

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE February 2003		
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604706F Life Support Systems					PROJECT 412A	
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost	
412A Life Support Systems	8,899	7,732	269	262	2,700	2,731	2,770	2,808	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	Continuing	TBD	
<p>(U) <u>A. Mission Description</u></p> <p>This program provides for development of life support equipment and subsystems to satisfy operational command requirements for improved life support equipment. There are five main projects in this PE. (1) The Aircrew Laser Eye Protection (ALEP) project provides aircrews with eye protection against a variety of laser devices which could cause temporary and permanent loss of vision. (2) The Fixed Aircrew Standardized Seat (FASS) Program seeks to evaluate and standardize seat systems and subsystems in non-ejection seat aircraft. (3) ACES II Ejection Seat improvements include, Structural Upgrades, Digital Recovery Sequencer, and Preplanned Product Improvements (P3I). (4) The Lightweight Environmentally Sealed Parachute Assembly (LESPA) is a lighter and thinner parachute than current equipment with a service life of 25 years and a 5-year repack cycle. (5) Panoramic Night Vision Goggles (PNVG) provide a greatly enhanced field of view over current night vision goggles. This PE also provides for the continuing development and integration of aircrew protection systems and subsystems for aircrew operations, escape and descent, and survival and recovery such as, but not limited to, the following: flight helmets, oxygen breathing equipment for aviators, survival radio support equipment, night vision devices, active/passive noise reduction devices, aircraft seating, and parachutes. Program management support includes tasks to assess deficiencies of currently fielded equipment, provide for the transition of new technology into SDD, and support all current life support projects.</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$2,406 Congressional Add for Panoramic Night Vision Goggle Development - Began System Development and Demonstration (SDD)</p> <p>(U) \$1,377 Congressional Add for ACES II Ejection Seat P3I</p> <p>(U) \$641 Congressional Add for Lightweight Environmentally Sealed Parachutes (LESPA) - Began Block II SDD</p> <p>(U) \$3,508 Began ALEP SDD</p> <p>(U) \$270 Continued development of other Life Support items and subsystems such as ejection seats, anti-gravity suits, F-22 integration, night vision devices, and parachutes</p> <p>(U) \$697 Program Management/Technical Support/Travel/Test & Evaluation Support</p> <p>(U) \$8,899 Total</p>											
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PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)**0604706F Life Support Systems****412A**(U) **A. Mission Description Continued**(U) FY 2003 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$2,465	Congressional Add for FASS Development
(U)	\$2,369	Congressional Add for ACES II Ejection Seat Improvements
(U)	\$1,973	Congressional Add for Aircrew Distress Signaling Systems
(U)	\$704	Continue ALEP SDD
(U)	\$100	Continue development of other Life Support items and subsystems such as ejection seats, anti-gravity suits, F/A-22 integration, night vision devices, and parachutes
(U)	\$121	Program Management/Technical Support/Travel/Test & Evaluation Support
(U)	\$7,732	Total

(U) FY 2004 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$149	Continue development of other Life Support items and subsystems such as ejection seats, anti-gravity suits, F/A-22 integration, night vision devices, aircrew laser eye protection, and parachutes
(U)	\$120	Program Management/Technical Support/Travel/Test & Evaluation Support
(U)	\$269	Total

(U) **B. Budget Activity Justification**

Program is in Budget Activity 5 because several projects are in Acquisition Phase B, SDD

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	9,208	925	274	TBD
(U) Appropriated Value	9,286	7,825		TBD
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-78	-83		TBD
b. Small Business Innovative Research	-148			TBD
c. Omnibus or Other Above Threshold Reprogram		-10		TBD
d. Below Threshold Reprogram	-117			TBD

