PE NUMBER: 0305219F
PE TITLE: PREDATOR DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	37.642	36.906	18.101	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5143 Predator	37.642	36.906	18.101	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

FY 2010 funding totals do not include $1.4M requested for Overseas Contingency Operations.

FY2009 funding totals include $12.4M in Congressional Adds.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. This funding supports development and enhancements to the Predator weapon system to include aircraft, Ground Control Stations, sensors, communication equipment, training systems and support elements. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, unmanned aerial system (UAS) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack capability to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 will operate primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates electro-optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time motion imagery throughout the operational theater. The program will develop and integrate Target Location Accuracy and Metric Sensor improvements. Additionally, the aircraft is multi-configurable to carry either a Synthetic Aperture Radar (SAR) or Hellfire laser-guided missiles. The program plans to develop a capability for Ka-band MILSATCOM and Mode S. Major changes will be classified as distinct blocks or Mission Design Series updates. Activities also include studies and analysis to support both current program planning and execution and future program planning.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, GCS allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-1 aircraft capabilities and the missions they perform.

This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

essential operational capabilities.

(U) B. Program Change Summary ($ in Millions)

		FY 2008	FY 2009	FY 2010
(U)	Previous President's Budget	33.781	24.773	21.039
(U)	Current PBR/President's Budget	37.642	36.906	18.101
(U)	Total Adjustments	3.861	12.133	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.267	
	Congressional Increases		12.400	
	Reprogrammings	3.861		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY09 $12.4M Congressional increase includes; $6M for sense and avoid work, $4M for Center for UAV Excellence Education, and $2.4M for PMATS upgrade

RDT&E funding decrease between FY09 and FY10 is result of stopping MQ-1 production after FY09.

Exhibit R-2a, RDT&E Project Justification			DATE: May 2009
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator	

Cost ($ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
5143 Predator	37.642	36.906	18.101	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

FY 2010 funding totals do not include $1.4M requested for Overseas Contingency Operations.

FY2009 funding totals include $12.4M in Congressional Adds.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. This funding supports development and enhancements to the Predator weapon system to include aircraft, Ground Control Stations, sensors, communication equipment, training systems and support elements. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

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This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide essential operational capabilities.

Exhibit R-2a, RDT&E Project Justification		DATE May 2009
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5143 Predator

	B. Accomplishments/Planned Program ($ in Millions)	FY 2008	FY 2009	FY 2010
(U)	MQ-1 Pre-planned Product Improvement. Includes advanced capabilities (such as multiple aircraft control/operations), engine upgrades, sensor and radar development/integration, quick reaction capabilities, payload development/integration, weaponization and experimentation, data link upgrades (including encryption and tactical common data link (TCDL)), mission planning, simulator/training devices, and ground station and communication equipment development/upgrades.	15.183	16.824	9.589
(U)	Developmental and Operational Test support	0.062	1.084	0.900
(U)	MQ-1 TLA/Metric Sensor	0.797	4.203	3.543
(U)	Sense and Avoid for Predator (Congressional Add)	5.000	6.000	
(U)	Center for Defense UAV Education (Congressional Add)	3.200	4.000	
(U)	Integrator UAS Advanced Concept Develpment (Congressional Add)	3.500		
(U)	Ka Migration		2.395	4.069
(U)	Mode S			
(U)	PMATS (GWOT and Congressional Add)	9.900	2.400	
(U)	Total Cost	37.642	36.906	18.101
	FY2009 funding totals include $12.4M in Congressional Adds.			

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

		FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total Cost
(U)	Other APPN										
(U)	Aircraft Procurement, AF (PE 0305219F)	299.220	377.674	0.000						TBD	TBD
(U)	Aircraft Modification, AF (PE 0305219F)	52.387	148.128	126.128						TBD	TBD

(U) D. Acquisition Strategy

The MQ-1 Predator system will be acquired sole-source with General Atomics-ASI as the prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **May 2009**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305219F PREDATOR DEVELOPMENT/FIELDING**

