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

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>							
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
Total Program Element	39.478	25.121	22.665	-	22.665	26.324	16.598	-	-	0.000	130.186
3071: <i>Very Low Collateral Damage Weapon</i>	8.400	-	-	-	-	-	-	-	-	0.000	8.400
3214: <i>Fuze Development Program</i>	19.031	25.121	22.665	-	22.665	26.324	16.598	-	-	0.000	109.739
3215: <i>Strike Weapons Technology Demonstrations</i>	12.047	-	-	-	-	-	-	-	-	0.000	12.047

Note

1. This PE began in FY10 and includes FMU-164 Fuze and Hard Target Void Sensing Fuze (HTVSF) under Project 3214. The HTVSF and Joint Surface Warfare (JSuW) were previously funded under PE 0604329N Project 3072 Small Diameter Bomb II.
2. The FMU-164 Program is currently in the Government Technology Development Phase, with the Contractor Phase awarding in March 2011 which will continue through FY13.
3. Project 3071 Very Low Collateral Damage Weapon was established in October 2010 as FY10 Overseas Contingency Operations (OCO) funding.

A. Mission Description and Budget Item Justification

The Precision Strike Weapons Development program provides for initial and continuing development of strike weapons consisting of armament, munitions, and weapon subsystems to allow for the horizontal integration among current and future weapon system capabilities to include Anti-Surface Warfare (ASuW) and the weaponization of Unmanned Aerial Systems (UAS). This program will also provide the Navy with the opportunity to improve upon the accuracy, lethality, interoperability, and overall effectiveness of current and future precision strike weapons. The OCO funding is provided for the development of the low collateral damage weapons and Precision Lethality (PL) weapons.

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BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	40.757	25.121	28.791	-	28.791
Current President's Budget	39.478	25.121	22.665	-	22.665
Total Adjustments	-1.279	-	-6.126	-	-6.126
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.743	-			
• SBIR/STTR Transfer	-0.407	-			
• Program Adjustments	-	-	-5.596	-	-5.596
• Section 219 Reprogramming	-0.127	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.530	-	-0.530
• Congressional General Reductions Adjustments	-0.002	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

FMU-164 Schedule: The revised Acquisition Strategy (AS) for the FMU-164 was approved by Milestone Decision Authority (MDA) on 16 DEC 2009. The impacts to the original AS schedule included the Material Development Decision to enter the Program into the Technology Development phase instead of at Milestone B. MS B was moved from first quarter FY13 to fourth quarter FY13, Milestone C moved from fourth quarter FY15 to fourth quarter FY16. Contract award moved from the first quarter of FY11 to the second quarter of FY11 due to additional time required for the Request For Information (RFI) and Source Selection process. The Technology Development phase was extended from first quarter FY13 to fourth quarter FY13. Critical Design Review (CDR) moved from second quarter FY13 to first quarter FY14, Technical Readiness Review (TRR) was moved from fourth quarter FY13 to third quarter FY14, Preproduction Readiness Review (PRR) was moved from third quarter FY15 to second quarter FY16. First test article quantity FY11-Quantity 512 changed to Quantity 0, FY13-Quantity 1130 changed to Quantity 6.

HTVSF Schedule: The HTVSF Engineering and Manufacturing Development Phase (EMD) was adjusted to align with the Milestone B decision. The HTVSF MS B moved from fourth quarter of FY10 to second quarter of FY11. MS C moved from second quarter FY13 to second quarter FY14, Full Rate Production (FRP) decision moved from first quarter of FY14 to third quarter FY15, EMD CDR moved from second quarter FY11 to fourth quarter FY11, Integrated Operational Test and Evaluation (IOT&E) moved from third quarter FY13 to first quarter FY15, Low-Rate Initial Production (LRIP) Contract Award (CTA) moved from second quarter of FY13 to beginning of third quarter of FY14. First test article quantity FY11-Quantity 5 changed to Quantity 30, FY12-Quantity 40 changed to Quantity 26. Quantity 3 for FY13, and Quantity 3 for FY14 were added to provide further details for program.

