

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0604122N I (U)Remote Minehunting System (RMS)							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	0.000	-	21.110	20.089	-	20.089	28.018	8.219	9.951	8.632	Continuing	Continuing
0260: Remote Minehunting Systems	0.000	-	21.110	20.089	-	20.089	28.018	8.219	9.951	8.632	Continuing	Continuing
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. This budget line supports the Remote Multi-Mission Vehicle (RMMV). 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 RMMV towing a 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 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.

The first RMMV Low Rate Initial Production (LRIP) units (LRIP 1) were used during the RMMV Reliability Growth Program (RGP) v4.2 configuration and are being upgraded to the version 6.0 (v6.0) configuration to support LCS integration.

This is not a new start. Acquisition Category (ACAT) 1D Transparency requirement realigned program funding from Project Element 0603502N/Project Unit 0260 beginning in FY15.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
Previous President's Budget	-	21.110	15.923	-	15.923
Current President's Budget	-	21.110	20.089	-	20.089
Total Adjustments	-	-	4.166	-	4.166
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	4.300	-	4.300
• Rate/Misc Adjustments	-	-	-0.134	-	-0.134

UNCLASSIFIED

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Navy		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604122N I (U) <i>Remote Minehunting System (RMS)</i>	
<b><u>Change Summary Explanation</u></b> Technical: Not applicable. Schedule: Not applicable.		

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
0260: Remote Minehunting Systems	-	-	21.110	20.089	-	20.089	28.018	8.219	9.951	8.632	Continuing	Continuing
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. This budget line supports the Remote Multi-Mission Vehicle (RMMV). 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 RMMV towing a 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 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.												
The RMMV Low Rate Initial Production (LRIP 1) will continue upgrades to version 6.0 (v6.0) configuration in FY15 and FY16. In FY15 a RMMV LRIP 1 integration/maintenance contract will be awarded a RMMV Competitive Low Rate Initial Production (LRIP 2) contract will be awarded to procure the next LRIPs in FY16.												
The Initial Operational Capability (IOC) has shifted to 2nd quarter FY16 to align with the LCS MCM MP IOC and will use LRIP 1 units.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Product Development								-	15.572	12.179	-	12.179
								Articles: -	-	-	-	-
FY 2014 Accomplishments:												
- Cited in PE 0603502N												
FY 2015 Plans:												
- Implement hardware/software improvements identified during RMS Developmental Test (DT).												
- Prepare vehicles for LCS MCM MP test events.												
- Complete RMMV v6.0 Physical Configuration Audit (PCA), Technical Data Package (TDP), and Interactive Electronic												
Technical Manual (IETM).												
- Incorporate v6.0 Engineering Change Proposals (ECPs) on additional v4.2 RMMVs for delivery to the LCS MCM MP.												

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<div>- Incorporate RMMV v6.0 ECPs on RMMV training assets to support Ready For Training (RFT) in FY16.</div> <div>- Design and implement hardware/software changes to support integration of RMMV with LCS discovered during LCS MCM MP IOT&amp;E.</div> <div>- Award a RMMV LRIP 1 Integration/Maintenance contract.</div> <div>- Implement Operational Availability (Ao) hardware/software improvements.</div> <div>FY 2016 Base Plans:</div> <div>- Upgrade Pre-Reliability Growth Program (RGP) vehicles (v4.0) to final v6.0 configuration including reliability upgrades and LCS Integration ECPs.</div> <div>- SBIR transition to LRIP 1 for software.</div> <div>- Design and implement hardware/software changes to support Freedom Class integration.</div> <div>- Correction of deficiencies identified during LCS IOT&amp;E.</div> <div>FY 2016 OCO Plans:</div> <div>N/A</div>						
<div>Title: Support</div> <div>Articles:</div> <div>FY 2014 Accomplishments:</div> <div>- Cited in PE 0603502N</div> <div>FY 2015 Plans:</div> <div>- Provide support for RMMV v6.0 PCA, TDP, and IETM.</div> <div>- Provide engineering, logistics, and programmatic support for v6.0 efforts.</div> <div>- Provide engineering, logistics, and programmatic support for RMMV Integration/Maintenance contract.</div> <div>- Conduct quality assurance audits at contractor facility.</div> <div>- Provide on-site engineering support for RMMVs at contractor facility.</div> <div>- Conduct RMMV Ready For Issue (RFI) Inspections.</div> <div>- Provide support for v6.0 DT/IT.</div> <div>FY 2016 Base Plans:</div> <div>- Provide engineering, logistics, and programmatic support for v6.0 upgrade efforts.</div> <div>- Conduct post-upgrade inspections.</div> <div>- Provide engineering, logistics, and programmatic support for RMMV Integration/Maintenance contract.</div> <div>- Support S&amp;T transitions to LRIP 1 fleet.</div>		-	2.550	5.380	-	5.380
		-	-	-	-	-

