Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0604659N: (U)Precision Strike Weapons Development Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	All Prior	FY 2012	FY 2013 <sup>#</sup>	FY 2014	FY 2014 OCO ##	FY 2014	EV 204 <i>E</i>	EV 2046	FY 2017	EV 2049	Cost To	Total
Total Program Element	<b>Years</b> 29.387	3.381		<b>Base</b> 2.257	-	<b>Total</b> 2.257	<b>FY 2015</b> 0.000	<b>FY 2016</b> 0.000		<b>FY 2018</b> 0.000	0.000	<b>Cost</b> 40.679
3214: Fuze Development Program	29.387	3.381	5.654	2.257	-	2.257	0.000	0.000	0.000	0.000	0.000	40.679

<sup>\*</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

### 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 and the weaponization of Unmanned Aerial Systems. This program provides for the development of weapon and weapon system technologies to address urgent requirements for enhanced and alternative weapon system capability requirements that include selectable output weapons, low collateral damage weapons, precision lethality weapons, area weapons, alternative warhead technology, Insenstive Munitions (IM), scaled munitions, DoD fuzing systems, sensors, extended range weapons and precision guided training round technology.

This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	3.450	5.654	2.269	-	2.269
Current President's Budget	3.381	5.654	2.257	-	2.257
Total Adjustments	-0.069	0.000	-0.012	-	-0.012
Congressional General Reductions	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
Congressional Rescissions	-	-			
Congressional Adds	-	-			
Congressional Directed Transfers	-	-			
Reprogrammings	-	_			
SBIR/STTR Transfer	-0.069	0.000			
Program Adjustments	0.000	0.000	16.963	-	16.963
Rate/Misc Adjustments	0.000	0.000	-16.975	-	-16.975

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2014 N	lavy							DATE: Apr	il 2013	
APPROPRIATION/BUDGET ACT	IVITY				R-1 ITEM I	NOMENCL	ATURE		<b>PROJECT</b>			
1319: Research, Development, Te BA 4: Advanced Component Deve						59N: <i>(U)Pre</i> ent Progran		e Weapons	3214: <i>Fuze</i>	e Developm	ent Program	
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To	Total Cost

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3214: Fuze Development Program	29.387	3.381	5.654	2.257	-	2.257	0.000	0.000	0.000	0.000	0.000	40.679
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

### A. Mission Description and Budget Item Justification

The Fuze Development Program provides for the development of alternative and innovative fuze system and fuze sensor technologies to improve the reliability, capability and production characteristics of fuze products. This program also provides for emerging technology insertion to improve the performance and maintainability characteristics of current and future fuze and fuze sensor technologies.

The Hard Target Void Sensing Fuze (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 Engineering Manufacturing Development (EMD) and production. The JCTD was completed in 3rd QTR FY10 and the EMD contract was 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.

Note: First test article quantity for HTVSF includes FY 12-Quantity 26, FY13-Quantity 3, FY14-Quantity 3

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014	
Title: Hard Target Void Sensing Fuze (HTVSF) Hardware Development	3.381	5.654	2.257	
Articles:	26	3	3	
<b>Description:</b> 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 OFP development.				
FY 2012 Accomplishments: Continued F/A-18 E/F integration, began mission planning software, procured additional EMD test assets and conducted testing.  FY 2013 Plans:				
			1	

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DATE: April 2013

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
1319: Research, Development, Test & Evaluation, Navy	PE 0604659N: (U)Precision Strike Weapons	3214: Fuze Development Program
BA 4: Advanced Component Development & Prototypes (ACD&P)	Development Program	

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue F/A-18 E/F integration, continue mission planning software, procure additional EMD test assets and conduct testing. Primary Hardware (H/W) development increases over the rate of inflation from FY12 to FY13 is due to the program sustaining a \$1.1M reduction in FY12 reducing the Navy's ability to pay its fair share cost of H/W development. The Air Force absorbed the joint cost of development in FY12 and the Navy will resume its fair share of H/W development cost starting in FY13.			
FY 2014 Plans: Complete F/A-18 E/F integration, complete mission planning software, achieve Milestone C and Award Low-Rate Initial Production contract.			
Accomplishments/Planned Programs Subtotals	3.381	5.654	2.257

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

	•	•	FY 2014	FY 2014	FY 2014					<b>Cost To</b>	
Line Item	FY 2012	FY 2013	Base	<u>000</u>	<u>Total</u>	FY 2015	FY 2016	FY 2017	FY 2018	Complete	<b>Total Cost</b>
PANMC/01450: General Purpose	0.000	0.000	2.000		2.000	4.300	4.386	0.000	0.000	0.000	10.686
Bombs											
RDTE/ PE 064635F: Air Force	24.467	9.423	26.721		26.721	4.480	0.000	0.000	0.000	0.000	97.591
(SDD)											
Proc/PE 020803: Air Force	0.000	0.130	19.280		19.280	38.500	39.510	41.700	0.000	0.000	139.120

#### Remarks

# **D. Acquisition Strategy**

The Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD) is a risk reduction effort. The JCTD supported two competitively selected sources for development and testing of initial prototyping. Following the JCTD, a down select to a single source occurred, awarding a contract to ATK in FY11. Engineering Manufacturing Development phase is ongoing and Low Rate Initial Production contract award is planned for FY14 and Full Rate Production in FY15.