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APPROPRIATION/BUDGET ACTIVITY
1319: *Research, Development, Test & Evaluation, Navy*
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE
PE 0604659N: *(U)Precision Strike Weapons Development Program*

The FMU-164 integration requirements which include preparation for pilot/platform interface updates, Joint Direct Attack Munition (JDAM) Block 09 S/W updates, GBU-24/FZU-48 flight certification, and GBU-31/FZU-48 flight certification will start prior to the Technology Development contract award to provide risk reduction to the program. BLU-109 Bomb (inerts) are required to support FMU-164 development and testing requirements.

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3071: <i>Very Low Collateral Damage Weapon</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
3071: <i>Very Low Collateral Damage Weapon</i>	8.400	-	-	-	-	-	-	-	-	0.000	8.400
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

OSD Joint Rapid Acquisition Cell directed execution of joint Precision Lethality (PL) MK-82 Quick Reaction Capability (QRC) to support Joint Urgent Operational Need (JUON) CC-0381 for a Very Low Collateral Damage Weapon (VLCDW). Provides low lethality in far field using non-fragmenting carbon fiber MK-82 form factor case to minimize collateral damage outside near field blast effect. Provides high lethality in near field using a specially tuned variant of high impulse Multi-phase Blast Explosive (MBX) similar to Small Diameter Bomb (SDB).

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

	FY 2010	FY 2011	FY 2012
Title: Very Low Collateral Damage Weapon	8.400	-	-
Articles:	0		
Description: Funding for development of a carbon fiber composite for General Purpose Bombs supporting a JUON for a VLCDW. The warhead matches the shape/mass properties of a MK82 such that it integrates with inventory of precision guidance kits and aircraft.			
FY 2010 Accomplishments: Initiated VLCDW program and accomplished System Requirements Review (SRR) and Preliminary Design Review (PDR).			
Accomplishments/Planned Programs Subtotals	8.400	-	-

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

N/A

D. Acquisition Strategy

OSD Joint Rapid Acquisition Cell directed execution of joint PL MK-82 QRC to support JUON CC-0381 for a VLCDW.

E. Performance Metrics

Accomplished SRR and PDR.

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3071: <i>Very Low Collateral Damage Weapon</i>
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Product Development (\$ in Millions)				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	MIPR	Air Force:Eglin AFB, FL	2.200	-		-		-		-	0.000	2.200	
Primary Hardware Development	Various	Various:Various	1.200	-		-		-		-	0.000	1.200	
Subtotal			3.400	-		-		-		-	0.000	3.400	

Support (\$ in Millions)				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
Government Support	WR	NAWC WD:China Lake, CA	1.000	-		-		-		-	0.000	1.000	
Subtotal			1.000	-		-		-		-	0.000	1.000	

Test and Evaluation (\$ in Millions)				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
Carrier Suitability Testing	WR	NAWC AD:Patuxent River, MD	1.000	-		-		-		-	0.000	1.000	
Safe Escape Analysis	WR	NAWC AD:Patuxent River, MD	1.800	-		-		-		-	0.000	1.800	
Subtotal			2.800	-		-		-		-	0.000	2.800	

Management Services (\$ in Millions)				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
Government Support	WR	NAWC WD:China Lake, CA	0.700	-		-		-		-	0.000	0.700	
Government Support	WR		0.500	-		-		-		-	0.000	0.500	

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3071: <i>Very Low Collateral Damage Weapon</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3071: <i>Very Low Collateral Damage Weapon</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Very Low Collateral Damage Weapon</i>				
Acquisition Milestones: Milestones: JROC Direction	1	2010	1	2010
Acquisition Milestones: Milestones: Navy IOC	4	2011	4	2011
Systems Development: Reviews: SRR	1	2010	1	2010
Systems Development: Reviews: PDR	3	2010	3	2010
Systems Development: Reviews: CDR	1	2011	1	2011
Test & Evaluation: Technical Evaluation: DT	2	2011	3	2011

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</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
3214: <i>Fuze Development Program</i>	19.031	25.121	22.665	-	22.665	26.324	16.598	-	-	0.000	109.739
Quantity of RDT&E Articles	0	30	26	0	26	9	3	0	0		

Note

1. The FMU-164 Program is currently in the Government Technology Development Phase, with the Contractor Phase awarding in March 2011 which will continue through FY13.

