

UNCLASSIFIED

PE NUMBER: 0604706F
 PE TITLE: Life Support Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604706F Life Support Systems
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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	13.247	16.553	10.711	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
412A Life Support Systems	13.247	16.553	10.711	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element provides for the recapitalization, continuing research and development, and integration of aircrew life support/airmen combat effectiveness equipment and subsystems to satisfy operational command requirements for improved/enhanced airmen performance capabilities. Aircrew life support/airmen combat effectiveness systems consist of human-centered programs that enable weapons systems to use more of their full mission envelopes, maximize combat capabilities, and protect airmen. This includes, but is not limited to, the following projects: directed energy protective equipment, flight helmets and visors, oxygen breathing equipment for aviators, radios and locator beacons support equipment, nuclear flashblindness protection, night vision devices, noise reduction devices, anti-g suits, flame resistant/retardant and blast protective gear, aircraft seating, impact protection, flotation devices, and personnel parachutes. Program management support includes tasks to assess deficiencies of currently fielded equipment, evaluate and demonstrate the feasibility of new technologies, provide for the transition of new technologies to development programs/projects, conduct business case analyses, assess suitability of commercially available items, and support all current aircrew life support/airmen combat effectiveness programs.

The Life Support program is in RDT&E Budget Activity 5 - System Development and Demonstration (SDD) because it supports development, testing and evaluation of materials and equipment for aircrew/airmen protection systems and subsystems for airmen operations, escape and descent, and survival and recovery.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	13.563	10.998	14.666
(U) Current PBR/President's Budget	13.247	16.553	10.711
(U) Total Adjustments	-0.316	5.555	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.045	
Congressional Increases		5.600	
Reprogrammings			
SBIR/STTR Transfer	-0.316		
(U) <u>Significant Program Changes:</u>			
- FY 2009: \$5.6M ACES 5 Ejection Seat (Congressional Add)			
- FY 2010: \$3.9M Reduced To Support Higher AF Priorities			

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)							PE NUMBER AND TITLE 0604706F Life Support Systems		PROJECT NUMBER AND TITLE 412A Life Support Systems	
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
412A Life Support Systems	13.247	16.553	10.711	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		

(U) A. Mission Description and Budget Item Justification

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) ACES Ejection Seat Improvements (Congressional Add)	0.932	5.555	
(U) Aircrew Laser Eye Protection (ALEP) Block II SDD	5.715	1.348	
(U) Helicopter Aircrew Restraint	0.300		
(U) Integrated Aircrew Ensemble (IAE) SDD		2.677	6.426
(U) Modular Aircrew Common Helmet (MACH) SDD	2.480	4.629	2.150
(U) Program Management Support/Travel/Supplies/Technical Engineering & Acquisition Support/Test & Evaluation	3.820	2.344	2.135
(U) Total Cost	13.247	16.553	10.711

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Other Procurement, AF Night Vision Goggles WSC 842140.	23.606	18.571	28.226							70.403
(U) Other Procurement, AF Items Less than \$5M (Safety and Rescue) WSC 842990.	0.000	0.000	13.280							13.280

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604706F Life Support Systems

PROJECT NUMBER AND TITLE

412A Life Support Systems

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

(U) Other Procurement, AF Items

Less than \$5M (Base Support

Equip) WSC 845990. FY

2009 Congressional Add:

Radio Test Sets for ANG

(\$1.0M).

14.419

6.894

0.000

21.313

(U) **D. Acquisition Strategy**

Acquisition Strategy Is Carried Out At The Project Level.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
05 System Development and Demonstration (SDD)				0604706F Life Support Systems					412A Life Support Systems			
(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 Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
ACES Ejection Seat Improvements (Congressional Add)	CPFF	Goodrich, CO	11.116	0.932	Dec-07	5.555	Jun-09				17.603	40.000
Aircrew Laser Eye Protection (ALEP) Block II SDD	FFP	Teledyne Imaging, CA	10.163	5.715	Dec-07	1.348	Jan-09				17.226	17.226
Helicopter Aircrew Restraint	MIPR	US Navy	0.980	0.300	Feb-08						1.280	1.280
Integrated Aircrew Ensemble (IAE) SDD	FPI	TBD	0.091			2.677	Feb-09	6.426	Jan-10	Continuing	TBD	TBD
Modular Aircrew Common Helmet (MACH) SDD	FPI	Gentex, PA	1.753	2.480	Jan-08	4.629	Jan-09	2.150	Jan-10	Continuing	TBD	TBD
Subtotal Product Development			24.103	9.427		14.209		8.576		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
Program Management Support	77 AESG, Brooks City-Base, TX			0.522		0.505		0.430		Continuing	TBD	
Travel				0.344		0.259		0.180		Continuing	TBD	
Supplies and Equipment				0.028				0.016			0.044	
Technical Engineering & Acquisition Support	A&AS	Terra Health, Brooks City Base, TX		1.623		1.580		1.509		Continuing	TBD	
Subtotal Support			0.000	2.517		2.344		2.135		Continuing	TBD	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
Program Tests (ACES, AHNR, Beacon, etc.)				1.303							1.303	
Subtotal Test & Evaluation			0.000	1.303		0.000		0.000		0.000	1.303	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			24.103	13.247		16.553		10.711		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

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0604706F Life Support Systems

PROJECT NUMBER AND TITLE

412A Life Support Systems

Life Support Systems Schedule

0604706F Life Support Systems

412A Life Support Systems

(U) Schedule Profile

ACES EJECTION SEAT IMPROVEMENTS

- B-2 Modular Seat Development
(Congressional Add)

AIRCREW HELMET NOISE REDUCTION (AHNR)

- SDD

AIRCREW LASER EYE PROTECTION (ALEP)

- Block II SDD
- Block II CDR
- Block II LRIP

HELICOPTER AIRCREW RESTRAINT

IMPROVED RESCUE BEACON

- SDD

INTEGRATED AIRCREW ENSEMBLE (IAE)

- SDD

MODULAR AIRCREW COMMON HELMET (MACH)

- SDD
- PDR
- CDR

	FY08				FY09				FY10				FY11				FY12				FY13				FY14				FY15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ACES EJECTION SEAT IMPROVEMENTS	▲															△																
AIRCREW HELMET NOISE REDUCTION (AHNR)								△																								
AIRCREW LASER EYE PROTECTION (ALEP)							△					△																				
HELICOPTER AIRCREW RESTRAINT								△																								
IMPROVED RESCUE BEACON						▲																										
INTEGRATED AIRCREW ENSEMBLE (IAE)							▲													△												
MODULAR AIRCREW COMMON HELMET (MACH)	▲														△																	
		▲					△																									

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Exhibit R-4a, RDT&E Schedule Detail

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May 2009

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(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) ACES Ejection Seat Improvements (B-2 Mod Seat Dev)	1Q	1-4Q	1-4Q
(U) ALEP Block II CDR		1Q	
(U) ALEP Block II LRIP		4Q	1-4Q
(U) IAE SDD Contract Award		2Q	
(U) MACH SDD Contract Award	2Q		
(U) MACH PDR	3Q		
(U) MACH CDR		3Q	