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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
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							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	18.778	32.513	0.000	32.513	27.038	5.208	0.000	0.000	Continuing	Continuing
645312: Hard Target Void Sensing Fuze	0.000	18.778	32.513	0.000	32.513	27.038	5.208	0.000	0.000	0.000	83.700
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 2010 and FY 2011 funding includes follow-on risk reduction and 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. Program Change Summary (\$ in Millions)											
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total						
Previous President's Budget	0.000	18.778	0.000	0.000	0.000						
Current President's Budget	0.000	18.778	32.513	0.000	32.513						
Total Adjustments	0.000	0.000	32.513	0.000	32.513						
• Congressional General Reductions		0.000									
• Congressional Directed Reductions		0.000									
• Congressional Rescissions	0.000	0.000									
• Congressional Adds		0.000									
• Congressional Directed Transfers		0.000									
• Reprogrammings	0.000	0.000									
• SBIR/STTR Transfer	0.000	0.000									
• Other Adjustments	0.000	0.000	32.513	0.000	32.513						

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<p><u>Change Summary Explanation</u></p> <p>The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>				PROJECT 645312: <i>Hard Target Void Sensing Fuze</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
645312: <i>Hard Target Void Sensing Fuze</i>	0.000	18.778	32.513	0.000	32.513	27.038	5.208	0.000	0.000	0.000	83.700
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>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.</p> <p>FY 2010 and FY 2011 funding includes follow-on risk reduction and EMD efforts to the the Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD) previously funded in PE 0604602F, Armament Ordnance Development.</p> <p>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).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Begin HTVSF EMD effort.						0.000	17.194	20.573	0.000	20.573	
<i>FY 2009 Accomplishments:</i> In FY 2009: N/A											
<i>FY 2010 Plans:</i> In FY 2010: Begin HTVSF EMD 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.											

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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 Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JCTD downselect will occur in 3rd Qtr 2010. This funding will support follow-on EMD effort beginning in 4th Qtr 2010. Efforts will include building test hardware and test and evaluation efforts. HTVSF EMD 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 2011 Base Plans: In FY 2011: Complete build of test hardware, test and evaluation, and begin efforts to support low rate initial production scheduled to begin in 2013. HTVSF EMD 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 2011 OCO Plans: In FY 2011 OCO: Not Applicable.					
MAJOR THRUST: Management/analysis support: including Critical Design Reviews (CDRs) required to ensure all additional post JCTD requirements are implemented FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: Supports beginning of EMD contract efforts and preparation required to support delta CDR FY 2011 Base Plans: In FY 2011: Main effort is the delta CDR to ensure all additional post JCTD requirements have been implemented.	0.000	0.798	1.104	0.000	1.104

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Test: build "hard" targets/prep for sled/flight test range events FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: Build hard targets/prep for sled/flight test events in support of EMD. FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.		0.000	0.000	10.145	0.000	10.145
MAJOR THRUST: Provide Subject Matter Experts to support EMD efforts. FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: Provide specialized expertise in manufacturing, testing and safety support for the HTVSF EMD program.		0.000	0.000	0.390	0.000	0.390

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.											
MAJOR THRUST: Ensure required government furnished equipment is available for the EMD program to include items such as bomb bodies/warheads, tailkits, and telemetry sets. FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: Provide items such as bomb bodies/warheads, tailkits and telemetry sets to support HTVSF EMD contract efforts and testing. FY 2011 Base Plans: In FY 2011: Continue to provide government furnished items listed to support all contract and testing efforts. FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						0.000	0.786	0.301	0.000	0.301	
Accomplishments/Planned Programs Subtotals						0.000	18.778	32.513	0.000	32.513	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0604602F: Armament Ordnance Development	8.569	9.930	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0208030F: <i>WRM Ammunition</i>	0.000	0.000	0.000	0.000	0.000	0.000	18.750	37.500	38.500	0.000	0.000
D. Acquisition Strategy EMD – Sole Source Contract to JCTD Winner: Cost Plus Fixed Fee W/ Incentives for Cost, Schedule, and Performance (small FF, larger incentive at end) Estimated Contract Length - 33 months After contract award: 6 month Delta CDRs start Jan 11											
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 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>				PROJECT 645312: <i>Hard Target Void Sensing Fuze</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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/CPIF	Alliant Techsystems or Thales Missile Electronics Minneapolis, MN, or Basingstroke, UK	0.000	17.194	Jul 2010	20.573	Jan 2011	0.000		20.573	23.466	61.233	Continuing
Subtotal			0.000	17.194		20.573		0.000		20.573	23.466	61.233	
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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/ Various	ManTech, StratCom, AFOTEC, Safety support Various	0.000	0.000		0.390		0.000		0.390	0.388	0.778	0.000
GFE	TBD/TBD	TBD TBD	0.000	0.786		0.301		0.000		0.301	0.320	1.407	0.000
Subtotal			0.000	0.786		0.691		0.000		0.691	0.708	2.185	0.000