A. Mission Description and Budget Item Justification

The Precision Strike Weapons Development program provides for initial and continuing development of strike weapons consisting of armament, munitions, and weapon subsystems to allow for the horizontal integration among current and future weapon system capabilities to include Anti-Surface Warfare (ASuW) and the weaponization of Unmanned Aerial Systems (UAS). This program will also provide the Navy with the opportunity to improve upon the accuracy, lethality, interoperability, and overall effectiveness of current and future precision strike weapons.

The current funding profile provides funding for the FMU-164 Bomb Fuze and the Hard Target Void Sensing Fuze (HTVSF). The Technology Development and Engineering and Manufacturing Development (EMD) phases of the FMU-164 Bomb Fuze program are intended to upgrade and expand the capabilities of the Navy's bomb fuze inventory. The FMU-164 is the next generation bomb fuze used with general purpose and guided bombs. The FMU-164 will provide a capability upgrade to the existing FMU-139 and FMU-143 Bomb Fuzes. The capability upgrades include in-flight cockpit selectability via a Serial Data Interface (SDI) and increased reliability. Software updates including H8, H10, H6.1, and 25X Operational Flight Program integration testing. HTVSF is an FY08 Joint Capability Technology Demonstration (JCTD) sponsored by United States Strategic Command in coordination with the United States Air Force and United States Navy. The JCTD was a 27 month risk reduction program that was awarded to two Contractors in 3rd QTR FY08 to perform design, test, and manufacturing activities leading to a down-select to a single Contractor for EMD and production. The JCTD was completed in 3th QTR FY10 and the EMD contract is scheduled to be awarded to a single Contractor in 2nd QTR FY11. HTVSF is designed to prosecute harder, deeper, and more complex targets that exceeded design parameters of existing conventional kinetic strike capabilities. HTVSF will be used only with BLU-109 Joint Direct Attack Munitions (JDAM).

Note: First test article quantity for FMU-164 includes FY13-Quantity 6
 First test article quantity for HTVSF includes FY11-Quantity 30, FY 12-Quantity 26 , FY13-Quantity 3, FY14-Quantity 3

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

	FY 2010	FY 2011	FY 2012
Title: FMU-164 Primary Hardware Development	16.964	17.101	15.920
Articles:	0	0	0
Description: The FMU-164 funding develops the bomb fuze to replace the FMU-139 and FMU-143 legacy bomb fuze. The vendor's efforts include providing platform integration support.			

