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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207590F I Seek Eagle							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	25.304	24.699	28.237	0.000	28.237	29.734	31.045	32.299	33.427	Continuing	Continuing
674037: SEEK EAGLE Certifications	-	25.304	24.699	28.237	0.000	28.237	29.734	31.045	32.299	33.427	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Air Force operates a variety of combat aircraft that carry numerous and varied stores (munitions, missiles, fuel tanks, targeting pods, range pods, electronic countermeasures pods, etc.). Stores are carried in many different loading combinations determined by operational and training scenarios, missions, tactics, and weapon development programs. Aircraft stores combinations change as operational plans and tactics change and as new stores are developed and fielded. Before operational, training, or test use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), as well as verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes certification recommendations and recommended flight clearances through any combination of engineering analysis, wind tunnel testing, modeling and simulation, and ground/flight test and evaluation. The SEEK EAGLE effort encompasses eight disciplines: Fit and Function, Flutter, Loads, Stability and Control, Electromagnetic Compatibility/Interference (EMC/EMI), Separations, Ballistics, and Safe Escape.

In support of certification, the program recommends approximately 1000 aircraft/store combinations for flight each year with analysis and testing, requiring from weeks to years depending on the complexity. Integrated solutions for combat aircrew weapon delivery planning problems are developed and provided to combat forces via Combat Weapons Delivery Software (CWDS) and Joint Safe Escape Analysis Solution (JSEAS). SEEK EAGLE works in coordination with the Air Force Safety Center to provide Hazards of Electromagnetic Radiation to Ordnance (HERO) analysis and certification recommendations of ordnance systems containing electro-explosive devices. The program is also responsible for inserting new and emerging technologies into the SEEK EAGLE process as well as providing resources for the sustainment of a viable Air Force aircraft/store certification capability.

SEEK EAGLE funds are currently budgeted to support certification testing and analysis for new and inventory stores including, but not limited to: Small Diameter Bomb I & II (SDB), Laser Joint Direct Attack Munitions (LJDAM), Joint Air-to-Surface Standoff Missile (JASSM), Air Intercept Missile (AIM-9X), Advanced Medium Range Air-to-Air Missile (AIM-120D), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Rack), BRU-61 (SDB Bomb Rack), Advanced Precision Kill Weapon System (APKWS), Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, laser guided bombs, B61 (Mod 12), penetrator warhead upgrades, practice bomb and aircraft instrumentation pod modifications. SEEK EAGLE funds are also used to support certification of other inventory stores on Combat Air Forces (CAF) and Special Operations Command (SOCOM) aircraft. In addition, these funds further support capability development and weapons certification efforts required by Air Combat Command to achieve Full Operational Capability (FOC) for the F-35A. Likewise, these funds also support F-22A weapons certification efforts for emerging weapons and B-21 development for critical Engineering and Manufacturing Development (EMD) milestones.

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This program element may include necessary civilian pay expenses required to manage, execute, and deliver SEEK EAGLE 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, 0605898F, and 0605833F.						
As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.						
This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.						
B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget		25.397	24.699	25.160	0.000	25.160
Current President's Budget		25.304	24.699	28.237	0.000	28.237
Total Adjustments		-0.093	0.000	3.077	0.000	3.077
• 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		-0.093	0.000			
• Other Adjustments		0.000	0.000	3.077	0.000	3.077
Change Summary Explanation						
FY 2020 \$3.077M increase funds critical F-35A weapons integration test support to achieve Full Operational Capability (FOC) for F-35A.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2018	FY 2019	FY 2020
Title: AFSEO Warfighter Mission				13.815	16.416	19.144
Description: Supports the ability to rapidly meet emerging warfighter needs for global operations such as Operation INHERENT RESOLVE, Operation FREEDOM'S SENTINEL, and other ongoing world-wide operations.						
FY 2019 Plans:						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
Support urgent warfighter needs such as Joint Urgent Operation Needs (JUONs) and Quick Reaction Capabilities (QRCs) as well as all disciplines, to include mission planning, loads, flutter, separations, safe escape, engineering analysis, information assurance, Combat Weapons Delivery Software (CWDS), and weapon program support to include B61-12 & APKWS. FY 2020 Plans: Continue to support urgent warfighter needs such as JUONs and QRCs as well as all disciplines, to include mission planning, loads, flutter, separations, safe escape, engineering analysis, information assurance, CWDS, and weapon program support to include B61-12 & APKWS. Validate F-35 capability development. Execute F-35 store compatibility using ground and flight tests, computer modeling, data analysis, and delivery of increased capability to the F-35 user. FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase due to additional manpower support for F-35A mission requirements.				
Title: 5th Generation Capability Development and Support Description: Supports capability development and weapons certification efforts required by Air Combat Command to achieve Full Operational Capability (FOC) for the F-35A. Funds F-22A capability development and support for emerging weapons certification efforts in addition to B-21 capability development and EMD support. FY 2019 Plans: Maintain F-35A, F-22A, and B-21 capability development and certification efforts. FY 2020 Plans: Continue to maintain F-35A, F-22A, and B-21 capability development and certification efforts. FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase is minimal.		5.232	2.987	3.166
Title: Advanced Next Generation Weapon Capability Development and Support Description: Development and certification support for advanced systems such as hypersonic weapons and other classified weapons programs; increased B-1, B-2, and B-52 certification support for advanced weapons such as Joint Air-to-Surface Standoff Missile-Extended Range (JASSM-ER) and Long Range Anti-Ship Missile (LRASM) for PACOM AOR. FY 2019 Plans: Increase security posture and tool development for next-generation weapons certification. FY 2020 Plans:		2.820	2.412	2.642

