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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 0603654N / <i>JT Service Explosive Ordn Dev</i>							
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	542.034	22.273	15.330	46.911	-	46.911	49.624	45.284	44.977	46.025	Continuing	Continuing
0377: <i>JT Service Expl Ord Disp System</i>	345.921	10.112	5.108	14.039	-	14.039	13.566	11.574	11.837	12.091	Continuing	Continuing
1317: <i>EOD Diving System</i>	103.452	2.049	2.200	5.467	-	5.467	5.102	4.486	4.584	4.683	Continuing	Continuing
3177: <i>Joint Counter Radio-Controlled IED Elec Warfare</i>	0.000	0.000	0.000	9.845	-	9.845	11.886	11.796	10.708	11.017	Continuing	Continuing
4023: <i>VSW MCM/Force Protection UUV</i>	92.661	10.112	8.022	17.560	-	17.560	19.070	17.428	17.848	18.234	Continuing	Continuing

A. Mission Description and Budget Item Justification

This is a Joint Service Program. This program provides for the development of Explosive Ordnance Disposal tools and equipment for use by all military services. The responsibility is assigned to the Navy as single service manager, by Department of Defense Directive 5160.62 of 26 April 1989, for management of the Joint Service Explosive Ordnance Disposal Research and Development Program. Proliferation of sophisticated types of foreign and domestic ordnance and Improvised Explosive Devices necessitate a continuing development program to provide Explosive Ordnance Disposal personnel of all military services with the special equipment and tools required to support this mission. This program also provides life support related equipment necessary to support the performance of Navy Explosive Ordnance Disposal tasks underwater. This equipment must have inherently low acoustic and magnetic signatures in order to allow the Explosive Ordnance Disposal technician to safely approach, render-safe and dispose of sea mines and other underwater ordnance. This program also provides for the research and development of Electronic Warfare (EW) systems, equipment, procedures, and tactical aids for all military services against the threat posed by Radio-Controlled Improvised Explosive Devices (RCIEDs) and to prevent initiation of RCIEDs across the spectrum of Joint military operations. Utilize Joint requirements to provide a system of systems approach for a suite of equipment for mounted, dismounted, and fixed site operations; provide a Joint Counter RCIED EW (CREW) development of equipment, procedures, and tactical aids to make rapid improvements to performance, supportability and affordability, while maintaining pace with evolving global threat.

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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 0603654N / <i>JT Service Explosive Ordn Dev</i>
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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	21.384	18.260	41.524	-	41.524
Current President's Budget	22.273	15.330	46.911	-	46.911
Total Adjustments	0.889	-2.930	5.387	-	5.387
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-2.931			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.990	0.000			
• SBIR/STTR Transfer	-0.101	0.000			
• Program Adjustments	0.000	0.000	10.044	-	10.044
• Rate/Misc Adjustments	0.000	0.001	-4.657	-	-4.657

Change Summary Explanation

Decrease in JT Service Explosive Ordnance Development by \$1.4 million as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

FY 2017 funding request includes \$10M for Joint Counter Radio-Controlled IED Electronic Warfare (CREW) due to PE 0604653N consolidation into PE 0603654N beginning in FY 2017. Other Rate/Misc Adjustments (MISC) (\$4.657K).

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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 0603654N / JT Service Explosive Ordn Dev				Project (Number/Name) 0377 / JT Service Expl Ord Disp System			
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
0377: JT Service Expl Ord Disp System	345.921	10.112	5.108	14.039	-	14.039	13.566	11.574	11.837	12.091	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides Explosive Ordnance Disposal personnel of all military services with the specialized equipment and tools required to support their mission of detection/location, identification, render-safe, recovery, field and laboratory evaluation, and disposal of unexploded ordnance (UXO) that is a threat to military operations, installations, personnel, or material. UXO includes foreign and domestic, both conventional and non-conventional, including Improvised Explosive Devices (IEDs). High Fidelity Weapons Mass Destruction performs detection and identification of hazardous material contained in devices using radiological and biological means. Advanced EOD Robot System (AEODRS) consists of multiple interoperable robot systems. The first class of robot and the architecture for the system will be developed first, then the other classes of robots will be developed.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: EOD DECISION SUPPORT SYSTEMS (DSS)	1.677	0.874	2.238	0.000	2.238
Articles:	-	-	-	-	-
FY 2015 Accomplishments: Continued improvements to the JEOD Decision Support System (DSS) based on prioritized user input, and provide Analysis of Alternatives for warfighter initiated improvements.					
FY 2016 Plans: Continue limited improvements to JEOD Decision Support System (DSS) based on user input, provide Analysis of Alternatives for warfighter initiated improvements and conduct procurement, testing and evaluation of potential commercial non-development items (CNDI) meeting EOD warfighter needs.					
FY 2017 Base Plans: Continue improvements to the JEOD Portal, Mobile Field Kit (MFK), and Common Control platform based on user input/prioritization, provide Analysis of Alternatives for warfighter initiated improvements and conduct procurements, testing and evaluation of potential commercial non-development items (CNDI) meeting EOD warfighters needs.					
FY 2017 OCO Plans: N/A					
Title: EOD ROBOTICS	7.435	4.234	10.437	0.000	10.437

