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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207590F: <i>Seek Eagle</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	19.165	18.599	22.654	-	22.654	24.342	24.422	24.571	25.715	Continuing	Continuing
674037: <i>SEEK EAGLE Certifications</i>	19.165	18.599	22.654	-	22.654	24.342	24.422	24.571	25.715	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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. 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). 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 (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-120,AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Rack), BRU-61 (SDB Bomb Rack) low collateral damage warhead (BLU-129), Wind Corrected Munitions Dispenser (WCMD), Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, laser guided bombs, laser guided Maverick (AGM-65L), F-22 supersonic tank, practice bomb (BDU-50), and Aircraft Instrumentation Pod (AN/ASQ-T50). SEEK EAGLE funds are also used to support certification of other inventory stores on CAF and SOCOM aircraft, assist the F-35 JPO with subject matter expertise in the System Development and Demonstration phase (e.g. development of limited organic store certifications capability to support F-35 in the Production, Sustainment, and Follow-on Development phase), continue developing F-22 engineering models/data and obtain follow-on technical support from Lockheed Martin, and to obtain non-inventory stores and store data for post-integration certification requirements.

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent year.

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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	19.263	18.599	19.154	-	19.154
Current President's Budget	19.165	18.599	22.654	-	22.654
Total Adjustments	-0.098	-	3.500	-	3.500
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.098	-	3.500	-	3.500
 Change Summary Explanation					
FY2011 adjustments are for Cong General Reductions -\$0.098					
FY2013 increase of \$3.500 for JSF organic platform-stores compatibility capability development					

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Title: F-22A	3.300	2.500	2.500
Description: F-22A Capability Development and Weapons Certification.			
FY 2011 Accomplishments: Continue developing organic F-22 engineering capability in remaining four disciplines by receiving additional contractor deliverables and developing organic computational M&S capabilities. Perform engineering analysis and begin wind tunnel and flight test planning to support certification of AIM-120D, AIM-9X, and MXU-1010 on the F-22 for increment 3.2. Enlist support from the contractor for engineering analysis for increment 3.2 aircraft-stores certification.			
FY 2012 Plans: Continue developing organic F-22 engineering capability in remaining four disciplines by receiving additional contractor deliverables and developing organic computational M&S capabilities. Perform engineering analysis and begin wind tunnel and flight test planning to support certification of AIM-120D and MXU-1010 and perform wind tunnel testing of AIM-9X on the F-22 for increment 3.2. Enlist support from the contractor for engineering analysis for increment 3.2 aircraft-stores certification. Provide capability flight recommendations.			
FY 2013 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue developing organic F-22 engineering capability in remaining four disciplines by receiving additional contractor deliverables and developing organic computational M&S capabilities. Perform engineering analysis and begin wind tunnel and flight test planning to support certification of supersonic tank and perform wind tunnel testing of AIM-9X on the F-22 for increment 3.2. Enlist support from the contractor for engineering analysis for increment 3.2 aircraft-stores certification. Continue to provide capability flight recommendations.				
<p>Title: F-35</p> <p>Description: F-35 Capability Development.</p> <p>FY 2011 Accomplishments: F-35 Capability Development support for SEEK EAGLE begins in FY13.</p> <p>FY 2012 Plans: F-35 Capability Development support for SEEK EAGLE begins in FY13, in order to be ready to support Combat Air Force's (CAF's) anticipated requirements after Initial Operational Capability (IOC).</p> <p>FY 2013 Plans: Begin development of organic F-35 engineering capability in all eight engineering disciplines by receiving contractor data, tools, and technical support.</p>		-	-	3.500
<p>Title: M&S Capability</p> <p>Description: Modeling and Simulation (M&S) capability development in support of store certification</p> <p>FY 2011 Accomplishments: Continue development and improvement of M&S capability to support store certification disciplines. Example work includes alpha and beta testing of new Create-AV/Kestrel code base for Stability and Control Discipline progressing from static aircraft to aircraft with moving control surfaces. Other key work includes tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.</p> <p>FY 2012 Plans: Continue development and improvement of M&S capability to support store certification disciplines. Example work includes alpha and beta testing of new Create-AV/Kestrel code base for Stability and Control Discipline progressing from static aircraft to aircraft with moving control surfaces. Other key work includes tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.</p> <p>FY 2013 Plans:</p>		2.900	2.900	3.000

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continue development and improvement of M&S capability to support store certification disciplines. Example work includes alpha and beta testing of new Create-AV/Kestrel code base for Stability and Control Discipline progressing from static aircraft to aircraft with moving control surfaces. Other key work includes tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.				
<p>Title: Aircraft/Store capability analysis</p> <p>Description: Evaluate aircraft/store compatibility through analysis, M&S and flight and ground test. Provide flight recommendations to airworthiness authorities.</p> <p>FY 2011 Accomplishments: Continually provide compatibility flight recommendations as requested by ACC/A8, AAC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X ground and flight testing will be performed.</p> <p>FY 2012 Plans: Continually provide compatibility flight recommendations as requested by ACC/A8, AAC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X ground and flight testing will be performed.</p> <p>FY 2013 Plans: Continually provide compatibility flight recommendations as requested by ACC/A8, AAC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X flight testing will be performed.</p>		10.365	10.699	11.654
<p>Title: CWDS</p> <p>Description: Develop Mission Planning Software including Combat Weapon Delivery Software (CWDS).</p> <p>FY 2011 Accomplishments: Continue support of CWDS requirements for multiple MPEs on two different frameworks: Portable Flight Planning System(PFPS) and the Joint Mission Planning System (JMPS). Begin transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.</p> <p>FY 2012 Plans: Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on two different frameworks: PFPS and JMPS. Continue transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.</p> <p>FY 2013 Plans:</p>		2.600	2.500	2.000

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on two different frameworks: PFPS and JMPS. Continue transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.			
Accomplishments/Planned Programs Subtotals	19.165	18.599	22.654

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

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• None: <i>N/A</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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 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-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LJDAM	1	2011	4	2017
JASSM	1	2011	4	2017
SDB	1	2011	4	2017
AIM-9X	1	2011	4	2017
AIM-120	1	2011	4	2017
WCMD	1	2011	4	2017
MALD	1	2011	4	2017
SNIPER	1	2011	4	2017
LITENING	1	2011	4	2017
BRU-57	1	2011	4	2017
BRU-61	1	2011	4	2013
BLU-129	1	2011	4	2013
AGM-65L	1	2011	4	2013
MXU-1010	1	2011	4	2013
AN/ASQ-T50	1	2011	4	2013
BDU-50	1	2011	4	2013