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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>					PE 0401219F: KC-10s							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	30.868	24.022	0.000	-	0.000	2.748	1.832	0.000	0.000	Continuing	Continuing
674498: <i>KC-10 Drag</i>	-	0.000	1.900	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675195: <i>Aircraft Modernization Program (AMP)</i>	-	30.868	22.122	0.000	-	0.000	2.748	1.832	0.000	0.000	0.000	57.570

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

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 to enable rapid global mobility and global strike missions. There are 59 KC-10 aircraft in the USAF tanker fleet. Funds will be used to support the Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) program.

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 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	30.868	24.022	4.580	-	4.580
Current President's Budget	30.868	24.022	0.000	-	0.000
Total Adjustments	0.000	0.000	-4.580	-	-4.580
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-4.580	-	-4.580

Change Summary Explanation

FY14 RDT&E funds reduced (\$4.580M) because of program rephasing.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>					R-1 ITEM NOMENCLATURE PE 0401219F: KC-10s				PROJECT 674498: KC-10 Drag			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
674498: KC-10 Drag	-	0.000	1.900	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date												
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. The KC-10 Drag Reduction program will improve fuel efficiency by adapting aerodynamic improvements to three areas of separated airflow identified on the airframe that produce turbulence. The three areas are the Pylon Fillet, Windshield Fairings, and Outboard Slat Seals. The total improvement in fuel burn is 1.4% fuel savings. This drag improvement results in reduced fuel consumption of 1,710,000 gallons per year after the modification is completed.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Title: KC-10 Drag Reduction program										0.000	1.900	0.000
Description: KC-10 Drag Reduction engineering design and analysis.												
FY 2013 Plans: Engineering design and analysis effort to modify the three areas of separated airflow identified on the airframe which produce turbulence.												
Accomplishments/Planned Programs Subtotals										0.000	1.900	0.000
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• APAF::BA05:Line Item # C01000: KC-10: Drag Reduction	0.000	0.175	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
Remarks												
D. Acquisition Strategy KC-10 Drag program cancelled due to Air Force higher priority programs.												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10s</i>	PROJECT 674498: <i>KC-10 Drag</i>

E. 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>							R-1 ITEM NOMENCLATURE PE 0401219F: KC-10s				PROJECT 674498: KC-10 Drag				
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Drag Reduction engineering design and analysis	SS/T&M	Boeing Corporation:Oklahoma City, OK	-	0.000		1.900	Jul 2013	0.000		-		0.000	Continuing	Continuing	
Subtotal			0.000	0.000		1.900		0.000		0.000		0.000			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		1.900		0.000		0.000		0.000			
Remarks															

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE				PROJECT			
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					PE 0401219F: KC-10s				675195: Aircraft Modernization Program (AMP)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675195: Aircraft Modernization Program (AMP)	-	30.868	22.122	0.000	-	0.000	2.748	1.832	0.000	0.000	0.000	57.570
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

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 Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) modification efforts.

The KC-10 Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) program provides worldwide airspace accessibility by FY2015 for the fleet of 59 KC-10 aircraft. FAA airworthiness certification following the modification is required. An upgrade of the current Flight Management System (FMS) and Inertial Navigation System (INS) is required to meet the 2015 CNS/ATM requirements and address associated INS and FMS obsolescence issues. This capability gap is well documented in both RAND KC-10 Analysis of Alternatives (AoA) and Service Life Extension Program (SLEP) studies. Avionics components shall use either Commercial Off-The-Shelf (COTS) or Military Off-The-Shelf (MOTS) software and hardware. CNS/ATM requirements include: Required Navigation Performance (RNP-4) Oceanic/Remote for enroute Oceanic Airspace with either 50/50 Nautical Miles (NM) or 30/30 NM separations; Basic Area Navigation (BRNAV) for enroute European Airspace (9,500ft & up); RNP 2 & 1 for enroute & terminal airspace operations; Precision-RNAV (P-RNAV) for Preferred terminal area routes in Europe (1 NM Accuracy); RNP-4 & RNP-1 for reduced separations enroute, and terminal airspace; Time of Arrival Control for Refuel rendezvous (within 30 sec); Automatic Dependent Surveillance - Broadcast (ADS-B) Out for enhanced air and ground surveillance; Global Positioning System (GPS) for enhanced navigation capability; Selective Availability Anti-Spoofing Module (SAASM) for Global Positioning System (GPS) Security; Satellite Data Link for Air Traffic Systems (ATS) and Command and Control (C2) Communications for flight in Oceanic Airspace (FL310-410); Satellite Voice for Beyond Line of Sight (BLOS) Pilot - Controller Communications C2 Operations; and Very-High Frequency Data Link (VDL) Mode-2 for Line of Sight (LOS) Pilot - Controller Communications and C2 Operations. The CNS/ATM development effort will end in FY13.

