Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0207161F: Tactical AIM Missiles

BA 7: Operational Systems Development

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	5.585	5.915	6.040	0.000	6.040	6.135	6.235	6.330	6.423	Continuing	Continuing
674132: AIM-9 Product Improvement	5.585	5.915	6.040	0.000	6.040	6.135	6.235	6.330	6.423	Continuing	Continuing

A. Mission Description and Budget Item Justification

The AIM-9X Sidewinder short-range air-to-air missile is a long-term evolution of the AIM-9 series of fielded missiles. The AIM-9X missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Airto-Air Missile (AMRAAM). Air superiority in the short range air-to-air missile arena is essential and includes first-shot, first-kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuse, rocket motor, and warhead). Anti-Tamper features have been incorporated to protect improvements inherent in this design. AIM-9X is a Post Milestone III, Acquisition Category 1C (ACAT 1C) joint-service program with Navy lead.

The program is in full-rate production (FRP) with Lot 9 contract awarded June 2009. Beginning with the Lot 9 contract award, the missile will include the preplanned product improvements (P3I) that resolve critical obsolescence issues such as the Active Optical Target Detector (i.e. Fuze) and the new CPU processor, as well as, improvements to the performance of the missile such as data link capabilities, battery improvements, safety improvements and appropriate software updates. This budget line item will fund the development, test and integration of software updates to the missile, as well as, aircraft platform integration, to ensure these capabilities perform in accordance with established requirements. Includes efforts to update missile components in order to comply with Insensitive Munitions requirements as established by Joint Requirements Oversight Council memo dated 11 February 2009.

The program is in budget activity 7 - Operational System Development - modifies an existing weapon system.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0207161F: Tactical AIM Missiles

DATE: February 2010

BA 7: Operational Systems Development

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	5.732	5.915	0.000	0.000	0.000
Current President's Budget	5.585	5.915	6.040	0.000	6.040
Total Adjustments	-0.147	0.000	6.040	0.000	6.040
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
 SBIR/STTR Transfer 	0.000	0.000			
 Other Adjustments 	-0.147	0.000	6.040	0.000	6.040

Change Summary Explanation

The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.

DATE: Echruany 2010

EXHIBIT R-2A, RD1&E Project Ju	Stiffication: P	3 ZUTT AIT F	orce						DATE: Feb	ruary 2010	
APPROPRIATION/BUDGET ACT 3600: Research, Development, To BA 7: Operational Systems Devel		I OMENCLA 1F: <i>Tactical i</i>	TURE AIM Missiles	M-9 Product Improvement							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
674132: AIM-9 Product Improvement	5.585	5.915	6.040	0.000	6.040	6.135	6.235	6.330	6.423	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Exhibit D 24 DDT8 E Droject Justification: DR 2011 Air Force

The AIM-9X Sidewinder short-range air-to-air missile is a long-term evolution of the AIM-9 series of fielded missiles. The AIM-9X missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short range air-to-air missile arena is essential and includes first-shot, first-kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common with the AIM-9M (fuse, rocket motor, and warhead). Anti-Tamper features have been incorporated to protect improvements inherent in this design. AIM-9X is a Post Milestone III, Acquisition Category 1C (ACAT 1C) joint-service program with Navy lead.

The program is in full-rate production (FRP) with Lot 9 contract awarded June 2009. Beginning with the Lot 9 contract award, the missile will include the preplanned product improvements (P3I) that resolve critical obsolescence issues such as the Active Optical Target Detector (i.e. Fuze) and the new CPU processor, as well as, improvements to the performance of the missile such as data link capabilities, battery improvements, safety improvements and appropriate software updates. This budget line item will fund the development, test and integration of software updates to the missile, as well as, aircraft platform integration, to ensure these capabilities perform in accordance with established requirements. Includes efforts to update missile components in order to comply with Insensitive Munitions requirements as established by Joint Requirements Oversight Council memo dated 11 February 2009.

The program is in budget activity 7 - Operational System Development - modifies an existing weapon system.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Continue Raytheon Missile Systems (RMS) P3I Contract	4.352	0.535	0.000	0.000	0.000	

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

BA 7: Operational Systems Development

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0207161F: Tactical AIM Missiles

