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**Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			PE 0205601N: <i>Harm Improvement</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	35.030	14.207	11.147	-	11.147	8.433	9.054	7.287	7.399	Continuing	Continuing
1780: <i>HARM Improvement</i>	1.860	1.555	1.412	-	1.412	1.416	1.446	1.495	1.517	Continuing	Continuing
2185: <i>AARGM</i>	14.490	7.793	6.684	-	6.684	7.017	7.608	5.792	5.882	Continuing	Continuing
3056: <i>Advanced Precision Kill Weapons System</i>	8.797	-	3.051	-	3.051	-	-	-	-	0.000	11.848
3212: <i>MEDUSA JCTD</i>	9.883	4.859	-	-	-	-	-	-	-	0.000	14.742

**A. Mission Description and Budget Item Justification**

Research, Development, Test and Evaluation funding for the Joint Service Pre-Planned Product Improvement program which will include near and far term performance improvements, cost reduction, and studies that establish future development requirements. Specific initial efforts include lower cost seeker component development and seeker aided fuzing to enhance warhead performance in low angle impacts and against certain ship targets. This excludes civilian and military manpower and their related costs and military construction costs which will be included in appropriate management and support elements.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	29.920	14.207	8.869	-	8.869
Current President's Budget	35.030	14.207	11.147	-	11.147
Total Adjustments	5.110	-	2.278	-	2.278
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	5.552	-			
• SBIR/STTR Transfer	-0.015	-			
• Program Adjustments	-	-	2.590	-	2.590
• Section 219 Reprogramming	-0.427	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.312	-	-0.312

**Change Summary Explanation**

Technical: Not applicable.

Schedule:

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	
<p>Advanced Anti-Radiation Guided Missile - Entered Operational Test C in 3Q FY 2010. In 4Q FY 2010, AARGM was decertified as a result of intermittent hardware and software failures. Failures have been corrected via updated software and the system is currently in Integrated Test and Evaluation (IT&amp;E). Operational Test C is scheduled to resume 3Q FY 2011. Delay will impact Initial Operational Capability (IOC) and Full Rate Production (FRP) dates. IOC slipped from 1Q FY 2011 to 3Q FY 2011, LRIP 2 deliveries moved from 2Q FY 2011 to 3Q FY 2011. FRP decision slipped from 2Q FY 2011 to 2Q FY 2012. FRP Lot 1 contract award slipped from 2Q FY 2011 to 3Q FY 2012. FRP Lot 2 contract award slipped from 1Q FY 2012 to 3Q FY 2013 and Full Operational Capability has slipped from 2Q FY 2013 to 4Q FY 2013 as result of FRP decision being delayed.</p> <p>Advanced Precision Kill Weapons Systems - Milestone C slid from 2Q FY 2010 to 3Q FY 2010 due to unanticipated Wing Slot Seal issues which caused a delay in the completion of Developmental Testing (DT) and Operational Assessment (OA) testing. As a result in DT and OA testing delays, Low Rate Initial Production deliveries have slid from 2Q FY 2010 to 2Q FY 2011. Initial Operational Test and Evaluation (IOT&amp;E) slid from 2Q FY 2011 to 3Q FY 2011. Initial Operating Capability (IOC) slid from 2Q FY 2011 to 3Q FY 2011. FRP deliveries slid from 2Q FY 2012 to 2Q FY 2013.</p> <p>Medusa - Performance Specifications and Capability Development Document (CDD) slid from 1Q FY11 to 4Q FY 2011 due to a delay in the Low Cost Imaging Terminal Seeker - Future Naval Capability final test event. Technical information from the final test event is needed for Performance Specifications and CDD development. Due to delay in program, the Military Utility Assessment has been delayed indefinitely.</p>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 1780: <i>HARM Improvement</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
1780: <i>HARM Improvement</i>	1.860	1.555	1.412	-	1.412	1.416	1.446	1.495	1.517	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

HIGH-SPEED ANTI-RADIATION MISSILE (HARM) IMPROVEMENT: HARM is a joint service program with the Air Force (Navy lead). The program commenced production in FY 1983. Program element 0205601N was used until FY 1990 to develop and test one hardware and two software upgrades to the HARM (AGM-88B, Block III & AGM-88C, Block IV) as Engineering Change Proposals (ECPs). Another ECP software program (Block IIIA&V) was developed (FY 1996 through FY 1999) to modify HARM software in order to meet operational requirements. HARM Block IIIA/V software was distributed to the Fleet in FY 2000. The Block V tactical software upgrade gives HARM improved geographic specificity and improved capability against advanced waveforms. HARM Block VA is currently in test and is projected to be distributed to the fleet in FY11.

