

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605221F / KC-46							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	1,680.736	1,550.289	1,558.590	776.937	-	776.937	606.368	316.827	21.557	4.401	-	6,515.705
655271: KC-46 RDT&E	1,680.736	1,550.289	1,558.590	776.937	-	776.937	606.368	316.827	21.557	4.401	-	6,515.705
Quantity of RDT&E Articles	4.000	-	-	-	-	-	-	-	-	-		
MDAP/MAIS Code: 387												

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Replacement of the legacy KC-135 fleet will take place in three stages, known as the KC-X (now the KC-46), KC-Y, and the KC-Z. The initial KC-46 increment will replace roughly a third of the current capability with the purchase of 179 aircraft. The Air Force completed an Analysis of Alternatives (AoA) in Apr 2006 to determine the most appropriate strategy to recapitalize the aging fleet of KC-135 aerial refueling aircraft. Based on this analysis, the Air Force concluded that a strategy of full and open competition to select a commercial derivative replacement tanker aircraft would result in a best value tanker contract. To initiate the first phase of the KC-135 replacement, the KC-46 program released a final Request for Proposal (RFP) on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46 program held a Milestone B Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter Engineering and Manufacturing Development (EMD) from OUSD(AT&L) on 24 Feb 2011, and awarded the KC-46 EMD contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46 aircraft.

The KC-46 will provide the capability to fuel joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and aeromedical evacuation capabilities. The KC-46 will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and redeployment of U.S. joint, allied, and coalition forces. The KC-46 will have communication, navigation and surveillance equipment for world-wide operations; will have the capability to perform missions in chemical and biological environments; will have the ability to operate in up to medium threat environments with self-defense/protection (both active and passive) capabilities; and will have necessary battle space awareness to mitigate survivability threats.

The KC-46 development effort will also procure the necessary ground and flight test assets to support development/operational test. The program plans to procure four RDT&E aircraft for integration and demonstration of capability that will ultimately be operationally fielded after a successful operational test phase. In addition, aircrew and maintenance training systems will be developed and procured using KC-46 funding. The Aircrew Training System (ATS) entered source selection on 31 May 2012 and a contract was awarded on 1 May 2013 to FlightSafety Services Corp. The ATS contract will provide aircrew training devices, to include Weapon System Trainers (WST), Boom Operator Trainers (BOT), Fuselage Trainers (FuT) and Part-Task Trainers (PTT) at each Main Operating Base (MOB) and the Formal Training Unit (FTU). The aircrew training system will also support Distributed Mission Operations (DMO), provide aircrew instruction, develop courseware, provide logistics support, acquire Technical Data Packages (TDP) to support future competition efforts, and manage training device concurrency with the aircraft. The Maintenance Training System (MTS) is scheduled to enter source selection in FY 2014. Initial training and sustainment efforts will be provided via Interim Contractor Support (ICS). KC-46 funding will also support a follow-on sustainment planning Business Case Analysis (BCA), various studies/analyses and KC-Y/KC-Z planning activities.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force				Date: March 2014		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0605221F / KC-46				
This program is in Budget Activity 05, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.						
B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		1,815.588	1,558.590	911.630	-	911.630
Current President's Budget		1,550.289	1,558.590	776.937	-	776.937
Total Adjustments		-265.299	-	-134.693	-	-134.693
• Congressional General Reductions		-2.293	-			
• Congressional Directed Reductions		-77.100	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-43.000	-			
• Other Adjustments		-142.906	-	-134.693	-	-134.693
Change Summary Explanation						
FY2013: Reduction of \$265.299M RDT&E due to: sequestration reduction (-\$142.906M), congressional directed reduction (-\$77.100M) due to excess funding, Small Business Innovation Research (SBIR) reduction (\$43.000M) and congressional general reduction (-\$2.293M)						
FY2015: Reduction of \$134.693M RDT&E due to higher Air Force priorities (-\$89.722M), Aircrew Training System (ATS) contract savings (-\$35.278M) and across-the-board OSD deflation (-\$9.693M).						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2013	FY 2014	FY 2015
Title: KC-46 Aircraft Product Development				1,501.978	1,468.996	643.157
Description: To begin re-capitalizing the aging KC-135 fleet, EMD activities will be conducted to include the following types of activities: Develop a commercial 767-2C aircraft upon which the KC-46 is based; develop the KC-46 military capability and integrate it into the aircraft; build 4 EMD aircraft; procure live fire assets; procure any required Government Furnished Equipment; procure simulator and maintenance data; develop technical manuals and Type 1 training; conduct development and operational testing.						
FY 2013 Accomplishments: Completed aircraft detailed design and began aircraft manufacturing and certification/qualification testing.						
FY 2014 Plans:						