## E. Performance Metrics

MS C is planned for 3rd QTR FY14.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy

R-1 ITEM NOMENCLATURE

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy

PE 0604659N: (U)Precision Strike Weapons | 3214: Fuze Development Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

Development Program

Product Developmen	nt (\$ in Mi	llions)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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 HTVSF	C/FPIF	ATK:Keyser, WV	2.298	0.093	Jan 2012	0.431	Feb 2013	0.384	Feb 2014	-		0.384	0.000	3.206	3.206
		Subtotal	2.298	0.093		0.431		0.384		0.000		0.384	0.000	3.206	3.206

#### Remarks

Primary Hardware(H/W) development increases over the rate of inflation from FY12 to FY13 is due to the program sustaining a \$1.1M reduction in FY12 reducing the Navy's ability to pay its fair share cost of H/W development. The Air Force absorbed the joint cost of development in FY12 and the Navy will resume its fair share of H/W development cost starting in FY13.

Support (\$ in Millions	s)			FY 2	2012	FY 2	2013		2014 ise		2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development HTVSF	WR	NAWC WD:China Lake, CA	2.677	0.500	Nov 2011	1.000	Dec 2012	0.351	Dec 2013	-		0.351	0.000	4.528	
Software Development HTVSF	C/CPIF	Boeing:St.Louis, MO	1.679	0.426	Mar 2012	0.350	Mar 2013	0.005	Dec 2013	-		0.005	0.000	2.460	2.460
Integrated Logistic Support HTVSF	WR	NAWC AD:Patuxent River, MD	0.037	0.000		0.023	Nov 2012	0.000		-		0.000	0.000	0.060	
Prior years cost no longer funded in the FYDP	Various	Various:Various	3.947	0.000		0.000		0.000		-		0.000	0.000	3.947	
		Subtotal	8.340	0.926		1.373		0.356		0.000		0.356	0.000	10.995	

#### Remarks

Software Development increase over the rate of inflation from FY12 to FY13 is for FA-18 H10 HTVSF S/W integration which will be completed in FY14.

Test and Evaluation	nd Evaluation (\$ in Millions)  Contract Method Performing All				2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2	2014 CO	FY 2014 Total			
Cost Category Item		Performing Activity & Location	All 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 HTVSF	WR	OPTVFOR:Norfolk, VA	0.040	0.020	Nov 2011	0.020	Nov 2012	0.268	Nov 2013	-		0.268	0.000	0.348	

PE 0604659N: (U)Precision Strike Weapons Development Program Navy

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy

R-1 ITEM NOMENCLATURE

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy

APPROPRIATION/BUDGET ACTIVITY

PE 0604659N: (U)Precision Strike Weapons 3214: Fuze Development Program

DATE: April 2013

BA 4: Advanced Component Development & Prototypes (ACD&P)

Development Program

Test and Evaluation	(\$ in Milli	ons)		FY 2	2012	FY 2	2013	FY 2 Ba	2014 ise	FY 2	2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation HTVSF	WR	NAWC AD:Patuxent River, MD	0.000	0.578	Nov 2011	0.400	Nov 2012	0.000		-		0.000	0.000	0.978	
Operational Test & Evaluation HTVSF	MIPR	Air Force:Eglin AFB, FL	0.000	0.000		0.674	Nov 2012	0.000		-		0.000	0.000	0.674	
Development Test & Evaluation HTVSF	WR	NAWC WD:China Lake, CA	0.000	0.000		1.400	Nov 2012	0.300	Nov 2013	-		0.300	0.000	1.700	
Operational Test & Evaluation HTVSF	WR	Various:Various	0.000	0.100	Nov 2011	0.100	Nov 2012	0.111	Nov 2013	-		0.111	0.000	0.311	
Prior years cost no longer funded in the FYDP	Various	Various:Various	9.339	0.000		0.000		0.000		-		0.000	0.000	9.339	
	•	Subtotal	9.379	0.698		2.594		0.679		0.000		0.679	0.000	13.350	

#### Remarks

Navy

FY13 Operational Test & Evaluation for HTVSF at Eglin AFB is for Sled Testing. FY13 Development Test and Evaluation for HTVSF at NAWCWD will be for Safe Separation/ Integration Flight Testing.

