Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-286

Remote Minehunting System (RMS)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Program Name

Remote Minehunting System (RMS)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned August 16, 2010

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated October 7, 2010

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated October 23, 2012

Mission and Description

The Remote Minehunting System (RMS) is a mine reconnaissance system designed for the detection, classification, identification, and localization of bottom and moored mines in shallow and deep water. The RMS is a fully integrated system consisting of a semi-submersible Remote Multi-Mission Vehicle (RMMV), AN/WLD-1(V)2, carrying a towed variable depth sensor, the AN/AQS-20A. The RMMV is a high-endurance, semi-autonomous, low-observable, unmanned, diesel-powered vehicle, operated and maintained from the Littoral Combat Ship (LCS). The AN/AQS-20A incorporates five separate sonar/sensors (side-look sonar, forward-look sonar, volume search sonar, gap fill sonar, and electro-optical identification sensor) in a compact, lightweight, and hydro-dynamically stable towed body. The AN/AQS-20A localizes mine-like objects and provides the operator with a visual image and a contact data list. All mission data is recorded by the LCS for post-mission analysis. Line-of-Sight and Over-the-Horizon communication provides vehicle Command and Control and mine reconnaissance sensor data transmission. The RMS will provide the Navy the capability to keep ships and Sailors out of the minefield and will be deployed from the LCS as part of the ships' Mine Countermeasures Mission Package.

Executive Summary

The Remote Minehunting System (RMS) Program is executing the Remote Multi-Mission Vehicle (RMMV) Reliability Growth Program (RGP) in accordance with the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD(AT&L)) Acquisition Decision Memorandum (ADM) dated June 1, 2010.

The objective of the RGP is for the RMMV to obtain a minimum of 75 hours Mean Time Between Operational Mission Failures (MTBOMF).

The RMMV RGP utilizes a two-pronged approach for achieving reliability, Test-Analyze-Fix and Design for Reliability (DFR). Test-Analyze-Fix corrected known Failure Modes (FMs) of the RMMV and DFR performed design reviews of the areas of the vehicle where the highest failure rates had been observed. A predictive model was utilized to select the best value design for reliability changes.

RGP Phase I V4.1 completed in November 2011 with 509 Mission Hours, corrected 29 FMs/Issues and demonstrated MTBOMF of 63.6 hours (objective was 59 hours).

RGP Phase II V4.2 addresses 20 FMs, 8 DFRs and 10 Process changes. RGP Phase II V4.2 Design Review was conducted in June 2012.

RGP Phase II V4.2 completed Integration Testing in November 2012, in preparation for Verification and Validation Testing.

RGP Phase II V4.2 completed Verification Testing in February 2013, verifying that corrections for the targeted FMs functioned correctly in the final fully assembled configuration.

RGP Phase II V4.2 Off Shore Validation Testing commenced in February 2013 and is scheduled for 22 weeks. Off-Shore Validation Testing consists of 850 hours of mission testing to validate the improvement in the MTBOMF. The RMS Program Manager projects that V4.2 vehicles will exceed a MTBOMF of 75 hours. As of April 25, 2013, 26 missions totaling 516 hours (of the planned 850 hours) of testing have been completed.

Two Overarching Integrated Product Team (OIPT) meetings were conducted in March and June 2012, providing status of the RGP and RMS/Littoral Combat Ship (LCS) Integration efforts. A pre-Defense Acquisition Board (DAB) In-Process Review (IPR) Assessment was successfully conducted on July 12, 2012. The IPR Assessment stated that the Assistant Secretary of Defense (Acquisition) is satisfied with the Navy's progress and directed the Navy to continue executing the program as outlined in the July 12, 2012 IPR Assessment meeting.