HARM Improvement includes efforts to conduct Foreign Military Assessment (FMA) analysis and engineering to exploit vulnerabilities of foreign anti-radar threats. HARM Improvement includes funding for threat assessment, operational updates and integration efforts.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Title:</b> HARM (FMA)	1.860	1.555	1.412	-	1.412
<b>Articles:</b>	0	0	0		0
<b>FY 2010 Accomplishments:</b> Continued to conduct FMA analysis and engineering to exploit vulnerabilities of foreign anti-radar threats. HARM Improvement included funding for threat assessment, operational updates and integration efforts.					
<b>FY 2011 Plans:</b> Continue to conduct FMA analysis and engineering to exploit vulnerabilities of foreign anti-radar threats. HARM Improvement includes funding for threat assessment, operational updates and integration efforts.					
<b>FY 2012 Base Plans:</b> Continue to conduct FMA analysis and engineering to exploit vulnerabilities of foreign anti-radar threats. HARM Improvement includes funding for threat assessment, operational updates and integration efforts.					
<b>Accomplishments/Planned Programs Subtotals</b>	1.860	1.555	1.412	-	1.412

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 1780: <i>HARM Improvement</i>

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

N/A

**D. Acquisition Strategy**

HARM Missile software updates are provided through the Software Support Activity at Naval Air Warfare Center - Weapons Division (NAWC-WD), China Lake, CA.

**E. Performance Metrics**

Successfully completed Developmental Test/Operational Test.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 1780: <i>HARM Improvement</i>
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<b>Product Development (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-WD:China Lake, CA	-	0.216	Nov 2010	1.211	Nov 2011	-		1.211	Continuing	Continuing	Continuing
<b>Subtotal</b>			-	0.216		1.211		-		1.211			

<b>Test and Evaluation (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Eval	WR	NAWC-WD:China Lake, CA	17.115	1.329	Nov 2010	0.192	Nov 2011	-		0.192	Continuing	Continuing	Continuing
<b>Subtotal</b>			17.115	1.329		0.192		-		0.192			

<b>Management Services (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	Various:Various	0.403	0.010	Nov 2010	0.009	Nov 2011	-		0.009	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.403	0.010		0.009		-		0.009			

**Remarks**  
Contract Type for Travel is TO

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		17.518	1.555	1.412	-	1.412		

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 1780: <i>HARM Improvement</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 1780: <i>HARM Improvement</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>HARM IMPROVEMENT</b>				
Acquisition Milestones: Radar System Evaluation: Radar System Evaluation - Foreign Military Assessment	1	2010	4	2016

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2185: <i>AARGM</i>	14.490	7.793	6.684	-	6.684	7.017	7.608	5.792	5.882	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The AGM-88E Advanced Anti-Radiation Guided Missile (AARGM) Project transitioned a Phase III Small Business Innovative Research (SBIR) program to develop and demonstrate a multi-mode guidance section on a HARM airframe to System Development and Demonstration (SD&D) in FY 2003. The AARGM SD&D program is designed to integrate multi-mode guidance (passive Anti-Radiation Homing (ARH)/active Millimeter Wave (MMW) Radar/Global Positioning System (GPS)/Inertial Navigation System on the HARM AGM-88 missile. AARGM weapon system capabilities include: active MMW terminal guidance, counter shutdown, expanded threat coverage, enhanced ARH, netted targeting real-time feed via Integrated Broadcast Service (IBS) prior to missile launch, weapon impact assessment transmitted prior to detonation, GPS/point-to-point weapon navigation, and weapon employment with impact avoidance zone/missile impact zones.