674132: AIM-9 Product Improvement

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY09: Funded primary hardware development/P3I efforts for the AOTD (Block II fuze). Provided system engineering/program management, as well as, support required to ensure missile integration with threshold AF/Navy aircraft platforms. Included effort to update missile components to comply with IM requirements established by a JROCM. Continued efforts to qualify/integrate the AOTD for the Block II missile.					
FY 2010 Plans: In FY10: Funds primary hardware development/P3I efforts for the AOTD (Block II fuze). Includes effort to update missile components to comply with IM requirements established by a JROCM. Completed efforts to qualify/integrate the AOTD for the Block II missile.					
FY 2011 Base Plans: In FY11: N/A.					
FY 2011 OCO Plans: In FY11 OCO: N/A					
MAJOR THRUST: Continue Software/Operational Flight Program (OFP) Upgrades	0.815	2.343	3.247	0.000	3.247
FY 2009 Accomplishments: In FY09: Funded the development, test and integration of software updates to the missile, as well as, aircraft platform integration, to ensure these capabilities perform in accordance with established requirements. Provided system engineering/program management and support required to ensure missile integration with threshold AF/Navy aircraft platforms. Initiated v9.3 algorithm and code development in support of the missile integration effort.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010 APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 3600: Research, Development, Test & Evaluation, Air Force PE 0207161F: Tactical AIM Missiles 674132: AIM-9 Product Improvement BA 7: Operational Systems Development

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY10: Funds the development, test and integration of software updates to the missile, as well as, aircraft platform integration, to ensure these capabilities perform in accordance with established requirements. Provides system engineering/program management and support required to ensure missile integration with threshold AF/Navy aircraft platforms. Continues the v9.3 algorithm and code development in support of the missile integration effort.					
FY 2011 Base Plans: In FY11: Funds the development, test and integration of software updates to the missile, as well as, aircraft platform integration, to ensure these capabilities perform in accordance with established requirements. Provides system engineering/program management and support required to ensure missile integration with threshold AF/Navy aircraft platforms. Funds the v9.4 algorithm and code development in support of the missile integration effort. FY 2011 OCO Plans:					
In FY11 OCO: N/A	0.440	0.007	0.700	0.000	0.700
MAJOR THRUST: Continue DT&E/OT&E for P3I updates and FOT&E efforts FY 2009 Accomplishments: In FY09: Funded T&E and associated Governmental test support required to ensure the missile integration with threshold AF/Navy aircraft platforms. Initiated Block II v9.2 DT for missile integration. Continued to provide for in-house and contractor support.	0.418	3.037	2.793	0.000	2.793
FY 2010 Plans: In FY10: Funds T&E and associated Governmental test support required to ensure the missile integration with threshold AF/Navy aircraft platforms. Funds continuation of Block II v9.2 DT and initiates Block II v9.3 DT for missile integration. Continues to provide for in-house and contractor support.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0207161F: Tactical AIM Missiles

674132: AIM-9 Product Improvement

BA 7: Operational Systems Development

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY11: Funds T&E and associated Governmental test support required to ensure the missile					
integration with threshold AF/Navy aircraft platforms. Funds continuation of Block II v9.3 DT for missile integration. Continues to provide for in-house and contractor support.					
FY 2011 OCO Plans:					
In FY11 OCO: N/A					
Accomplishments/Planned Programs Subtotals	5.585	5.915	6.040	0.000	6.04

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

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
Activity Not Provided: PE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.000
0603715D											
• PE 0207161F: <i>Tactical AIM</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.817
Missile Modification (BP21)											
• PE 0207161F (1): <i>Tactical AIM</i>	76.995	78.527	64.523	0.000	64.523	59.723	58.654	56.691	56.379	0.000	0.000
Missile Procurement (BP20)											
• PE 0207161F (2): <i>Tactical AIM</i>	4.238	0.817	3.514	0.000	3.514	7.879	8.848	10.749	10.860	0.000	0.000
Missile Procurement (BP25)											
• PE 0207161F (3): Tactical AIM	1.235	1.571	1.558	0.000	1.558	1.662	1.650	1.653	1.739	0.000	0.000
Missile Procurement (BP26)											
• PE 0207590F: <i>SEEK EAGLE</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.028

D. Acquisition Strategy

The Low-Rate Initial Production (LRIP) 4, Lot 4, Firm-Fixed-Price (FFP) contract was awarded Apr 04. ASN(RD&A) approved the FRP decision in May 04. FRP 1, Lot 5 contract awarded Nov 04. FRP 1, Lot 5 through FRP 3, Lot 7 contracts awarded Nov 06. Rewards/penalties are provided depending on RMS performance relative

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force	DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	PE 0207161F: Tactical AIM Missiles	674132: AIM-9 Product Improvement
to the Procurement Price Commitment Curve (PPCC) for Lots 5 tl and was awarded in Jan 08. The FRP 5, Lot 9 (FY09) contract w for Operational Testing, as well as, Captive Air Training Missiles f performance improvements.	as awarded in Jun 09, and will be the first lot of B	lock II missiles (to include Tactical Test Missiles
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for Force performance goals and most importantly, how they contribute the properties of the performance goals.		ed and how those resources are contributing to Air