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 0377 / JT Service Expl Ord Disp System

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"><i>Articles:</i></p> <p>FY 2015 Accomplishments: Expanded Advanced EOD Robotics Increment 1 architecture for use in Increments 2 & 3 resulting in prototype development and testing.</p> <p>FY 2016 Plans: Conduct development and test of Advanced EOD Robotics System Increments prototypes. Continue development of Advanced EOD Robotics System Increments 1 and 2.</p> <p>FY 2017 Base Plans: Conduct testing on Advanced EOD Robotics System (AEODRS) Increment One - dismounted operations, provided by Prime Systems Integrator (PSI) development contractor. Begin development of AEODRS Increment Two - tactical operations, with PSI development contractor."</p> <p>FY 2017 OCO Plans: N/A</p>	-	-	-	-	-
<p>Title: TCM AN/PLT-XXX SYSTEMS</p> <p align="right"><i>Articles:</i></p> <p>FY 2015 Accomplishments: Developed loadsets beyond current theater. Upgrade current theater loadsets to remain current with continually changing threats.</p> <p>FY 2016 Plans: N/A</p> <p>FY 2017 Base Plans: Development loadset upgrades for fielded EOD TCM systems to remain current with continually changing threats and develop loadsets beyond current theater, both CONUS/OCONUS to remain current with continual changing threats.</p> <p>FY 2017 OCO Plans: N/A</p>	1.000 -	0.000 -	1.364 -	0.000 -	1.364 -
Accomplishments/Planned Programs Subtotals	10.112	5.108	14.039	0.000	14.039

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 0377 / JT Service Expl Ord Disp System

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

Line Item	FY 2015	FY 2016	FY 2017	FY 2017	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Cost To	Total Cost
			Base	OCO	Total					Complete	
• OPN/5509: EOD Equipment (VN075)	0.000	10.905	5.955	-	5.955	0.000	9.050	9.360	5.669	0.000	58.822

Remarks

FY17 Procurement reductions per POM17.

D. Acquisition Strategy

Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new subprojects. The AOA addresses and emphasizes acquisition strategies of the most cost-effective solution over the subprojects' life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modification), non-developmental item (including modification), and lastly, developmental programs. Contracting for RDT&E, if required, is always competitive and when feasible, production options are included.

E. Performance Metrics

Processed 43 Joint Service EOD Decision Support System (DSS) change requests resulting in the release of 1,290 Mobile Field Kit and Publication Suite Software copies per quarter to the Joint Services including USN. Completed TCM, AN/PLT-5 loadset upgrade for EOD use in-theater based upon new IED/UXO threats seen during operations. Awarded and kicked off development efforts for the Advanced EOD Robotics System, Increment one, prime system integrator.

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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 0603654N / JT Service Explosive Ordn Dev					0377 / JT Service Expl Ord Disp System						
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
Primary Hardware Development	WR	EODTD : Indian Head, MD	149.897	5.684	Oct 2014	2.977	Nov 2015	9.746	Oct 2016	-		9.746	Continuing	Continuing	Continuing
Software Development	WR	EODTD : Indian Head, MD	27.934	1.528	Oct 2014	1.000	Oct 2015	2.000	Oct 2016	-		2.000	Continuing	Continuing	Continuing
ILS	WR	EODTD : Indian Head, MD	48.090	0.500	Oct 2014	0.450	Oct 2015	0.600	Oct 2016	-		0.600	Continuing	Continuing	Continuing
Subtotal			225.921	7.712		4.427		12.346		-		12.346	-	-	-
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
Program Management Support	C/CPFF	HARRIS : Herndon, VA	7.433	0.500	Oct 2014	0.081	Oct 2015	0.350	Nov 2016	-		0.350	Continuing	Continuing	Continuing
Subtotal			7.433	0.500		0.081		0.350		-		0.350	-	-	-
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
Developmental Test & Evaluation	WR	EODTD : Indian Head, MD	75.479	0.915	Oct 2014	0.450	Oct 2015	0.858	Nov 2016	-		0.858	Continuing	Continuing	Continuing
Operation Test & Evaluation	WR	EODTD : Indian Head, MD	10.983	0.500	Oct 2014	0.000	Oct 2015	0.085	Nov 2016	-		0.085	Continuing	Continuing	Continuing
Subtotal			86.462	1.415		0.450		0.943		-		0.943	-	-	-

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 0377 / JT Service Expl Ord Disp System

