

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2008</b>
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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0401218F KC-135s</b>
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.092	8.710	7.133	0.000	0.000	0.000	0.000	Continuing	TBD
4494 KC-135 Aging Aircraft Program	1.092	1.228	1.160	0.000	0.000	0.000	0.000	Continuing	TBD
5261 KC-135 Upgrades	0.000	7.482	5.973	0.000	0.000	0.000	0.000	0.000	0.000

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

KC-135 Aging Aircraft Program (674494).

This program supports projects that will help to keep the KC-135 viable into the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

KC-135 Upgrades (675261).

Block 45 program - Supports a modification program performing analysis, testing, software development, prototyping, documenting source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS) - Replaces the current APX-100 transponder with the APX-119 transponder. Efforts allow integration of new equipment into exiting KC-135 systems.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational System Development.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	1.122	8.766	7.133
(U) Current PBR/President's Budget	1.092	8.710	7.133
(U) Total Adjustments	-0.030	-0.056	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.056	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-0.030		
(U) <u>Significant Program Changes:</u>			

**Exhibit R-2a, RDT&E Project Justification**

DATE

**February 2008**

<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>				<b>PE NUMBER AND TITLE</b> <b>0401218F KC-135s</b>			<b>PROJECT NUMBER AND TITLE</b> <b>4494 KC-135 Aging Aircraft Program</b>		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4494 KC-135 Aging Aircraft Program	1.092	1.228	1.160	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

This program supports projects that will help to keep the KC-135 viable into the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Corrosion/crack growth rate and fatigue determination and testing	0.076	0.439	0.000
(U) Functional Systems Integrity Program (FSIP)	0.698	0.500	0.600
(U) Mission support/contractor support	0.318	0.289	0.560
(U) Total Cost	1.092	1.228	1.160

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

	<u>FY 2007</u>	<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>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>Complete</u>	
(U) None									

**(U) D. Acquisition Strategy**

The acquisition strategy consists primarily of separate task orders (with separate statements of work) ranging from fixed price to cost plus contracts. These task orders address a myriad of aging aircraft activities against existing contract vehicles, such as the SPO-managed KC-135 Fleet Support Contract and Design Engineering Program contracts managed through the Air Logistics Centers.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE

**February 2008**

BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
<b>07 Operational System Development</b>				<b>0401218F KC-135s</b>					<b>4494 KC-135 Aging Aircraft Program</b>			
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
None											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Support</u>												
Aging Aircraft Studies	C/FP	ARINC, Oklahoma City and other support ctrs.		0.310		0.439		0.200		Continuing	TBD	
Subtotal Support			0.000	0.310		0.439		0.200		Continuing	TBD	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Corrosion & Fatigue Testing/Functional Systems Integrity Program	Fleet Support, T&M/FFP	Boeing, Wichita KS		0.774		0.500		0.600		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.774		0.500		0.600		Continuing	TBD	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.008		0.289		0.360		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	1.092		1.228		1.160		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE  
February 2008

BUDGET ACTIVITY  
07 Operational System Development

PE NUMBER AND TITLE  
0401218F KC-135s

PROJECT NUMBER AND TITLE  
4494 KC-135 Aging Aircraft Program

KC-135 R-4 Schedule Profile

Fiscal Year	FY06				FY07				FY08				FY09			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Corrosion & Fatigue Testing													▲			
FSIP (see note 1)																
FSIP will continue to examine additional a/c systems as required while monitoring those that have previously been examined (note 1).																
Contractor/Management Support																

- ☆ Major Event or Milestone
- Planned Ongoing Activity
- Ongoing Activity that is Complete
- ▲ Completed Event
- △ Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2008

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0401218F KC-135s

PROJECT NUMBER AND TITLE

4494 KC-135 Aging Aircraft Program

(U) Schedule Profile

FY 2007

FY 2008

FY 2009

(U) Corrosion & Fatigue Testing

1-4Q

1-4Q

(U) FSIP

1-4Q

1-4Q

1-4Q

**Exhibit R-2a, RDT&E Project Justification**

DATE  
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<b>BUDGET ACTIVITY</b> 07 Operational System Development				<b>PE NUMBER AND TITLE</b> 0401218F KC-135s			<b>PROJECT NUMBER AND TITLE</b> 5261 KC-135 Upgrades		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5261 KC-135 Upgrades	0.000	7.482	5.973	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	1	0	0	0	0		

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

Block 45 program - Supports a modification program performing analysis, testing and incorporating a new Digital Flight Director (DFD), Radar Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS) - Replaces the current APX-100 transponder with the APX-119 transponder. Efforts allow integration of new equipment into exiting KC-135 systems.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Block 45 - Non-Recurring Engineering efforts/tasks for all Block 45 sub programs		5.917	5.973
(U) EHS - Non-Recurring Engineering efforts/tasks for EHS		1.565	
(U) Total Cost	0.000	7.482	5.973

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

	<u>FY 2007</u>	<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>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>Complete</u>	
(U) Block 45 Mod # 8653 3010 BP11 C135 0401218F			2.123	5.322	15.815	37.244	45.538	195.765	301.807
(U) EHS Mod # 8654 3010 BP11 C135 0401218F		5.341	5.777	19.894	8.950	4.019			43.981

**(U) D. Acquisition Strategy**

Block 45 - The strategy is to have a contracted integrator accomplish the task of performing analysis, testing, software development, prototype, documentation of source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS). The contractor will be responsible for acquiring the necessary information and personnel to incorporate each item stated above. An RFP will be sent out requesting a single contracted integrator to integrate Block 45 onto the KC-135. The contractor will be responsible for developing, subcontracting, or a combination of the two for the development of the components.

EHS - The strategy is to have a single contractor do NRE. Kits will be purchased and installed as a Field Level Modification.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE				
<b>07 Operational System Development</b>				<b>0401218F KC-135s</b>				<b>5261 KC-135 Upgrades</b>				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Block 45 - NRE, engineering, development, and prototype	TBD	TBD				5.917		5.973			11.890	
EHS - NRE and development	TBD	TBD				1.565					1.565	
Subtotal Product Development			0.000	0.000		7.482		5.973		0.000	13.455	0.000
Remarks:												
(U) <u>Support</u>		TBD									0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>		TBD									0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>		TBD									0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		7.482		5.973		0.000	13.455	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

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BUDGET ACTIVITY  
07 Operational System Development

PE NUMBER AND TITLE  
0401218F KC-135s

PROJECT NUMBER AND TITLE  
5261 KC-135 Upgrades

Block 45 / EHS								
	FY08				FY09			
	1	2	3	4	1	2	3	4
Block 45 Development, T&E								
Prototype								
EHS Development, T&E								

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2008

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0401218F KC-135s

PROJECT NUMBER AND TITLE

5261 KC-135 Upgrades

(U) Schedule Profile

FY 2007

FY 2008

FY 2009

(U) Block 45 - NRE Effort

2-4Q

1-4Q

(U) EHS - NRE Effort

2Q