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force		Date: March 2014		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>		R-1 Program Element (Number/Name) PE 0605221F / KC-46		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Continue aircraft manufacturing and certification/qualification testing.				
FY 2015 Plans: Continue aircraft manufacturing and certification/qualification testing.				
Title: KC-46 Trainer Product Development - Aircrew Training System Description: To begin re-capitalizing the aging KC-135 fleet, Trainer Development activities will be conducted to include the following types of activities: Develop an Aircrew Training System FY 2013 Accomplishments: Awarded KC-46 Aircrew Training System EMD contract. FY 2014 Plans: Continue activities associated with Aircrew Training System development. FY 2015 Plans: Continue activities associated with Aircrew Training System development.		15.500	35.459	29.436
Title: KC-46 Trainer Product Development - Maintenance Training System Description: To begin re-capitalizing the aging KC-135 fleet, Trainer Development activities will be conducted to include the following types of activities: Develop a Maintenance Training System. FY 2013 Accomplishments: N/A FY 2014 Plans: N/A FY 2015 Plans: Award KC-46 Maintenance Training System Engineering and Manufacturing Development contract.		-	-	41.115
Title: KC-46 Support Description: Studies and Analysis and mission planning support activities associated with the development, integration and demonstration of the KC-46 capability. In addition, planning activities for future efficiency initiatives, business case analyses, KC-Y & KC-Z planning, and misc. program office support & planning. Also includes requirements such as travel, office supplies, training courses, and service contracts. FY 2013 Accomplishments:		15.445	28.645	23.838

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force							Date: March 2014					
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>					R-1 Program Element (Number/Name) PE 0605221F / KC-46							
C. Accomplishments/Planned Programs (\$ in Millions)							FY 2013	FY 2014	FY 2015			
Continued KC-46 program support activities (AFLCMC)												
FY 2014 Plans: Continue program support activities (AFLCMC)												
FY 2015 Plans: Continue program support activities (AFLCMC)												
Title: KC-46 Test & Evaluation							17.366	25.490	39.391			
Description: To begin re-capitalizing the aging KC-135 fleet, Test & Evaluation activities will be conducted to include the following types of activities: Development Test & Evaluation support, Operational Test & Evaluation, Receiver Qualification, Live Fire Test & Evaluation, Federal Aviation Administration (FAA) support, and other test planning and organizational support.												
FY 2013 Accomplishments: Continued KC-46 Test & Evaluation planning and Live Fire Testing												
FY 2014 Plans: Continue KC-46 Test & Evaluation planning and Live Fire Testing, conduct 767-2C First Flight, and begin Development Test & Evaluation												
FY 2015 Plans: Continue KC-46 Developmental Test & Evaluation, Live Fire Testing and other Test & Evaluation planning activities; and conduct Operational Assessment #2 and KC-46 First Flight												
Accomplishments/Planned Programs Subtotals							1,550.289	1,558.590	776.937			
D. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
•	APAF: BA02: Line Item #: KC046A	-	-	1,582.685	-	1,582.685	2,426.792	3,772.120	3,691.434	3,316.663	24,803.978	39,593.671
Remarks												
E. Acquisition Strategy												
The KC-46 program acquisition strategy is to procure an existing commercial, Federal Aviation Administration (FAA) certified aircraft modified to meet USAF requirements. The KC-46 program released a final Request for Proposal (RFP) on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46 program held a Milestone B Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter Engineering and Manufacturing Development (EMD) from OUSD(AT&L) on 24 Feb 2011, and awarded the KC-46 contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46 aircraft. The KC-46 contract procurement was conducted												