In June 2003, a successful Milestone B transitioned AARGM to a SD&D Acquisition Category 1C program. ATK Missile Systems Company was awarded the AARGM SD&D contract valued at \$222.6M. In May 2004, the contract baseline was increased to \$231.9M to accelerate incorporation of an embedded IBS-Receiver, enabling the warfighter to directly receive National intelligence data, providing additional AARGM targeting data to increase overall pilot situational awareness. Recent modifications have increased the current baseline to \$232.3. The AARGM program includes 31 test articles and 1,871 production modification kits.

DT-B1 began in FY 2004 and continued through 4Q FY 2008. Captive carry testing of Engineering Manufacturing Development hardware began in FY 2007. DT-B1 overlapped with DT-B2 which began in 3Q FY 2007. Operational Assessment was completed 4Q FY 2008. Milestone C was achieved 4Q FY 2008, followed by a combined Low Rate Initial Production (LRIP) contract award in 1Q FY 2009. All live fire tests were completed in 4Q FY 2009 for DT-B2. Program began Initial Operational Test and Evaluation in 3Q FY 2010. In 4Q FY 2010 AARGM was decertified as a result of intermittent hardware and software failures. Failures have been corrected via updated software and system is currently in Integrated Test and Evaluation (IT&E). Operational Test C is scheduled to resume in 3Q FY 2011. LRIP II deliveries will begin in 3Q FY 2011. FRP Lot 1 contract award moved from 2Q FY 2011 to 3Q FY 2011 and as a result, FRP Lot 1 deliveries moved from 2Q FY 2012 to 3Q FY 2012. LRIP III is planned for 3Q FY 2011, with deliveries in 3Q FY 2012. FRP decision moved to 2Q FY 2012 and as a result, FRP Lot 1 contract award slipped to 3Q FY 2012.

In FY 2010-FY 2016, the AGM-88E AARGM program plans to develop and demonstrate the capability to engage and destroy non-traditional Suppression of Enemy Air Defenses (SEAD)/Destruction of Enemy Air Defenses (DEAD) and Overseas Contingency Operations (OCO) targets. These developments continue Future Naval Capability Science and Technology investments by the Office of Naval Research initiated in FY 2006.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Title:</b> AARGM SD&D	8.879	-	-	-	-
<b>Articles:</b>	0				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy			<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
<b><i>FY 2010 Accomplishments:</i></b> OPEVAL commenced 3Q FY 2010. Began Follow-on Test and Evaluation.						
<b><i>Title:</i></b> Threat Data Library						
	<b><i>Articles:</i></b>	2.471 0	3.453 0	2.887 0	-	2.887 0
<b><i>FY 2010 Accomplishments:</i></b> Updated Electronic Intelligence (ELINT) files and MMW signatures to identify track and engage new and/or improved threat radars. Began testing and assessment of threat systems. Began update of AARGM threat data library.						
<b><i>FY 2011 Plans:</i></b> Continue to update ELINT files and MMW signatures to identify track and engage new and/or improved threat radars. Continue test and assessment of threat systems. Continue to update AARGM threat data library.						
<b><i>FY 2012 Base Plans:</i></b> Continue to update ELINT files and MMW signatures to identify track and engage new and/or improved threat radars. Continue test and assessment of threat systems. Continue to update AARGM threat data library.						
<b><i>Title:</i></b> AARGM Derivative Program						
	<b><i>Articles:</i></b>	0.550 0	4.340 0	3.797 0	-	3.797 0
<b><i>FY 2010 Accomplishments:</i></b> Began development of capability to attack non-traditional SEAD/DEAD and OCO targets will continue through the Future Years Defense Plan.						
<b><i>FY 2011 Plans:</i></b> Continue to develop the capability to attack non-traditional SEAD/DEAD and OCO targets.						
<b><i>FY 2012 Base Plans:</i></b> Continue to develop capability to attack non-traditional SEAD/DEAD and OCO targets						
<b><i>Title:</i></b> ARM JMPS UPC Software						
	<b><i>Articles:</i></b>	2.590 0	-	-	-	-
<b><i>FY 2010 Accomplishments:</i></b>						