OUSD(AT&L) approved an update to the Acquisition Program Baseline (APB) on October 23, 2012. The update reflects the five Key Performance Parameters (KPPs) identified in the Capability Development Document (CDD), #842-85-11, approved on May 31, 2011. The Director, Operational Test & Evaluation (DOT&E) approved the Test and Evaluation Master Plan (TEMP) on June 13, 2012. On March 14, 2013, the Navy's Resources and Requirements Review Board approved RMS Capability Production Document (CPD) to enter Joint Staffing.

The RMS program provided two RMMVs to support the LCS Mission Package (MP) Developmental Test during the periods of January - March 2012 and June - July 2012. RMS demonstrated improved Launch, Handling & Recovery capability and additional required changes were identified to address outstanding problem areas.

The FY 2013 plan is to continue execution of the RMMV RGP Phase II V 4.2 efforts and continue RMS LCS MP integration. Both of these efforts are crucial in supporting LCS MP Technical Evaluation and Initial Operational Test

& Evaluation in FY 2014.

RMS Operational Assessment and Milestone C decision are both on track for FY 2014.

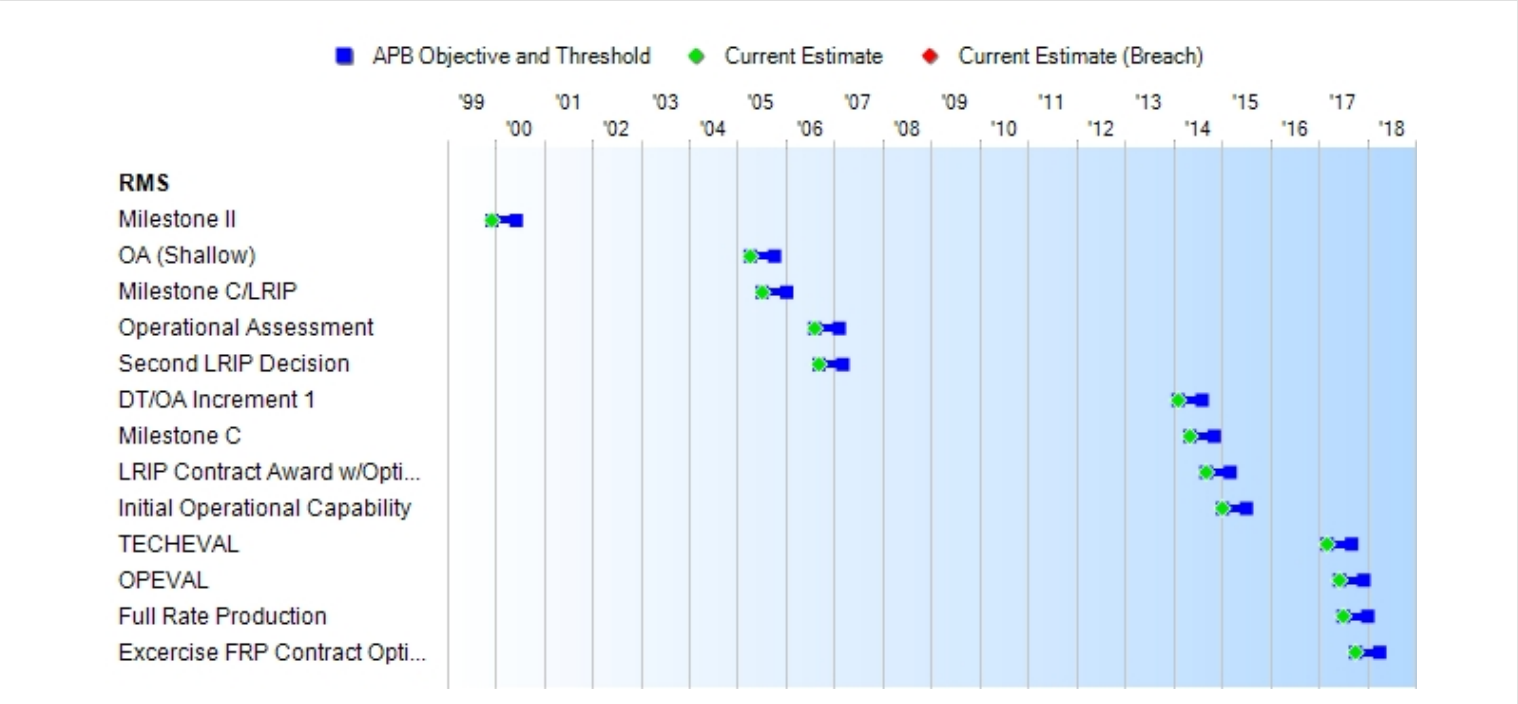
There are no significant software-related issues with this program at this time.

