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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Air Force	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				PE 0604635F: <i>Ground Attack Weapons Fuze Development</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	0.087	32.513	24.467	-	24.467	5.185	-	-	-	Continuing	Continuing
645312: <i>Hard Target Void Sensing Fuze</i>	0.087	32.513	24.467	-	24.467	5.185	-	-	-	Continuing	Continuing

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

The Hard Target Void Sensing Fuze (HTVSF) is an advanced system designed to provide fuzing and void sensing functions for a weapon to penetrate and destroy hardened targets protected by multiple layers of soil and/or reinforced concrete. The HTVS Fuze shall also provide in-flight cockpit programmability, safing and arming, multi-function (time delay and void sensing) and multi-delay arming. FY 2011 and FY 2012 funding includes follow-on risk reduction and Engineering, Manufacturing, and Development (EMD) efforts to the the Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD) previously funded in PE 0604602F, Armament Ordnance Development. This Program Element was created to include the whole spectrum of fuze development and is positioned in Budget Activity 4 - Advanced Component Development and Prototypes (ACD&P).

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011</u></b>	<b><u>FY 2012 Base</u></b>	<b><u>FY 2012 OCO</u></b>	<b><u>FY 2012 Total</u></b>
Previous President's Budget	18.778	32.513	27.038	-	27.038
Current President's Budget	0.087	32.513	24.467	-	24.467
Total Adjustments	-18.691	-	-2.571	-	-2.571
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-18.613	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.078	-	-2.571	-	-2.571

**Change Summary Explanation**

FY 10 Reprogrammings: Funding identified as early to need and reprogrammed for higher AF priorities

FY 12: BY1 Other Adjustment of \$2.6M for higher AF priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0604635F: Ground Attack Weapons Fuze Development				PROJECT 645312: Hard Target Void Sensing Fuze			
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
645312: Hard Target Void Sensing Fuze	0.087	32.513	24.467	-	24.467	5.185	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
The Hard Target Void Sensing Fuze (HTVSF) is an advanced system designed to provide fuzing and void sensing functions for a weapon to penetrate and destroy hardened targets protected by multiple layers of soil and/or reinforced concrete. The HTVS Fuze shall also provide in-flight cockpit programmability, safing and arming, multi-function (time delay and void sensing) and multi-delay arming. FY 2011 and FY 2012 funding includes follow-on risk reduction and Engineering, Manufacturing, and Development (EMD) efforts to the the Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD) previously funded in PE 0604602F, Armament Ordnance Development. This Program Element was created to include the whole spectrum of fuze development and is positioned in Budget Activity 4 - Advanced Component Development and Prototypes (ACD&P).											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Engineering and Manufacturing Development Contract							-	14.888	22.405	-	22.405
Description: Conduct HTVSF EMD effort.											
FY 2010 Accomplishments: Dollars were early to need and were adjusted during OMNIBUS.											
FY 2011 Plans: Conduct HTVSF EMD effort to develop a joint use Air Force/Navy item to interface with legacy penetrator weapons to provide a capability to survive a 5K-15K psi penetration environment and detonate in a specific void inside the target or at a specific delay time programmed into the fuze. Effort to include building test hardware and test and evaluation efforts.											
FY 2012 Base Plans: Continue EMD program effort to develop a joint use Air Force/Navy item to interface with legacy pentatrator weapons to provide a capability to survive a 5K - 15K psi penetration environment and detonate in a specific void inside the target or at a specific delay time programmed into the fuze.											
FY 2012 OCO Plans:											
Title: Mgmt Analysis and Support							0.087	1.443	1.155	-	1.155

