Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-391

Standard Missile-6 (SM-6)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Program Name

Standard Missile-6 (SM-6)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned May 3, 2013

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 26, 2010

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 26, 2010

Mission and Description

The Standard Missile-6 (SM-6) Extended Range Active Missile (ERAM) is designed to provide ship self-defense, fleet area defense, and theater air defense for sea and littoral forces. Raytheon Missile Systems (RMS) has been chosen as the sole source contractor for SM-6 ERAM Block I. The SM-6 ERAM is a surface-to-air supersonic missile, launched from AEGIS Cruisers and Destroyers, capable of successfully engaging manned and unmanned, fixed or rotary wing aircraft and land attack or Anti-Ship Cruise Missiles (ASCM) in flight. The SM-6 ERAM program is an evolutionary, capabilities based acquisition program that will use spiral development to produce an initial Block I capability, with follow-on blocks to pace emerging threat systems as required. In addition to an extended range, the initial SM-6 ERAM Block I will have active missile seeker homing for improved flight responsiveness, guidance, sub-clutter visibility, and countermeasures resistance over present SM-2 missiles and will be "Engage-On-Remote" (EOR) intercept capable.

SM-6 will be an effective weapon that will apply timely, precise, accurate and lethal fire power against cruise missile threats and launch platforms in a fleet area defense role and over hostile territory. SM-6 will provide in-flight destruction capabilities over the total flight path. SM-6 may be employed in concert with the developing Joint Theater Air and Missile Defense (TAMD) Family of Systems (FoS) to provide continuous protection to forward deployed maneuver forces as well as theater rear assets.

Executive Summary

SM-6 Initial Operational Test and Evaluation (IOT&E) Flight Testing was conducted at Pacific Missile Range Facility (PMRF) between June 2011 and July 2011. Commander Operational Test and Evaluation Force (COTF) issued the Interim Operational Test and Evaluation Assessment Report in August 2011. The second phase of IOT&E, Runs for the Record, was completed and COTF issued the Interim report in August 2012. Final reporting will be completed upon completion of the supplemental testing.

The SM-6 program received authorization to enter into a fourth year of Low Rate Initial Production (LRIP) in FY 2012 as documented in the Acquisition Decision Memorandum (ADM), dated April 5, 2012. This ADM provided for the increase in the total LRIP quantity from 120 (10 percent) to 178 (15 percent) and deferred the Full Rate Production (FRP) decision to FY 2013.

An Undefinitized Contract Action (UCA) for the LRIP lot 4 production contract was awarded on May 10, 2012.

The Navy completed supplemental testing in November 2012 to inform the FRP decision.

A contract for the Long Lead Material (LLM) in support of the FY 2013 FRP production lot was awarded on January 31, 2013.

The SM-6 program received authorization to increase the procurement profile from 1200 missiles to 1800 missiles as documented in the Navy Electronic Resources and Requirements Review Board (ER3B) memorandum, dated March 18, 2013.

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

Threshold Breaches

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

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

Explanation of Breach

The Schedule Breach was previously reported in the December 31, 2011 and September 30, 2012 SARs.

