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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Air Force	<b>DATE:</b> February 2011
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0207590F: <i>Seek Eagle</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	21.979	19.263	18.599	-	18.599	19.154	19.442	19.722	20.071	Continuing	Continuing
674037: <i>SEEK EAGLE</i> <i>Certifications</i>	21.979	19.263	18.599	-	18.599	19.154	19.442	19.722	20.071	Continuing	Continuing

**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). 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 weapons programs (and all new variants) 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), 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 travel pod (MXU-1010), 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 for post-integration certification requirements.

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 year.

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3600: Research, Development, Test & Evaluation, Air Force		PE 0207590F: Seek Eagle				
BA 7: Operational Systems Development						
B. Program Change Summary (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget		22.071	19.263	18.661	-	18.661
Current President's Budget		21.979	19.263	18.599	-	18.599
Total Adjustments		-0.092	-	-0.062	-	-0.062
• Congressional General Reductions			-			
• Congressional Directed Reductions			-			
• Congressional Rescissions		-	-			
• Congressional Adds			-			
• Congressional Directed Transfers			-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Other Adjustments		-0.092	-	-0.062	-	-0.062
Change Summary Explanation						
No Significant Changes						

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207590F: Seek Eagle				PROJECT 674037: SEEK EAGLE Certifications			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674037: SEEK EAGLE Certifications	21.979	19.263	18.599	-	18.599	19.154	19.442	19.722	20.071	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). 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 weapons programs (and all new variants) 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), 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 travel pod (MXU-1010), 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 for post-integration certification requirements.

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 year.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
<b>Title:</b> F-22A	4.200	3.300	2.500	-	2.500

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207590F: Seek Eagle	PROJECT 674037: SEEK EAGLE Certifications				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><b>Description:</b> F-22A Capability Development and Weapons Certification.</p> <p><b>FY 2010 Accomplishments:</b> Finalized integrated contractor-to-government engineering capability transition plan for the F-22. Continued developing organic F-22 engineering capability in remaining 4 disciplines by receiving additional contractor deliverables and developing organic computational M&amp;S capabilities. Continued to support engineering and flight test activities for store integration and certification on F-22, such as the GBU-39 SDB I, AIM-9X, Joint Direct Attack Munition (JDAM) enhancements and a travel pod.</p> <p><b>FY 2011 Plans:</b> Continue developing organic F-22 engineering capability in remaining 4 disciplines by receiving additional contractor deliverables and developing organic computational M&amp;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.</p> <p><b>FY 2012 Base Plans:</b> Continue developing organic F-22 engineering capability in remaining 4 disciplines by receiving additional contractor deliverables and developing organic computational M&amp;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.</p> <p><b>FY 2012 OCO Plans:</b></p>						
<p><b>Title:</b> CWDS</p> <p><b>Description:</b> Develop Mission Planning Software including Combat Weapon Delivery Software (CWDS).</p> <p><b>FY 2010 Accomplishments:</b> Continued support of CWDS requirements across multiple Mission Planning Environments (MPEs) on two different frameworks: Portable Flight Planning Software (PFPS) and Joint Mission Planning System (JMPS). Sustained the CWDS software development cycle to meet new, multi-platform requirements in addition to on-</p>		2.800	2.600	2.500	-	2.500

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
going warfighter requirements. Initiated CWDS re-architecture for alignment with JMPS FY11 requirements and provided additional essential capabilities to the warfighter.  <b>FY 2011 Plans:</b> Continue support of CWDS requirements for multiple MPEs on two different frameworks: PFPS and 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.  <b>FY 2012 Base Plans:</b> 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.  <b>FY 2012 OCO Plans:</b>							
<b>Title:</b> M&S capability  <b>Description:</b> Modeling and Simulation (M&S) capability development in support of store certification  <b>FY 2010 Accomplishments:</b> Continued development and improvement of M&S capability to support store certification disciplines. Example work included alpha testing of new Create-AV/Kestrel code base for Stability and Control Discipline with static aircraft. Other key work included tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.  <b>FY 2011 Plans:</b> 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.  <b>FY 2012 Base Plans:</b> 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			2.900	2.900	2.900	-	2.900