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605221F I KC-46	
<p>via a full and open competition per Federal Acquisition Regulation (FAR) Part 15, and resulted in a FY 2011 EMD Fixed Price Incentive Firm (FPIF) contract. The EMD phase will develop, build, and test four KC-46 aircraft, and will qualify receiver aircraft.</p> <p>Production will begin in FY 2015 with the first of two Low-Rate Initial Production (LRIP) lots (Firm Fixed Priced (FFP)) and then Full-Rate Production (FRP) options (FFP with Not to Exceed (NTE) + Economic Price Adjustment (EPA)). The LRIP and FRP options will be exercised following a successful Milestone C decision for the LRIP decision, and a successful completion of Initial Operational Test and Evaluation (IOT&E) for the FRP decision.</p> <p>The Aircrew Training System (ATS) acquisition strategy is to provide aircrew training devices and associated support structure to each Main Operating Base (MOB) and the Formal Training Unit (FTU). The ATS entered source selection on 31 May 2012 and a contract was awarded on 1 May 2013 to FlightSafety Services Corp. The ATS contract procurement was conducted via a full and open competition per Federal Acquisition Regulation (FAR) Part 15, and resulted in a FY 2013 EMD FPIF contract. The EMD phase will develop and procure aircrew training devices delivered to the MOB #1 and the FTU. All supported with courseware, Training System Support Center, technical data package and support equipment to ensure system availability and concurrency with the aircraft. Production devices will commence in FY 2015 as FFP options. The government plans to compete the development, deployment, and sustainment of a Maintenance Training System separately.</p> <p>Based on the market research and a cost effectiveness analysis, the engines will be procured as contractor furnished equipment (CFE) for EMD. Following EMD, the government will assess the potential of breaking out the engines as a separate procurement based on an updated market analysis.</p> <p>The KC-46 program is responsible for the development, testing, and production of a drogue-equipped, wing-mounted refueling system to meet Capability Development Document (CDD) thresholds and objectives, for simultaneous refueling of two probe-equipped receivers. The system can be installed or removed from the KC-46 as mission needs dictate.</p> <p>The long-term support concept for the KC-46 is organic two-level maintenance (2LM): organization level (O-level) and depot level (D-level). For the purposes of this program, all maintenance other than O-level shall be referred to as D-level. The product support strategy will initially employ Interim Contractor Support before transitioning to a 100% organically managed maintenance and supply support capability. Performance Based Logistics (PBL) solutions will be evaluated during EMD as viable approaches to facilitate the transition.</p> <p>This acquisition strategy requires sufficient aircraft to be designed, tested, and delivered to meet a Required Assets Available (RAA) date of 78 months after contract award. RAA is defined as 18 aircraft meeting final production configuration with all required training and support in place. Initial Operational Capability (IOC) will be attained when the Commander, Air Mobility Command (AMC/CC) determines the unit is operationally war ready. AMC has not yet determined an IOC date. Full Operational Capability (FOC) is expected approximately 24 months after IOC.</p>		
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 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0605221F / KC-46				Project (Number/Name) 655271 / KC-46 RDT&E					
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
KC-46 aircraft non-recurring development, integration, and testing, 4 RDT&E tanker aircraft and support	C/FPIF	The Boeing Company : Seattle, WA	1,610.699	1,501.978	Oct 2012	1,468.996	Oct 2013	643.157	Oct 2014	-		643.157	671.196	5,896.026	4,393.857
Aircrew Training System	C/FPIF	FlightSafety Services Corp. : Centennial, CO	1.000	15.500	May 2013	35.459	Nov 2013	29.436	Oct 2014	-		29.436	35.691	117.086	78.370
Develop a Maintenance Training System	C/FPIF	TBD : TBD,	0.000	-		-		41.115	May 2015	-		41.115	152.424	193.539	-
Subtotal			1,611.699	1,517.478		1,504.455		713.708		-		713.708	859.311	6,206.651	-
Remarks															
The KC-46 EMD contract was awarded 24 Feb 2011. The contract ceiling price of \$4.9B is the government's maximum financial liability on the prime contract. The "Total Cost" value represents the Milestone B Service Cost Position (SCP), which accounts for the ceiling price of the contract plus the financial risk of potential design changes for the KC-46 Aircraft.															
The MTS contract award is the estimated date.															
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Studies and Analysis associated with the development, integration, and demonstration of KC-46 capability & future planning	Various	Various : Various,	11.234	5.282	Oct 2012	16.824	Oct 2013	10.599	Oct 2014	-		10.599	19.608	63.547	-
Subtotal			11.234	5.282		16.824		10.599		-		10.599	19.608	63.547	-
Remarks															
These contracts are on an as needed basis, with various contract types and performing activities.															