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
Continue to increase security posture and tool development for next-generation weapons certification.				
FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase is minimal.				
Title: Modeling and Simulation Capability Description: Modeling and Simulation (M&S) capability development in support of store certification. Supports cutting-edge innovation that leverages artificial intelligence to enable rapid weapons certification. FY 2019 Plans: Support development and sustainment of state-of-the-art engineering & business tools to support SEEK EAGLE enterprise. FY 2020 Plans: Continue to support development and sustainment of state-of-the-art engineering & business tools to support SEEK EAGLE enterprise. FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase is minimal.		2.272	1.561	1.700
Title: Aircraft-Store Compatibility Analysis Description: Evaluates aircraft/store compatibility through analysis, M&S, and flight and ground test. Provides flight recommendations to airworthiness authorities. FY 2019 Plans: Provide for USAF Air-to-Air and Air-to-Ground Munitions certification efforts such as towed decoys, Electronic Countermeasures (ECM) pods, and chaff/flare countermeasures certification efforts, and Airborne Instrumentation Systems pods, fuel tanks, and travel pod certification efforts. FY 2020 Plans: Continue to provide for USAF Air-to-Air and Air-to-Ground Munitions certification efforts such as towed decoys, ECM pods, and chaff/flare countermeasures certification efforts, and Airborne Instrumentation Systems pods, fuel tanks, and travel pod certification efforts. FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase is minimal.		1.165	1.323	1.585
Accomplishments/Planned Programs Subtotals		25.304	24.699	28.237

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D. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
E. Acquisition Strategy The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. For initial aircraft-weapons integration, the aircraft or weapon program office is responsible for budgeting and providing the test assets to the Air Force SEEK EAGLE Office (AFSEO) for the store certification requirements. For post-integration certification requirements, AFSEO funds are used to obtain the non-inventory test assets.		
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 2020 Air Force												Date: February 2019			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0207590F / Seek Eagle				Project (Number/Name) 674037 / SEEK EAGLE Certifications					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
F-22 Capabilities Raytheon	C/CPFF	Raytheon : Waltham, MA	-	0.754	Mar 2018	-		-		-		-	Continuing	Continuing	-
AFSEO Mission and Planning Support (SEMATS)	C/CPFF	ERC : Ft. Walton Beach, FL	-	7.014	Mar 2018	11.980	Mar 2019	12.563	Mar 2020	-		12.563	Continuing	Continuing	-
F-35 Capabilities	C/CPFF	Lockheed Martin : Marietta, GA	-	1.048	Nov 2017	1.170	Nov 2018	2.340	Nov 2019	-		2.340	Continuing	Continuing	-
F-22 Capabilities Lockheed Martin	C/CPFF	Lockheed Martin : Marietta, GA	-	-		0.415	Mar 2019	0.261	Mar 2020	-		0.261	Continuing	Continuing	-
Multiple Fighter and Weapon Capability Support	C/CPFF	Multiple : Multiple	-	4.642	Nov 2017	0.155	Mar 2019	0.109	Mar 2020	-		0.109	Continuing	Continuing	-
F-16 Aero Sustainment	C/CPFF	Lockheed Martin : Marietta, GA	-	0.150	Feb 2018	0.120	Feb 2019	0.100	Feb 2020	-		0.100	Continuing	Continuing	-
Subtotal			-	13.608		13.840		15.373		-		15.373	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
96th Test Wing	RO	Eglin AFB : Eglin AFB, FL	-	8.579	Oct 2017	8.107	Oct 2018	8.024	Oct 2019	-		8.024	Continuing	Continuing	-
AEDC	PO	Arnold Engineering Dev Complex : Arnold AFB, TN	-	1.937	Jan 2018	1.531	Jan 2019	3.463	Jan 2020	-		3.463	Continuing	Continuing	-
Subtotal			-	10.516		9.638		11.487		-		11.487	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS Support (TMAS)	C/CPFF	Eglin AFB : Eglin AFB, FL	-	0.457	Oct 2017	0.450	Oct 2018	0.472	Oct 2019	-		0.472	Continuing	Continuing	-

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Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support	Various	Various : Various, FL	-	0.723	Oct 2017	0.771	Oct 2018	0.905	Oct 2019	-		0.905	Continuing	Continuing	-
Subtotal			-	1.180		1.221		1.377		-		1.377	Continuing	Continuing	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	25.304		24.699		28.237		-		28.237	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force																Date: February 2019			
Appropriation/Budget Activity								R-1 Program Element (Number/Name)								Project (Number/Name)			
3600 / 7								PE 0207590F / Seek Eagle								674037 / SEEK EAGLE Certifications			

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
SEEK EAGLE																												
AFSEO Warfighter Mission																												
5th Generation Capability Development and Support																												
Advanced Next Generation Weapon Capability Development and Support																												
Modeling and Simulation Capability																												
Aircraft Store Capability Analysis																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force		Date: February 2019
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207590F / <i>Seek Eagle</i>	Project (Number/Name) 674037 / <i>SEEK EAGLE Certifications</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SEEK EAGLE				
AFSEO Warfighter Mission	1	2018	4	2024
5th Generation Capability Development and Support	1	2018	4	2024
Advanced Next Generation Weapon Capability Development and Support	1	2018	4	2024
Modeling and Simulation Capability	1	2018	4	2024
Aircraft Store Capability Analysis	1	2018	4	2024

Note

Note: The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Rather, user requirements trigger the SEEK EAGLE process for requested aircraft-store configurations for flight clearances. Air Force SEEK EAGLE Office (AFSEO) work is completed in accordance with the designated user priority established through the SEEK EAGLE Prioritization List process.