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: February 2015		
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<div>- Provide planning support for RMMV Tech Refresh and Overhaul efforts.</div> <div>- Provide engineering support for correction of deficiencies efforts.</div> <div>- Provide programmatic support for LRIP 2 contract.</div> <div>- Support fleet introduction.</div> <div>FY 2016 OCO Plans:</div> <div>N/A</div>						
<div>Title: Test and Evaluation (T&amp;E)</div> <div></div> <div>FY 2014 Accomplishments:</div> <div>N/A</div> <div>FY 2015 Plans:</div> <div>- Prepare for and support LCS MCM MP TECHEVAL.</div> <div>- Prepare for and support LCS MCM MP IOT&amp;E.</div> <div>- Prepare for and conduct v6.0 DT/IT.</div> <div>FY 2016 Base Plans:</div> <div>- Verify correction of deficiencies identified during IOT&amp;E.</div> <div>FY 2016 OCO Plans:</div> <div>N/A</div>		<div>Articles:</div> <div>-</div>	<div>2.300</div> <div>-</div>	<div>1.842</div> <div>-</div>	<div>-</div> <div>-</div>	<div>1.842</div> <div>-</div>
<div>Title: Management</div> <div></div> <div>FY 2014 Accomplishments:</div> <div>N/A</div> <div>FY 2015 Plans:</div> <div>- Provide program management and oversight of RMMV v6.0 upgrades.</div> <div>- Award LRIP 1 RMMV Integration/Maintenance contract.</div> <div>- Provide program management support for and oversight of LRIP 1 Integration/Maintenance contract.</div> <div>FY 2016 Base Plans:</div> <div>- Provide program management and oversight of RMMV v6.0 upgrades.</div>		<div>Articles:</div> <div>-</div>	<div>0.688</div> <div>-</div>	<div>0.688</div> <div>-</div>	<div>-</div> <div>-</div>	<div>0.688</div> <div>-</div>

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Provide program management and oversight of RMMV Integration/Maintenance contract.												
FY 2016 OCO Plans: N/A												
Accomplishments/Planned Programs Subtotals								-	21.110	20.089	-	20.089
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost	
• OPN/1605: Remote Minehunting System	-	-	87.627	-	87.627	68.409	58.457	58.003	37.371	Continuing	Continuing	
• RDT&E/0603502N: Remote Minehunting System	33.799	-	-	-	-	-	-	-	-	-	524.188	
Remarks												
Five Year Defense Plan (FYDP) funding includes: funding for the RMMV units, RMMV Shipboard Stowage equipment, and production engineering support. The 1605 OPN line item is to award the RMMV Competitive LRIP 2/Full Rate Production (FRP) contract in FY16.												
The LRIP 2/FRP procurement profile is quantity (2) in FY16 and (4) in each ensuing FY through FY27. The first (10) units are LRIPs and the remaining are FRP units. Award of LRIP 2 contract supports LCS MCM MP inventory requirements.												
D. Acquisition Strategy												
In FY15, conduct a Milestone (MS) C DAB in support of the LRIP 2 decision. An RMMV LRIP 1 Integration/Maintenance Contract will be 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. Award the RMMV Competitive LRIP 2/FRP contract in FY16. A Full Rate Production Decision Review (FRPDR) in FY20.												
E. Performance Metrics												
- Conduct a Milestone (MS) C DAB (FY15)												
- Award RMMV LRIP 2 contract with Options for Full Rate Production (FY16)												
- Support LCS MCM MP IOT&E (FY15)												
- Initial Operational Capability (FY16)												
- Complete RMMV IOT&E based on LRIP 2 (FY20)												
- RMMV FRP Decision Review (FRPDR) (FY20)												