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

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate
Milestone II	DEC 1999	DEC 1999	JUN 2000	DEC 1999
OA (Shallow)	APR 2005	APR 2005	OCT 2005	APR 2005
Milestone C/LRIP	JUL 2005	JUL 2005	JAN 2006	JUL 2005
Operational Assessment	AUG 2006	AUG 2006	FEB 2007	AUG 2006
Second LRIP Decision	SEP 2006	SEP 2006	MAR 2007	SEP 2006
DT/OA Increment 1	FEB 2014	FEB 2014	AUG 2014	FEB 2014
Milestone C	MAY 2014	MAY 2014	NOV 2014	MAY 2014
LRIP Contract Award w/Options for FRP	SEP 2014	SEP 2014	MAR 2015	SEP 2014
Initial Operational Capability	JAN 2015	JAN 2015	JUL 2015	JAN 2015
TECHEVAL	MAR 2017	MAR 2017	SEP 2017	MAR 2017
OPEVAL	JUN 2017	JUN 2017	DEC 2017	JUN 2017
Full Rate Production	JUL 2017	JUL 2017	JAN 2018	JUL 2017
Excercise FRP Contract Options under LRIP Contract	OCT 2017	OCT 2017	APR 2018	OCT 2017

Acronyms And Abbreviations

DT - Developmental Testing
FRP - Full Rate Production
LRIP - Low Rate Initial Production
OA - Operational Assessment
OPEVAL - Operational Evaluation
TECHEVAL - Technical Evaluation

Change Explanations

None

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate	
Operational Availability	.85	.85	0.80	TBD	0.80	(Ch-1)
Material Availability	N/A	0.75	0.59	TBD	0.59	(Ch-1)
Net Ready	N/A	yes	yes	TBD	yes	(Ch-1)
Transit Speed (kts)	20	N/A	N/A	N/A	N/A	(Ch-2)
Water Depth -Shallow						(Ch-2)
Mine Type	Bottom, CCT, CT, IV	N/A	N/A	N/A	N/A	(Ch-2)
Water Depth - Deep						(Ch-2)
Mine Type	CCT, CT, IV	N/A	N/A	N/A	N/A	(Ch-2)

Requirements Source: Capability Development Document (CDD) dated May 31, 2011

Acronyms And Abbreviations

CCT - Close-Close Tethered
CT - Close Tethered
IV - In-Volume
kts - knots
N/A - Not Applicable
TBD - To Be Determined

Change Explanations

(Ch-1) Updated Operational Availability Current Estimate and added Material Availability and Net Ready characteristics in accordance with the approved CDD of May 2011 and the approved APB of October 2012.

(Ch-2) Removed from APB because characteristic is no longer applicable.

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

Memo

An update to the APB was approved on October 23, 2012 by Under Secretary of Defense, Acquisition, Technology & Logistics. The update reflects the five Key Performance Parameters (KPPs) identified in the CDD, #842-85-11, approved on May 31, 2011. Operational Availability remains an unclassified KPP. There are two new unclassified KPPs, Material Availability and Net Ready.