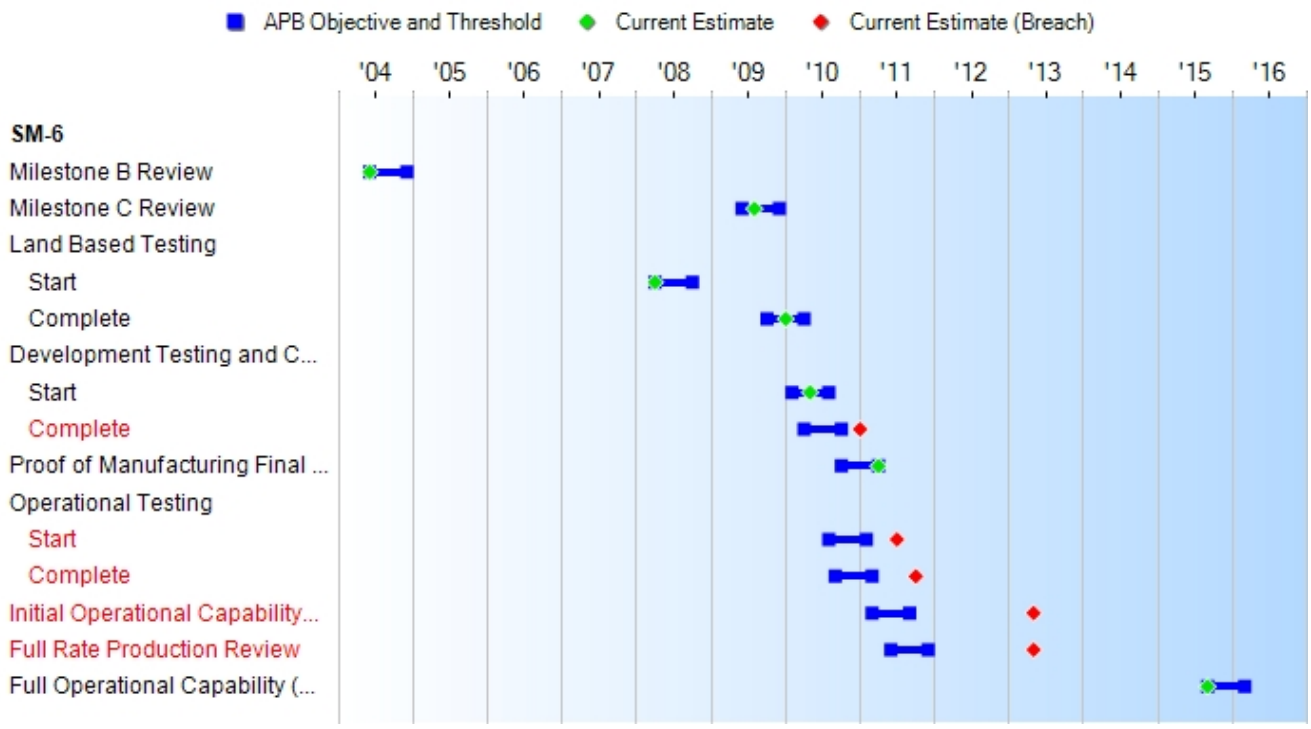
A Program Deviation Report to address the threshold breach was submitted to the Assistant Secretary of the Navy Research, Development, and Acquisition (ASN RD&A) on September 7, 2012.

The Navy completed supplemental testing in November 2012 to inform the Full Rate Production (FRP) decision in FY 2013.

The Cost Breaches reported in Procurement and O&S are related to an increase in costs associated with an increase in the procurement profile from 1200 missiles to 1800 missiles. The SM-6 program received authorization to increase quantity as documented in the Navy Electronic Resources and Requirements Review Board (ER3B) memorandum, dated March 18, 2013.

An APB requesting new schedule dates and reflecting the increase in procurement quantity will be presented at the FRP decision review.

Schedule


APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
SM-6
Milestone B Review
Milestone C Review
Land Based Testing
Start
Complete
Development Testing and C...
Start
Complete
Proof of Manufacturing Final ...
Operational Testing
Start
Complete
Initial Operational Capability...
Full Rate Production Review
Full Operational Capability (...

Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	
Milestone B Review	JUN 2004	JUN 2004	DEC 2004	JUN 2004	
Milestone C Review	JUN 2009	JUN 2009	DEC 2009	AUG 2009	
Land Based Testing					
Start	APR 2008	APR 2008	OCT 2008	APR 2008	
Complete	OCT 2009	OCT 2009	APR 2010	JAN 2010	
Development Testing and Combined Development and Operational Testing					
Start	FEB 2010	FEB 2010	AUG 2010	MAY 2010	
Complete	APR 2010	APR 2010	OCT 2010	**JAN 2011**[1]	
Proof of Manufacturing Final Review	OCT 2010	OCT 2010	APR 2011	APR 2011	
Operational Testing					
Start	AUG 2010	AUG 2010	FEB 2011	**JUL 2011**[1]	
Complete	SEP 2010	SEP 2010	MAR 2011	**OCT 2011**[1]	
Initial Operational Capability (IOC)	MAR 2011	MAR 2011	SEP 2011	**MAY 2013**[1]	(Ch-1)
Full Rate Production Review	JUN 2011	JUN 2011	DEC 2011	**MAY 2013**[1]	(Ch-2)
Full Operational Capability (FOC)	SEP 2015	SEP 2015	MAR 2016	SEP 2015	

[1] *APB Breach*

Change Explanations

(Ch-1) The IOC current estimate changed from March 2013 to May 2013 in order to align with the scheduled Full Rate Production decision review date. Correction of deficiencies were verified in supplemental testing.

(Ch-2) The Full Rate Production Review current estimate changed from March 2013 to May 2013 in order to align with the scheduled decision review date.

Memo

The extended threshold for FOC is defined in the SM-6 Capability Production Document (CPD).

Performance

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

Track To Budget

General Memo

The SM-6 Development was funded under PE 0604366N - Project 3092.

The FY 2014 President's Budget (PB) includes Research & Development (R&D) funding for other STANDARD Missile improvements, none of which are included in the SM-6 development program baseline: SM-6 Insensitive Munitions (IM), Joint Integrated Fire Enhancement, and Portable All-Up Round Built In Test (BIT) Tester (PABT).

The FY 2014 PB for SM-6 procurement (APPN 1507, PE 0204228N) includes ICN 223400 and 612000. Both are shared with SM-2 through FY 2011. All up rounds are reflected in Budget Line Item (BLI) 2234 P1-7. Initial Spares are included in BLI 6120 P1-35.

RDT&E

APPN 1319	BA 05	PE 0604366N	(Navy)	
	Project 3092	Standard Missile 6 Program	(Shared)	(Sunk)

FY 2012 is the last year of SM-6 RDT&E funding related to the Baseline Program of Record as reported in the SAR.

Procurement

APPN 1507	BA 02	PE 0204228N	(Navy)
	ICN 223400	STANDARD Missile	

Shared with SM-2 through FY 2011.

APPN 1507	BA 06	PE 0204228N	(Navy)
	ICN 612000	Spares and Repair Parts	(Shared)

Shared with SM-2 in Standard Missile Replenishment Spares line through FY 2011 and continues to be shared with other Navy programs.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2004 $M			BY2004 $M	TY $M		
	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	861.6	861.6	947.8	834.5	963.2	963.2	933.4
Procurement	4419.5	4419.5	4861.5	**6424.6** [1]	5634.0	5634.0	8842.1
Flyaway	3832.8	--	--	5585.1	4881.3	--	7684.7
Recurring	3798.9	--	--	5561.0	4842.1	--	7656.6
Non Recurring	33.9	--	--	24.1	39.2	--	28.1
Support	586.7	--	--	839.5	752.7	--	1157.4
Other Support	430.8	--	--	582.3	551.9	--	803.7
Initial Spares	155.9	--	--	257.2	200.8	--	353.7
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	5281.1	5281.1	N/A	7259.1	6597.2	6597.2	9775.5

[1] ***APB Breach***

Confidence Level for Current APB Cost 50% - The Independent Cost Estimate (ICE) to support SM-6 Milestone C decision, like all life-cycle cost estimates previously performed by the Office of the Secretary of Defense, Cost Assessment and Program Evaluation (OSD, CAPE), is built upon a product-oriented work breakdown structure, based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which the Department has been successful. It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is equally likely that the estimate will prove low or too high for execution of the program described. The current SM-6 Acquisition Program Baseline (APB) is based on the OSD CAPE ICE prepared for Milestone C. The confidence level of the SM-6 cost estimates is referenced in the OSD CAPE ICE memorandum for the SM-6 Program dated July 28, 2009.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	1200	1200	1800
Total	1200	1200	1800