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
<p><i>FY 2010 Accomplishments:</i> Commenced FMU-164 requirement development, logical analysis and System Engineering Technical Reviews leading up to Preliminary Design Review (PDR) and MS B approval. Commence aircraft integration and ancillary hardware development including H8E, H6.1, 25X and JDAM software updates.</p> <p><i>FY 2011 Plans:</i> Commence FMU-164 design confidence testing including explosive train reliability, insensitive munition, hazard classification, electro-magnetic environment, product oriented packaging and target penetration (sled) tests. These tests will be conducted to gather design information. RDT&E test units are consumed during testing by the contractor.</p> <p><i>FY 2012 Plans:</i> Commence FMU-164 PDR which is scheduled to be completed in FY12 along with a downselect to one vendor for the EMD contract award in FY13. Conduct Electromagnetic, Environmental, Effects (E3) Testing.</p>				
<p><i>Title:</i> FMU-164 Design Qualification</p> <p align="right"><i>Articles:</i></p> <p><i>Description:</i> The FMU-164 funding will be used to qualify Fuze to weapon and Fuze to aircraft interfaces.</p> <p><i>FY 2011 Plans:</i> Continue FMU-164 design development and testing of the electrical firing circuit and SDI. The cockpit selectability Key Performance Parameter will be tested using Software-In-The-Loop (SIL) prototypes with F/A-18 Operational Flight Program and JDAM tail kits.</p> <p><i>FY 2012 Plans:</i> Receive SIL units from 2 Contractors for use with H8, H10, H6.1, and 25X Operational Flight Program integration testing.</p>		-	2.570 0	2.295 0
<p><i>Title:</i> HTVSF Hardware Development</p> <p align="right"><i>Articles:</i></p> <p><i>Description:</i> HTVSF hardware development funding will be used to qualify the fuze booster as part of the BLU-109 explosive train and begin F/A-18E/F software Operational Flight Program development.</p> <p><i>FY 2010 Accomplishments:</i> Continued HTVSF systems engineering, hardware development and modeling & simulation and target construction. This phase includes initial F/A-18 E/F H8, H10, H6.1, and 25X Operational Flight Program software development and integration testing.</p> <p><i>FY 2011 Plans:</i></p>		2.067 0	5.450 30	4.450 26

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Funding is for F/A-18 Operational Flight Program development, mission planning, procure sled and flight test hardware, execute tests and procure EMD test assets.			
<i>FY 2012 Plans:</i> Continue F/A-18 E/F integration, begin mission planning software, procure EMD test assets and conduct testing.			
Accomplishments/Planned Programs Subtotals	19.031	25.121	22.665

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
• Proc/PE 020803: <i>USAF</i>	0.000	0.000	0.000	0.000	0.000	0.000	18.800	37.500	38.500	0.000	94.800
• RDTE/ PE 0604602F: <i>(JCTD) Air Force</i>	0.000	10.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.000
• RDTE/ PE 064635F: <i>Air Force (SDD)</i>	0.000	18.800	33.400	0.000	33.400	27.900	5.400	0.000	0.000	0.000	85.500
• PAN&MC/014500a: <i>General Purpose Bombs HTVSF</i>	0.000	0.000	0.000	0.000	0.000	0.000	2.000	4.300	4.300	0.000	10.600
• PAN&MC/014500b: <i>General Purpose Bombs FMU-164</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.753	0.000	6.753

D. Acquisition Strategy

The FMU-164 will provide a capability upgrade to the existing FMU-139 and FMU-143 Bomb Fuzes. The capability upgrades include in-flight cockpit selectability via a SDI and increased reliability. The FMU-164 will also be Insensitive Munition compliant. Program plan consists of Technology Development starting in FY10 followed by EMD starting in FY13, followed by LRIP starting in FY16 and FRP starting in FY17.

The HTVSF JCTD is considered a risk reduction effort. The JCTD supports 2 competitively selected sources for development and testing of initial prototyping. Following the JCTD, a down select to a single source will occur and EMD is scheduled in FY11 followed by LRIP in FY14 and FRP in FY15.

E. Performance Metrics

Successfully complete milestones: Enter Milestone B (EMD), System Functional Review (SFR), PDR, and CDR.

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>
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Product Development (\$ in Millions)				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 FMU-164	C/CPIF	TBD:TBD	-	11.167	Mar 2011	9.475	Jan 2012	-		9.475	18.167	38.809	38.809
Primary Hardware Development HTVSF	C/CPIF	TBD:TBD	-	2.121	Mar 2011	1.000	Jan 2012	-		1.000	2.528	5.649	5.649
Subtotal			-	13.288		10.475		-		10.475	20.695	44.458	44.458