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force												Date: March 2014			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0605221F / KC-46				Project (Number/Name) 655271 / KC-46 RDT&E					
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Testing and Planning support of development & operational test, FAA & military certification, and aircraft qualification activities	Various	Various : Various,	17.403	17.366	Oct 2012	25.490	Oct 2013	39.391	Oct 2014	-		39.391	58.727	158.377	-
Subtotal			17.403	17.366		25.490		39.391		-		39.391	58.727	158.377	-
Remarks Testing and planning activities are performed by government organizations, with some Advisory & Assistance Services (A&AS) support.															
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 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
Program Management Administration - KC-46 A&AS Support	C/FFP	PESystems Inc. : Dayton, OH	21.454	6.754	Feb 2013	6.967	Feb 2014	6.553	Feb 2015	-		6.553	6.493	48.221	-
Program Management Administration - Trainer A&AS Support	C/FFP	National Technologies Assoc. Inc. : Dayton, OH	0.000	1.665	Dec 2012	1.945	Dec 2013	1.387	Dec 2014	-		1.387	1.472	6.469	-
Program Management Administration - Other	Various	KC-46 Program Office : Dayton, W-P AFB, OH	18.946	1.744	Oct 2012	2.909	Oct 2013	5.299	Oct 2014	-		5.299	3.542	32.440	-
Subtotal			40.400	10.163		11.821		13.239		-		13.239	11.507	87.130	-
Remarks 2 A&AS contracts over \$1M. Other PMA funding includes but is not limited to: A&AS contracts less than \$1M, travel, supplies and training.															
			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1,680.736	1,550.289		1,558.590		776.937		-		776.937	949.153	6,515.705	-
Remarks															