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<p>(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>e. Rescissions</td> <td style="text-align: center;">-44</td> <td></td> <td></td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Adjustments to Budget Years Since FY 2003 PBR</td> <td></td> <td></td> <td style="text-align: center;">-5</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Current Budget Submit/FY 2004 PBR</td> <td style="text-align: center;">8,899</td> <td style="text-align: center;">7,732</td> <td style="text-align: center;">269</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p>(U) <u>Significant Program Changes:</u> FY 2003 Congressional Adds: \$2.5M for FASS; \$2.4M for ACES II Ejection Seat Improvements; \$2.0M for Aircrew Distress Signaling Systems</p> <p>(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;"><u>FY 2006</u></th> <th style="text-align: center;"><u>FY 2007</u></th> <th style="text-align: center;"><u>FY 2008</u></th> <th style="text-align: center;"><u>FY 2009</u></th> <th style="text-align: center;"><u>Cost to</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> <tr> <th></th> <th style="text-align: center;"><u>Actual</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Complete</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>(U) Items Less Than \$5M (Safety Equipment) PE 0702833F BPAC 842990: Aircrew Laser Eye Protection (ALEP)</td> <td style="text-align: center;">2,800</td> <td style="text-align: center;">4,520</td> <td style="text-align: center;">3,920</td> <td style="text-align: center;">1,400</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">12,640</td> </tr> <tr> <td>(U) Warfighter Rapid Acquisition Program PE 0203761F BPAC 674936: Panoramic Night Vision Goggles (PNVG) Development</td> <td style="text-align: center;">4,666</td> <td style="text-align: center;">4,000</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">8,666</td> </tr> <tr> <td>(U) Items Less Than \$5M (Safety Equipment) PE 0702833F BPAC 842140: Panoramic Night Vision Goggles--FYDP Requirements TBD</td> <td></td> <td style="text-align: center;">2,900</td> <td style="text-align: center;">4,100</td> <td style="text-align: center;">3,100</td> <td style="text-align: center;">3,100</td> <td style="text-align: center;">19,300</td> <td style="text-align: center;">20,100</td> <td style="text-align: center;">20,900</td> <td style="text-align: center;">0</td> <td style="text-align: center;">73,500</td> </tr> </tbody> </table> <p>The PNVG project was selected for transition by the FY 02 Warfighter Rapid Acquisition Process (WRAP). WRAP (PE 0203761F) provides approval and rapid transition funding, up to 2 years, for the development and fielding of the results of highly successful competitive experiments, demonstrations, and innovative</p>										<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>	e. Rescissions	-44			TBD	(U) Adjustments to Budget Years Since FY 2003 PBR			-5	TBD	(U) Current Budget Submit/FY 2004 PBR	8,899	7,732	269	TBD		<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>		<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>		(U) Items Less Than \$5M (Safety Equipment) PE 0702833F BPAC 842990: Aircrew Laser Eye Protection (ALEP)	2,800	4,520	3,920	1,400					0	12,640	(U) Warfighter Rapid Acquisition Program PE 0203761F BPAC 674936: Panoramic Night Vision Goggles (PNVG) Development	4,666	4,000							0	8,666	(U) Items Less Than \$5M (Safety Equipment) PE 0702833F BPAC 842140: Panoramic Night Vision Goggles--FYDP Requirements TBD		2,900	4,100	3,100	3,100	19,300	20,100	20,900	0	73,500
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0604706F Life Support Systems

PROJECT

412A(U) **D. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	

approaches to support the Expeditionary Air Force (EAF) and other warfighters. Subsequent to the two year transition period, all future enhancements for PNVGs are part of this PE.

(U) **E. Acquisition Strategy**

Acquisition strategy is carried out at the project level. There are no major Life Support projects in FY04.

(U) **F. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4

(U) ACES II Digital Sequencer Qual Start

X

(U) F-16 ACES II Structural Improvement Task

*

(U) F-15 ACES II Structural Improvement Task

*

(U) ACES II Limb Restraint Study

*

(U) F-16 ACES II P3I Task Completion

X

(U) ACES II Accommodations Kit FDE (OT&E) Completion

X

(U) ACES II Limb Restraint Kit FDE (OT&E) Completion

X

(U) LESPA Development Block I Completion

X

(U) LESPA Development Block II Completion

X

(U) FASS CTD Award

*

(U) FASS DT&E/OT&E

X

(U) ALEP SDD Contract Award

*

(U) ALEP Complete DT&E

X

(U) ALEP Complete IOT&E

X

(U) ALEP Block I Production Award

X

(U) PNVG SDD Contract Award

*

(U) PNVG Block I Production Award

X

* = completed event

X = planned event

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05 - System Development and Demonstration (SDD)**0604706F Life Support Systems****412A****(U) F. Schedule Profile Continued**

<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
1	2	3	4	1	2	3	4	1	2	3	4

Note: LESPA Development Block I schedule slip due to unavailability of test aircraft; ACES II Accommodations Kit OT&E and Limb Restraint Kit OT&E apparent schedule slip because event 'start' was shown previously and now the event 'completion' is shown in its place.

