	491.5	571	491.5	491.5

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FPIF) contract.

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because an earned value management (EVM) waiver was granted by Assistant Secretary of the Air Force for Acquisition on September 19, 2014. Under the Better Buying Power (BBP) goal to "Employ appropriate contract types," the AMRAAM production lot contract transitioned from a Firm Fixed Price (FFP) contract type to a Fixed Price Incentive (Firm Target) (FPIF) contract type. This approach allows the government to share expected cost savings with the contractor and does not require EVM information in order to properly execute this strategy.

Notes

This is the first time this contract is being reported.

AIM-120D production is anticipated to complete in January 2017.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	10669	10696	16540	64.67%
Total Program Quantity Delivered	10669	10696	16540	64.67%

Expended and Appropriated (TY \$M)

Total Acquisition Cost	20600.9	Years Appropriated	39
Expended to Date	11928.4	Percent Years Appropriated	81.25%
Percent Expended	57.90%	Appropriated to Date	13373.4
Total Funding Years	48	Percent Appropriated	64.92%

The above data is current as of January 31, 2015.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 15, 2015
Source of Estimate:	POE
Quantity to Sustain:	16540
Unit of Measure:	Total Quantity
Service Life per Unit:	20.00 Years
Fiscal Years in Service:	FY 1991 - FY 2025

The O&S costs are the direct costs for the tactical missile and the Captive Carry Missile (CCM) associated with operating, supporting, and maintaining the AMRAAM missile over a 30-year deployment phase starting in FY 1991 for the Air Force and FY 1992 for the Navy. The Air Force estimate covers base operations including CCM, AUR fault verification, operational firings, depot repairs (seven year Interim Contractor Support (ICS)), supply/item management, transportation, replenishment spares, and field software updates. The Navy estimate includes AMRAAM fleet operations and support, depot rework (five years ICS), technical support (fleet support, engineering services, quality surveillance, program management), supply support, replenishment spares, and contractor augmented support.

Sustainment Strategy

The AMRAAM All-Up-Round (AUR) maintenance concept calls for aircraft loading/unloading, removal/replacement of wings and fins and missile Built-In-Test (BIT). A missile failing BIT will be sent to the Intermediate-Level Shop for test verification on the Missile Bit Test Set (Air Force only), Common Field-Level Memory Reprogramming Equipment, or Common Munitions BIT Reprogramming Equipment Plus. Failed missiles will be returned to the contractor AMRAAM depot for repair.

Antecedent Information

The AMRAAM replaced the AIM-7 and was integrated and maintained using existing support resources with no additional manpower requirements. The AIM-7 is the last semi-active air-to-air missile while the AIM-120 provides the first fully active and autonomous launch and leave medium range capability. The AIM-7 cost data was obtained from the Naval Visibility and Management of Operating and Support Cost (VAMOSOC) database (FY 1990 - FY 2013) and is historical in nature.

Cost Element	Annual O&S Costs BY1992 \$M	
	AMRAAM Average Annual Cost Per Total Quantity	AIM-7 (Antecedent) Average Annual Cost For All Missiles
Unit-Level Manpower	0.256	0.000
Unit Operations	0.914	0.627
Maintenance	6.015	4.290
Sustaining Support	13.606	4.615
Continuing System Improvements	1.447	1.192
Indirect Support	0.071	0.000
Other	0.000	0.000
Total	22.309	10.724

Item	Total O&S Cost \$M			
	AMRAAM		Current Estimate	AIM-7 (Antecedent)
	Current Production APB Objective/Threshold			
Base Year	N/A	N/A	892.4	N/A
Then Year	N/A	N/A	1329.6	N/A

Equation to Translate Annual Cost to Total Cost

Total O&S Cost = Average Annual O&S Cost per Total Quantity * service life of all missiles = \$22.309M * 40 years = \$892.4M.

The AIM-7 data is incomplete, therefore the total program costs cannot be calculated.

O&S Cost Variance		
Category	BY 1992 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2013 SAR	892.5	
Programmatic/Planning Factors	-0.1	Updated to reflect FY 2016 PB quantity profile.
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	-0.1	
Current Estimate	892.4	

Disposal Estimate Details

Date of Estimate: April 01, 2013
Source of Estimate: POE
Disposal/Demilitarization Total Cost (BY 1992 \$M): Total costs for disposal of all Total Quantity are 10.8

Letterkenny Munitions Center is utilized to demilitarize AMRAAM. The decision to demilitarize individual missiles or entire lots in lieu of refurbishment or retrofit will be made by Air Combat Command (ACC) for the Air Force and Navy Resource Sponsor for the Navy.