SM-6 received authorization to increase the procurement profile from 1200 missiles to 1800 missiles as documented in the Navy Electronic Resources and Requirements Review Board (ER3B) memorandum, dated March 18, 2013. An APB reflecting the increase in procurement quantity will be presented at the FRP decision review.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2014 President's Budget / December 2012 SAR (TY$ M)

Appropriation	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
RDT&E	933.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	933.4
Procurement	831.1	419.4	386.9	571.3	589.3	741.1	836.5	4466.5	8842.1
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2014 Total	1764.5	419.4	386.9	571.3	589.3	741.1	836.5	4466.5	9775.5
PB 2013 Total	1757.2	419.4	516.1	702.7	762.3	926.5	720.0	662.8	6467.0
Delta	7.3	0.0	-129.2	-131.4	-173.0	-185.4	116.5	3803.7	3308.5

Program funding and production quantities listed in this SAR are consistent with the FY 2014 President's Budget (PB). The FY 2014 PB did not reflect the enacted DoD appropriation for FY 2013, nor sequestration; it reflected the President's requested amounts for FY 2013.

Quantity	Undistributed	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	178	94	81	125	127	160	174	861	1800
PB 2014 Total	0	178	94	81	125	127	160	174	861	1800
PB 2013 Total	0	178	94	115	157	168	204	150	134	1200
Delta	0	0	0	-34	-32	-41	-44	24	727	600

Cost and Funding

Annual Funding By Appropriation

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

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2004	--	--	--	--	--	--	25.5
2005	--	--	--	--	--	--	83.8
2006	--	--	--	--	--	--	114.8
2007	--	--	--	--	--	--	150.0
2008	--	--	--	--	--	--	172.6
2009	--	--	--	--	--	--	195.4
2010	--	--	--	--	--	--	112.6
2011	--	--	--	--	--	--	61.0
2012	--	--	--	--	--	--	17.7
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**933.4**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2004 $M	Non End Item Recurring Flyaway BY 2004 $M	Non Recurring Flyaway BY 2004 $M	Total Flyaway BY 2004 $M	Total Support BY 2004 $M	Total Program BY 2004 $M
2004	--	--	--	--	--	--	25.0
2005	--	--	--	--	--	--	80.0
2006	--	--	--	--	--	--	106.3
2007	--	--	--	--	--	--	135.6
2008	--	--	--	--	--	--	153.2
2009	--	--	--	--	--	--	171.3
2010	--	--	--	--	--	--	97.2
2011	--	--	--	--	--	--	51.3
2012	--	--	--	--	--	--	14.6
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**834.5**

