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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	20.534	17.589	3.001	-	3.001	0.000	0.000	0.000	0.000	0.000	41.124
0260: <i>Remote Minehunting Systems</i>	0.000	20.534	17.589	3.001	-	3.001	0.000	0.000	0.000	0.000	0.000	41.124

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 286

A. Mission Description and Budget Item Justification

The AN/WLD-1(V)2 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 will provide the Navy the capability to keep ships and sailors out of the minefield. The RMS is deployed from the Littoral Combat Ship (LCS) as part of the ships' Mine Countermeasure (MCM) Mission Package (MP). The RMS is a fully integrated system consisting of a semi-submersible Remote Multi-Mission Vehicle (RMMV) towing a variable depth sensor, the AN/AQS-20A. This budget line supports the RMMV. The RMMV is a high-endurance, semi-autonomous, low-observable, unmanned, diesel-powered vehicle, operated and maintained from the LCS. Line-of-sight (LOS) and over-the-horizon (OTH) data links provide real time vehicle command and control and mine reconnaissance sensor data transmission to/from LCS.

In FY 2016 two vehicles are being upgraded to the version 6.0 (v6.0) configuration to support LCS integration.

The RMS program is currently under evaluation with the Department's Independent Review Team (IRT). FY 2017 budget focuses on studies and analysis to support RMS IRT recommendations.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	21.110	20.089	28.018	-	28.018
Current President's Budget	20.534	17.589	3.001	-	3.001
Total Adjustments	-0.576	-2.500	-25.017	-	-25.017
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-2.500	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-0.576	0.000	-	-	-
• Program Adjustments	0.000	0.000	-23.300	-	-23.300
• Rate/Misc Adjustments	0.000	0.000	-1.717	-	-1.717

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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604122N / (U) <i>Remote Minehunting System (RMS)</i>	
<u>Change Summary Explanation</u> Decrease in Remote Minehunting System (RMS) by \$188 thousand as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015. Program Adjustments: FY15 -\$576K Total adjustments; SBIR -\$576K. FY16 -\$2,500K Total adjustments; -\$2,500K Congressional Mark - Excess support FY17 -\$25,017K Total adjustments; -\$23,300K DT Shift/Mod Kit Recolor, -\$1,717K Miscellaneous adjustment.		

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)				Project (Number/Name) 0260 / Remote Minehunting Systems			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
0260: Remote Minehunting Systems	0.000	20.534	17.589	3.001	-	3.001	0.000	0.000	0.000	0.000	0.000	41.124
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 286

A. Mission Description and Budget Item Justification

The AN/WLD-1(V)2 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 will provide the Navy the capability to keep ships and sailors out of the minefield. The RMS is deployed from the Littoral Combat Ship (LCS) as part of the ships' Mine Countermeasure (MCM) Mission Package (MP). The RMS is a fully integrated system consisting of a semi-submersible Remote Multi-Mission Vehicle (RMMV) towing a variable depth sensor, the AN/AQS-20A. This budget line supports the RMMV. The RMMV is a high-endurance, semi-autonomous, low-observable, unmanned, diesel-powered vehicle, operated and maintained from the LCS. Line-of-sight (LOS) and over-the-horizon (OTH) data links provide real time vehicle command and control and mine reconnaissance sensor data transmission to/from LCS.

In FY 2016 two vehicles are being upgraded to the version 6.0 (v6.0) configuration to support LCS integration.