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Updated Unique Planning Component (UPC) software leading to testing to maintain Advanced Radiation Missile (ARM) Joint Mission Planning System (JMPS) UPC compatibility with future JMPS architecture.					
<b>Accomplishments/Planned Programs Subtotals</b>	14.490	7.793	6.684	-	6.684

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

<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• WPN 2327: <i>HARM Mods</i>	47.825	53.543	73.061	0.000	73.061	88.939	131.949	136.079	158.321	515.623	1,268.697
• RDTEN 3063: <i>0604269N EA-18G Development</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.200

**D. Acquisition Strategy**

The AARGM program started as a Phase I SBIR, Advanced Technology Program, evolved into a Phase III SBIR program, and transitioned into a SD&D ACAT 1C program in June 2003. The AARGM SD&D fulfills U.S. Navy operational requirements and incorporates AARGM Advanced Technology Development and Quick Bolt Advanced Concept Technology Demonstration- demonstrated system requirements. Government responsibilities for SD&D have included monitoring, technical assessment, and validation of contractor technology development and testing. Milestone C was achieved 4Q FY 2008, followed by a combined LRIP contract award in 1Q FY 2009. LRIP 1 deliveries commenced 3Q FY 2010.

**E. Performance Metrics**

Achieved Milestone C in 2008. Completed Developmental Testing in 2009. Successfully completed Operational Test Readiness Review in 2010. Successfully complete Operational Test in 2011.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>
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<b>Product Development (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSMA:Arlington, VA	1.634	1.576	Nov 2010	0.916	Nov 2011	-		0.916	9.416	13.542	
Systems Engineering	WR	NAWC-WD:China Lake, CA	58.725	5.162	Nov 2010	4.690	Nov 2011	-		4.690	16.633	85.210	
PY Product Development	Various	Various:Various	464.611	-		-		-		-	0.000	464.611	
<b>Subtotal</b>			524.970	6.738		5.606		-		5.606	26.049	563.363	

**Remarks**  
Difference between Total cost and Target Value of Contract represents contract variance to date.

<b>Support (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies and Analyses	Various	Various:Various	0.761	0.050	Nov 2010	-		-		-	0.010	0.821	
Prior Years Support	Various	Various:Various	6.884	-		-		-		-	0.000	6.884	
<b>Subtotal</b>			7.645	0.050		-		-		-	0.010	7.705	

<b>Test and Evaluation (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NAWC-WD:China Lake, CA	20.476	0.335	Nov 2010	0.342	Nov 2011	-		0.342	1.286	22.439	
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	10.349	0.440	Nov 2010	0.502	Nov 2011	-		0.502	2.213	13.504	
Prior Years T & E	Various	Various:Various	6.390	-		-		-		-	0.000	6.390	
<b>Subtotal</b>			37.215	0.775		0.844		-		0.844	3.499	42.333	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>
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<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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 & Technical Services	Various	Various:Various	3.481	0.020	Feb 2011	0.015	Feb 2012	-		0.015	0.020	3.536	
Program Management Support	Various	Various:Various	6.504	0.200	Feb 2011	0.175	Feb 2012	-		0.175	0.200	7.079	
Travel	WR	NAVAIR HQ:Patuxent River, MD	1.528	0.010	Nov 2010	0.044	Nov 2011	-		0.044	0.040	1.622	
Prior Years Mgmt	Various	Various:Various	6.759	-		-		-		-	0.000	6.759	
<b>Subtotal</b>			18.272	0.230		0.234		-		0.234	0.260	18.996	