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

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2009	19	92.5	--	17.6	110.1	12.3	122.4
2010	11	55.0	--	10.5	65.5	32.2	97.7
2011	59	211.0	--	--	211.0	31.9	242.9
2012	89	324.3	--	--	324.3	43.8	368.1
2013	94	362.9	--	--	362.9	56.5	419.4
2014	81	331.1	--	--	331.1	55.8	386.9
2015	125	509.5	--	--	509.5	61.8	571.3
2016	127	529.2	--	--	529.2	60.1	589.3
2017	160	663.6	--	--	663.6	77.5	741.1
2018	174	727.6	--	--	727.6	108.9	836.5
2019	150	643.6	--	--	643.6	100.5	744.1
2020	150	653.6	--	--	653.6	101.2	754.8
2021	150	663.6	--	--	663.6	102.9	766.5
2022	150	674.3	--	--	674.3	104.7	779.0
2023	150	685.3	--	--	685.3	106.6	791.9
2024	111	529.5	--	--	529.5	100.7	630.2
Subtotal	**1800**	**7656.6**	**--**	**28.1**	**7684.7**	**1157.4**	**8842.1**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2004 $M	Non End Item Recurring Flyaway BY 2004 $M	Non Recurring Flyaway BY 2004 $M	Total Flyaway BY 2004 $M	Total Support BY 2004 $M	Total Program BY 2004 $M
2009	19	80.1	--	15.2	95.3	10.7	106.0
2010	11	46.8	--	8.9	55.7	27.4	83.1
2011	59	175.4	--	--	175.4	26.5	201.9
2012	89	264.5	--	--	264.5	35.7	300.2
2013	94	290.3	--	--	290.3	45.2	335.5
2014	81	260.0	--	--	260.0	43.8	303.8
2015	125	392.6	--	--	392.6	47.6	440.2
2016	127	400.1	--	--	400.1	45.5	445.6
2017	160	492.4	--	--	492.4	57.5	549.9
2018	174	529.8	--	--	529.8	79.3	609.1
2019	150	459.9	--	--	459.9	71.8	531.7
2020	150	458.4	--	--	458.4	70.9	529.3
2021	150	456.7	--	--	456.7	70.8	527.5
2022	150	455.4	--	--	455.4	70.7	526.1
2023	150	454.2	--	--	454.2	70.6	524.8
2024	111	344.4	--	--	344.4	65.5	409.9
Subtotal	**1800**	**5561.0**	**--**	**24.1**	**5585.1**	**839.5**	**6424.6**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	7/12/2004	4/5/2012
Approved Quantity	120	178
Reference	Milestone B ADM	LRIP Lot 4 ADM
Start Year	2009	2009
End Year	2011	2012

The SM-6 program received authorization to enter into a fourth year of Low Rate Initial Production (LRIP) as documented in the Acquisition Decision Memorandum (ADM) dated April 5, 2012. This ADM authorized the increase in the total LRIP quantity from 120 (10 percent) to 178 (15 percent) and deferred the Full Rate Production decision to FY 2013. The current authorized LRIP quantity is 19 missiles for FY 2009, 11 missiles for FY 2010, 59 missiles for FY 2011, and 89 missiles for FY 2012.

The SM-6 program will build-up 25 non-LRIP rounds that will be test fired during the System Development and Demonstration (SDD) phase of the program. All 25 missiles will be expended prior to Initial Operational Capability (IOC).

