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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 0702207F I Depot Maintenance (Non-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	-	1.455	1.605	1.407	-	1.407	1.664	1.468	1.497	1.526	Continuing	Continuing
673326: Precision Measurement & Calibration	-	1.455	1.605	1.407	-	1.407	1.664	1.468	1.497	1.526	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

**A. Mission Description and Budget Item Justification**

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

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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B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		1.588	1.605	1.425	-	1.425
Current President's Budget		1.455	1.605	1.407	-	1.407
Total Adjustments		-0.133	-	-0.018	-	-0.018
• Congressional General Reductions		-0.003	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Other Adjustments		-0.130	-	-0.018	-	-0.018
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2013	FY 2014	FY 2015
Title: Weapons Systems Measurement Standards				0.490	0.640	0.442
Description: Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.						
FY 2013 Accomplishments: Continue development						
FY 2014 Plans: Continue development						
FY 2015 Plans: Continue development						
Title: Electrical Measurements				0.185	0.185	0.185
Description: Continue development of standards for electrical measurements to support high accuracy electronic test equipment.						
FY 2013 Accomplishments: Continue development						
FY 2014 Plans: Continue development						
FY 2015 Plans:						

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
Continue development				
<b>Title:</b> Radar Support/Communications <b>Description:</b> Continue development of standards for radar support, RF communication systems, and radar cross section range measurements. <b>FY 2013 Accomplishments:</b> Continue development <b>FY 2014 Plans:</b> Continue development <b>FY 2015 Plans:</b> Continue development		0.155	0.155	0.155
<b>Title:</b> Calibration <b>Description:</b> Continue the development of improved calibration standards to support physical, mechanical, and electro-mechanical support equipment. <b>FY 2013 Accomplishments:</b> Continue development <b>FY 2014 Plans:</b> Continue development <b>FY 2015 Plans:</b> Continue development		0.320	0.320	0.320
<b>Title:</b> Radiation Hazard <b>Description:</b> Continue the development of national standards for calibration of ionizing radiation hazard instrumentation. <b>FY 2013 Accomplishments:</b> Continue development <b>FY 2014 Plans:</b> Continue development <b>FY 2015 Plans:</b>		0.045	0.045	0.045

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
Continue development				
<b>Title:</b> Chemical/Biological Measurements <b>Description:</b> Continue development of improved standards and procedures to support chemical/biological measurements. <b>FY 2013 Accomplishments:</b> Continue development <b>FY 2014 Plans:</b> Continue development <b>FY 2015 Plans:</b> Continue development		0.160	0.160	0.160
<b>Title:</b> Analytical Metrology <b>Description:</b> Continue development of standards, models, and procedures to support analytical metrology applications. <b>FY 2013 Accomplishments:</b> Continue development <b>FY 2014 Plans:</b> Continue development <b>FY 2015 Plans:</b> Continue development		0.100	0.100	0.100
<b>Accomplishments/Planned Programs Subtotals</b>		1.455	1.605	1.407
<b>D. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>E. Acquisition Strategy</b>				
Primarily accomplish through intergovernmental transfer between the Department of Defense and other Federal Departments.				
<b>F. Performance Metrics</b>				
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-4, RDT&E Schedule Profile: PB 2015 Air Force**

Date: March 2014

**Appropriation/Budget Activity**  
3600 / 7

**R-1 Program Element (Number/Name)**  
PE 0702207F / Depot Maintenance (Non-IF)

**Project (Number/Name)**  
673326 / Precision Measurement & Calibration

## Precision Measurement & Calibration

**FY13****FY14****FY15****FY16****FY17****FY18****FY19**

## Develop Standards