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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0604327F Hardened Target Munitions				PROJECT 644641		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
644641	Hard and Deeply Buried Target Defeat System (HDBTDS)	2,466	4,840	0	0	0	0	0	0	11,455
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0
<p>(U) <u>A. Mission Description</u></p> <p>The Hard and Deeply Buried Target Defeat System (HDBTDS) program is an effort designed to hold at risk those highest priority assets essential to the enemy's war fighting ability, which are heavily defended and protectively hardened. Hardening techniques include construction of facilities, many of which are deep underground with multiple layers of reinforced concrete, rock rubble, and/or earth overburden. Other hardened targets include operations within caves, tunnels, and mountains built using rapidly improving construction equipment exported by allies and adversaries on a large scale. (Examples include enemy command and control facilities, air defense facilities, facilities for the production, storage, and deployment of weapons including weapons of mass destruction, surface to surface missile launch sites, aircraft storage sites, artillery sites.) Potential solutions include (but are not limited to) Special Forces, conventional short or long range ballistic missiles (land or sea launched), cruise missiles, direct attack munitions, and standoff weapons.</p> <p>An Analysis of Alternatives (AOA) was conducted to evaluate the weapon concepts to determine the most promising concepts to move forward into a follow-on program. The potential weapon concepts were evaluated in an air campaign analysis. The results of the AOA were presented to the Joint Requirements Oversight Council (JROC) in 4th Quarter FY 1999.</p> <p>The AOA is being documented into a report for future reference. The primary legacy hard target penetrator weapon, GBU-28, will be tested in rock to validate computer models used in the AOA analysis and to provide test data for future use when considering weapon design alternatives for increased penetration capability. The results will be presented in 1st Quarter FY 2001.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$1,083 Completed Analysis of Alternatives (AOA) study effort.</p> <p>(U) \$1,383 Continue field agency activities to support planning efforts (acquisition support and documentation).</p> <p>(U) \$2,466 Total</p>										
Project 644641		Page 1 of 6 Pages				Exhibit R-2 (PE 0604327F)				

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT		
04 - Demonstration and Validation	0604327F Hardened Target Munitions	644641		
(U) <u>A. Mission Description Continued</u>				
(U) <u>FY 2000 (\$ in Thousands)</u>				
(U) \$1,100	Document AOA analysis into a report for future reference and use by other DoD analysis organizations. Important data in the AOA report will include the worldwide hard and deeply buried target set, key intelligence inputs and requirements, weapon concept descriptions including life cycle cost estimates, and modeling assumptions and methodology.			
(U) \$2,290	Conduct GBU-28 rock test program. This includes acquiring GBU-28 test assets and launching the weapons from F-15E aircraft into rock targets to validate models and provide data for potential future design of improved warhead penetration capability.			
(U) \$970	Conduct field agency activities. This includes project office and contractor support to manage the Hardened Target Munitions program, consisting of testing GBU-28 in rock in coordination with the Defense Threat Reduction Agency (DTRA), and documentation of the AOA.			
(U) \$480	System Engineering and Technical Analysis (SETA) support will include evaluation of GBU-28 performance in rock and design analysis and prototype evaluation of potential future upgrades to the GBU-28 5000 lb hard target penetrator weapon and other legacy weapons.			
(U) \$4,840	Total			
(U) <u>FY 2001 (\$ in Thousands)</u>				
(U) \$0	No Activity			
(U) \$0	Total			
(U) <u>B. Budget Activity Justification</u>				
This program is in budget activity 4 - Demonstration and Validation, because the program would develop a Hard Target Munitions capability to precisely hit and destroy hard and deeply buried targets not currently held at risk.				
(U) <u>C. Program Change Summary (\$ in Thousands)</u>				
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2000 PBR)	9,803	4,910	0	14,713
(U) Appropriated Value	3,000	4,910		7,910
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-451	-70		
b. Small Business Innovative Research	-69			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram				
e. Rescissions	-14			
f. Other		0		
Project 644641	Page 2 of 6 Pages	Exhibit R-2 (PE 0604327F)		