Track To Budget

RDT&E				
APPN 1319	BA 04	PE 0603502N	(Navy)	
	Project 0260	Surface and Shallow Water Mine Countermeasures	(Shared)	
	Project 9999	RMS Prog - Cong	(Shared)	(Sunk)
	Congressional Add to continue development of RMS during the RMS reliability growth program.			
APPN 1319	BA 04	PE 0603581N	(Navy)	
	Project 3129A	MIW Modules Prog - Cong	(Shared)	(Sunk)
	Funding is provided to research and study methods to employ mine warfare mission modules independently of the Littoral Combat Ship (LCS) platform.			

Procurement				
APPN 1810	BA 01	PE 0204230N	(Navy)	
	ICN 34160000	LCS Modules	(Shared)	(Sunk)
APPN 1810	BA 02	PE 0204302N	(Navy)	
	ICN 34262200	Minesweeping System Replacement	(Shared)	
APPN 1810	BA 08	PE 0204228N	(Navy)	
	ICN 34902000	Spares and Repair Parts	(Shared)	(Sunk)

For the shared PE0204302N, Minesweeping System Replacement, the RMS budget is comprised of all the elements of cost listed under Cost Code LV064, RMS.

For the shared PE0204230N, Littoral Combat Ship (LCS) Modules, the RMS budget is only the Remote Multi-Mission Vehicle element of cost under the Cost Code LM001.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2006 $M			BY2006 $M	TY $M		
	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	649.6	649.6	714.2	645.1	654.4	654.4	654.4
Procurement	630.0	630.0	693.0	613.5	795.0	795.0	795.0
Flyaway	518.8	--	--	504.9	653.6	--	653.7
Recurring	518.8	--	--	504.9	653.6	--	653.7
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	111.2	--	--	108.6	141.4	--	141.3
Other Support	78.2	--	--	76.8	98.3	--	98.2
Initial Spares	33.0	--	--	31.8	43.1	--	43.1
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	1279.6	1279.6	N/A	1258.6	1449.4	1449.4	1449.4

Confidence Level for Current APB Cost 50% -
The Independent Cost Estimate to support the RMS Nunn McCurdy certification, like all life-cycle cost estimates previously performed by the 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 Derpartment 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 us of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	52	52	52
Total	54	54	54

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	504.7	39.1	31.8	23.8	18.7	18.7	11.1	6.5	654.4
Procurement	109.3	0.0	0.0	33.3	61.1	58.6	58.5	474.2	795.0
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	614.0	39.1	31.8	57.1	79.8	77.3	69.6	480.7	1449.4
PB 2013 Total	585.3	39.1	32.0	57.2	79.8	77.4	104.5	474.1	1449.4
Delta	28.7	0.0	-0.2	-0.1	0.0	-0.1	-34.9	6.6	0.0

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	2	0	0	0	0	0	0	0	0	2
Production	0	8	0	0	2	4	4	4	30	52
PB 2014 Total	2	8	0	0	2	4	4	4	30	54
PB 2013 Total	2	8	0	0	2	4	4	4	30	54
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