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE		February 2003	
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - System Development and Demonstration (SDD)				0604706F Life Support Systems				412A		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
				<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>		
(U) Contracts				7,281		7,039				
(U) Technical Engineering Support				774		350		100		
(U) Travel				180		38		25		
(U) Government Testing				146		222		49		
(U) Program Management/Technical Support and Misc.				518		83		95		
(U) Total				8,899		7,732		269		
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>		<u>Method/Type</u>		<u>Award or</u>		<u>Performing</u>		<u>Project</u>		
<u>Performing</u>		<u>or Funding</u>		<u>Obligation</u>		<u>Activity</u>		<u>Office</u>		<u>Total Prior</u>
<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 2002</u>
								<u>Budget</u>		<u>Budget</u>
								<u>FY 2002</u>		<u>FY 2003</u>
								<u>FY 2004</u>		<u>Budget to</u>
								<u>Complete</u>		<u>Total</u>
										<u>Program</u>
<u>Product Development Organizations</u>										
UPCO-Inflatable Rest		SS/CPAF		Aug 99		2,053		2,053		2,157
Entran Devices-ACES II		FFP		Sep 99		39		39		39
Boeing-ACES II Struc Def		SS/CPFF		Dec 99		200		200		200
ATA Sensors-ACES II		FFP		Mar 00		31		31		31
Gemini Elect Co-ACES II		FFP		May 99		9		9		9
Denton, Inc-ACES II		FFP		Sep 99		47		47		47
First Tech Sys-ACES II		FFP		Oct 99		393		393		193
Boeing-ACES II --Study		SS/CPFF		Aug 99		237		237		237
Pioneer Aerospace-ACES II		FFP		Jan 99		9		9		9
EME Corp-ACES II		FFP		Mar 00		244		244		
ITT-NVS		C/CPIF		Jan 93		14,081		14,081		14,081
KRUG-ATAGS		SS/FFP		7 July 97		424		424		424
Mustang-ATAGS		SS/FFP		Sep 97		499		499		499
ALEP - (AL/Navy)		C/CPFF		Jun 97		4,552		4,552		4,552
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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)				0604706F Life Support Systems				412A	
(U) <u>Performing Organizations Continued:</u>									
<u>Product Development Organizations</u>									
MDA-Enhanced Drogue	SS/CPFF	Jun 97	1,130	1,130	1,130				1,130
MDA-ACES II Seats	SS/FFP	Sept 97	150	150	150				150
SRL-ATAGS DT&E Support	SS/CPFF	Dec 97	150	150	150				150
Boeing-ACES II Pre-SDD	SS/CPFF	Feb 98	250	250	250				250
Brooks AFB, Supply	Supply Reqt	Feb 98	311	311	311				311
Contax	SS/FFP	Apr 98	11	11	11				11
Boeing-ACES II SDD	SS/CPIF	Dec 98	5,004	5,004	6,747				6,747
Boeing-ACES II SDD (Structural)	SS/CPFF	Jun 00			412				412
SEI - Vacuum Packed Parachute	SS/CPFF	Sep 01	752	752	122				122
Pax River	AF 185	Aug 99	147	147					
Holloman AFB	AF 185	Nov 99	5	5					
ALEP CTD	CPFF	Sep 00	3,551	3,551	4,667				4,667
Rockwell/Kaiser ALEP SDD	CPFF	27 Feb 02	5,650	5,650		3,103	232		3,335
Fixed Seats	CPFF	09 Aug 02	3,200	3,200	900		2,465		3,365
Inflatable Restraints Early SDD	C/CPIF	Sep 00	3,000	3,000	2,174				2,174
SAIC						774	350		1,124
Insight - PNVG SDD	CPIF	Nov 02				2,406			2,406
BF Goodrich - ACES II P3I	CPFF	Nov 02				1,086	2,369		3,455
SEI - LESPA Block II SDD	SS/CPFF	Sep 02	1,100	1,100		416			416
Mustang - ATAGS	CPFF	Sep 02				270			270
Distress Systems - TBD	TBD	TBD					1,973		1,973

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05 - System Development and Demonstration (SDD)				0604706F Life Support Systems				412A	
(U) <u>Performing Organizations Continued:</u>									
<u>Support and Management Organizations</u>									
Program Management		5,601	5,601	3,247	518	83	100	Continuing	TBD
Support									
Travel		1,273	1,273	716	180	38	25	Continuing	TBD
Tech Eng & Acq		6,941	6,941	5,095			95	Continuing	TBD
<u>Test and Evaluation Organizations</u>									
Edwards Test Facility		AF 185	100	100	21				21
ALEP Testing Agency		TBD	TBD			222			222
Fixed Seats Testing Agency		TBD	TBD						
AFOTEC				62			49	Continuing	TBD
AFOTEC		Proj	3,146	3,146	3,146	125			3,271
		Ord-Various							
(U) <u>Government Furnished Property:</u>									
<u>Contract</u>									
<u>Method/Type</u>									
<u>Award or</u>		<u>Obligation</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
<u>Item</u>		<u>or Funding</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Description</u>		<u>Vehicle</u>							<u>Program</u>
<u>Product Development Property</u>									
<u>Support and Management Property</u>									
<u>Test and Evaluation Property</u>									
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
					<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Subtotals</u>									<u>Total</u>
Subtotal Product Development					39,502	8,055	7,389		54,946
Subtotal Support and Management					9,058	698	121	220	TBD
Subtotal Test and Evaluation					3,208	146	222	49	TBD
Total Project					51,768	8,899	7,732	269	TBD
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