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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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/Various	46th Test Wing Various	0.000	0.000		10.145		0.000		10.145	6.505	16.650	0.000
Subtotal			0.000	0.000		10.145		0.000		10.145	6.505	16.650	0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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	TBD/TBD	679 ARSS Eglin AFB, FL	0.000	0.798		1.104		0.000		1.104	1.567	3.469	0.000
Subtotal			0.000	0.798		1.104		0.000		1.104	1.567	3.469	0.000

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Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	18.778		32.513		0.000		32.513	32.246	83.537	
Remarks Total Prior Years Cost may include only FY 2009 data.													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 4: Advanced Component Development & Prototypes (ACD&P)

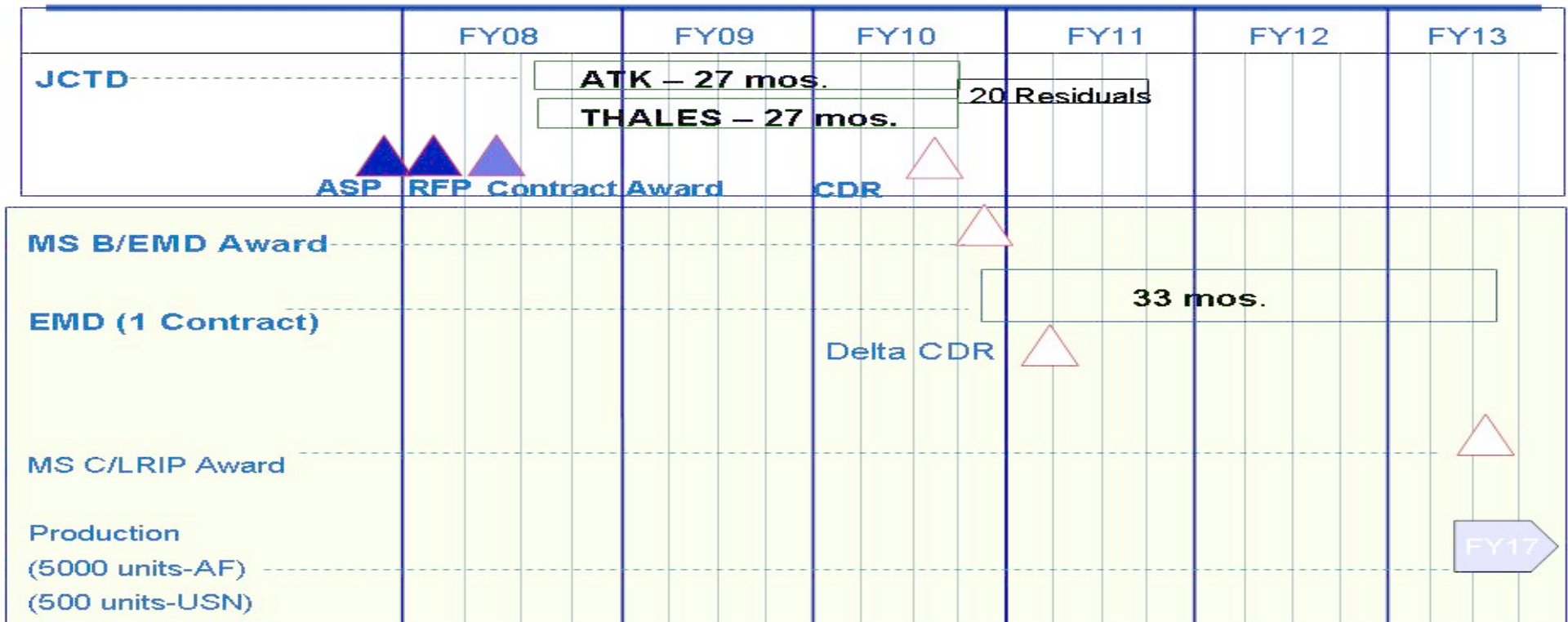
R-1 ITEM NOMENCLATURE

PE 0604635F: Ground Attack Weapons Fuze Development

PROJECT

645312: Hard Target Void Sensing Fuze

HTVSF EMD:Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604635F: <i>Ground Attack Weapons Fuze Development</i>	PROJECT 645312: <i>Hard Target Void Sensing Fuze</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
CDR (JCTD event; feeds 1st Delta CDR)	4	2010	4	2010
Order & Build Test Hardware	1	2011	4	2011
Delta CDR I	2	2011	2	2011
MS B/EMD Award	4	2010	4	2010
Delta CDR II	4	2011	4	2011

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