The Mode 5 modification is a DoD-mandated upgrade to the KC-10's Identify Friend or Foe (IFF) system (the primary means of aircraft identification during Air Defense operations). The Mode 5 upgrade increases anti-spoofing and exploitation capabilities and lowers the possibility of aircraft/aircrew loss due to misidentification of friendly aircraft. The modification includes a new Mode 5 crypto applique, a circuit card upgrade to the APX-119 transponder, support equipment upgrades and replacement/relocation of the data loader from the avionics bay to the flight deck. Mode 5 integration funding will begin in FY15 and continue through FY16.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2012	FY 2013	FY 2014
Title: CNS-ATM Avionics Upgrade	30.868	22.122	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0401219F: KC-10s			PROJECT 675195: Aircraft Modernization Program (AMP)				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Description: CNS-ATM Avionics Upgrade to fleet of 59 KC-10 aircraft FY 2012 Accomplishments: CNS/ATM: Begin software and hardware development activities of aircraft and Aircrew Training Device (ATD) designs and prepare for aircraft production startup in FY 14. The development activities include Systems Integration Laboratory (SIL) testing, installation of CNS/ATM kits in the EMD aircraft, installation of CNS/ATM kits in an ATD, accomplishment of ATD testing and certification, and accomplishing aircraft ground and flight test leading to a Federal Aviation Administration (FAA) Supplemental Type Certificate (STC). FY 2013 Plans: CNS/ATM: Finish software and hardware development activities of aircraft and ATD designs and prepare for aircraft production startup in FY 14. The development activities include Systems Integration Laboratory (SIL) testing, accomplishment of ATD testing and certification, and accomplishing aircraft ground and flight test leading to a Federal Aviation Administration (FAA) Supplemental Type Certificate (STC).												
Accomplishments/Planned Programs Subtotals										30.868	22.122	0.000
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• APAF:BA05:Line Item #C01000: KC-10:	0.000	38.900	64.600		64.600	28.700	0.000	0.000	0.000	0.000	132.200	
Remarks												
D. Acquisition Strategy Acquisition Approach Summary: CNS/ATM: The acquisition is in accordance with Federal Acquisition Regulation (FAR) Part 15, Contracting by Negotiation. Further, this acquisition was awarded to a single integrator to accomplish all activities and utilizes a firm fixed price (FFP) contract with performance based payments. Payments (expenditures) on this contract are intentionally deferred, to the advantage of the government, to incentivize the contractor to successfully complete program milestones. These deferred payments cannot be paid until these milestones have been successfully completed; thus, delaying complete expenditure of those funds. Therefore, expenditures for this effort will lag behind OSD goals.												
E. 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.												

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0401219F: KC-10s						PROJECT 675195: Aircraft Modernization Program (AMP)			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Engineering, Design, and Integration (Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM))	C/FFP	Rockwell Collins:Cedar Rapids, IA	-	14.337	Jan 2012	6.122	Mar 2013	0.000		-		0.000	0.000	20.459	
Subtotal			0.000	14.337		6.122		0.000		0.000		0.000	0.000	20.459	
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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:Oklahoma City, OK	-	14.531	Jan 2012	15.000	Mar 2013	0.000		-		0.000	0.000	29.531	
Subtotal			0.000	14.531		15.000		0.000		0.000		0.000	0.000	29.531	
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All 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	-	2.000	Jan 2012	1.000	Mar 2013	0.000		-		0.000	0.000	3.000	
Subtotal			0.000	2.000		1.000		0.000		0.000		0.000	0.000	3.000	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force											DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0401219F: KC-10s					PROJECT 675195: Aircraft Modernization Program (AMP)			
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	30.868		22.122		0.000		0.000		0.000	0.000	52.990	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