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0377				
Title: EOD DECISION SUPPORT SYSTEM	1	2015	4	2021
DSS Continous Improvement	1	2015	4	2021
Title: TCM, AN/PLT-XXX (CLASSIFIED III)	1	2015	4	2021
AN/PLT-XXX Continous Improvement	1	2015	4	2021
Title: EOD FUTURE RADIOGRAPHIC SYSTEM	1	2015	4	2015
Production	1	2015	4	2015
Increment I (TEST)	1	2015	1	2015
Title: JS EOD WMD	1	2015	4	2020
Procurement	1	2015	2	2015
Increment I (RESEARCH/TESTING)	1	2015	4	2020
Increment I (PROD READNESS MODEL)	1	2019	4	2020
Title: ADVANCED EOD ROBOT SYSTEM	1	2015	4	2020
Testing (#1)	1	2015	3	2016
Production Decision (INCREMENT #1)	4	2016	4	2016
Development (INCREMENT # 2 & 3)	1	2015	4	2021
Testing (INCREMENT # 2 & 3)	2	2016	3	2021
Production (INCREMENT 1, 2 & 3)	4	2016	4	2021
Continous Improvement (1,2,3)	1	2017	4	2021

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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 0603654N / JT Service Explosive Ordn Dev				Project (Number/Name) 1317 / EOD Diving System			
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
1317: EOD Diving System	103.452	2.049	2.200	5.467	-	5.467	5.102	4.486	4.584	4.683	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides for development of Diver Safety/Life Support Equipment, Advanced Diver Integrated Sensors and Advanced Firing Systems to support Navy Explosive Ordnance Disposal (EOD) underwater operations and Expeditionary MCM Company establishment by US Fleet Forces Command. The equipment must have inherently low acoustic and magnetic signatures in order to allow the EOD divers to safely approach, render-safe, recover, exploit, and dispose of underwater explosive threats to include sea mines, limpet mines, underwater improvised explosive devices, and unexploded ordnance.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: DIVER SAFETY & LIFE SUPPORT SYSTEMS	1.600	1.950	3.328	0.000	3.328
Articles:	-	-	-	-	-
<p>Description: Diver Safety & Life Support Systems: Develop diver safety tools to include more capable life support systems for EOD, and Mobile Diving & Salvage Units (MDSU) operations. Specific tools include but are not limited to Underwater Breathing Apparatus (UBA), specialized dive masks, heads-up displays, emergency life support systems and the ability to train divers and to evaluate Mine Countermeasures (MCM)/Explosive Ordnance Disposal (EOD) tools, tactics and procedures with regard to influence cleanliness against sea mines both at home and in controlled threat areas prior to commencing EOD operations.</p> <p>FY 2015 Accomplishments: Continued EOD UBA acquisition initiative and develop improvements to Mine Warfare EOD Training and Readiness Evaluation Systems (METRES) tool set.</p> <p>FY 2016 Plans: Enter engineering and manufacturing development phase in progressing towards a production decision. Continue development, testing and evaluation of METRES product improvements.</p> <p>FY 2017 Base Plans: Continue engineering and manufacturing development phase in progressing towards a production decision. Continue development, testing and evaluation of METRES product improvements. Increased ACAT efforts for</p>					

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 1317 / EOD Diving System				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
the next generation Underwater Breathing Apparatus with significant testing including production of the EDM rigs.						
FY 2017 OCO Plans: N/A						
Title: ADVANCED DIVER INTEGRATED SENSORS		0.399	0.200	1.949	0.000	1.949
		Articles: -	-	-	-	-
Description: Develop Advanced Diver Integrated Sensors equipment to enhance EOD and MDSU ability to detect, access, neutralize and gather intelligence on underwater targets of interest. Requirements include Diver Hull Inspection Navigation System (DHINS) and improvements to the Underwater Imaging System (UIS).						
FY 2015 Accomplishments: Entered into risk reduction phase for the development of the next generation Advanced Integrated Sensor System for EOD divers as a replacement of the UIS. Continued CIP integration with DHINS.						
FY 2016 Plans: Initiate acquisition program for the next generation Advanced Integrated Sensor System for Expeditionary MCM forces.						
FY 2017 Base Plans: Continue acquisition program for the next generation Advanced Integrated Sensor System for Expeditionary MCM forces. STRIDENT effort significantly increased with acquisition of an Advanced Development Model and conducting initial testing.						
FY 2017 OCO Plans: N/A						
Title: ADVANCED FIRING SYSTEM		0.050	0.050	0.190	0.000	0.190
		Articles: -	-	-	-	-
Description: Develops product improvements to existing systems for below and above water neutralization of underwater threats to support EOD and MDSU operations.						
FY 2015 Accomplishments:						

