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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	22.046	23.844	21.564	-	21.564	25.560	25.569	25.115	25.564	Continuing	Continuing
674037: SEEK EAGLE Certifications	-	22.046	23.844	21.564	-	21.564	25.560	25.569	25.115	25.564	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 countless 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 about 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), Wind Corrected Munitions Dispenser (WCMD), Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, laser guided bombs, F-22 supersonic tank, B61 (Mod 12), penetrator warhead upgrades (BLU-111/BLU-117), 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, assist the F-35 JPO with subject matter expertise in the System Development and Demonstration phase (e.g., development of organic store certifications capability to support F-35 in the Production, Sustainment, and Follow-on Development phases), sustain organic F-22 store certifications capability, and to obtain non-inventory stores and store data for post-integration certification requirements.

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The FY2016 funding request was reduced by \$2.306 million to account for the availability of prior execution balances.								
This program is in Budget Activity 7, Operational System Development. These budget activities include development efforts to upgrade systems currently fielded or which have approval for full rate production and anticipate production funding in the current or subsequent year.								
B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total		
Previous President's Budget		22.386	23.844	24.014	-	24.014		
Current President's Budget		22.046	23.844	21.564	-	21.564		
Total Adjustments		-0.340	-	-2.450	-	-2.450		
• Congressional General Reductions		-	-					
• Congressional Directed Reductions		-	-					
• Congressional Rescissions		-	-					
• Congressional Adds		-	-					
• Congressional Directed Transfers		-	-					
• Reprogrammings		-	-					
• SBIR/STTR Transfer		-0.340	-					
• Other Adjustments		-	-	-2.450	-	-2.450		
Change Summary Explanation								
FY16, BY 1 Other Adjustments:								
-\$2.306M, availability of prior execution balances								
-\$0.144M, inflation adjustment								
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: F-22A				1.829	-	-	-	-
Description: F-22A Capability Development and Weapons Certification.								
FY 2014 Accomplishments:								
- Finished certification of external fuel tanks at supersonic speeds and full AIM-120D integration.								
- Starting in FY15, F-22 weapon certification requirements will now be a part of, Aircraft/Store Compatibility Analysis major thrust.								
FY 2015 Plans:								
N/A								
FY 2016 Base Plans:								

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A						
FY 2016 OCO Plans: N/A						
Title: F-35 Description: F-35 Capability Development for SEEK EAGLE began in FY13, to support Combat Air Force's (CAF's) anticipated requirements after Initial Operational Capability (IOC).  FY 2014 Accomplishments: Continued development of organic F-35 engineering capability in all eight SEEK EAGLE engineering disciplines by receiving contractor data, tools, and technical support.  FY 2015 Plans: Continue development of organic F-35 engineering capability in all eight SEEK EAGLE engineering disciplines by receiving contractor data, tools, and technical support.  FY 2016 Base Plans: Continue development of organic F-35 engineering capability in all eight SEEK EAGLE engineering disciplines by receiving contractor data, tools, and technical support.  FY 2016 OCO Plans: N/A		3.571	4.700	4.500	-	4.500
Title: M&S Capability Description: Modeling and Simulation (M&S) capability development in support of store certification  FY 2014 Accomplishments: - Continued development and improvement of M&S capability to support store certification disciplines. - Developed tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.  FY 2015 Plans: - Continue development and improvement of M&S capability to support store certification disciplines.		2.222	3.000	3.000	-	3.000

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<p>- Develop tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.</p> <p><b>FY 2016 Base Plans:</b></p> <p>- Continue development and improvement of M&amp;S capability to support store certification disciplines.</p> <p>- Develop tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.</p> <p><b>FY 2016 OCO Plans:</b></p> <p>N/A</p>						
<p><b>Title:</b> Aircraft/Store Compatibility Analysis</p> <p><b>Description:</b> Evaluate aircraft/store compatibility through analysis, M&amp;S and flight and ground test. Provide flight recommendations to airworthiness authorities.</p> <p><b>FY 2014 Accomplishments:</b></p> <p>- Provided compatibility flight recommendations as requested by ACC/A8, AFLCMC, AFSOC and other agencies.</p> <p>- Supported extensive F-16/SDB and F-16/AIM-9X flight testing.</p> <p><b>FY 2015 Plans:</b></p> <p>- Continually provide compatibility flight recommendations as requested by ACC/A8, AFLCMC, AFSOC and other agencies.</p> <p>- Support extensive SDB II and B-61 (MOD 12) flight testing.</p> <p><b>FY 2016 Base Plans:</b></p> <p>- Continually provide compatibility flight recommendations as requested by ACC/A8, AFLCMC, AFSOC and other agencies.</p> <p>- Perform extensive SDB II and B-61 (MOD 12) flight testing.</p> <p><b>FY 2016 OCO Plans:</b></p> <p>N/A</p>		12.687	14.442	12.064	-	12.064
<p><b>Title:</b> Combat Weapon Delivery Software (CWDS)</p> <p><b>Description:</b> Develop Mission Planning Software, including Combat Weapon Delivery Software (CWDS).</p>		1.737	1.702	2.000	-	2.000