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

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1996	--	--	--	--	--	--	11.9
1997	--	--	--	--	--	--	24.6
1998	--	--	--	--	--	--	16.4
1999	--	--	--	--	--	--	17.4
2000	--	--	--	--	--	--	47.5
2001	--	--	--	--	--	--	42.9
2002	--	--	--	--	--	--	55.4
2003	--	--	--	--	--	--	59.0
2004	--	--	--	--	--	--	56.7
2005	--	--	--	--	--	--	17.3
2006	--	--	--	--	--	--	26.6
2007	--	--	--	--	--	--	5.7
2008	--	--	--	--	--	--	8.5
2009	--	--	--	--	--	--	6.0
2010	--	--	--	--	--	--	26.0
2011	--	--	--	--	--	--	32.5
2012	--	--	--	--	--	--	50.3
2013	--	--	--	--	--	--	39.1
2014	--	--	--	--	--	--	31.8
2015	--	--	--	--	--	--	23.8
2016	--	--	--	--	--	--	18.7
2017	--	--	--	--	--	--	18.7
2018	--	--	--	--	--	--	11.1
2019	--	--	--	--	--	--	6.5
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**654.4**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
1996	--	--	--	--	--	--	13.8
1997	--	--	--	--	--	--	28.2
1998	--	--	--	--	--	--	18.7
1999	--	--	--	--	--	--	19.6
2000	--	--	--	--	--	--	52.7
2001	--	--	--	--	--	--	46.9
2002	--	--	--	--	--	--	60.0
2003	--	--	--	--	--	--	63.0
2004	--	--	--	--	--	--	58.9
2005	--	--	--	--	--	--	17.5
2006	--	--	--	--	--	--	26.1
2007	--	--	--	--	--	--	5.5
2008	--	--	--	--	--	--	8.0
2009	--	--	--	--	--	--	5.6
2010	--	--	--	--	--	--	23.8
2011	--	--	--	--	--	--	29.0
2012	--	--	--	--	--	--	44.0
2013	--	--	--	--	--	--	33.5
2014	--	--	--	--	--	--	26.8
2015	--	--	--	--	--	--	19.7
2016	--	--	--	--	--	--	15.2
2017	--	--	--	--	--	--	14.9
2018	--	--	--	--	--	--	8.7
2019	--	--	--	--	--	--	5.0
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**645.1**

Annual Funding TY$
1810 | Procurement | Other 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
2005	3	32.1	--	--	32.1	2.1	34.2
2006	4	46.3	--	--	46.3	11.7	58.0
2007	--	--	--	--	--	--	--
2008	1	10.8	--	--	10.8	3.6	14.4
2009	--	--	--	--	--	2.7	2.7
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	2	26.0	3.7	--	29.7	3.6	33.3
2016	4	44.2	6.3	--	50.5	10.6	61.1
2017	4	42.1	6.1	--	48.2	10.4	58.6
2018	4	42.1	6.0	--	48.1	10.4	58.5
2019	4	42.5	6.1	--	48.6	10.6	59.2
2020	4	43.2	6.2	--	49.4	10.7	60.1
2021	4	44.0	6.3	--	50.3	10.9	61.2
2022	4	44.8	6.4	--	51.2	11.1	62.3
2023	4	45.8	6.5	--	52.3	11.3	63.6
2024	4	46.7	6.7	--	53.4	11.5	64.9
2025	4	47.7	6.9	--	54.6	11.7	66.3
2026	2	24.7	3.5	--	28.2	8.4	36.6
Subtotal	**52**	**583.0**	**70.7**	**--**	**653.7**	**141.3**	**795.0**

Annual Funding BY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2006 $M	Non End Item Recurring Flyaway BY 2006 $M	Non Recurring Flyaway BY 2006 $M	Total Flyaway BY 2006 $M	Total Support BY 2006 $M	Total Program BY 2006 $M
2005	3	32.1	--	--	32.1	2.1	34.2
2006	4	44.8	--	--	44.8	11.3	56.1
2007	--	--	--	--	--	--	--
2008	1	10.1	--	--	10.1	3.3	13.4
2009	--	--	--	--	--	2.5	2.5
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	2	21.3	3.0	--	24.3	3.0	27.3
2016	4	35.6	5.1	--	40.7	8.5	49.2
2017	4	33.3	4.8	--	38.1	8.2	46.3
2018	4	32.7	4.7	--	37.4	8.0	45.4
2019	4	32.4	4.6	--	37.0	8.1	45.1
2020	4	32.3	4.6	--	36.9	8.0	44.9
2021	4	32.3	4.6	--	36.9	8.0	44.9
2022	4	32.2	4.6	--	36.8	8.0	44.8
2023	4	32.3	4.6	--	36.9	8.0	44.9
2024	4	32.4	4.6	--	37.0	8.0	45.0
2025	4	32.4	4.7	--	37.1	8.0	45.1
2026	2	16.5	2.3	--	18.8	5.6	24.4
Subtotal	**52**	**452.7**	**52.2**	**--**	**504.9**	**108.6**	**613.5**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	7/1/2005	4/2/2008
Approved Quantity	3	8
Reference	Acquisition Decision Memorandum (ADM)	ADM
Start Year	2005	2005
End Year	2007	2010