The RMS program is currently under evaluation with the Department's Independent Review Team (IRT). FY 2017 budget focuses on studies and analysis to support RMS IRT recommendations.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Product Development	14.996	12.619	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments:					
- Implemented hardware/software improvements identified during RMS Developmental Test (DT).					
- Prepared vehicles for LCS MCM MP test events.					
- Completed RMMV v6.0 Physical Configuration Audit (PCA), Technical Data Package (TDP), and Interactive Electronic Technical Manual (IETM).					
- Incorporated v6.0 Engineering Change Proposals (ECPs) on additional v4.2 RMMVs for delivery to the LCS MCM MP.					
- Awarded a RMMV LRIP 1 Integration/Maintenance contract.					
FY 2016 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016			
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<ul style="list-style-type: none"> - Upgrade Pre-Reliability Growth Program (RGP) vehicles (v4.0) to final v6.0 configuration including reliability upgrades and LCS Integration ECPs. - SBIR transition to LRIP 1 for software. <p>FY 2017 Base Plans: - N/A</p> <p>FY 2017 OCO Plans: N/A</p>						
Title: Support		2.550	3.920	2.001	0.000	2.001
		Articles:	-	-	-	-
<p>FY 2015 Accomplishments:</p> <ul style="list-style-type: none"> - Provided support for RMMV v6.0 PCA, TDP, and IETM. - Provided engineering, logistics, and programmatic support for v6.0 efforts. - Provided engineering, logistics, and programmatic support for RMMV Integration/Maintenance contract. - Conducted quality assurance audits at contractor facility. - Provided on-site engineering support for RMMVs at contractor facility. - Conducted RMMV Ready For Issue (RFI) Inspections. - Provided support for v6.0 DT/IT. <p>FY 2016 Plans:</p> <ul style="list-style-type: none"> - Provide engineering, logistics, and programmatic support for v6.0 upgrade efforts. - Conduct post-upgrade inspections. - Provide engineering, logistics, and programmatic support for RMMV Integration/Maintenance contract. - Support S&T transitions to LRIP 1 fleet. - Provide planning support for RMMV Technology Refresh and Overhaul efforts. - Provide engineering support for correction of deficiencies efforts. <p>FY 2017 Base Plans: - Provide engineering, logistics, and programmatic support for IRT recommendations.</p> <p>FY 2017 OCO Plans: N/A</p>						
Title: Test and Evaluation (T&E)		2.300	0.000	0.000	0.000	0.000

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Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p align="right">Articles:</p> <p>FY 2015 Accomplishments: - Prepared for and supported LCS MCM MP TECHEVAL. - Prepared for and conducted v6.0 DT/IT.</p> <p>FY 2016 Plans: - N/A</p> <p>FY 2017 Base Plans: - N/A</p> <p>FY 2017 OCO Plans: N/A</p>	-	-	-	-	-
<p>Title: Management</p> <p align="right">Articles:</p> <p>FY 2015 Accomplishments: - Provided program management and oversight of RMMV v6.0 upgrades. - Awarded LRIP 1 RMMV Integration/Maintenance contract. - Provided program management support for and oversight of LRIP 1 Integration/Maintenance contract.</p> <p>FY 2016 Plans: - Provide program management and oversight of RMMV v6.0 upgrades. - Provide program management and oversight of RMMV Integration/Maintenance contract. - Support for the Independent Review Team (IRT)</p> <p>FY 2017 Base Plans: - Provide program management and oversight of IRT recommendations.</p> <p>FY 2017 OCO Plans: N/A</p>	0.688	1.050	1.000	0.000	1.000
Accomplishments/Planned Programs Subtotals	20.534	17.589	3.001	0.000	3.001

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPN/1605: Remote Minehunting System (RMS)	0.000	53.077	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	53.077

Remarks
This program is under review by the Independent Review Team (IRT). Current funding profile may not representative of the final pending report.