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>						
	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>	
<p><b><i>FY 2014 Accomplishments:</i></b></p> <ul style="list-style-type: none"> <li>- Continued support of efforts aimed at improving aircrew interface. Continued support of CWDS requirements for multiple mission planning environments (MPEs) on the Joint Mission Planning Software (JMPS) framework.</li> <li>- Continued transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continued support of legacy CWDS development to transition all MPEs to new JMPS framework.</li> </ul> <p><b><i>FY 2015 Plans:</i></b></p> <ul style="list-style-type: none"> <li>- Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on the JMPS framework.</li> <li>- Continue transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture.</li> <li>- Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.</li> </ul> <p><b><i>FY 2016 Base Plans:</i></b></p> <ul style="list-style-type: none"> <li>- Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on the JMPS framework.</li> <li>- Begin to support the F-35 mission planning support environment using the current CWDS development as a baseline for development.</li> <li>- Continue transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture.</li> <li>- Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.</li> </ul> <p><b><i>FY 2016 OCO Plans:</i></b> N/A</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		22.046	23.844	21.564	-	21.564
<b>D. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>E. Acquisition Strategy</b> 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 AFSEO for the store certification requirements. For post integration certification requirements, AFSEO funds are used to obtain the non-inventory test assets.						

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### 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 2016 Air Force												Date: February 2015			
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 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Organic F-22 Capabilities	C/CPFF	Lockheed Martin : Marietta, GA	-	0.500	Jan 2014	-		-		-		-	-	0.500	-
Organic F-35 Capabilities	C/CPFF	Lockheed Martin : Marietta, GA	-	3.000	Jan 2014	4.500	Feb 2015	4.200	Feb 2016	-		4.200	Continuing	Continuing	-
Multiple fighter and weapon capability support	C/CPFF	Lockheed Martin : Marietta, GA	-	-		-		0.200	Nov 2015	-		0.200	Continuing	Continuing	-
F15 Test Support	C/CPFF	Boeing : St Louis, MO	-	-		0.010	Feb 2015	0.010	Jan 2016	-		0.010	Continuing	Continuing	-
Enhance Existing and Develop Organic Electro EMI Capabilities	C/CPFF	Applied Research : Baltimore, MD	-	-		0.250	Feb 2015	0.250	Mar 2016	-		0.250	Continuing	Continuing	-
Subtotal			-	3.500		4.760		4.660		-		4.660	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Mission Support CWDS	C/CPFF	Survice : Ft Walton Beach, FL	-	2.000	Nov 2013	2.000	Nov 2014	2.000	Nov 2015	-		2.000	Continuing	Continuing	-
Subtotal			-	2.000		2.000		2.000		-		2.000	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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	-	12.009	Oct 2013	13.584	Oct 2014	12.064	Oct 2015	-		12.064	Continuing	Continuing	-
AEDC	PO	Arnold Engineering Dev Complex : Arnold AFB, TN	-	0.500	Dec 2013	1.500	Jan 2015	0.840	Jan 2016	-		0.840	Continuing	Continuing	-
AFTC	Various	Edwards AFB : Edward AFB, CA	-	1.000	Sep 2013	2.000	Aug 2015	-		-		-	Continuing	Continuing	-

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<b>Test and Evaluation (\$ in Millions)</b>				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Various: Navy, other AF	Various	China Lake, Patuxent River, other : Multiple,	-	3.037	Dec 2013	-		2.000	Dec 2015	-		2.000	Continuing	Continuing	-
<b>Subtotal</b>			-	16.546		17.084		14.904		-		14.904	-	-	-
<b>Management Services (\$ in Millions)</b>				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
<b>Subtotal</b>			-	-		-		-		-		-	-	-	-
			Prior Years	FY 2014	FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract	
<b>Project Cost Totals</b>			-	22.046	23.844		21.564		-		21.564	-	-	-	
<b>Remarks</b>															



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2016 Air Force			<b>Date:</b> February 2015		
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			<b>Project (Number/Name)</b> 674037 / <i>SEEK EAGLE Certifications</i>		

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
Store compatabilty analysis, to include, but not limited to, LJDAM, JASSM,SDB, AIM-9X, AIM-120, MALD, SNIPER, BRU-57, B61 (Mod 12), BLU-111, and BLU-117 [Requests are processed by user priority]																												
F-35 Capability Development: Initial Operational Capability																												
F-35 Capability Development: Full Operational Capability																												
Modeling and Simulation Capability: development and refresh of analysis tools																												
Combat Weapon Delivery Software: develop and enhance multiple mission planning environments on the Joint Mission Planning Software framework																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Air Force			<b>Date:</b> February 2015
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Store compatabilty analysis, to include, but not limited to, LJDAM, JASSM,SDB, AIM-9X, AIM-120, MALD, SNIPER, BRU-57, B61 (Mod 12), BLU-111, and BLU-117 [Requests are processed by user priority]	1	2014	4	2020
F-35 Capability Development: Initial Operational Capability	4	2016	4	2016
F-35 Capability Development: Full Operational Capability	4	2018	4	2018
Modeling and Simulation Capability: development and refresh of analysis tools	1	2014	4	2020
Combat Weapon Delivery Software: develop and enhance multiple mission planning environments on the Joint Mission Planning Software framework	1	2014	4	2020