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 1317 / EOD Diving System

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Began fielding miniaturized AFCT to meet approved inventory objectives. Analyzed and developed alternatives for improvement to acoustic firing device (AFD) receivers. FY 2016 Plans: Complete testing, evaluation and fielding of AFCTs, and begin development and testing of product improvement to AFD receiver subsystems. FY 2017 Base Plans: Continue development and testing of product improvements to AFD receiver subsystems. FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	2.049	2.200	5.467	0.000	5.467

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• OPN/0977a: Underwater EOD Program (Cost Code UQ034)	1.000	1.000	1.730	-	1.730	3.960	4.050	11.500	5.520	0.000	53.505
• OPN/0977b: UW EOD (UQ036)	0.000	0.338	0.411	-	0.411	1.233	0.440	6.600	6.600	0.000	18.822

Remarks

D. Acquisition Strategy
Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new sub-projects. The AOA addresses and emphasizes acquisition strategies of the most cost-effective solution over the sub-projects life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modification), non-developmental item (including modification), and lastly, developmental programs. Contracting for RDT&E, if required, is always competitive and when feasible, production options are included.

E. Performance Metrics
Research and Develop technologies for the design of Diver Safety Systems, Advanced Diver Integrated Sensors and Advanced Underwater Firing Systems used to render safe, recover, exploit, and dispose of sea limpet mines and unexploded ordnance.

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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 0603654N / JT Service Explosive Ordn Dev					1317 / EOD Diving System						
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
Primary Hardware Development	WR	EODTECHDIV : IH, MD	41.266	0.470	Oct 2014	0.367	Oct 2015	0.995	Oct 2016	-		0.995	Continuing	Continuing	Continuing
Software Development	WR	EODTECHDIV : IH MD	4.517	0.250	Oct 2014	0.389	Oct 2015	1.439	Oct 2016	-		1.439	Continuing	Continuing	Continuing
Systems Engineering	WR	EODTECHDIV : IH MD	8.228	0.000		0.000		0.000		-		0.000	0.000	8.228	-
ILS	WR	EODTECHDIV : IH MD	11.916	0.000		0.000		0.000		-		0.000	0.000	11.916	-
Systems Engineering	WR	NSWC : Panama City	1.728	0.200	Oct 2014	0.300	Oct 2015	0.617	Oct 2016	-		0.617	Continuing	Continuing	Continuing
Systems Engineering	WR	SPAWAR : San Diego	3.262	0.192	Oct 2014	0.180	Oct 2015	0.376	Oct 2016	-		0.376	Continuing	Continuing	Continuing
Subtotal			70.917	1.112		1.236		3.427		-		3.427	-	-	-
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
Program Management Support1	C/CPFF	HARRIS : Herndon VA	3.537	0.000		0.000		0.000		-		0.000	0.000	3.537	-
Program Management Support2	C/CPFF	HARRIS : Herndon VA	3.371	0.250	Oct 2014	0.250	Nov 2015	0.530	Oct 2016	-		0.530	Continuing	Continuing	Continuing
Integrated Logistics Support	WR	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Configuration Management	WR	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Technical Data	WR	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
GFE	WR	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Award Fees	WR	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-

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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 0603654N / JT Service Explosive Ordn Dev				1317 / EOD Diving System								
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	
Subtotal			6.908	0.250		0.250		0.530		-		0.530	-	-	-	
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	
Development Test & Evaluation	WR	EODTECHDIV : IH MD	7.486	0.356	Oct 2014	0.338	Oct 2015	0.719	Oct 2016	-		0.719	Continuing	Continuing	Continuing	
Operational Test & Evaluation	WR	EODTECHDIV : IH MD	1.560	0.000		0.000		0.000		-		0.000	0.000	1.560	-	
Subtotal			9.046	0.356		0.338		0.719		-		0.719	-	-	-	
Management Services (\$ 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	
Program Management Support	WR	EODTECHDIV : IH MD	9.625	0.331	Oct 2014	0.328	Nov 2015	0.769	Oct 2016	-		0.769	0.000	11.053	-	
Miscellaneous	WR	NSWC, Activities : Not Specified	6.943	0.000	Oct 2014	0.048	Nov 2015	0.022	Oct 2016	-		0.022	0.000	7.013	-	
Acquisition Workforce Fund	Various	Various : Various	0.013	0.000		0.000		0.000		-		0.000	0.000	0.013	-	
Subtotal			16.581	0.331		0.376		0.791		-		0.791	0.000	18.079	-	
Project Cost Totals			103.452	2.049		2.200		5.467		-		5.467	-	-	-	
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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 1317 / EOD Diving System

