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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 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0401119F I C-5 Airlift Squadrons (IF)							
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	-	12.220	48.617	38.773	-	38.773	7.556	-	-	-	-	107.166
675358: C-5 Mission Computer-Mission Sys Equip-Weather Radar	-	12.220	48.617	38.773	-	38.773	7.556	-	-	-	-	107.166
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

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

A. Mission Description and Budget Item Justification

The C-5 Core Mission Computer (CMC), Weather Radar, and Mission Systems Equipment Program is a comprehensive sustainment modification to mitigate the obsolescence of the current CMC and weather radar. This effort centers around modifying the current mission computer to obtain sufficient capacity/capability to support integration of new system capabilities with margin for growth by replacing the Core Processing Module (CPM) cards. Also, the effort includes replacement of the weather radar with a commercial off-the-shelf color weather radar. Mission systems equipment includes, but is not limited to, a redesign of the C-5 lavatory system. Examples of other mission systems equipment include troop seats, crew entry door and ladder, and interior trim.

The current C-5 CMC has reached maximum capacity and cannot integrate required aircraft systems and capabilities to include the weather radar; flight management system (FMS); and communication, navigation, surveillance (CNS)/air traffic management (ATM) requirements. These requirements include capabilities such as the automatic dependent surveillance-broadcast out (ADS-B Out), and identification, friend or foe (IFF) mode 5. The new CMC will allow for current and future throughput growth of additional processing requirements to meet CY 2020 CNS/ATM mandates.

The modification helps to maintain aircraft availability as the new color weather radar replaces the current APS-133 weather radar system, which is experiencing severe diminishing manufacturing source (DMS) issues. Failure to replace the CMC to support a new weather radar will create a significant operational impact due to parts obsolescence of the current weather radar. Equipment DMS issues will be resolved to support continued production and installation of requirements for the C-5 fleet. Further, DMS issues will be resolved to support continued operations through studies, bridge buys, life-of-type buys, development, and redesign efforts.

The current C-5 lavatory system suffers inoperability and leakage of liquid sodium hypochlorite causing severe corrosion and burnt wires in the landing gear control panels. A redesign of the Mission Systems Equipment program will increase safety, mitigate risk, and reduce man-hours required to repair extensive damage.

BA7 - 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.

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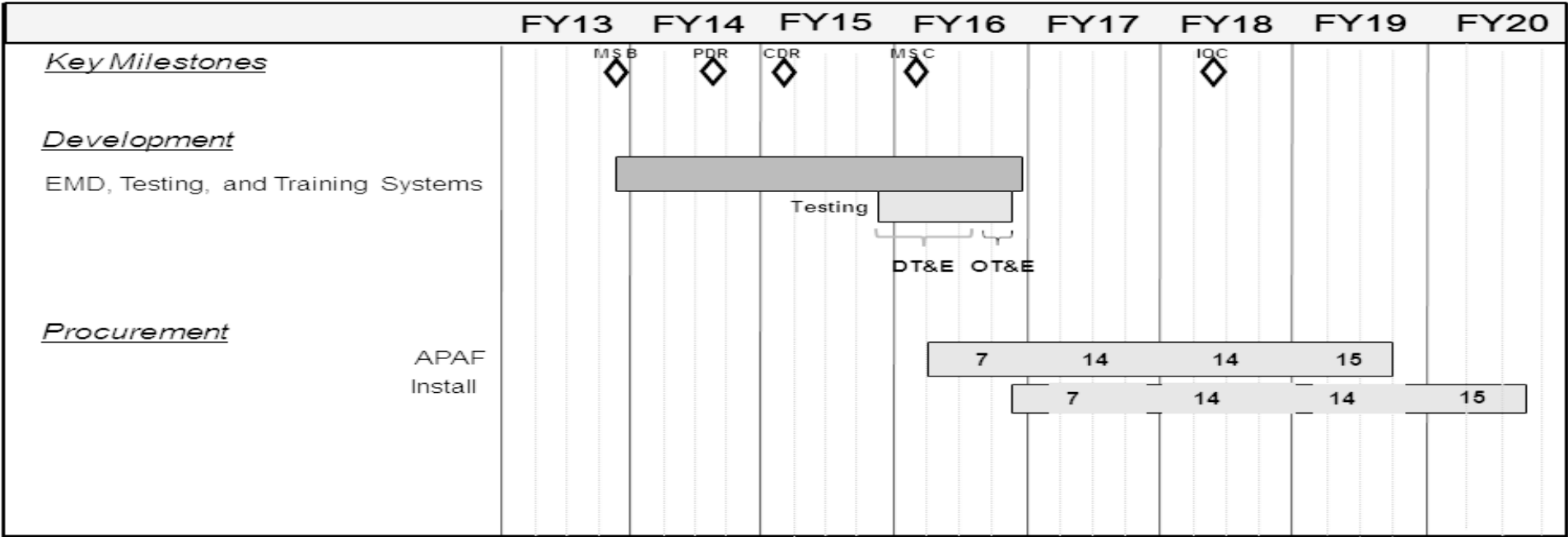
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B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		35.115	61.492	24.227	-	24.227
Current President's Budget		12.220	48.617	38.773	-	38.773
Total Adjustments		-22.895	-12.875	14.546	-	14.546
• Congressional General Reductions		-0.046	-			
• Congressional Directed Reductions		-	-12.875			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-18.955	-			
• SBIR/STTR Transfer		-1.009	-			
• Other Adjustments		-2.885	-	14.546	-	14.546
Change Summary Explanation						
FY13: Reductions due to SBIRs, Sequestration and ATR to support O&M funding requirement.						
FY14: Congressional mark of \$12.875M due to program decrease.						
FY15: Adjustments for prior reductions and change in procurement strategy.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2013	FY 2014	FY 2015
Title: Mission Computer and Weather Radar Program				11.220	48.617	38.773
Description: Core Mission Computer modification and Weather Radar replacement replacement will enable the C-5 to achieve wartime mission requirements by maintaining fleet availability (mission capable rate) and Program Management Administration (PMA).						
FY 2013 Accomplishments: Program accomplishments with FY13 funding include: supported CPM re-design, weather radar integration, development, and engineering change orders.						
FY 2014 Plans: The planned program funding in FY14 is to support completion of formal qualification testing, software integration, installation and functional check of hardware, and design and development of aircrew and maintenance training system modifications.						
FY 2015 Plans:						