Support (\$ in Millions)				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
Software Development FMU-164	WR	NAWC WD:China Lake, CA	0.802	1.383	Jun 2011	1.465	Jun 2012	-		1.465	8.255	11.905	
Software Development FMU-164	C/CPIF	Boeing:St.Louis, MO	0.303	0.406	Mar 2011	0.497	Mar 2012	-		0.497	1.460	2.666	2.666
Software Development FMU-164	MIPR	Air Force:Eglin AFB, FL	0.500	0.150	Jun 2011	0.150	Jun 2012	-		0.150	0.000	0.800	
Integrated Logistic Support FMU-164	WR	NAWC AD:Patuxent River, MD	0.035	0.037	Nov 2010	0.043	Nov 2011	-		0.043	0.000	0.115	
Software Development HTVSF	WR	NAWC WD:China Lake, CA	0.123	1.554	Jan 2011	0.900	Nov 2011	-		0.900	1.549	4.126	
Software Development HTVSF	C/CPIF	Boeing:St.Louis, MO	0.211	0.468	Mar 2011	0.326	Mar 2012	-		0.326	0.511	1.516	1.516
Integrated Logistic Support HTVSF	WR	NAWC AD:Patuxent River, MD	-	0.037	Nov 2010	0.043	Nov 2011	-		0.043	0.177	0.257	
Prior years cost no longer funded in the FYDP	Various	Various:Various	0.250	-		-		-		-	0.000	0.250	
Subtotal			2.224	4.035		3.424		-		3.424	11.952	21.635	

Remarks
Changes are based on updated FMU-164 schedule

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

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Test and Evaluation (\$ in Millions)				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 & Evaluation FMU-164	WR	NAWC AD:Patuxent River, MD	1.500	-		-		-		-	0.000	1.500	
Development Test & Evaluation FMU-164	WR	OPTVFOR:Norfolk, VA	0.140	0.140	Jan 2011	0.140	Feb 2012	-		0.140	0.300	0.720	
Development Test & Evaluation HTVSF	WR	OPTVFOR:Norfolk, VA	0.020	0.020	Nov 2010	0.020	Nov 2011	-		0.020	0.040	0.100	
Operational Test & Evaluation HTVSF	WR	Various:Various	-	-		0.200	Nov 2011	-		0.200	0.020	0.220	
Operational Test & Evaluation HTVSF	WR	NAWC AD:Patuxent River, MD	-	-		0.900	Nov 2011	-		0.900	0.000	0.900	
Prior years cost no longer funded in the FYDP	Various	Various:Various	7.559	-		-		-		-	0.000	7.559	
Subtotal			9.219	0.160		1.260		-		1.260	0.360	10.999	

Remarks
Changes are based on updated FMU-164 schedule and BLU-109 Bomb (inerts) required to support FMU-164 RDT&E requirements.

Management Services (\$ in Millions)				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
Government Support FMU-164	WR	NAWC WD:China Lake, CA	3.528	3.481	Nov 2010	3.636	Nov 2011	-		3.636	6.959	17.604	
Government Support FMU-164	WR	NAWC AD:Patuxent River, MD	1.476	1.376	Nov 2010	1.684	Nov 2011	-		1.684	4.500	9.036	
Program Management Support FMU-164	WR	Various:Various	0.300	0.251	Nov 2010	0.259	Nov 2011	-		0.259	0.833	1.643	
Program Management Support FMU-164	C/CPFF	NAWC AD:Patuxent River, MD	1.151	1.215	Dec 2010	0.778	Dec 2011	-		0.778	2.559	5.703	5.703
Travel	C/T&M	NAWC AD:Patuxent River, MD	0.083	0.065	Jan 2011	0.088	Jan 2012	-		0.088	0.264	0.500	
Government Support HTVSF	WR		0.800	1.000	Nov 2010	0.811	Nov 2011	-		0.811	1.166	3.777	