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2016 Navy</b>												<b>Date:</b> February 2015			
<b>Appropriation/Budget Activity</b> 1319 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0604122N / (U)Remote Minehunting System (RMS)						<b>Project (Number/Name)</b> 0260 / Remote Minehunting Systems			
<b>Product Development (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Hardware Development & Integration	SS/CPFF	LOCKHEED MARTIN : West Palm Beach, FL	0.000	-		13.894	Nov 2014	10.579	Nov 2015	-		10.579	Continuing	Continuing	Continuing
SBIR Transition	SS/CPFF	BOSTON ENGINEERING : Waltham, MA	0.000	-		0.678	Nov 2014	1.600	Dec 2015	-		1.600	-	2.278	-
Hardware Development & Integration	SS/CPIF	LOOKHEED MARTIN : West Palm Beach, FL	0.000	-		1.000	Nov 2014	-		-		-	-	1.000	-
<b>Subtotal</b>			0.000	-		15.572		12.179		-		12.179	-	-	-
<b>Support (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Engineering/ILS	WR	NSWC/PCD : Panama City, FL	0.000	-		1.731	Nov 2014	4.396	Oct 2015	-		4.396	Continuing	Continuing	Continuing
Engineering Support	WR	NUWC/NPT : Newport, RI	0.000	-		0.511	Nov 2014	0.549	Nov 2015	-		0.549	Continuing	Continuing	Continuing
Engineering Support	WR	NUWC.KPT : Keyport, WA	0.000	-		-		0.222	Nov 2015	-		0.222	Continuing	Continuing	Continuing
Engineering Support	WR	PORTSMOUTH NSY : Portsmouth, NH	0.000	-		0.308	Nov 2014	0.213	Nov 2015	-		0.213	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	-		2.550		5.380		-		5.380	-	-	-
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
LCS MCM MP Test Events	WR	NSWC/PCD : Panama City, FL	0.000	-		1.537	Nov 2014	1.342	Oct 2015	-		1.342	Continuing	Continuing	Continuing

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2016 Navy</b>												<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 1319 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0604122N / (U)Remote Minehunting System (RMS)				<b>Project (Number/Name)</b> 0260 / Remote Minehunting Systems				

  

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
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	SS/CPFF	LOCKHEED MARTIN : West Palm Beach, FL	0.000	-		0.763	Nov 2014	0.500	Nov 2015	-		0.500	-	1.263	-
<b>Subtotal</b>			0.000	-		2.300		1.842		-		1.842	-	-	-

  

**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.

  

<b>Management Services (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
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
Management Support	C/CPFF	TBD : TBD	0.000	-		0.647	Dec 2014	0.647	Dec 2015	-		0.647	Continuing	Continuing	Continuing
Travel	WR	NAVSEA : WNY, DC	0.000	-		0.041	Jan 2015	0.041	Jan 2016	-		0.041	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	-		0.688		0.688		-		0.688	-	-	-

  

		<b>Prior Years</b>	<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>		0.000	-		21.110		20.089		-		20.089	-	-	-

  

**Remarks**



**UNCLASSIFIED**

PE 0604122N: (U)Remote Minehunting System (RMS)  
Navy

R-1 Line #75

R-1 Program Element (Number/Name)	Program Element Description	Program Element Status	Program Element Comments

PE 0604122N I (U)Remote Minehunting  
System (RMS)

0260 / Remote Minehunting Systems



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Navy			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604122N / (U)Remote Minehunting System (RMS)	<b>Project (Number/Name)</b> 0260 / Remote Minehunting Systems	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 0260</b>				
Milestones: Milestone (MS) C	3	2015	3	2015
Milestones: Initial Operating Capability (IOC)	2	2016	2	2016
Milestones: Full Rate Production Decision (FRPD)	2	2020	2	2020
Product Development: RMS/LCS Integration	1	2015	3	2016
Product Development: RMS P3I Upgrade (Ao Improvements & Parts Obsolescence)	1	2017	4	2019
RMS Test and Evaluation Milestones: LCS MCM MP Test Events: DT Phase IV Period 2	1	2015	1	2015
RMS Test and Evaluation Milestones: LCS MCM MP Test Events: LCS MCM MP TECHEVAL	3	2015	3	2015
RMS Test and Evaluation Milestones: LCS MCM MP Test Events: LCS MCM MP IOT&E	4	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
RMS Test and Evaluation Milestones: Remote Minehunting System (RMS) Test Events: RMS Developmental Testing (DT)/Operational Test (OT)	3	2019	3	2019
RMS Test and Evaluation Milestones: Remote Minehunting System (RMS) Test Events: RMS IOT&E	4	2019	4	2019
RMMV Contract Milestones: Base Production Award (2 systems)	2	2016	2	2016
RMMV Contract Milestones: Option 1 Production Award (4 systems)	2	2017	2	2017
RMMV Contract Milestones: Option 2 Production Award (4 systems)	2	2018	2	2018
RMMV Contract Milestones: Option 3 Production Award (4 systems)	2	2019	2	2019
RMMV Contract Milestones: Option 4 Production Award (4 systems)	2	2020	2	2020

**UNCLASSIFIED**

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015		
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	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
RMMV Contract Milestones: RMMV LRIP 1 Integration/Maintenance (Legacy Configuration) Award		1	2015	1	2015
RMMV System Deliveries: 2 LRIPs		1	2019	1	2019
RMMV System Deliveries: 4 LRIPs		4	2019	4	2019