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Advanced Firing Systems																												
Systems Integration/Testing (Continue)																												
Production Decision/ECP Approval 1/2																												
Production/Fleet Retrofit 1																												
Production/Fleet Retrofit 2																												
System Integration/Test																												
Production Decision/ECP 3																												
Diver Safety & Life Support																												
Systems Integration/Testing																												
Systems Integration/Testing (Continue)																												
Production Decision/ECP Approval 1																												
Production Decision/ECP Approval 2																												
Production Decision/ECP Approval 3																												
Production/Fleet Retrofit (1,2,3)																												
System Integration																												
Advanced Diver Integrated Sensors																												
Production Decision/ECP Approval 1																												
Production/Fleet Retrofit 1																												
Production Decision/ECP Approval 2																												
Production/Fleet Retrofit 2																												
Development																												
Testing																												
Production Decision																												
Production																												

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 1317 / EOD Diving System

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 1317				
Title: ADVANCED FIRING SYSTEMS	1	2015	4	2021
Production/Fleet Retrofit 1	1	2015	2	2015
Production/Fleet Retrofit 2	3	2015	2	2018
System Integration/Testing	2	2018	1	2021
Production Decision/ECP 3	2	2021	2	2021
Title: DIVER SAFETY & LIFE SUPPORT	1	2015	4	2021
System Integration/Testing (Continue)	1	2015	4	2018
"Production Decision/ECP Approval 2"	4	2015	4	2015
Production Decision/ECP Approval 3	2	2018	2	2018
Production/Fleet Retrofit (2,3)	1	2015	2	2021
System Integration	2	2020	4	2021
Title: ADVANCED DIVER INTEGRATED SENSORS	1	2015	4	2021
Production/Fleet Retrofit 1	1	2015	4	2015
Production Decision/ECP Approval 2	3	2017	3	2017
Production/Fleet Retrofit 2	3	2017	4	2018
Development	1	2015	3	2017
Testing	2	2017	3	2018
Production Decision- 3	3	2018	3	2018
Production - 3	4	2018	4	2021

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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 0603654N / JT Service Explosive Ordn Dev			Project (Number/Name) 3177 / Joint Counter Radio-Controlled IED Elec Warfare				
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
3177: Joint Counter Radio-Controlled IED Elec Warfare	0.000	0.000	0.000	9.845	-	9.845	11.886	11.796	10.708	11.017	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides for the research and development of Electronic Warfare (EW) systems, equipment, procedures, and tactical aids for all military services against the threat posed by Radio-Controlled Improvised Explosive Devices (RCIEDs) and to prevent initiation of RCIEDs across the spectrum of Joint military operations. Utilize Joint requirements to provide a system of systems approach for a suite of equipment for mounted, dismounted, and fixed site operations; provide a Joint Counter RCIED EW (CREW) development of equipment, procedures, and tactical aids to make rapid improvements to performance, supportability and affordability, while maintaining pace with evolving global threat.

The JCREW system, Increment 1 Block 1 (I1B1) is the next generation of counter RCIED systems. This family of systems includes fixed site, mounted and dismounted units, which provide countermeasures against the global RCIED threat. Key system design features include significant performance increases over current legacy systems, a modular open architecture system to address current and future advanced threats, robust information assurance and security, and is net-capable for improved Communications and Control (C2). JCREW I1B1 supports global deployment and sustainment for all combatant commands providing increased protection to Warfighter against the evolving worldwide RCIED threats.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Joint Counter Radio-Controlled IED Elec Warfare	0.000	0.000	9.845	0.000	9.845
Articles:	-	-	-	-	-
Description: Supports the design, integration and test of Tech Insertion hardware, software, and advanced techniques into JCREW systems. Tech Insertion candidates include ONR sponsored technologies ready for transition to JCREW, and techniques, hardware and software performance improvements developed by Navy laboratories, FFRDs, UARCs, and the JCREW Prime contractor. Analysis of Alternatives will be conducted to evaluate and select Tech Insertion candidates based on technical maturity, cost, and performance. Hardware and software updates will be designed, tested, and implemented into JCREW through Engineering Change Proposals.					
FY 2015 Accomplishments: N/A					
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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 3177 / Joint Counter Radio-Controlled IED Elec Warfare

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
FY 2017 Base Plans: Develop and test advanced techniques to maintain JCREW performance against evolving global RCIEDs. Execute Engineering Change Proposal to design, and fabricate hardware and software changes for Tech Insertion I.					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	9.845	0.000	9.845

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/5509: Explosive Ordnance Disposal Equip	0.000	0.000	0.774	99.329	100.103	0.806	0.925	0.928	0.941	0.000	103.703

Remarks
PE 0604653N/JT Cntr Radio Controlled IED Elec War (JCREW) consolidated into PE 0603654N/JT Service Explosive Ordn Dev FY17 and out.