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2013	FY 2014	FY 2015
The planned program funding in FY15 will support completion of formal qualification testing, installation and functional check of hardware, design and development of aircrew and maintenance training system modification, and developmental test and evaluation, completing in FY16.												
Title: Mission Systems Equipment										1.000	-	-
Description: Mission Systems Equipment replacement will enable the C-5 to achieve wartime mission requirements by maintaining fleet availability (mission capable rate).												
FY 2013 Accomplishments: Redesign of mission systems equipment. Mission support funding was required for program office operations.												
Accomplishments/Planned Programs Subtotals										12.220	48.617	38.773
D. Other Program Funding Summary (\$ in Millions)												
Line Item	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	
• APAF: BA05: Line Item # C00500: C-5	-	-	0.495	-	0.495	21.378	35.023	33.454	49.531	3.249	147.053	
Remarks Funding for initial spares and depot stand-up are included in the CMC/WxRadar modification requirements.												
E. Acquisition Strategy Core Mission Computer, Weather Radar, and Mission Systems Equipment programs: Engineering, manufacturing, and development (EMD) for the core mission computer and weather radar began in FY13. The acquisition strategy for this project considered every opportunity to use commercial components to modernize the C-5 core mission computer and weather radar and maintain aircraft availability in support of mobility missions worldwide. The strategy is for the prime contractor, Lockheed Martin Aero (LMA), to procure the core mission computer chips and weather radar, integrate and test those components, and install on two (2) EMD aircraft. The LMA negotiations were completed 4 Feb 14 and have an expected contract award date of March 2014. The contract method is sole source. The contract type will be predominately CPIF (Cost Plus Incentive Fee) with some FFP (Firm Fixed Price) elements. The mission systems equipment redesign will require RDT&E funding for commercial off-the-shelf (COTS) proofing. Funds are required for validation and verification of the lavatory design and installation. The Mission Systems Equipment contract method was competitive through the Defense Technical Information Center (DTIC). Wyle Science, Technical, and Engineering Group is the selected source, and the contract type is Cost Plus Fixed Fee (CPFF).												
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.												

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0401119F / C-5 Airlift Squadrons (IF)	Project (Number/Name) 675358 / C-5 Mission Computer-Mission Sys Equip-Weather Radar

Mission Computer and Weather Radar



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Mission Systems Equipment