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0604635F: Ground Attack Weapons Fuze Development		PROJECT 645312: Hard Target Void Sensing Fuze	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Description:</b> Management/analysis support: including Critical Design Reviews (CDRs) required to ensure all additional post JCTD requirements are implemented					
<b>FY 2010 Accomplishments:</b> Management and Analysis support including CDRs required to ensure all additional post JCTD requirements are addressed.					
<b>FY 2011 Plans:</b> Main effort is the delta CDR to ensure all additional post JCTD requirements have been implemented.					
<b>FY 2012 Base Plans:</b> Continued effort to support EMD program					
<b>FY 2012 OCO Plans:</b>					
<b>Title:</b> Test Support					
<b>Description:</b> Test: build "hard" targets/prep for sled/flight test range events					
<b>FY 2010 Accomplishments:</b>					
<b>FY 2011 Plans:</b> Build hard targets/prep for sled/flight test events in support of EMD.					
<b>FY 2012 Base Plans:</b>					
<b>FY 2012 OCO Plans:</b>					
<b>Title:</b> External Support					
<b>Description:</b> Provide Subject Matter Experts to support EMD efforts.					
<b>FY 2010 Accomplishments:</b>					
<b>FY 2011 Plans:</b> Provide specialized expertise in manufacturing, testing and safety support for the HTVSF EMD program.					
<b>FY 2012 Base Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force							<b>DATE:</b> February 2011				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>			<b>PROJECT</b> 645312: <i>Hard Target Void Sensing Fuze</i>					
<b>B. Accomplishments/Planned Programs (\$ 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>
Provide specialized expertise in manufacturing, testing and safety support for the HTVSF EMD program. <b>FY 2012 OCO Plans:</b>											
<b>Title:</b> Government-Furnished Equipment/Government-Furnished Parts (GFE/GFP) Items <b>Description:</b> Ensure required government furnished equipment is available for the EMD program to include items such as bomb bodies/warheads, tailkits, and telemetry sets.  <b>FY 2010 Accomplishments:</b> <b>FY 2011 Plans:</b> provide government furnished items such as bomb bodies/warheads, tailkits and telemetry sets to support HTVSF EMD contract efforts and testing listed to support all contract and testing efforts. <b>FY 2012 Base Plans:</b> <b>FY 2012 OCO Plans:</b>							-	2.808	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>							0.087	32.513	24.467	-	24.467
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<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>
• PE 0604602F: <i>RDT&amp;E, Armament Ordnance Development</i>	7.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0208030F: <i>PAAF, WRM Ammunition</i>	0.000	0.000	0.000	0.000	0.000	15.630	39.280	38.500	39.510	Continuing	Continuing
<b>D. Acquisition Strategy</b>											
EMD – Sole Source Contract to JCTD Winner: Fixed Price Incentive Fee Estimated Contract Length - 37 months After contract award: 15 month Delta CDRs start Jun 12											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>	<b>PROJECT</b> 645312: <i>Hard Target Void Sensing Fuze</i>

**E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0604635F: Ground Attack Weapons Fuze Development				PROJECT 645312: Hard Target Void Sensing Fuze				
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
HTVSF EMD	C/TBD	Alliant Techsystems or Thales Missile Electronics:MN or UK,	-	14.888	Mar 2011	22.405	Jan 2012	-		22.405	31.920	69.213	TBD
Subtotal			-	14.888		22.405		-		22.405	31.920	69.213	
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
External	Various	ManTech, StratCom, AFOTEC, Safety support:Various,	-	0.905	Mar 2011	0.907	Jan 2012	-		0.907	0.388	2.200	0.000
GFE	TBD	Boeing:St Louis,	-	2.808	Mar 2011	-		-		-	0.320	3.128	0.000
Subtotal			-	3.713		0.907		-		0.907	0.708	5.328	0.000
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
Target build and sled/flight test	Various	46th Test Wing:Various,	-	12.469	Mar 2011	-		-		-	6.505	18.974	0.000
Subtotal			-	12.469		-		-		-	6.505	18.974	0.000
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
Program management/analysis support	Various	AAC/EBDZ:Eglin AFB, FL	0.087	1.443	Mar 2011	1.155	Jan 2012	-		1.155	1.567	4.252	0.000
Subtotal			0.087	1.443		1.155		-		1.155	1.567	4.252	0.000

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force								<b>DATE:</b> February 2011	
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	<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>	0.087	32.513	24.467	-	24.467	40.700	97.767		
<b>Remarks</b>									

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>	<b>PROJECT</b> 645312: <i>Hard Target Void Sensing Fuze</i>
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>	<b>PROJECT</b> 645312: <i>Hard Target Void Sensing Fuze</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JCTD CDR	3	2010	3	2010
Milestone B/EMD Award	2	2011	2	2011
Procure Flight Targets	2	2011	2	2012
Delta CDR	3	2012	3	2012
BLU-109 Flight Test	4	2013	2	2014
Milestone C/LRIP Award	3	2014	3	2014

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