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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force **Date:** February 2018

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605214F I <i>Ground Attack Weapons Fuze Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
655313: <i>Hard Target Void Sensing Fuze</i>	-	0.903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program was created to include the whole spectrum of general purpose and specialized fuze development and integration of advanced precision, navigation, and timing (PNT) capabilities (i.e., GPS, non-GPS, optical, passive, active, etc.), resulting in commodity fuzes for use with air-to-ground weapons.

The Hard Target Void Sensing Fuze (HTVSF) is an advanced system designed to provide fuzing and void sensing functions for legacy and advanced penetrator weapons to destroy hardened targets protected by multiple layers of soil and/or reinforced concrete. The HTVSF will also provide in-flight cockpit programmability, safing and arming, multi- function (time delay and void sensing) and multi-delay arming. Program Element funding currently supports the Engineering, Manufacturing, and Development (EMD) effort for HTVSF.

HTVSF completed Milestone C in May 2015, Low-Rate Initial Production (LRIP 1) was awarded in Jul 2015, Low-Rate Initial Production (LRIP II) was awarded in Sept 2016, and Full Rate Production (FRP) is projected to award in Sept 2017. EMD funding is currently needed in FY16-FY17 to complete BLU-109/113 follow-on testing and post-Milestone C development requirements as derived from the Milestone C Decision.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver HTVSF weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F,0605832F,and 0605898F.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks.

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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.937	0.000	0.000	0.000	0.000
Current President's Budget	0.903	0.000	0.000	0.000	0.000
Total Adjustments	-0.034	0.000	0.000	0.000	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.034	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

Change Summary Explanation

No Significant Program Changes

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: HTVSF Test Support	0.903	0.000	0.000	0.000	0.000
Description: BLU-113 follow-on testing; post-Milestone C (MS C) development.					
FY 2018 Plans: N/A					
FY 2019 Base Plans: N/A					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement: N/A					
Accomplishments/Planned Programs Subtotals	0.903	0.000	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PAAF 01 Line Item 356120: <i>Fuzes</i>	22.243	31.537	0.000	44.000	44.000	0.000	0.000	-	-	0.000	97.780

Remarks

- Navy PE 050120 to fund 50/450 units FY15 and FY17.

E. Acquisition Strategy

N/A

F. 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 2019 Air Force **Date:** February 2018

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605214F / <i>Ground Attack Weapons Fuze Development</i>	Project (Number/Name) 655313 / <i>Hard Target Void Sensing Fuze</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Target build and sled/flight test	Various	Eglin AFB (96 TW) / Holloman AFB / White Sands Missile Range : Various	-	0.903	Sep 2017	-		-		-		-	Continuing	Continuing	-
Subtotal			-	0.903		-		-		-		-	Continuing	Continuing	N/A

Remarks
Various locations to include: Eglin AFB, Fort Walton Beach FL; Holloman AFB, Alamogordo NM; White Sands Missile Range, Las Cruces NM.

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.903	0.000	-	-	-	Continuing	Continuing	N/A

Remarks
HTVSF Completed Milestone C in Apr 2015 and Low-Rate Initial Production (LRIP) was awarded in Jul 2015. \$3.598M in FY16 EMD funding and \$.937M in FY17 funding is needed to complete BLU-113 follow-on testing and post Milestone C development requirements as derived from the Milestone C Decision.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605214F / <i>Ground Attack Weapons Fuze Development</i>	Project (Number/Name) 655313 / <i>Hard Target Void Sensing Fuze</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

HTVSF	
Follow-on Testing/Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605214F / <i>Ground Attack Weapons Fuze Development</i>	Project (Number/Name) 655313 / <i>Hard Target Void Sensing Fuze</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
HTVSF				
Follow-on Testing/Development	1	2017	4	2017

Note

HTVSF Completed Milestone C in Apr 2015 and Low-Rate Initial Production 2 (LRIP) was awarded in Sep 2016. \$.937M in FY17 funding is needed to complete BLU-/113 follow-on testing and post Milestone C development requirements as derived from the Milestone C Decision.