

UNCLASSIFIED

PE NUMBER: 0305220F
 PE TITLE: GLOBAL HAWK DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
---	------------------------------

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING
--	--

Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	336.159	226.579	226.502	230.127	233.719	0.000	0.000
5144 Global Hawk	0.000	0.000	336.159	226.579	226.502	230.127	233.719	0.000	0.000

For FY05 and out, all Global Hawk funding is in PE 305220F, project 675144; funds were transferred from PE 305205F, project 674799F.

(U) A. Mission Description and Budget Item Justification

Global Hawk is a high-altitude, long-endurance unmanned aerial vehicle developed to provide all-weather, day/night, intelligence, surveillance and reconnaissance (ISR) in direct support of theater ISR collection requirements and integrate with existing ISR architectures for mission planning, data processing, exploitation and dissemination.

The Global Hawk System consists of the RQ-4A Unmanned Aerial Vehicle (UAV), the AN/MSQ-131 Ground Segment (GS), and the support system. The aircraft is a fully autonomous, high altitude, long endurance unmanned aircraft designed as an Intelligence, Surveillance and Reconnaissance (ISR) platform. The RQ-4A is an imagery intelligence-collecting UAV designed to carry 2,000 pounds of payload. Its payload includes an Integrated Sensor Suite (ISS) which contains Synthetic Aperture Radar (SAR) with Ground Moving Target Indicator (GMTI) capability, along with an Electro-Optical (EO)/Infrared (IR) camera.

The RQ-4B will be a multi-intelligence collecting UAV with a payload capacity of 3,000 pounds. Its payload will include an upgraded ISS as well as a signals intelligence (SIGINT) capability providing both a high-band and low-band signal capability. The GS consists of the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). It is designed to provide up to 40,000 sq. nmi. of search radar imagery and EO or IR imagery per mission. Global Hawk is designed as a standoff imagery platform with the capability to operate in low-to-moderate air defense threat environments, and collect imagery while looking line of sight into high threat areas.

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-2, RDT&E Budget Item Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget			300.021
(U) Current PBR/President's Budget	0.000	0.000	336.159
(U) Total Adjustments	0.000	0.000	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING			PROJECT NUMBER AND TITLE 5144 Global Hawk		
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
5144 Global Hawk	0.000	0.000	336.159	226.579	226.502	230.127	233.719	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Global Hawk Funding for FY04 and prior is in PE 305205F, Project 674799. Funding for FY05 and out is in PE 305220F Project 675144.

(U) **A. Mission Description and Budget Item Justification**

Global Hawk is a high-altitude, long-endurance unmanned aerial vehicle developed to provide all-weather, day/night, intelligence, surveillance and reconnaissance (ISR) in direct support of theater ISR collection requirements and integrate with existing ISR architectures for mission planning, data processing, exploitation and dissemination.

The Global Hawk System consists of the RQ-4A Unmanned Aerial Vehicle (UAV), the AN/MSQ-131 Ground Segment (GS), and the support system. The aircraft is a fully autonomous, high altitude, long endurance unmanned aircraft designed as an Intelligence, Surveillance and Reconnaissance (ISR) platform. The RQ-4A is an imagery intelligence-collecting UAV designed to carry 2,000 pounds of payload. Its payload includes an Integrated Sensor Suite (ISS) which contains Synthetic Aperture Radar (SAR) with Ground Moving Target Indicator (GMTI) capability, along with an Electro-Optical (EO)/Infrared (IR) camera.

The RQ-4B will be a multi-intelligence collecting UAV with a payload capacity of 3,000 pounds. Its payload will include an upgraded ISS as well as a signals intelligence (SIGINT) capability providing both a high-band and low-band signal capability. The GS consists of the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). It is designed to provide up to 40,000 sq. nmi. of search radar imagery and EO or IR imagery per mission. Global Hawk is designed as a standoff imagery platform with the capability to operate in low-to-moderate air defense threat environments, and collect imagery while looking line of sight into high threat areas.