D. Acquisition Strategy

FRP Production Line Start Up and Ramp Up and FRP Organic Depot Line Startup and Ramp Up in FY 2017. Spares support and OEM Depot will be utilized during LRIP phase. Establishment of Organic Depot capability during LRIP phase in support of FRP Decision Review with Weapons System Support Center Mechanicsburg as Primary Inventory Control Activity (PICA). Full Rate Production contract will be full and open competition using LRIP final Tech Data Package (TDP) with unlimited data rights. Tech Insertion will help to maintain JCREW performance against evolving global RCIED threats.

E. Performance Metrics

LRIP contract awarded September 2015. Deliveries will support IOC. Analysis of Alternatives for Tech Insertion 1 in September 2015. Request for Proposal (RFP) for Full Rate Production will release the 1st quarter of FY17.

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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 0603654N / JT Service Explosive Ordn Dev				3177 / Joint Counter Radio-Controlled IED Elec Warfare								
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	
Primary Hardware Development	Various	TBD : TBD	0.000	0.000		0.000		1.929	Nov 2016	-		1.929	Continuing	Continuing	Continuing	
Systems Engineering	Various	TBD : TBD	0.000	0.000		0.000		0.964	Nov 2016	-		0.964	Continuing	Continuing	Continuing	
Software Development	Various	TBD : TBD	0.000	0.000		0.000		0.964	Nov 2016	-		0.964	Continuing	Continuing	Continuing	
System Integration	Various	TBD : TBD	0.000	0.000		0.000		0.964	Nov 2016	-		0.964	Continuing	Continuing	Continuing	
Subtotal			0.000	0.000		0.000		4.821		-		4.821	-	-	-	
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	
Loadset Development	FFRDC	JHU/APL, MITRE: : Laurel, MD	0.000	0.000		0.000		0.442	Nov 2016	-		0.442	Continuing	Continuing	Continuing	
Systems Engineering	WR	NSWC: : Various	0.000	0.000		0.000		1.436	Nov 2016	-		1.436	Continuing	Continuing	Continuing	
Program Management Support	WR	IHEODTD: : Indian Head, MD	0.000	0.000		0.000		0.331	Nov 2016	-		0.331	Continuing	Continuing	Continuing	
Subtotal			0.000	0.000		0.000		2.209		-		2.209	-	-	-	
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	
Test & Evaluation	WR	NSWC : Various	0.000	0.000		0.000		1.208	Nov 2016	-		1.208	Continuing	Continuing	Continuing	
Test & Evaluation	MIPR	YPG : Yuma, Arizona	0.000	0.000		0.000		0.600	Nov 2016	-		0.600	Continuing	Continuing	Continuing	
Subtotal			0.000	0.000		0.000		1.808		-		1.808	-	-	-	

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 3177 / Joint Counter Radio-Controlled IED Elec Warfare

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
JCRE W I1B1																												
LRIP Production									█	█	█	█																
Full Rate Production											█	█	█	█	█	█												
Tech Insertion I																												
Tech Refresh Development									█	█	█	█																
Tech Refresh Implementation and Test												▲																
Tech Insertion II																												
Tech Refresh Analysis of Alternatives											█	█	█	█	█	█												
Tech Refresh Development													█	█	█	█												
Tech Refresh Implementation and Test																				▲								
Tech Insertion II																												
Tech Refresh Analysis of Alternatives																	█	█	█	█								
Tech Refresh Development																					█	█	█	█				
Tech Refresh Implementation and Test																									█	█	█	█

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 3177 / Joint Counter Radio-Controlled IED Elec Warfare

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3177				
LRIP Production	1	2017	4	2017
Full Rate Production	3	2017	1	2019
TECH INSERTION 1	1	2017	4	2017
Tech Refresh Development (1)	1	2017	3	2017
Tech Refresh Implementation and Test (1)	4	2017	4	2017
TECH INSERTION 2	4	2017	3	2019
Tech Refresh Analysis of Alternatives (2)	4	2017	2	2018
Tech Refresh Development (2)	3	2018	2	2019
Tech Refresh Implementation and Test (2)	3	2019	3	2019
TECH INSERTION 3	3	2019	2	2021
Tech Refresh Analysis of Alternatives (3)	3	2019	1	2020
Tech Refresh Development (3)	2	2020	1	2021
Tech Refresh Implementation and Test (3)	2	2021	2	2021

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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 0603654N / JT Service Explosive Ordn Dev				Project (Number/Name) 4023 / VSW MCM/Force Protection UUV			
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
4023: VSW MCM/Force Protection UUV	92.661	10.112	8.022	17.560	-	17.560	19.070	17.428	17.848	18.234	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides for development of affordable expeditionary, unmanned underwater systems to support Navy Expeditionary forces including Explosive Ordnance (EOD). Mobile Diving and Salvage Units, and Shallow Water (SW), Very Shallow Water (VSW) and Underwater Mine Countermeasures (UMCM) mission operations. The equipment must be highly portable in order to support the Navy EOD technician to safely approach, render safe, recover, exploit and dispose of underwater explosive threats to include sea mines, limpet mines and unexploded ordnance. Provides support for the Navy's high priority missions of Maritime Homeland Defense, MCM, including clandestine reconnaissance and mine clearance in support of amphibious operations. Development of Expeditionary UUV systems to support localization render-safe and detailed intelligence gathering of UXO including Underwater Improvised Explosive Devices. This project supports CNO N957 MCM UUV Roadmap.