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the elimination of the Remote Multi-Mission Vehicles (RMMVs) for the Anti-Submarine Warfare (ASW) Mission Package for the Littoral Combat Ship (LCS) in the FY 2010 President's Budget (PB 2010), which reduced the number of RMMV production units from 106 to 52.

Eight LRIP units have been approved to date and have been delivered.

Foreign Military Sales

None

Nuclear Cost

None

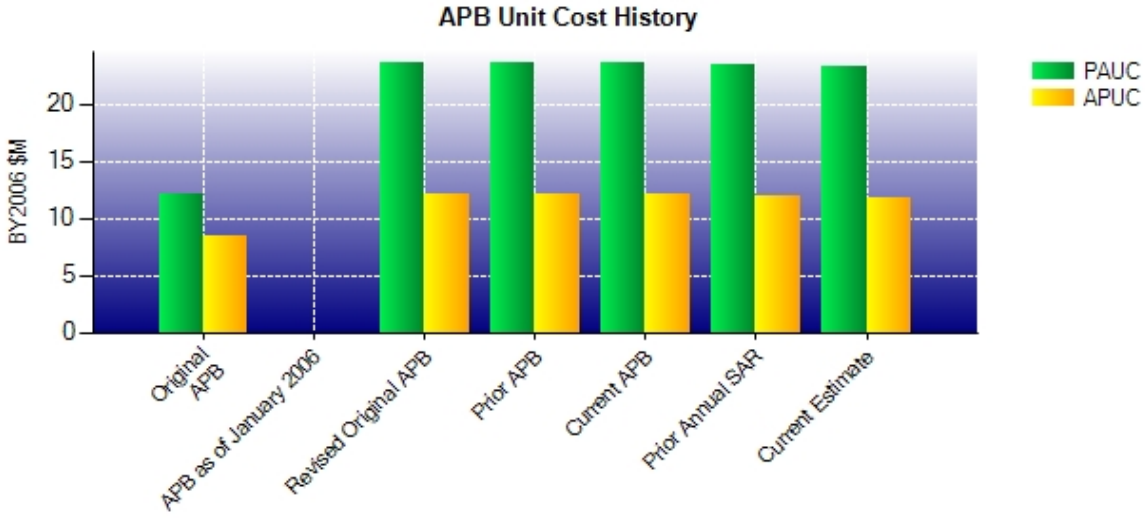
Unit Cost

Unit Cost Report

Unit Cost	BY2006 $M Current UCR Baseline (OCT 2012 APB)	BY2006 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	1279.6	1258.6	
Quantity	54	54	
Unit Cost	23.696	23.307	-1.64
Average Procurement Unit Cost (APUC)			
Cost	630.0	613.5	
Quantity	52	52	
Unit Cost	12.115	11.798	-2.62

Unit Cost	BY2006 $M Revised Original UCR Baseline (OCT 2010 APB)	BY2006 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	1279.6	1258.6	
Quantity	54	54	
Unit Cost	23.696	23.307	-1.64
Average Procurement Unit Cost (APUC)			
Cost	630.0	613.5	
Quantity	52	52	
Unit Cost	12.115	11.798	-2.62

Unit Cost History



		BY2006 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	OCT 2006	12.080	8.364	12.957	9.572
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	OCT 2010	23.696	12.115	26.841	15.288
Prior APB	OCT 2010	23.696	12.115	26.841	15.288
Current APB	OCT 2012	23.696	12.115	26.841	15.288
Prior Annual SAR	DEC 2011	23.435	11.952	26.841	15.288
Current Estimate	DEC 2012	23.307	11.798	26.841	15.288