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
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. <b>FY 2012 OCO Plans:</b>						
<b>Title:</b> Aircraft/Store capability analysis <b>Description:</b> Evaluate aircraft/store compatibility through analysis, M&S and flight and ground test. Provide flight recommendations to airworthiness authorities. <b>FY 2010 Accomplishments:</b> Delivered 187 flight clearance recommendations, certification recommendations and related products to airworthiness authorities. Significant projects included Quick Reaction Certifications (QRCs) providing carriage of 3 GBU-12s on F-15E and a GBU-38 and GBU-54 alternate loading and release sequence on the F-15E; MALD, SDB II and targeting pod Developmental Test Support; multiple AFSOC/SOCOM efforts including one QRC; certification of MALD and AIM-9X mixed loadings on F-16, JASSM on the F-15E, and support of the MOP on the B-2. <b>FY 2011 Plans:</b> 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. <b>FY 2012 Base Plans:</b> 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. <b>FY 2012 OCO Plans:</b>		12.079	10.463	10.699	-	10.699
Accomplishments/Planned Programs Subtotals		21.979	19.263	18.599	-	18.599

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0207590F: <i>Seek Eagle</i>	<b>PROJECT</b> 674037: <i>SEEK EAGLE Certifications</i>	

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**D. 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.

**E. 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 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207590F: Seek Eagle				PROJECT 674037: SEEK EAGLE Certifications						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	4.900	3.000	Dec 2009	2.100	Dec 2009	-		2.100	Continuing	Continuing	0.000	
Multiple fighter and weapon capability support	C/CPFF	Lockheed Martin:Marietta, GA	5.637	0.020	Jul 2006	0.020	Jul 2006	-		0.020	Continuing	Continuing	0.000	
Enhance Existing and Develop Organic Electro EMI Capabilities	C/CPFF	Applied Research:Baltimore, MD	0.385	0.250	Apr 2010	0.250	Apr 2010	-		0.250	Continuing	Continuing	0.000	
Subtotal			10.922	3.270		2.370		-		2.370			0.000	
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Mission Support	C/CPFF	Tybrin:Ft Walton Beach, FL	23.110	2.600	Jan 2006	2.500	Jan 2006	-		2.500	Continuing	Continuing	0.000	
Subtotal			23.110	2.600		2.500		-		2.500			0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
46th Test Wing	RO	Eglin AFB:Eglin AFB, FL	214.763	10.793		11.079		-		11.079	Continuing	Continuing	0.000	
AEDC	Various	Arnold Engineering Dev Center,TN:Arnold AFB, TN	21.479	0.750		0.800		-		0.800	Continuing	Continuing	0.000	
AFFTC	PO	Edwards AFB:Edward AFB, CA	1.150	0.350		0.350		-		0.350	Continuing	Continuing	0.000	
Various	Various	Various:Multiple,	94.445	1.500		1.500		-		1.500	Continuing	Continuing	0.000	
Subtotal			331.837	13.393		13.729		-		13.729			0.000	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force											<b>DATE:</b> February 2011		
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<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

  

	<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	365.869	19.263		18.599		-		18.599			0.000

  

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0207590F: <i>Seek Eagle</i>	<b>PROJECT</b> 674037: <i>SEEK EAGLE Certifications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LJDAM	1	2010	4	2012
JASSM	1	2010	4	2012
SDB	1	2010	4	2012
AIM-9X	1	2010	4	2012
AIM-120	1	2010	4	2012
WCMD	1	2010	4	2012
MALD	1	2010	4	2012
SNIPER VDL	1	2010	4	2012
LITENING GEN 4	1	2010	4	2012
BRU-57	1	2010	4	2012
BLU-129	1	2010	4	2012
AGM-65L	1	2010	4	2012
MXU-1010	1	2010	4	2012
AN/ASQ-T50	1	2010	4	2012
BDU-50	1	2010	4	2012

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