FY 2017 will focus on developing, testing and ultimately fielding advanced sensors that will allow warfighters to detect, classify and localize high priority threats in meeting mine warfare missions. Also, resources will be used to expand deployability of the MK 18 Family of Systems abroad a higher number of shipboard platforms and also to deploy the family of systems from additional small boats other than the 11m RHIB. The Increment 1 MK 18 Mod 2 upgrade will allow implementation of Automated Target Recognition (ATR), advanced autonomy architecture and enhanced electro-optic sensor performance

FY 2017 will also support the initiation of the next increment of the MK 18 Mod 2 which will enable mine identification and marking, this enhancement will reduce the MCM tactical timeline. Also, the MK 18 Mod 1 systems will be re-configured with ATR and advanced autonomy architecture to reduce the MCM tactical timeline. These efforts will improve the projected inventory of 36 MK 18 Mod 2 vehicles and 63 MK 18 Mod 1 vehicles for fleet expeditionary forces. Currently, the MK 18 Family of Systems are being employed in multiple theater of operations and for CONUS based missions as well.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: VSW MCM/Force Protection UUV	10.112	8.022	17.560	0.000	17.560
Articles:	-	-	-	-	-
Description: This program supports development, testing and Fleet approval for evolving generations of affordable, expeditionary Unmanned Underwater Vehicles (UUV), support equipment, and Common Operator Interface Navy (COIN) systems to address validated requirements in support of Expeditionary SW and VSW UMCM mission areas. Mission areas include: open and confined areas, hulls, piers and pilings to search, classify, map, re-acquire, identify, and neutralize sea and limpet mines and underwater improvised explosive devices.					

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 4023 / VSW MCM/Force Protection UUV

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p><i>FY 2015 Accomplishments:</i> Continued to develop, test and evaluate mature technology solutions to support integration into block upgrades via ECP retrofits to fielded MK 18 MOD 1 UUV and HULS, Developed and executed MK 18 MOD 2 UUV systems capability increments, and Neutralization systems. Planned and executed structured UOES and requirements compliance testing and evaluation associated with program execution (RDT&E) to evaluate effectiveness, supportability and suitability of prototype block upgrade retrofit kits.</p> <p><i>FY 2016 Plans:</i> Continue testing evaluation, fielding and installation of MK 18 MOD 1 and MOD 2 UUV Systems to meet US Fleet Forces Command inventory objectives in support of the Expeditionary MCM Company capability establishment. Continue testing and evaluation of MK 18 UUV family of systems (FoS) capability increments and HULS ECP product improvements. Initiate acquisition of Expeditionary UUV Neutralization System (EUNS) program to develop standoff explosives threat object investigation, assessment, neutralization and battle damage assessment capabilities.</p> <p><i>FY 2017 Base Plans:</i> Continue testing evaluation, fielding and installation of MK 18 MOD 1 and MOD 2 UUV Systems to meet US Fleet Forces Command inventory objectives in support of the Expeditionary MCM Company capability establishment. Continue testing and evaluation of MK 18 UUV family of systems (FoS) capability increments and HULS ECP product improvements. Continue acquisition of Expeditionary UUV Neutralization System (EUNS) program to develop standoff explosives threat object investigation, assessment, neutralization and battle damage assessment capabilities. Initiation of next generation Expeditionary UUV assessment for MCM with advanced sensor products for operations in complex undersea environments.</p> <p><i>FY 2017 OCO Plans:</i> N/A</p>					
Accomplishments/Planned Programs Subtotals	10.112	8.022	17.560	0.000	17.560

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 4023 / VSW MCM/Force Protection UUV

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

Line Item	FY 2015	FY 2016	FY 2017	FY 2017	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Cost To	Total Cost
			Base	OCO	Total					Complete	
• OPN/0977: Underwater EOD Program (Cost Code UQ034)	41.362	33.706	11.810	-	11.810	37.867	27.818	13.782	21.355	0.000	232.320

Remarks

D. Acquisition Strategy

Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new sub-projects. The AOA addresses and emphasizes acquisitions strategies of the most cost-effective solution over the sub-projects' life -cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modifications), non-developmental item (including modifications), and lastly, developmental programs. Contracting for RDT&E, if required is always competitive and when feasible, production options are included.