UNCLASSIFIED

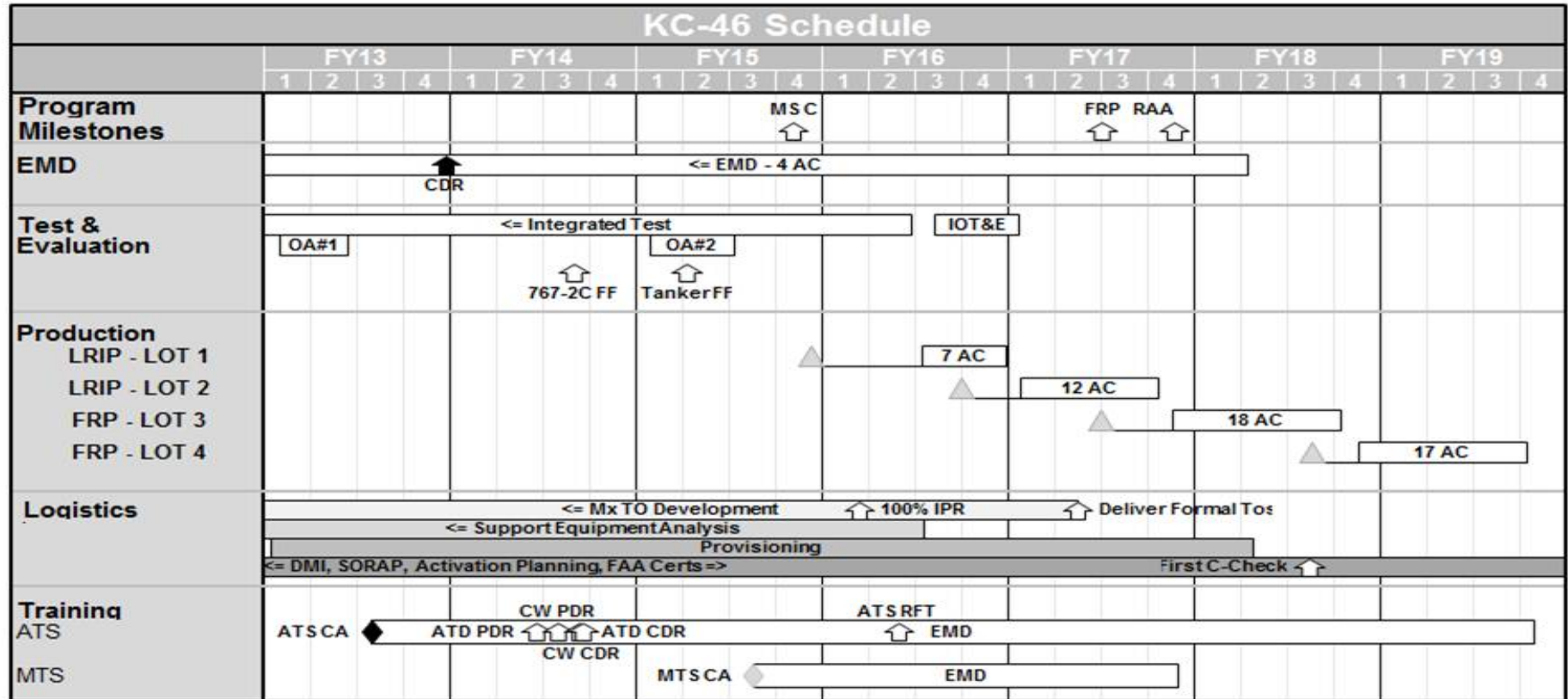
Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force

Date: March 2014

Appropriation/Budget Activity
3600 / 5

R-1 Program Element (Number/Name)
PE 0605221F / KC-46

Project (Number/Name)
655271 / KC-46 RDT&E



UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605221F / KC-46	Project (Number/Name) 655271 / KC-46 RDT&E	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EMD: KC-46 Aircraft	1	2013	2	2018
Critical Design Review	4	2013	4	2013
Test & Evaluation	1	2013	1	2017
Operational Assessment #1	1	2013	2	2013
767-2C First Flight	3	2014	3	2014
Tanker First Flight	2	2015	2	2015
Operational Assessment #2	1	2015	3	2015
Initial Operational Test & Evaluation	3	2016	1	2017
Low Rate Initial Production - Lot 1	4	2015	4	2016
Low Rate Initial Production - Lot 2	3	2016	4	2017
Full Rate Production - Lot 3	3	2017	4	2018
Full Rate Production - Lot 4	3	2018	4	2019
Maintenance Tech Order Development	1	2013	2	2017
100% In Process Review	1	2016	1	2016
Deliver Formal Tech Orders	2	2017	2	2017
Support Equipment Analysis	1	2013	3	2016
Provisioning	1	2013	2	2018
Depot Maintenance Inter-servicing (DMI), Source of Repair Assignment Process (SORAP), Activation Planning & FAA Certifications	1	2013	4	2019
First C-Check	3	2018	3	2018
Aircrew Training System Development & Updates	3	2013	4	2019
Maintenance Training System Development & Updates	3	2015	4	2017