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>
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Management Services (\$ in Millions)				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
		NAWC WD:China Lake, CA											
Government Support HTVSF	WR	NAWC AD:Patuxent River, MD	0.250	0.250	Nov 2010	0.250	Nov 2011	-		0.250	0.250	1.000	
Subtotal			7.588	7.638		7.506		-		7.506	16.531	39.263	

Remarks
Changes are based on updated FMU-164 schedule

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.031	25.121		22.665		-		22.665	49.538	116.355	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Hard Target Void Sensing Fuze (HTVSF)				
Acquisition Milestones: Milestones: Milestone B (MS B)	2	2011	2	2011
Acquisition Milestones: Milestones: Full Rate Production Decision (FRPD)	3	2015	3	2015
Acquisition Milestones: Milestones: Milestone C (MS C)	2	2014	2	2014
Acquisition Milestones: Milestones: IOC	4	2015	4	2015
Systems Development: Hardware Development: JCTD	1	2010	3	2010
Systems Development: Hardware Development: Transition to Engineering, Manufacturing, and Development Phase (EMD)	4	2010	2	2011
Systems Development: Hardware Development: Engineering, Manufacturing, and Development Phase (EMD)	3	2011	2	2014
Systems Development: Reviews: JCTD Critical Design Review (CDR)	3	2010	3	2010
Systems Development: Reviews: EMD Critical Design Review (CDR)	4	2011	4	2011
Systems Development: Contract Award: Engineering, Manufacturing, and Development Phase (EMD)	2	2011	2	2011
Systems Development: Contract Award: 30 Test Units	3	2011	3	2011
Systems Development: Contract Award: 26 Test Units	2	2012	2	2012
Systems Development: Contract Award: 3 Test Units	1	2013	1	2013
Systems Development: Contract Award: 3 Test Unit	1	2014	1	2014
Systems Development: Test Unit Deliveries: 62 Test Deliveries	4	2011	2	2014
Test & Evaluation: Technical Evaluation: Developmental Test and Evaluation (DT&E)	4	2011	2	2014
Test & Evaluation: Operational Evaluation: Intergrational Operational Test and Evaluation (IOT&E)	1	2015	2	2015
	3	2014	3	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Milestones: Contract Awards: Low-Rate Initial Production (LRIP) Award (PANMC)				
Production Milestones: Contract Awards: Full Rate Production-1 (FRP) Award (PANMC)	4	2015	4	2015
Production Milestones: Contract Awards: Full Rate Production-2 (FRP) Award (PANMC)	3	2016	3	2016
Deliveries: LRIP Deliveries 50 (PANMC)	2	2015	2	2016
Deliveries: FRP 1 Deliveries 225 (PANMC)	2	2016	4	2016
FMU-164/Bomb Fuze				
Acquisition Milestones: Milestones: FMU-164 Material Development Decision (MDD)	1	2010	1	2010
Acquisition Milestones: Milestones: FMU-164 MS B	4	2013	4	2013
Acquisition Milestones: Milestones: FMU-164 MS C	4	2016	4	2016
Systems Development: Hardware Development: Technology Development Phase	1	2010	4	2013
Systems Development: Hardware Development: Engineering, Manufacturing, and Development (EMD)	4	2013	3	2016
Systems Development: Reviews: FMU-164 Preliminary Design Review (PDR)	2	2012	2	2012
Systems Development: Reviews: FMU-164 Critical Design Review (CDR)	1	2014	1	2014
Systems Development: Reviews: FMU-164 Technical Readiness Review (TRR)	3	2014	3	2014
Systems Development: Reviews: FMU-164 Preproduction Readiness Review (PRR)	2	2016	2	2016
Systems Development: Contract Award: BLU-109 Test Unit (RDT&E)	4	2010	4	2010
Systems Development: Contract Award: FMU-164 Technology Development Phase Contract Award	2	2011	2	2011
Systems Development: Contract Award: 6 Test Units (RDT&E)	2	2013	2	2013
Systems Development: Test Unit Deliveries: BLU-109 Test Unit (RDT&E)	3	2011	1	2012
Systems Development: Test Unit Deliveries: 6 Test Units (RDT&E)	4	2013	2	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3214: <i>Fuze Development Program</i>