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(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>											
		<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>		<u>Total Cost</u>			
(U)	Adjustments to Budget Years Since FY 2000 PBR	0		0		0		0			
(U)	Current Budget Submit/FY 2001 PBR	2,466		4,840		0		11,455			
(U) <u>Significant Program Changes:</u>											
Funding: FY 1999 funding was reduced from \$9.8M to \$3.0M for the Air Force and from \$9.8M to \$3.0M for the Navy. This reduction eliminated ongoing parameter analysis and trade study efforts. All Air Force and Navy funding was combined to complete the AOA analysis and prepare for follow-on program. FY 2000 funding was added to document the AOA into a report; conduct testing and evaluation of the GBU-28 5000 lb weapon in rock; and perform design analysis and evaluation of potential future upgrades to the GBU-28 hard target penetrator weapon and other legacy weapons.											
Schedule: The AOA was extended to evaluate additional concepts and conduct a survivability analysis. The AOA was completed in 4Q FY 1999											
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>											
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>Cost to</u>	<u>Total Cost</u>	
		<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>		
(U)	Not Applicable										
(U) <u>E. Acquisition Strategy</u>											
The contract to perform the AOA work was a modification to an existing Systems Engineering and Technical Assistance (SETA) support contract to the Ogden Air Logistics Center (OO-ALC) ICBM System Program Office (SPO) - a Cost Plus Award Fee (CPAF) contract filled by TRW (Colorado Springs). Hardened Target Munitions Program alternatives were fully evaluated in the AOA. At the conclusion of the AOA, the Air Force had the necessary information to support the GBU-28 5000 lb weapon as the most cost-effective alternative to defeat hard and deeply buried targets and to conduct investigations into improvements of the GBU-28 and other legacy weapons.											
(U) <u>F. Schedule Profile</u>											
				<u>FY 1999</u>			<u>FY 2000</u>		<u>FY 2001</u>		
				1	2	3	4	1	2	3	4
(U)	Complete AOA						*				
(U)	Brief AOA Results						*				
(U)	Publish AOA Report								X		
(U)	Conduct Testing in Rock								X		
(U)	Brief Rock Test Results									X	
Project 644641		Page 3 of 6 Pages						Exhibit R-2 (PE 0604327F)			

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BUDGET ACTIVITY

04 - Demonstration and Validation

PE NUMBER AND TITLE

0604327F Hardened Target Munitions

PROJECT

644641

(U) F. Schedule Profile Continued

<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
1	2	3	4	1	2	3	4	1	2	3	4

* = Completed event
X = Planned event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0604327F Hardened Target Munitions				PROJECT 644641		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>		
(U)	AOA					1,083	1,100	0		
(U)	Field Agency and Contractor Support					1,383	970	0		
(U)	SETA Contractor						480	0		
(U)	GBU-28 Test Assets						240	0		
(U)	GBU-28 T&E						2,050	0		
(U)	Total					2,466	4,840	0		
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
SETA Contractor	SS/CPAF	Oct 99	480	480	0	0	480	0	0	480
TRW (CO Spgs)	SS/CPAF	Oct 96	8,894	8,894	2,068	1,083	1,100	0	0	4,251
Note: EAC estimate by Performing Activity and Project Office includes FY96 and FY97 funds from PE 0603311F.										
<u>Support and Management Organizations</u>										
TRW (McLean, VA)	SS/CPAF	Dec 98	N/A	N/A	0	225	400	0	0	625
AFMC/OAS Kirtland AFB	MIPR	Dec 97	N/A	N/A	20	10	10	0	0	40
SMC/TE (Kirtland)	MIPR	Oct 97	N/A	N/A	943	172	0	0	0	1,115
ASC/YG (Eglin)	MIPR	Oct 97	N/A	N/A	1,118	976	800	0	0	2,894
<u>Test and Evaluation Organizations</u>										
WSMR (White Sands)	MIPR	Oct 99	N/A	N/A	0	0	1,350	0	0	1,350
F-15 Support (Eglin)	MIPR	Oct 99	N/A	N/A	0	0	700	0	0	700

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BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0604327F Hardened Target Munitions				PROJECT 644641	
(U) Government Furnished Property:									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
N/A N/A									
<u>Support and Management Property</u>									
<u>Test and Evaluation Property</u>									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				2,068	1,083	1,580	0	0	4,731
Subtotal Support and Management				2,081	1,383	1,210	0	0	4,674
Subtotal Test and Evaluation				0	0	2,050	0	0	2,050
Total Project				4,149	2,466	4,840	0	0	11,455