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

PE 0207161F: Tactical AIM Missiles

674132: AIM-9 Product Improvement

Product Development (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO					
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
RMS Software/OFP Upgrade	C/CPIF	RMS Tucson, AZ	0.815	2.343	Dec 2009	3.247	Dec 2010	0.000		3.247	Continuing	Continuing	0.000
RMS P3I Contract	C/CPIF	RMS Tucson, AZ	4.352	0.535	Dec 2009	0.000	Dec 2010	0.000		0.000	Continuing	Continuing	0.000
		Subtotal	5.167	2.878		3.247		0.000		3.247			0.000

Remarks

Support (\$ in Millions)

	,												
		FY 2	2010	FY 2 Ba	2011 ise	FY 2	2011 CO	FY 2011 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
In House Support	MIPR	PMA-259 Patuxent River, MD	0.403	0.707	Dec 2009	0.497	Dec 2010	0.000		0.497	Continuing	Continuing	0.000
	•	Subtotal	0.403	0.707		0.497		0.000		0.497			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

PE 0207161F: Tactical AIM Missiles

674132: AIM-9 Product Improvement

Test and Evaluation (\$ in Millions)

				FY 2	010	FY 2 Ba		FY 2		FY 2011 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
DT&E/OT&E for P3I	PO	Various Various	0.015	2.330	Dec 2009	2.296	Dec 2010	0.000		2.296	Continuing	Continuing	0.000
		Subtotal	0.015	2.330		2.296		0.000		2.296			0.000

Remarks

	Total Prior Years Cost	FY 2010		2011 ise	FY :	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.585	5.915	6.040		0.000		6.040			0.000

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force **DATE:** February 2010 **R-1 ITEM NOMENCLATURE PROJECT** APPROPRIATION/BUDGET ACTIVITY PE 0207161F: Tactical AIM Missiles 674132: AIM-9 Product Improvement 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development Fiscal Year 2009 2010 2011 2012 2013 2014 2015 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 2 3 2 3 2 3 4 1 1 Primary Hardware Dev. AOTD P3I (AKA FUZE) T&E Milestones Software v8.2 Operational Test (OT-IIIB) IIIB Block II (v9.2 S/W) Development Test (DT-IIIC) DT-IIIC OT-IIIC Block II (v9.2 S/W) Operational Test (OT-IIIC) Software v9.3 Development Test (DT-IIID) DT-IIID Software v9.3 Integrated Development/Operational Test (IT-IIID) IT-IIID Software v9.3 Operational Test (OT-IIID) OT-IIID Production Milestones **ERP Awards** FRP 10 FRP 5 FRP 6 FRP 7 FRP 8 FRP 9 **FRP 11** Lot 9 Lot 10 Lot 11 Lot 12 Lot 13 Lot 14 Lot 15 Block II Deliveries Lot 7: 32 Lot 8 Deliveries: 319 Lot 9 Deliveries: 271 Lot 10 Deliveries: 380 Lot 11 Deliveries: 333 Lot 12 Deliveries: 308 Lot 13 Deliveries: 308 Production Deliveries 0 106 108 58 47 0 4 42 71 88 94 89 99 98 94 86 84 86 81 83 75 72 78 86 72 86 32 75 9 9 9 9/10 10 13 10 10 10/11 11 11 11/12 12 12 12/13 13 13 13 Deliveries by Lot 13/14 Note: Production Gaps between Lots 7, 8 and 9 are filled with Foreign Military Sales deliveries

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R-1 Line Item #136 Page 10 of 11

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT 3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

PE 0207161F: Tactical AIM Missiles 674132: AIM-9 Product Improvement

Schedule Details

	Sta	End		
Event	Quarter	Year	Quarter	Year
AOTD P3I, Phase 1	1	2009	4	2009
AOTD P3I, Phase 2	1	2010	2	2010
Operational Test OT-IIIB	1	2009	1	2009
Developmental Test DT-IIIC	1	2009	4	2009
Operational Test OT-IIIC, Phase 1	4	2009	4	2009
Operational Test OT-IIIC, Phase 2	1	2010	2	2010
Developmental Test DT-IIID, Phase 1	4	2009	4	2009
Developmental Test DT-IIID, Phase 2	1	2010	1	2010
Integrated Test IT-IIID, Phase 1	2	2010	4	2010
Integrated Test IT-IIID, Phase 2	1	2011	3	2011
Operational Test OT-IIID	4	2011	4	2011
Full Rate Production (FRP-5) Award Lot 9	3	2009	3	2009
Full Rate Production (FRP-6) Award Lot 10	2	2010	2	2010
Full Rate Production (FRP-7) Award Lot 11	1	2011	1	2011