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Test & Evaluation: Technical Evaluation: Developmental Test and Evaluation (DT&E)	3	2015	2	2016
Production Milestones: Low-Rate Initial Production (LRIP) Award (PANMC)	4	2016	4	2016

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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3215: <i>Strike Weapons Technology Demonstrations</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
3215: <i>Strike Weapons Technology Demonstrations</i>	12.047	-	-	-	-	-	-	-	-	0.000	12.047
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Precision Strike Weapons Development program provides for initial and continuing development of strike weapons consisting of armament, munitions, and weapon subsystems to allow for the horizontal integration among current and future weapon system capabilities to include Anti-Surface Warfare (ASuW) and the weaponization of Unmanned Aerial Systems. This program will also provide the Navy with the opportunity to improve upon the accuracy, lethality, interoperability, and overall effectiveness of current and future precision strike weapons.

The Strike Weapons Technology Demonstrations project unit currently consists of the Joint Capability Technology Demonstrations (JCTD) effort. Overall intent of the JCTD is to demonstrate, operationally assess, rapidly deploy, and transition capability solutions and innovative concepts to address the joint, coalition and interagency operational gaps and shortfalls. The Combatant Commands drive JCTDs through their stated operational priorities and needs, which are applied to an agile acquisition process that yields results years ahead of traditional material development cycles.

The JCTD will demonstrate robust, end-to-end kill chains to engage enemy surface combatants. Intelligence Surveillance and Reconnaissance (ISR) platforms will include the USAF E-8 Joint Surveillance Targeting Attack Radar System (JSTARS) and the USN P-3 Littoral Surveillance Radar System (LSRS). The launch platform will be the F/A-18E/F Super Hornet. Weapons will include the AGM-154C Joint Stand-off Weapon (JSOW-C-1), and the AGM-84K Stand-off Land Attack Missile-Expanded Response (SLAM-ER). In the case of the SLAM-ER, the FA-18 will translate ISR Link-16 targeting information and transmit that information to the SLAM-ER with J3.3/J3.5 messages via the AWW-13 pod. The focus will be on in-flight targeting messages going directly from the ISR platforms to the weapons themselves.

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

	FY 2010	FY 2011	FY 2012
Title: Strike Weapons Technology Demonstrations	12.047	-	-
Articles:	0		
FY 2010 Accomplishments:			
The JCTD has completed the Weapons Data Link Network (WDLN) Advanced Concept Technology Demonstration (ACTD) and its networking protocols by integrating the WDLN messages into Intelligence Surveillance and Reconnaissance platforms in accordance with MIL-STD-6016C; the launch platform and weapons will integrate the messages as part of their programs of record. Platform modifications will be centered around the integration of the WDLN messages (hereafter referred to as the Net-Enabled Weapon (NEW) messages) into aircraft mission computers to transmit and receive joint targeting data. Weapon			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604659N: <i>(U)Precision Strike Weapons Development Program</i>	PROJECT 3215: <i>Strike Weapons Technology Demonstrations</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
modifications (outside of Joint Surface Warfare (JSuW) JCTD funding but included as part of the capability) include the avionics changes necessary to transmit and receive the WDLN message set to enable targeting of surface ships.				
Accomplishments/Planned Programs Subtotals		12.047	-	-
C. Other Program Funding Summary (\$ in Millions)				
N/A				
D. Acquisition Strategy				
The contracting strategy for JSuW JCTD utilized Raytheon for LSRS and Northrop Grumman for JSTARS platforms to demonstrate Link 16 capabilities with Network Enabled Weapons.				
E. Performance Metrics				
The JSuW JCTD has completed the WDLN ACTD and its networking protocols by integrating the J-11 messages set via JSTARS and the USN P-3 LSRS into ISR platforms.				