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

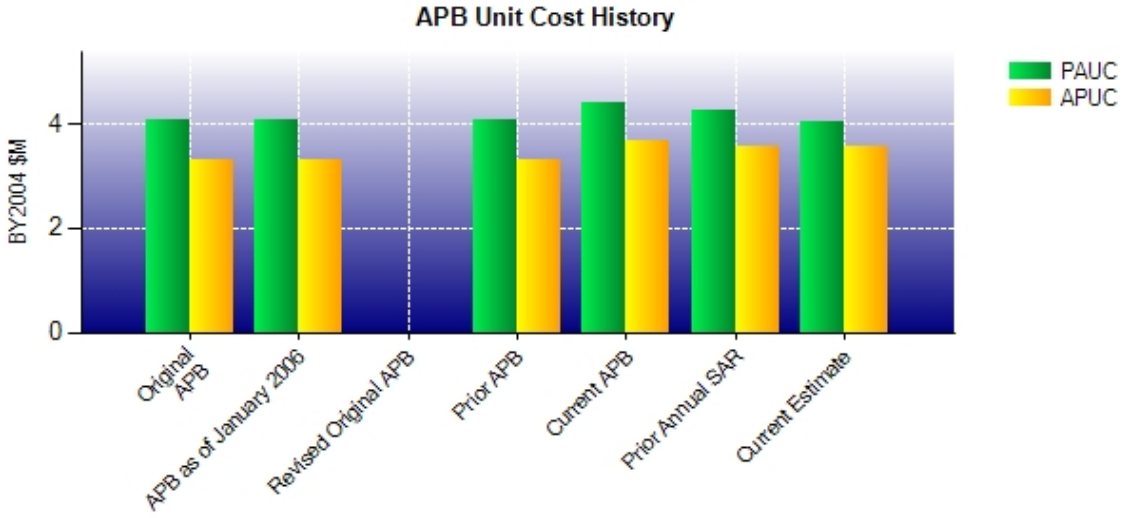
Unit Cost Report

Unit Cost	BY2004 $M Current UCR Baseline (MAR 2010 APB)	BY2004 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5281.1	7259.1	
Quantity	1200	1800	
Unit Cost	4.401	4.033	-8.36
Average Procurement Unit Cost (APUC)			
Cost	4419.5	6424.6	
Quantity	1200	1800	
Unit Cost	3.683	3.569	-3.10

Unit Cost	BY2004 $M Original UCR Baseline (JUL 2004 APB)	BY2004 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	4866.3	7259.1	
Quantity	1200	1800	
Unit Cost	4.055	4.033	-0.54
Average Procurement Unit Cost (APUC)			
Cost	3949.6	6424.6	
Quantity	1200	1800	
Unit Cost	3.291	3.569	+8.45

SM-6 received authorization to increase the procurement profile from 1200 missiles to 1800 missiles as documented in the Navy Electronic Resources and Requirements Review Board (ER3B) memorandum, dated March 18, 2013.

Unit Cost History



		BY2004 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	JUL 2004	4.055	3.291	4.986	4.163
APB as of January 2006	JUL 2004	4.055	3.291	4.986	4.163
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	JUL 2004	4.055	3.291	4.986	4.163
Current APB	MAR 2010	4.401	3.683	5.498	4.695
Prior Annual SAR	DEC 2011	4.264	3.575	5.389	4.620
Current Estimate	DEC 2012	4.033	3.569	5.431	4.912

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
4.986	0.114	0.000	-0.046	0.000	0.153	0.000	0.291	0.512	5.498

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
5.498	0.053	-0.377	0.068	0.000	-0.029	0.000	0.218	-0.067	5.431

Initial SAR Baseline to Current SAR Baseline (TY $M)

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
4.163	0.085	0.000	-0.046	0.000	0.202	0.000	0.291	0.532	4.695

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
4.695	0.052	-0.110	0.068	0.000	-0.011	0.000	0.218	0.217	4.912

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	JUN 2004	JUN 2004	JUN 2004
Milestone C	N/A	SEP 2008	JUN 2009	AUG 2009
IOC	N/A	SEP 2010	MAR 2011	MAY 2013
Total Cost (TY $M)	N/A	5983.3	6597.2	9775.5
Total Quantity	N/A	1200	1200	1800
Prog. Acq. Unit Cost (PAUC)	N/A	4.986	5.498	5.431

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	963.2	5634.0	--	6597.2
Previous Changes				
Economic	+0.8	+30.3	--	+31.1
Quantity	--	--	--	--
Schedule	--	+42.0	--	+42.0
Engineering	--	--	--	--
Estimating	-40.6	-136.2	--	-176.8
Other	--	--	--	--
Support	--	-26.5	--	-26.5
Subtotal	-39.8	-90.4	--	-130.2
Current Changes				
Economic	+0.6	+63.6	--	+64.2
Quantity	--	+2619.6	--	+2619.6
Schedule	--	+81.0	--	+81.0
Engineering	--	--	--	--
Estimating	+9.4	+115.7	--	+125.1
Other	--	--	--	--
Support	--	+418.6	--	+418.6
Subtotal	+10.0	+3298.5	--	+3308.5
Adjustments	--	--	--	--
Total Changes	-29.8	+3208.1	--	+3178.3
CE - Cost Variance	933.4	8842.1	--	9775.5
CE - Cost & Funding	933.4	8842.1	--	9775.5