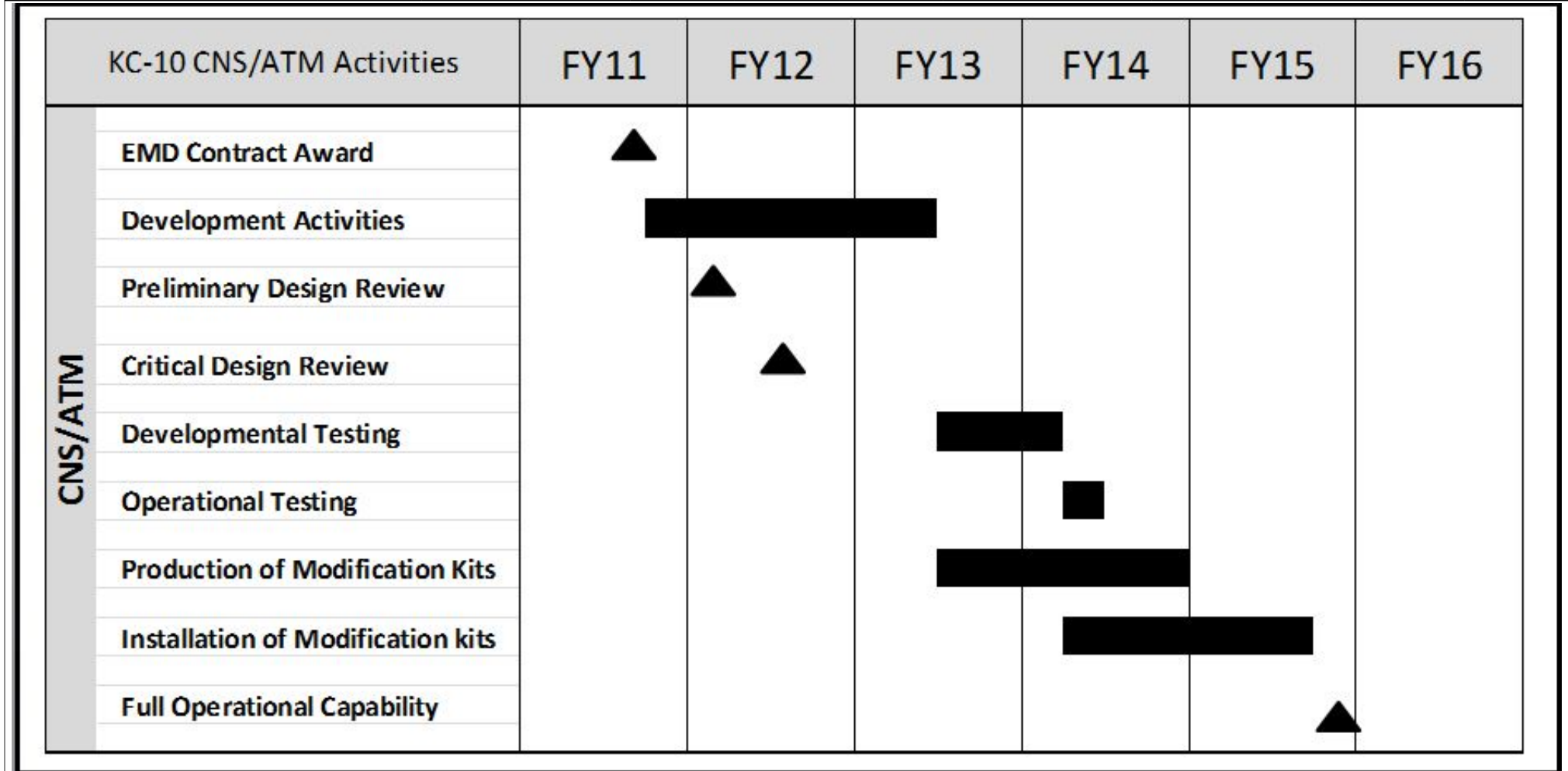
3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0401219F: KC-10s

PROJECT

675195: *Aircraft Modernization Program (AMP)*



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10s</i>	PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CNS/ATM Development	1	2012	2	2013
CNS/ATM Preliminary Design Review	1	2012	1	2012
CNS/ATM Critical Design Review	3	2012	3	2012
CNS/ATM Developmental Testing	2	2013	2	2014
CNS/ATM Operational Testing	1	2014	2	2014
CNS/ATM FY14 Initial Production Long Lead Items	1	2013	1	2014
CNS/ATM FY13 Initial Spares Long Lead Items	1	2013	1	2014
CNS/ATM FY15 Production Long Lead Items	1	2014	1	2015
CNS/ATM Mod Kit Production	1	2013	1	2015
CNS/ATM Mod Kit Installation	2	2014	4	2015