**Remarks**  
Contract Type for Travel is TO

	<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	588.102	7.793		6.684		-		6.684	29.818	632.397	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 2185: <i>AARGM</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>AARGM</b>				
Acquisition Milestones: Milestones: Initial Operational Capability	3	2011	3	2011
Acquisition Milestones: Milestones: Full Rate Production Decision	2	2012	2	2012
Acquisition Milestones: Milestones: Full Operational Capability	4	2013	4	2013
Development: Physical Configuration Audit	1	2010	1	2010
Test & Evaluation: Operational Evaluation: Operational Test Readiness Review	2	2010	2	2010
Test & Evaluation: Operational Evaluation: Operational Evaluation	3	2010	4	2010
Test & Evaluation: Operational Evaluation: Integrated Test and Evaluation	1	2011	2	2011
Test & Evaluation: Operational Evaluation: Operational Evaluation Restart	3	2011	4	2011
Production Milestones: Low Rate Initial Production 2 (WPN)	3	2010	3	2010
Production Milestones: Low RATE Initial Production 3	3	2011	3	2011
Production Milestones: Full Rate Production Lot 1	3	2012	3	2012
Production Milestones: Full Rate Production Lot 2	3	2013	3	2013
Production Milestones: Full Rate Production Lot 3	3	2014	3	2014
Deliveries: Low Rate Initial Production 1 Delivery (WPN)	3	2010	3	2011
Deliveries: Low-Rate Initial Production 2 Delivery (WPN)	3	2011	3	2012
Deliveries: Low Rate Initial Production 3 Delivery (WPN)	3	2012	3	2013
Deliveries: Full Rate Production Deliveries - Lot 1 (WPN)	3	2013	3	2014
Deliveries: Full Rate Production Deliveries - Lot 2 (WPN)	3	2014	3	2015
Deliveries: Full Rate Production Deliveries - Lot 3 (WPN)	3	2015	3	2016

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3056: <i>Advanced Precision Kill Weapons System</i>	8.797	-	3.051	-	3.051	-	-	-	-	0.000	11.848
Quantity of RDT&E Articles	78	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

Advanced Precision Kill Weapons System (APKWS) II was an Army System Development & Demonstration (SD&D) program to develop a low cost Semi Active Laser precision guidance section for existing 2.75-inch unguided rockets. APKWS II will provide an inexpensive, small, lightweight precision-kill weapon that is effective against soft and lightly armored targets, and which enhances crew survivability with increased standoff range. APKWS offers precision, maximum stored kills per aircraft sortie, minimum collateral damage potential, and increased effectiveness over legacy unguided rockets. The guidance package can be assembled with existing unguided rocket components (warhead and rocket motors) and can be fired from LAU-61/LAU-68. SD&D program was completed 3Q FY 2010, and Milestone C was approved in 3Q FY 2010. The Low Rate Initial Production (LRIP) 1 contract was awarded to BAE Systems in 4Q FY 2010. The LRIP II contract was awarded to BAE Systems in 2Q FY 2011.

The Fixed Wing Joint Capability Technology Demonstration (JCTD) is a joint USN and USAF effort sponsored by OSD and U.S. Central Command which will modify the APKWS II from the Program of Record (POR) and conduct a demonstration on USMC AV-8B and USAF A-10 aircraft. Effort is funded with OSD funds in FY 2010 and will be funded from this program element in FY 2012.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Title:</b> Advanced Precision Kill Weapons System (APKWS) SD&D	8.797	-	3.051	-	3.051
<b>Articles:</b>	78		0		0
<b>FY 2010 Accomplishments:</b> APKWS Program Of Record (POR) - Achieved Milestone C approval, awarded LRIP contract, completed twenty-one Development Test/Operational Assessment live fire events.					
<b>FY 2012 Base Plans:</b> APKWS POR - Full-Rate Production decision and contract. APKWS JCTD - Technology demonstration and Military Utility Assessment.					
<b>Accomplishments/Planned Programs Subtotals</b>	8.797	-	3.051	-	3.051

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• PANMC/015100: <i>Airborne Rockets</i>	75.034	114.764	38.264	80.200	118.464	48.184	69.808	56.792	67.516	Continuing	Continuing

**D. Acquisition Strategy**

The Navy assumed the APKWS program from the Army. The previously competed SD&D Army contract to prime contractor was transferred to the Navy for continued management. The program was through Milestone B and meeting cost schedule and technical performance requirements. The Navy funded the remainder of the program to complete SD&D. The LRIP 1 contract was awarded to BAE Systems in 4Q FY 2010.