Management Servic	es (\$ in M	illions)		FY 2	2012	FY 2	2013		2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	NAWC AD:Patuxent River, MD	0.142	0.019	Jan 2012	0.018	Jan 2013	0.000		-		0.000	0.000	0.179	
Government Support HTVSF	WR	NAWC WD:China Lake, CA	1.531	0.774	Nov 2011	0.894	Nov 2012	0.636	Nov 2013	-		0.636	0.000	3.835	
Government Support HTVSF	WR	NAWC AD:Patuxent River, MD	0.500	0.608	Nov 2011	0.190	Nov 2012	0.117	Nov 2013	-		0.117	0.000	1.415	
Management Support HTVSF	C/FFP	NAWC AD:Patuxent River, MD	0.200	0.263	Dec 2011	0.154	Dec 2012	0.085	Nov 2013	-		0.085	0.000	0.702	0.702
Prior year cost no longer funded in the FYDP	WR	NAWC WD:China Lake, CA	6.997	0.000		0.000		0.000		-		0.000	0.000	6.997	
		Subtotal	9.370	1.664		1.256		0.838		0.000		0.838	0.000	13.128	

PE 0604659N: (U)Precision Strike Weapons Development Program Page 5 of 8

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R-1 Line #75

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy

PE 0604659N: (U)Precision Strike Weapons 3214: Fuze Development Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

Development Program

Management Services	s (\$ in M	illions)		FY	2012	FY	2013		2014 ise	FY 2		FY 2014 Total			
	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract

#### Remarks

FY13 Government Support reduction at NAWCAD reflects the ramping down of the development and transitioning to the Safe Separation/Integration Flight Testing at NAWCWD.

	All Prior Years	FY 2	2012	FY 2	2013	FY 2 Ba	FY 2	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	29.387	3.381		5.654		2.257	0.000	2.257	0.000	40.679	

#### Remarks

PE 0604659N: (U)Precision Strike Weapons Development Program Navy

DATE: April 2013 Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

**PROJECT** 

PE 0604659N: (U)Precision Strike Weapons | 3214: Fuze Development Program

Development Program

Hard Target Void Sensing Fuze (HTVSF)	1	FY 2	2012	:		FY 2	2013			F	Y 2014			FY	2015			FY	2016			FY 2	017			FY 2	018	3
Ì	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4
Acquisition Milestones																												Ţ
Milestones											MS C ▲				FRPD	IOC												
Systems Development		İ							İ	İ						İ										$\Box$		T
Hardware Development					E	MD																						
Reviews							l		l																			
Contract Award																												
Test Unit Deliveries				62 T	est	Deliv	/erie	s																				
Test & Evaluation																												T
Technical Evaluation					Dī	T&E																						
Operational Evaluation													101	T&E												İ		
Production Milestones		İ				İ	İ		İ	İ						İ										H		T
Contract Awards											LRIP (PANMC)				FRP 1				FRP 2									
Deliveries															LRIP				FRP					FRE		$\exists$		t

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0604659N: (U)Precision Strike Weapons 3214: Fuze Development Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

Development Program

# Schedule Details

	Sta	art	En	ıd
Events by Sub Project	Quarter	Year	Quarter	Year
Hard Target Void Sensing Fuze (HTVSF)				
Acquisition Milestones: Milestones: Full Rate Production Decision (FRPD)	3	2015	3	2015
Acquisition Milestones: Milestone C (MS C)	3	2014	3	2014
Acquisition Milestones: Milestones: IOC	4	2015	4	2015
Systems Development: Hardware Development: Engineering, Manufacturing, and Development Phase (EMD)	1	2012	2	2014
Systems Development: Test Unit Deliveries: 62 Test Deliveries	1	2012	2	2014
Test & Evaluation: Technical Evaluation: Developmental Test and Evaluation (DT&E)	1	2012	2	2014
Test & Evaluation: Operational Evaluation: Intergrational Operational Test and Evaluation (IOT&E)	1	2015	2	2015
Production Milestones: Contract Awards: Low-Rate Initial Production (LRIP) Award (PANMC)	3	2014	3	2014
Production Milestones: Contract Awards: Full Rate Production-1 (FRP) Award (PANMC)	3	2015	3	2015
Production Milestones: Contract Awards: Full Rate Production-2 (FRP) Award (PANMC)	3	2016	3	2016
Deliveries: LRIP Deliveries 50 (PANMC)	2	2015	1	2016
Deliveries: FRP 1 Deliveries 225 (PANMC)	2	2016	2	2017
Deliveries: FRP 2 Deliveries 225 (PANMC)	3	2017	3	2018