SAR Unit Cost History

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

Initial PAUC Prod Est	Changes								PAUC Dev Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
12.957	-0.752	3.262	2.950	0.454	6.344	0.000	1.626	13.884	26.841

Current SAR Baseline to Current Estimate (TY $M)

PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
26.841	0.537	0.000	0.000	0.000	-0.385	-0.065	-0.087	0.000	26.841

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

Initial APUC Prod Est	Changes								APUC Dev Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.572	-0.783	-0.129	3.238	0.000	1.702	0.000	1.688	5.716	15.288

Current SAR Baseline to Current Estimate (TY $M)

APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
15.288	0.433	0.000	0.000	0.000	-0.275	-0.067	-0.090	0.001	15.288

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	N/A	DEC 1999	N/A
Milestone C	N/A	MAY 2014	JUL 2005	MAY 2014
IOC	N/A	JAN 2015	SEP 2007	JAN 2015
Total Cost (TY $M)	N/A	1449.4	1399.4	1449.4
Total Quantity	N/A	54	108	54
Prog. Acq. Unit Cost (PAUC)	N/A	26.841	12.957	26.841

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	654.4	795.0	--	1449.4
Previous Changes				
Economic	+3.2	+11.7	--	+14.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-3.2	-5.5	--	-8.7
Other	--	-3.5	--	-3.5
Support	--	-2.7	--	-2.7
Subtotal	--	--	--	--
Current Changes				
Economic	+3.3	+10.8	--	+14.1
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-3.3	-8.8	--	-12.1
Other	--	--	--	--
Support	--	-2.0	--	-2.0
Subtotal	--	--	--	--
Total Changes	--	--	--	--
CE - Cost Variance	654.4	795.0	--	1449.4
CE - Cost & Funding	654.4	795.0	--	1449.4

Summary Base Year 2006 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	649.6	630.0	--	1279.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-5.6	-7.3	--	-12.9
Other	--	--	--	--
Support	--	-1.2	--	-1.2
Subtotal	-5.6	-8.5	--	-14.1
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+1.1	-6.6	--	-5.5
Other	--	--	--	--
Support	--	-1.4	--	-1.4
Subtotal	+1.1	-8.0	--	-6.9
Total Changes	-4.5	-16.5	--	-21.0
CE - Cost Variance	645.1	613.5	--	1258.6
CE - Cost & Funding	645.1	613.5	--	1258.6

Previous Estimate: December 2011

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+3.3
Adjustment for current and prior escalation. (Estimating)	-0.9	-1.1
Revised estimate reflects FY 2014 President's Budget (PB). (Estimating)	+13.2	+13.5
Revised estimate to reflect Below Threshold Reprogramming. (Estimating)	+8.0	+8.9
Decrease in FY 2018 of $23.2M to account for funds received in prior years (FY 2010 ($4.4), FY 2011 ($8.9M), FY 2012 ($9.9M)). (Estimating)	-18.0	-23.2
Decrease in estimate due to RMS Research, Development, Test & Evaluation Ramp Down. (Estimating)	-6.2	-7.9
Revised estimate to address reliability growth deficiencies through technology refresh. (Estimating)	+5.0	+6.5
RDT&E Subtotal	+1.1	0.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+10.8
Revised estimate to reflect application of new outyear escalation indices. (Estimating)	-5.2	-6.8
Decrease in Other Support due to integration of inflationary guidance. (Support)	-0.7	-1.3
Decrease in Initial Spares due to integration of inflationary guidance. (Support)	-0.7	-0.7
Decrease in estimate to reflect FY 2014 President's Budget (PB). (Estimating)	-1.4	-2.0
Procurement Subtotal	-8.0	0.0

Contracts

Appropriation: RDT&E	
Contract Name	**Reliability Growth Program (RGP) Completion Contract**
Contractor	Lockheed Martin Corporation
Contractor Location	100 East 17th Street Riviera Beach, FL 33404
Contract Number, Type	N00024-12-C-6316, CPIF/CPFF
Award Date	December 16, 2011
Definitization Date	November 29, 2012

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
55.0	N/A	0	56.5	N/A	0	50.0	52.3

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (2/15/2013)	-2.9	-2.5
Previous Cumulative Variances	0.0	0.0
Net Change	-2.9	-2.5

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to increased resources necessary to address V4.2 design changes and software testing; unplanned regression tests; increased material ordering from higher than planned material rejection rate; and higher than planned procurement price for preventive maintenance materials.