**E. Performance Metrics**

APKWS Milestone C approved in April 2010.  
 APKWS LRIP I awarded in July 2010.  
 APKWS LRIP II awarded in January 2011.  
 APKWS Fixed Wing JCTD Military Utility Assessment is scheduled for 2012.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>
Primary Hardware Development	C/CPFF	BAE SYS:New Hampshire	21.924	-		0.949	Apr 2012	-		0.949	0.000	22.873	22.873
Prior Years Prod Dev	Various	Various:Various	4.106	-		-		-		-	0.000	4.106	
APKWS JCTD Contract	C/CPFF	BAE SYS:New Hampshire	3.950	-		-		-		-	0.000	3.950	3.950
<b>Subtotal</b>			29.980	-		0.949		-		0.949	0.000	30.929	

<b>Support (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>
Prior Years Support	Various	Various:Various	0.624	-		0.100	Dec 2011	-		0.100	0.000	0.724	
<b>Subtotal</b>			0.624	-		0.100		-		0.100	0.000	0.724	

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>
Developmental Test & Evaluation	WR	NAWC-WD:China Lake, CA	2.489	-		0.758	Dec 2011	-		0.758	0.000	3.247	
Prior Years T&E	Various	Various:Various	3.900	-		-		-		-	0.000	3.900	
<b>Subtotal</b>			6.389	-		0.758		-		0.758	0.000	7.147	

<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>
Government Engineering Support	WR	NAWC-WD:China Lake, CA	4.347	-		0.710	Dec 2011	-		0.710	0.000	5.057	
	Various	Various:Various	1.706	-		0.485	Dec 2011	-		0.485	0.000	2.191	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>
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<b>Management Services (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support													
Travel	WR	NAVAIR HQ:Patuxent River, MD	0.300	-		0.049	Nov 2011	-		0.049	0.000	0.349	
<b>Subtotal</b>			6.353	-		1.244		-		1.244	0.000	7.597	

**Remarks**  
Contract Type for Travel is TO

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	43.346	-		3.051		-		3.051	0.000	46.397	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Advanced Precision Kill Weapons System</b>				
Acquisition Milestones: Milestones: APKWS Milestone C	3	2010	3	2010
Acquisition Milestones: Milestones: Initial Operational Capability	3	2011	3	2011
Acquisition Milestones: Milestones: Full Rate Production (FRP) Decision	2	2012	2	2012
System Development & Demonstration: Advanced Precision Kill Weapon System (APKWS) System Development & Demonstration	1	2010	3	2010
System Development & Demonstration: Joint Capability Technology Demonstrations: Joint Capability Technology Demonstration (JCTD)	1	2012	4	2012
System Development & Demonstration: Joint Capability Technology Demonstrations: JCTD Military Utility Assessment (MUA)	3	2012	3	2012
Test & Evaluations Milestones: Operational Assessment: APKWS Operational Assessment	2	2010	2	2010
Test & Evaluations Milestones: Initial Operational Test and Evaluation: APKWS Initial Operational Test and Evaluation	3	2011	3	2011
Production Milestones: Contract Awards: Low Rate Initial Procurement 1 (RDTE & PANMC)	4	2010	4	2010
Production Milestones: Contract Awards: Low Rate Initial Procurement 2 (PANMC)	2	2011	2	2011
Production Milestones: Contract Awards: Full Rate Production I	2	2012	2	2012
Production Milestones: Contract Awards: Full Rate Production II	2	2013	2	2013
Production Milestones: Contract Awards: Full Rate Production III	2	2014	2	2014
Production Milestones: Contract Awards: Full Rate Production IV	2	2015	2	2015
Production Milestones: Contract Awards: Full Rate Production V	2	2016	2	2016
Deliveries: Low-Rate Initial Production LRIP I: APKWS Low Rate Initial Procurement 1 (LRIP) Deliveries (RDTE)	2	2011	1	2012

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3056: <i>Advanced Precision Kill Weapons System</i>

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Deliveries: Low-Rate Initial Production LRIP II: APKWS LRIP 2 Deliveries (PANMC)	2	2012	1	2013
Deliveries: Full Rate Production: FRP I Deliveries	2	2013	1	2014
Deliveries: Full Rate Production: FRP II Deliveries	2	2014	1	2015
Deliveries: Full Rate Production: FRP III Deliveries	2	2015	1	2016
Deliveries: Full Rate Production: FRP IV Deliveries	2	2016	4	2016