Summary Base Year 2004 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	861.6	4419.5	--	5281.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	-3.5	--	-3.5
Engineering	--	--	--	--
Estimating	-34.9	-110.0	--	-144.9
Other	--	--	--	--
Support	--	-20.8	--	-20.8
Subtotal	-34.9	-134.3	--	-169.2
Current Changes				
Economic	--	--	--	--
Quantity	--	+1761.1	--	+1761.1
Schedule	--	+23.9	--	+23.9
Engineering	--	--	--	--
Estimating	+7.8	+80.8	--	+88.6
Other	--	--	--	--
Support	--	+273.6	--	+273.6
Subtotal	+7.8	+2139.4	--	+2147.2
Adjustments	--	--	--	--
Total Changes	-27.1	+2005.1	--	+1978.0
CE - Cost Variance	834.5	6424.6	--	7259.1
CE - Cost & Funding	834.5	6424.6	--	7259.1

Previous Estimate: September 2012

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.6
Adjustment for current and prior escalation. (Estimating)	-0.5	-0.6
Increase in funding provided through an Above Threshold Requirement to support supplemental testing in FY 2012. (Estimating)	+8.3	+10.0
RDT&E Subtotal	+7.8	+10.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+63.6
Stretch-out of procurement buy profile from FY 2020 to FY 2024. (Schedule)	0.0	+45.4
Total Quantity variance resulting from an increase of 600 All Up Round missiles from 1200 to 1800. (Subtotal)	+1707.6	+2540.1
Quantity variance resulting from an increase of 600 All Up Round missiles from 1200 to 1800. (Quantity) (QR)	(+1761.1)	(+2619.6)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+23.9)	(+35.6)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-77.4)	(-115.1)
Adjustment for current and prior escalation. (Estimating)	-5.4	-6.5
Revised estimate to reflect application of new escalation indices. (Estimating)	+101.6	+141.6
Increase due to quantity reduction in FY 2014 resulting in loss of learning in Future Years Defense Plan (FYDP) and outyears. Flattened learning in out years with steady procurement rate. (Estimating)	+62.0	+95.7
Adjustment for current and prior escalation. (Support)	-0.8	-1.2
Increase in Other Support. (Subtotal)	+196.1	+299.8
Non quantity related increase in Other Support due to moderate rephasing within the FYDP to match total Procurement funding controls. (Support)	(-2.2)	(+3.4)
Quantity related increase in Other Support resulting from an increase of 600 All Up Round missiles and extending the procurement profile to FY 2024. (Support) (QR)	(+198.3)	(+296.4)
Increase in Spares requirements estimated as a percent of All Up Round hardware. (Subtotal)	+78.3	+120.0
Non quantity related increase in Initial Spares due to realignment of spares funding requirements to the rephased procurement profile within the FYDP. (Support)	(-3.8)	(-2.3)
Quantity related increase in Spares resulting from an increase of 600 All Up Round missiles and extending the procurement profile to FY 2024. (Support) (QR)	(+82.1)	(+122.3)
Procurement Subtotal	+2139.4	+3298.5

(QR) Quantity Related

Contracts

Appropriation: Procurement	
Contract Name	**SM-6 LRIP Contract**
Contractor	Raytheon Missile Systems (RMS)
Contractor Location	Tucson, AZ 85731-1337
Contract Number, Type	N00024-09-C-5305/0, FPIF
Award Date	September 04, 2009
Definitization Date	July 01, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
368.0	397.4	89	377.2	407.5	92	377.2	377.2

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/19/2013)	+11.4	+18.7
Previous Cumulative Variances	+10.0	+24.9
Net Change	+1.4	-6.2

Cost And Schedule Variance Explanations

The favorable net change in the cost variance is due to Raytheon working ahead of the contractual baseline schedule.

The unfavorable net change in the schedule variance is due to Raytheon working ahead of the contractual baseline schedule but has lost some of the lead from what was previously reported. The total schedule variance remains favorable.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to contract modification P00015 which added three additional FY 2012 All Up Round missiles in support of the Missile Defense Agency Sea Based Terminal efforts.