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.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Continue spiral development and related tasks, including aircraft (\$66M), payloads (\$45M), ground stations (\$21M), support segment(\$5M), program management, test and systems engineering (\$74M) to satisfy ORD requirements.			211.002
(U) Provide government test and evaluation support at Edwards AFB			13.949
(U) Provide government program management, mission support, and other related costs.			9.847
(U) Demonstrations and exercises			5.000
(U) Multi- Platform Radar Technology Improvement Program (MP-RTIP) sensor adaptation			33.594
(U) Continue advanced Airborne Signals Intelligence Program (ASIP) payload modernization for Global Hawk and U-2 (Global Hawk ASIP platform integration is in Spiral 3 and platform integration for U-2 is in PE, 0305202F).			62.767
(U) Total Cost	0.000	0.000	336.159

Exhibit R-2a, RDT&E Project Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

**0305220F GLOBAL HAWK
DEVELOPMENT/FIELDING**

PROJECT NUMBER AND TITLE

5144 Global Hawk**(U) C. Other Program Funding Summary (\$ in Millions)****(U) D. Acquisition Strategy**

Global Hawk program uses Evolutionary Acquisition with an emphasis on a Spiral Development strategy. This strategy provides the warfighter with a near term, combat capability with increased, time phased capability improvements as soon as technology and risk achieve satisfactory levels. The initial system capability evolved from a successful technology demonstration program and was refined in the first development spiral. Subsequent development spirals incorporate additional capabilities into the system design. The Spiral Development strategy supports current operational requirements and can be updated as requirements evolve. The production program incorporates these incremental capability improvements into a series of production lots. These production lots deliver the increasingly capable Global Hawk system.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE				
07 Operational System Development				0305220F GLOBAL HAWK DEVELOPMENT/FIELDING				5144 Global Hawk				
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
(U) <u>Product Development</u>												
NGUMS	SS/CPAF/CPFF	Rancho Bernardo CA						206.068	Oct-04		206.068	
ASC Reconnaissance SPO	SS CPAF	San Jose CA						52.257	Feb-05		52.257	
ASC Reconnaissance SPO	SS CPAF	Falls Church VA						4.000	Feb-05		4.000	
ASC Reconnaissance SPO	SS CPAF	Denver CO						4.000	Feb-05		4.000	
ESC	SS CPAF	Melbourne FL						33.594	Feb-05		33.594	
Subtotal Product Development			0.000	0.000		0.000		299.919		0.000	299.919	0.000
Remarks:												
(U) <u>Support</u>												
NGUMS	SS/CPFF	Rancho Bernardo CA						2.100	Jan-05		2.100	
Other Govt Orgs	MIPR	Various						3.259	Nov-04		3.259	
Subtotal Support			0.000	0.000		0.000		5.359		0.000	5.359	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
AFFTC (Edwards)	PO	Edwards AFB						13.949	Jan-0		13.949	
Demo & Exercise Support	MIPR / CPFF	Various						5.000	Nov-04		5.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		18.949		0.000	18.949	0.000
Remarks:												
(U) <u>Management</u>												
A&AS	PR	Various						7.765	Nov-04		7.765	
Other Govt Orgs	PR	ASC/RG/RA, Dayton OH						4.167	Jan-05		4.167	
Subtotal Management			0.000	0.000		0.000		11.932		0.000	11.932	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		336.159		0.000	336.159	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