D. Acquisition Strategy

An RMMV LRIP 1 Integration/Maintenance Contract was awarded in FY15 to support the integration and maintenance activities of LRIP 1 systems, integration with the LCS Freedom Variant, incorporate Ao improvements, and address obsolescence changes.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
1319 / 4				PE 0604122N / (U)Remote Minehunting System (RMS)					0260 / Remote Minehunting Systems						
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development & Integration	Various	LOCKHEED MARTIN : West Palm Beach, FL	0.000	13.318	Nov 2014	11.219	Nov 2015	0.000		-		0.000	0.000	24.537	-
SBIR Transition	Various	Various : Various	0.000	0.678	Nov 2014	1.400	Jan 2016	0.000		-		0.000	0.000	2.078	-
Hardware Development & Integration	C/FPIF	LOOKHEED MARTIN : West Palm Beach, FL	0.000	1.000	Nov 2014	0.000		0.000		-		0.000	0.000	1.000	-
Subtotal			0.000	14.996		12.619		0.000		-		0.000	0.000	27.615	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering/ILS	WR	NSWC/PCD : Panama City, FL	0.000	1.731	Nov 2014	3.474	Oct 2015	1.751	Oct 2016	-		1.751	0.000	6.956	-
Engineering Support	WR	NUWC/NPT : Newport, RI	0.000	0.511	Nov 2014	0.233	Nov 2015	0.250	Nov 2016	-		0.250	0.000	0.994	-
Engineering Support	WR	PORTSMOUTH NSY : Portsmouth, NH	0.000	0.308	Nov 2014	0.213	Nov 2015	0.000		-		0.000	0.000	0.521	-
Subtotal			0.000	2.550		3.920		2.001		-		2.001	0.000	8.471	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
LCS MCM MP Test Events	WR	NSWC/PCD : Panama City, FL	0.000	1.537	Nov 2014	0.000		0.000		-		0.000	0.000	1.537	-
LCS MCM MP Test Events	SS/CPIF	LOCKHEED MARTIN : West Palm Beach, FL	0.000	0.763	Nov 2014	0.000		0.000		-		0.000	0.000	0.763	-
Subtotal			0.000	2.300		0.000		0.000		-		0.000	0.000	2.300	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems
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Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				

Remarks
 LCS MCM MP Test Events will require contractor to groom vehicles prior to testing.
 SFTF - South Florida Test Facility for the laying and recovery of mines for the DT/IT event.

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Management Support	C/CPFF	TBD : TBD	0.000	0.647	Dec 2014	1.000	Dec 2015	1.000	Dec 2016	-		1.000	0.000	2.647	-	
Travel	WR	NAVSEA : WNY, DC	0.000	0.041	Jan 2015	0.050	Jan 2016	0.000		-		0.000	0.000	0.091	-	
Subtotal			0.000	0.688		1.050		1.000		-		1.000	0.000	2.738	-	

Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract			
Project Cost Totals			0.000	20.534	17.589	3.001	-	3.001	0.000	41.124	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems
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Proj 0260	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Milestones																																
Product Development																																
	RMS/LCS Integration																															
RMS Test and Evaluation Milestones																																
LCS MCM MP Test Events	DT Phase IV Period 2				LCS MCM MP TECHEVAL																											
Remote Minehunting System (RMS) Test Events	RMS DT/IT																															
RMMV Contract Milestones																																
	RMMV LRIP 1 Integration/Maintenance Award ▲								Base Award (1 system) ▲																							
RMMV System Deliveries																																
									v6.0 Deliveries (2) ▲								RMMV LRIP 2 (1 system)															

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604122N / (U)Remote Minehunting System (RMS)	Project (Number/Name) 0260 / Remote Minehunting Systems

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0260				
Product Development: RMS/LCS Integration	1	2015	3	2017
RMS Test and Evaluation Milestones: LCS MCM MP Test Events: DT Phase IV Period 2	1	2015	2	2015
RMS Test and Evaluation Milestones: LCS MCM MP Test Events: LCS MCM MP TECHEVAL	3	2015	4	2015
RMS Test and Evaluation Milestones: Remote Minehunting System (RMS) Test Events: RMS v6.0 Developmental Testing (DT)/Integrated Testing (IT)	1	2015	2	2015
RMMV Contract Milestones: Base Production Award (1 system)	4	2016	4	2016
RMMV Contract Milestones: RMMV LRIP 1 Integration/Maintenance (Legacy Configuration) Award	1	2015	1	2015
RMMV System Deliveries: v6.0 Deliveries (2)	4	2016	4	2016