This ongoing program capitalizes on a User Operational Evaluation System (UOES) effort involving Fleet operators engaged in tactical experimentation with prototype UUVs prior to fielding baseline systems and capability improvement package increments. These UUV operators also participate in detailed requirements analyses and definition. Operational capabilities with UUV have been realized at designated operational units, with a competitive acquisition strategy. The addition of enhanced capabilities through an evolutionary acquisition approach to the UUV toolbox is programmed for delivery in accordance with approved CNO requirements and ONR TTAs. Further improvements to the toolbox to add basic mine and underwater explosive threats neutralization capabilities will be pursued.

E. Performance Metrics

Research and Develop technologies for the design of Unmanned Underwater Systems to provide enhanced fleet capabilities to locate, classify, identify, assess, neutralize and conduct post-neutralization battle damage assessment/verification of mines and unexploded ordnance.

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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 0603654N / JT Service Explosive Ordn Dev				4023 / VSW MCM/Force Protection UUV								
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	
Primary Hardware Development	WR	Multiple Activities : Not Specified	15.986	2.196	Oct 2014	1.692	Oct 2015	3.382	Oct 2016	-		3.382	0.000	23.256	-	
Systems Engineering	WR	NSWC, Activities : Not Specified	10.097	1.915	Oct 2014	1.602	Oct 2015	3.159	Oct 2016	-		3.159	0.000	16.773	-	
Primary Hardware Development	WR	EODTECHDIV : IH, MD	16.238	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing	
Systems Engineering	WR	EODTECHDIV : IH, MD	18.037	2.139	Oct 2014	1.715	Oct 2015	3.458	Oct 2016	-		3.458	Continuing	Continuing	Continuing	
Subtotal			60.358	6.250		5.009		9.999		-		9.999	-	-	-	
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	
Technical Support	C/CPFF	HARRIS : Herndon, VA	5.028	0.355	Oct 2014	0.315	Oct 2015	0.586	Oct 2016	-		0.586	Continuing	Continuing	Continuing	
Subtotal			5.028	0.355		0.315		0.586		-		0.586	-	-	-	
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	
Developmental Test & Evaluation	WR	Multiple Activities : Not Specified	10.143	1.900	Oct 2014	1.409	Oct 2015	3.519	Oct 2016	-		3.519	0.000	16.971	-	
Operational Test & Evaluation	WR	NSWC, Activities : Not Specified	1.848	0.644	Oct 2014	0.639	Oct 2015	1.642	Oct 2016	-		1.642	0.000	4.773	-	
Developmental Test & Evaluation	WR	EODTECHDIV : IH, MD	8.063	0.556	Oct 2014	0.436	Oct 2015	1.151	Oct 2016	-		1.151	Continuing	Continuing	Continuing	
Operational Test & Evaluation	WR	EODTECHDIV : IH, MD	1.424	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing	
Subtotal			21.478	3.100		2.484		6.312		-		6.312	-	-	-	

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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 0603654N / JT Service Explosive Ordn Dev	Project (Number/Name) 4023 / VSW MCM/Force Protection UUV

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 4023				
3RD GENERATION (NEUTRALIZATION)	1	2015	4	2021
Development	1	2015	2	2019
Testing Final 1	3	2017	2	2020
Production Decision (Limited) 1	2	2020	2	2020
Title: 4th GENERATION (SEARCH-CLASSIFY & ID)	1	2015	4	2021
Systems Integration/Testing (1,2,and 3)	1	2015	4	2020
Production/Retrofit Decision 2	3	2015	3	2015
Production/Retrofit Decision 3	3	2017	3	2017
Production Retrofit Decision 4	2	2018	2	2018
Production/Fleet Retrofit (1,2,and 3)	1	2015	1	2021
5th GENERATION (SEARCH, CLASSIFY & ID, IN COMPLEX MCM ENVIRONMENTS)	1	2015	4	2021
Systems Integration/Testing (1,2,3)	1	2015	4	2021
Production Retrofit/Decision 1	2	2016	2	2016
Production Retrofit/Decision 2	2	2019	2	2019
Production Retrofit/Decision 3	3	2020	3	2020
Production/Fleet Retrofit (1 and 2)	1	2015	4	2021
Title: HULS	1	2015	4	2020
User Operational Eval System (UOES)	1	2015	4	2018
ECP/Fleet Retrofits - 1	1	2015	4	2016
Preliminary Engineering Change Proposal (PECP) - 2	1	2015	4	2016
Retrofit Production Decision 2	1	2017	1	2017

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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 0603654N / <i>JT Service Explosive Ordn Dev</i>	Project (Number/Name) 4023 / <i>VSW MCM/Force Protection UUV</i>

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ECP/Fleet Retrofits - 2	1	2017	4	2018
PECP - 3	1	2019	4	2020
Production Retrofit Decision 3	2	2021	2	2021
ECP/Fleet Retrofit 3	3	2021	4	2021