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3212: <i>MEDUSA JCTD</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3212: <i>MEDUSA JCTD</i>	9.883	4.859	-	-	-	-	-	-	-	0.000	14.742
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Medusa Joint Capability Technology Demonstration (JCTD) will demonstrate the Low Cost Guided Imaging Rockets (LOGIR) technology currently being developed at the Naval Air Warfare Center Weapons Division China Lake on the MH-60S. LOGIR provides "fire and forget" capability to 2.75-inch rockets in support of Sea Shield Pillar, increases platform lethality against Fast Attack Craft/Fast Inshore Attack Craft threat, provides a low-cost Imaging InfraRed precision guidance section for the existing 2.75-inch unguided rockets and provides maximum precision kills per sortie, low cost, minimum collateral damage, increased efficiency, and increased standoff. OSD is also providing funding for this effort. Initial Program documentation (i.e. Performance Spec, Capabilities Development Document) will be developed within the scope of the JCTD.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Title:</b> MEDUSA JCTD	9.883	4.859	-	-	-
<b>Articles:</b>	0	0			
<b>FY 2010 Accomplishments:</b> Began demonstration of the LOGIR technology currently being developed.					
<b>FY 2011 Plans:</b> Continue demonstration of the LOGIR technology on the MH-60S.					
<b>Accomplishments/Planned Programs Subtotals</b>	9.883	4.859	-	-	-

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDTE 0603648D8Z: <i>Project#648, DUSD (AS&amp;C)</i>	4.000	3.605	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.605
• RDTEN 0603790N: <i>NIPO Research and Development</i>	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
• Project# K0-1: <i>Republic of Korea</i>	2.460	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.460

**D. Acquisition Strategy**

The MEDUSA JCTD is a technology demonstration by DoD government activities.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3212: <i>MEDUSA JCTD</i>

**E. Performance Metrics**

Integration and Demonstration are schedule to continue until 2Q FY12. Performance Spec and Capability Development Document will be completed in 4Q FY11.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3212: <i>MEDUSA JCTD</i>
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<b>Product Development (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-WD:China Lake, CA	4.521	1.461	Nov 2010	-		-		-	0.000	5.982	
Product Development	C/CPFF	Sikorsky:Stratford, CT	-	0.500	May 2011	-		-		-	0.000	0.500	1.500
Prior Years Prod Dev	C/CPFF	Raytheon:Crane, IN	1.018	-		-		-		-	0.000	1.018	7.500
<b>Subtotal</b>			5.539	1.961		-		-		-	0.000	7.500	

<b>Test and Evaluation (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-AD:Patuxent River, MD	-	0.508	Feb 2011	-		-		-	0.000	0.508	
Developmental Testing	C/CPFF	DMEA:Mcclellan, CA	0.037	0.040	Mar 2011	-		-		-	0.000	0.077	0.077
Developmental Testing	C/CPFF	Lockheed:Owego, NY	4.050	1.936	Mar 2011	-		-		-	0.000	5.986	6.036
<b>Subtotal</b>			4.087	2.484		-		-		-	0.000	6.571	

<b>Management Services (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWC-AD:Patuxent River, MD	0.122	0.374	Nov 2010	-		-		-	0.000	0.496	
Travel	WR	NAVAIR HQ:Patuxent River, MD	0.010	0.040	Nov 2010	-		-		-	0.000	0.050	
Program Management Support	C/CPFF	AMEWAS:California, MD	0.125	-		-		-		-	0.000	0.125	0.125
<b>Subtotal</b>			0.257	0.414		-		-		-	0.000	0.671	

**Remarks**  
Contract Type for Travel is TO

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3212: <i>MEDUSA JCTD</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0205601N: <i>Harm Improvement</i>	<b>PROJECT</b> 3212: <i>MEDUSA JCTD</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>MEDUSA JCTD</b>				
Systems Development: Performance Spec: Performance Spec	4	2011	4	2011
Systems Development: Capability Development Document: Capability Development Document	4	2011	4	2011
Test & Evaluation Milestones: Integration & Demonstration: Integration and Demonstration	1	2010	2	2012