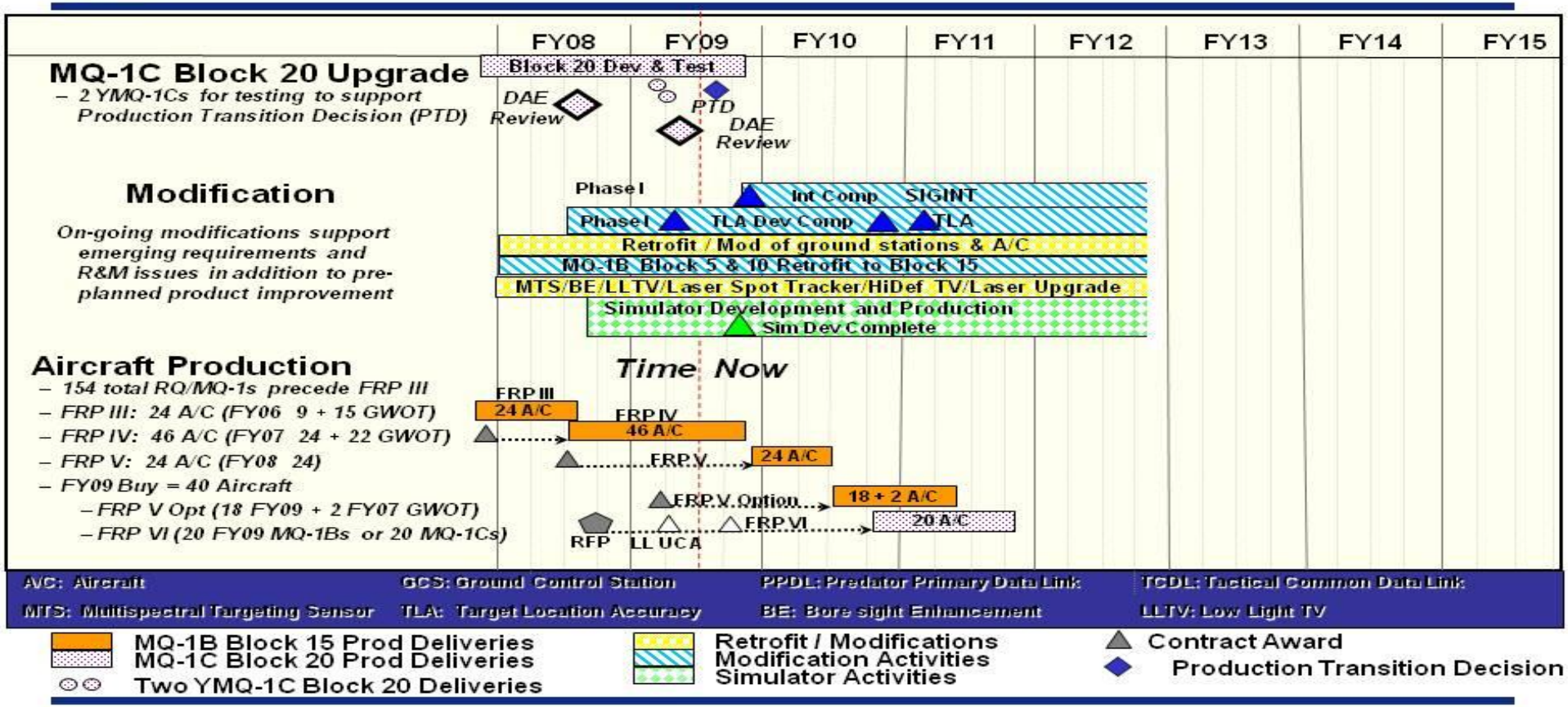
PROJECT NUMBER AND TITLE: **5143 Predator**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2008 Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MQ-1/MQ-9 Development	Various	General Atomics-ASI, Rancho Bernardo CA		15.183	Feb-09	16.824	Feb-09	9.589	Mar-10	Continuing	TBD	TBD
Target Location Accuracy	Various	Raytheon, McKinney TX		0.797	Sep-08	4.203	Jan-09	3.543	Dec-09	Continuing	TBD	TBD
Congressional Adds	Various	Various		11.700	Dec-08	12.400	Jun-09				24.100	TBD
PMATS GWOT Supplemental	CPIF	L3 Comm, Salt Lake City		9.900	Feb-09						9.900	
Ka Migration	CPFF	L3 Comm, Salt Lake City				2.395	May-09	4.069	May-09	Continuing	TBD	TBD
Mode S	CPFF	General Atomics-ASI, Rancho Bernardo CA									0.000	TBD
Subtotal Product Development			0.000	37.580		35.822		17.201		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Development and Operational Test Support	Various	Various		0.062	Oct-07	1.084	May-09	0.900	Mar-10	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.062		1.084		0.900		Continuing	TBD	TBD
Remarks:												
(U)											0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	37.642		36.906		18.101		Continuing	TBD	TBD

Prior to FY08 MQ-1 and MQ-9 costs combined.

Exhibit R-4, RDT&E Schedule Profile		DATE: May 2009
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

MQ-1 Predator Schedule



FY10 Staffer Brief

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Exhibit R-4a, RDT&E Schedule Detail		DATE May 2009
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

(U) Schedule Profile	FY 2008	FY 2009	FY 2010
(U) Target Location Accuracy Phase 1 Complete		2Q	
(U) MQ-1 Simulator Development Complete		4Q	
(U) Improved Target Location Accuracy Development Complete			4Q
(U) SIGINT Payload Integration Complete		4Q	
(U) Target Location Accuracy Deliveries Start		3Q	

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