

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
--	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0401219F / KC-10s											
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	-	2.714	1.799	-	1.799	-	-	-	-	-	4.513
675195: <i>Aircraft Modernization Program (AMP)</i>	-	-	2.714	1.799	-	1.799	-	-	-	-	-	4.513
Quantity of RDT&E Articles	-	-	-	1	-	1	-	-	-	-		

A. Mission Description and Budget Item Justification

The KC-10A Extender is an aerial refueling asset built on the commercial DC-10 airframe. The aircraft creates an air bridge enabling rapid global mobility and global strike missions. There are 59 KC-10A aircraft in the USAF tanker fleet. RDT&E funds throughout the FYDP will be used to support the Mode 5 modification effort.

The Mode 5 modification is a DoD-mandated (JROCOM 047-07, 5 Mar 07 directs KC-10 IOC by 2014, FOC by 2020) upgrade to the KC-10's Identification Friend or Foe (IFF) system (the primary means of aircraft identification, used for command and control, during Air Defense operations). The Mode 5 upgrade increases anti-spoofing capabilities and lowers the possibility of aircraft/aircrew loss due to misidentification of friendly aircraft. The modification includes a APX-119 Mode 5 capable transponder, new KIV-77 Mode 5 crypto applique replacing the KIV-119, integration into the CNS/ATM avionics with control via the Central Display Unit, removal of the existing IFF control panel, and minor wiring changes.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>
Previous President's Budget	-	2.714	1.811	-	1.811
Current President's Budget	-	2.714	1.799	-	1.799
Total Adjustments	-	-	-0.012	-	-0.012
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.012	-	-0.012

Change Summary Explanation

FY16 adjustment for inflation.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force							Date: February 2015				
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>				R-1 Program Element (Number/Name) PE 0401219F / KC-10s							

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: Mode 5 Description: DoD-mandated upgrade to the IFF system to increase anti-spoofing and exploitation capabilities and lower the possibility of aircraft/aircrew loss due to misidentification of friendly aircraft. FY 2015 Plans: Engineering design and analysis effort to include upgrade of APX-119 transponder with Mode 5 capability, integration with CNS/ATM control panel, and replaces KIV-119 with KIV-77. FY 2016 Plans: Engineering design and analysis effort to include upgrade of APX-119 transponder with Mode 5 capability, integration with CNS/ATM control panel, and replaces KIV-119 with KIV-77.	-	2.714	1.799
Accomplishments/Planned Programs Subtotals	-	2.714	1.799

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF:BA05:Line Item #C01000: KC-10 Mods	48.169	77.513	5.611	-	5.611	6.162	5.730	4.762	4.841	-	152.788

Remarks

E. Acquisition Strategy
 Acquisition Approach Summary:

 The acquisition strategy will be a sole source 18-month RDT&E effort followed by procurement of kits and modification of fleet.

F. Performance Metrics
 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0401219F / KC-10s				Project (Number/Name) 675195 / Aircraft Modernization Program (AMP)					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CNS/ATM	C/FFP	Rockwell Collins : Cedar Rapids, IA	-	-		-		-		-		-	Continuing	Continuing	20.459
Mode 5 IFF EMD	SS/FFP	Rockwell Collins : Cedar Rapids, IA	-	-		2.514	Sep 2015	1.311	Jan 2016	-		1.311	Continuing	Continuing	3.825
Subtotal			-	-		2.514		1.311		-		1.311	-	-	24.284
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Gov Test and Evaluation (CNS/ATM)	Various	Contract Crew, AMC/TE, FAA : McGuire AFB, NJ	-	-		-		-		-		-	Continuing	Continuing	29.531
Gov Test and Evaluation (Mode 5)	Various	Contract Crew, AMC/TE, FAA : McGuire AFB, NJ	-	-		-		0.288	Jul 2016	-		0.288	-	0.288	0.288
Subtotal			-	-		-		0.288		-		0.288	-	-	29.819
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	Various	Various : Tinker AFB, OK	-	-		-		-		-		-	Continuing	Continuing	3.000

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0401219F / KC-10s				Project (Number/Name) 675195 / Aircraft Modernization Program (AMP)					

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mode 5 Mission Support	C/CPAF	Various : Tinker AFB, OK	-	-		0.200	Mar 2015	0.200	Mar 2016	-		0.200	Continuing	Continuing	0.400
Subtotal			-	-		0.200		0.200		-		0.200	-	-	3.400

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		2.714		1.799		-		1.799	-	-	57.503

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0401219F / KC-10s		Project (Number/Name) 675195 / Aircraft Modernization Program (AMP)	

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
Mode 5 EMD Contract Award																												
Mode 5 EMD																												
Mode 5 Production of Kits																												
Mode 5 Kit Installation																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401219F / KC-10s	Project (Number/Name) 675195 / Aircraft Modernization Program (AMP)	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mode 5 EMD Contract Award	4	2015	4	2015
Mode 5 EMD	4	2015	2	2017
Mode 5 Production of Kits	1	2017	1	2018
Mode 5 Kit Installation	1	2018	4	2018