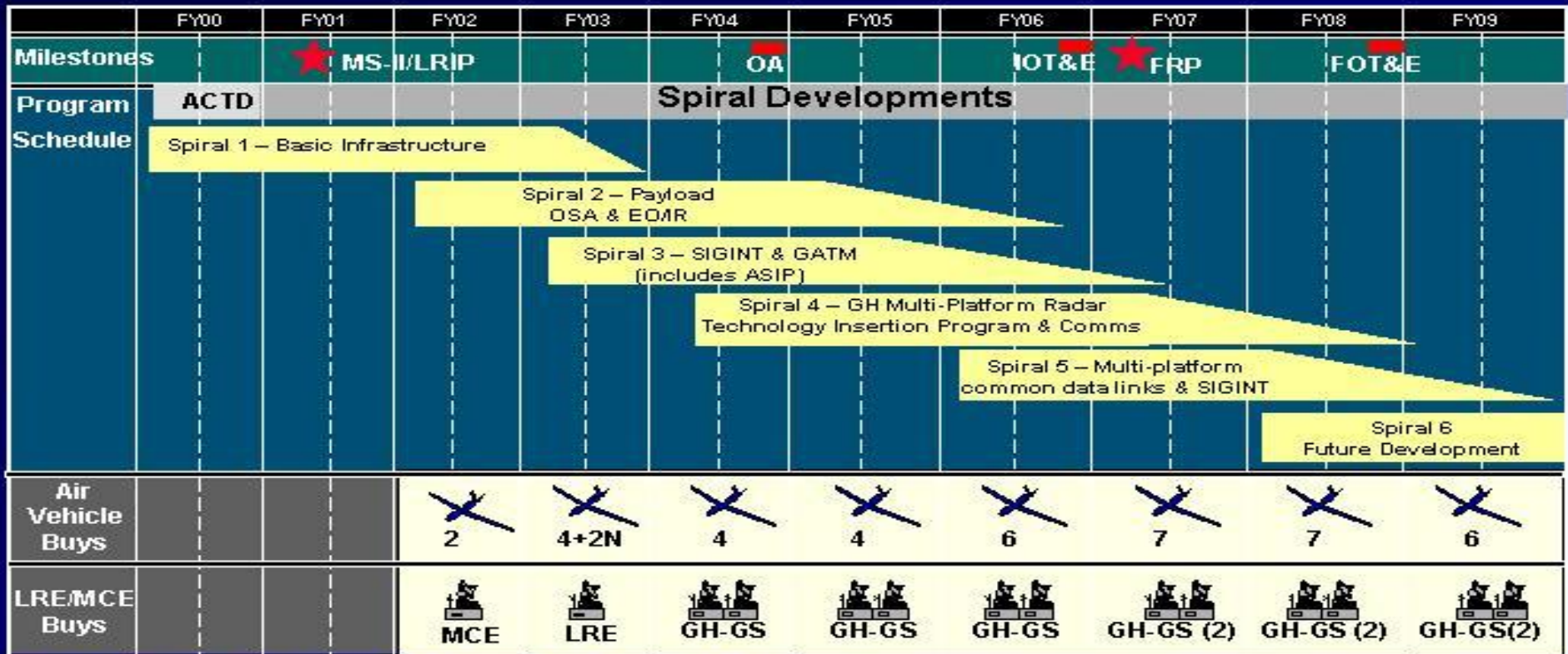
BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0305220F GLOBAL HAWK
DEVELOPMENT/FIELDING

PROJECT NUMBER AND TITLE
5144 Global Hawk



Development/Production Program



MS-II/LRIP – Milestone II / Low Rate Initial Production

OA – Operational Assessment

FRP – Full Rate Production

I/FOT&E – Initial / Follow-on Operational Test & Evaluation

MCE – Msn Control Element

LRE – Launch Recovery Element

GH-GS – GH Ground Station

(MCE & LRE)

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2004

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5144 Global Hawk
---	--	---

(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Award EMD Spiral 4B contract definitization			1Q
(U) Deliver 2 Navy LREs			1Q
(U) SIGINT High Band Subsystem (HBS) Demonstration			3Q
(U) Delivery of 1st Navy GH			1Q
(U) Delivery of 2nd Navy GH			2Q
(U) Delivery of AF5			2Q
(U) Delivery of AF 6			4Q
(U) Ultimate Load Testing (ULT)			4Q