On September 4, 2009, RMS was awarded a letter contract to establish Not-to-Exceed (NTE) prices for the Low Rate Initial Production (LRIP) Contract Line Item Numbers (CLINs). The contract was definitized on July 1, 2010. Contract Option 2 (FY 2011 lot 3) was awarded on June 23, 2011.

The SM-6 Milestone C Acquisition Decision Memorandum (ADM) dated August 24, 2009 authorized LRIP lot 1 plus Long Lead Material (LLM) for FY 2010 (lot 2). The SM-6 LRIP lot 2 ADM dated June 7, 2010 authorized LRIP lot 2 plus LLM for FY 2011 (lot 3). The SM-6 LRIP lot 3 and LLM ADM dated May 13, 2011 authorized LRIP lot 3 plus LLM for FY 2012.

An Integrated Baseline Review (IBR) for FY 2009 lot 1 was successfully conducted in January 2011. A follow-on IBR for FY 2010 lot 2 was successfully conducted in June 2011 and a follow-on IBR for FY 2011 lot 3 was successfully conducted in January 2012.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	30	38	1800	2.11%
Total Program Quantities Delivered	30	38	1800	2.11%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	9775.5	Years Appropriated	10
Expenditures To Date	1135.0	Percent Years Appropriated	47.62%
Percent Expended	11.61%	Appropriated to Date	2183.9
Total Funding Years	21	Percent Appropriated	22.34%

The above data is current as of 3/29/2013.

Missile deliveries are more than expected.

Operating and Support Cost

SM-6

Assumptions and Ground Rules

Cost Estimate Reference:

Estimate based on the Program Office estimate for a total quantity of 1800 missiles pending the OSD Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) being updated for the Full Rate Production (FRP) decision review.

Sustainment Strategy:

1) Since the SM-6 is a wooden round (a concept that pictures a weapon as being completely reliable and, while deployed on board a ship, having an infinite shelf life while at the same time requiring no special handling, storage, surveillance, or maintenance by ships force personnel), Personnel Costs are unnecessary for missile operation.

2) The average annual cost per missile assumes 1800 All Up Rounds over a 30 year life cycle.

3) Unit Level Consumption includes Range and Target Costs, as well as Post Flight Analysis.

4) Intermediate Maintenance consists of Intermediate Level Maintenance facility costs.

5) Depot Maintenance includes Depot Maintenance and Refurbishment.

6) Sustaining Support includes Sustaining Investment and Software Maintenance.

7) Indirect Costs include Other costs.

Antecedent Information:

There is no Antecedent System for the SM-6 program. The SM-6 program meets a different threat set and demonstrates enhanced capabilities in comparison to the SM-2 program.

Unitized O&S Costs BY2004 $K		
Cost Element	**SM-6 Avg Annual Cost per Missile**	**No Antecedent (Antecedent) No Antecedent**
Unit-Level Manpower	0.0	0.0
Unit Operations	3.0	0.0
Maintenance	3.2	0.0
Sustaining Support	2.1	0.0
Continuing System Improvements	0.0	0.0
Indirect Support	0.2	0.0
Other	0.0	0.0
Total	8.5	--

Unitized Cost Comments:

Cost/Missile/Year based on a 30 year life cycle for 1800 missiles.

	Total O&S Cost $M			
	Current Production APB Objective/Threshold		Current Estimate	
	SM-6		SM-6	No Antecedent (Antecedent)
Base Year	344.6	379.1	**460.3** [1]	0.0
Then Year	558.0	N/A	845.9	0.0

[1] **APB O&S Cost Breach**

Total O&S Costs Comments:

There are no O&S objective and threshold in the current Acquisition Program Baseline (APB). O&S is not included in the Program Acquisition Unit Cost (PAUC) calculation.

Disposal Costs

The Army is responsible for demilitarization of all Department of Defense missile systems at the end of the missile service life, including the STANDARD missile. Disposal costs have not been calculated yet.