The unfavorable net change in the schedule variance is due to delay in receipt of FY 2011 and FY 2012 funding, which delayed start of V4.2 offshore testing, and, was compounded by unplanned integration testing failures. However, the program remains on track for a Milestone C in FY 2014.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to addition of funds for Logistics and Test & Evaluation Support.

Initial Contract Price Target was updated to reflect contract definitization on November 29, 2012.

Estimate at Completion (EAC) only addresses the cost portion of the contract.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	8	8	52	15.38%
Total Program Quantities Delivered	10	10	54	18.52%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	1449.4	Years Appropriated	18
Expenditures To Date	626.5	Percent Years Appropriated	58.06%
Percent Expended	43.22%	Appropriated to Date	653.1
Total Funding Years	31	Percent Appropriated	45.06%

The above data is current as of 3/8/2013.

Operating and Support Cost

RMS

Assumptions and Ground Rules

Cost Estimate Reference:
RMS Service Cost Position dated November 3, 2010.

Sustainment Strategy:
RMS currently plans to execute an “organic” three level maintenance strategy. Afloat, Ashore and Depot maintenance approaches are defined as follows: Afloat – critical corrective only with flyaway support; Ashore – deferred Organic, Intermediate and limited Depot; Depot – to be determined based on Depot Source of Repair analysis. The Production & Deployment effort assumes Acquisition Program Baseline quantity of 54 RMMVs (two Engineering Development Models, 18 Low Rate Initial Production Units and 34 Production Units). The system life is 20 years.

Antecedent Information:
There is no antecedent system to the RMS. The Littoral Combat Ship, along with the systems onboard, replaces the Avenger Class Mine Countermeasures (MCM) Ship. The RMS alone does not replace the MCM Ship.

Unitized O&S Costs BY2006 $K		
Cost Element	**RMS Remote Multi-Mission Vehicle**	**No Antecedent System (Antecedent) No Antecedent System**
Unit-Level Manpower	0.00	0.00
Unit Operations	12.25	0.00
Maintenance	444.60	0.00
Sustaining Support	63.55	0.00
Continuing System Improvements	80.55	0.00
Indirect Support	0.00	0.00
Other	0.00	0.00
Total	600.95	--

Unitized Cost Comments:
All base year costs are shown in Constant Year FY 2006 dollars. The office of Cost Assessment and Program Evaluation (CAPE) identified the acquisition approach to use here. All technical, financial, schedule and programmatic inputs are reviewed, at a minimum by members of either the RMS Program Office or stakeholders from the Naval Surface Warfare Center, Panama City Division. The actual funded amount was used from FY 1996 to FY 2009. The overhaul period is every three years.

	Total O&S Cost $M			
	Current Development APB Objective/Threshold		Current Estimate	
	RMS		RMS	No Antecedent System (Antecedent)
Base Year	649.0	713.9	649.0	N/A
Then Year	1109.0	N/A	1109.0	N/A

Total O&S Costs Comments:

The Production & Deployment effort assumes Acquisition Program Baseline quantity of 54 RMMVs (two Engineering Development Models, 18 Low Rate Initial Production Units and 34 Production Units). The system life is 20 years. O&S costs are estimated through FY 2048.

Disposal Costs

Per the RMS Service Cost Position, dated November 3, 2010, the estimate for disposal is $4.8M (FY 2010).