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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605807F: Test and Evaluation Support							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	756.327	749.756	759.868	0.000	759.868	758.259	732.288	748.855	777.809	Continuing	Continuing
6606TG: 46 Test Group	30.715	28.949	31.009	0.000	31.009	32.828	36.888	37.635	37.606	Continuing	Continuing
6606TS: Test and Evaluation Support	725.612	720.807	728.859	0.000	728.859	725.431	695.400	711.220	740.203	Continuing	Continuing

A. Mission Description and Budget Item Justification

Test facilities, capabilities and resources operated through this program include wind tunnels, rocket and jet engine test cells, hypersonic and subsonic testing, limited space environmental simulation chambers, armament test ranges, hardware-in-the-loop test facilities, climatic test facilities, avionics test facilities, aircraft testbeds, dry lakebed landing sites, instrumented test ranges, civilian payroll, and contractor services. It also provides resources for maintaining and modifying as required Air Force Materiel Command (AFMC) assigned test and test support coded aircraft. No acquisition contracts are funded from this program; test support contracts for services and supplies and equipment are predominantly awarded on the basis of full and open competition.

This program element is in Budget Activity 6, RDT&E Management Support, because it funds institutional infrastructure resources (civilians, aircraft, facilities and ranges) to operate the Air Force test activities which are included in the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB).

B. Program Change Summary (\$ in Millions)					
	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	756.327	736.488	0.000	0.000	0.000
Current President's Budget	756.327	749.756	759.868	0.000	759.868
Total Adjustments	0.000	13.268	759.868	0.000	759.868
• Congressional General Reductions		-0.023			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		10.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	3.291	759.868	0.000	759.868

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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2009	FY 2010
Project: 6606TG: <i>46 Test Group</i>			
Congressional Add: <i>Assist with contractor to civilian conversion.</i>		0.000	0.531
Congressional Add Subtotals for Project: 6606TG		0.000	0.531
Project: 6606TS: <i>Test and Evaluation Support</i>			
Congressional Add: <i>Assist with contractor to civilian conversion.</i>		0.000	9.469
Congressional Add Subtotals for Project: 6606TS		0.000	9.469
Congressional Add Totals for all Projects		0.000	10.000
<u>Change Summary Explanation</u>			
FY10:			
\$10.0M Congressional add for civ pay for the contractor to civilian conversion			
\$3.3M for fuel			
The price for fuel in this program element is calculated using the FY 2010 President's Budget of \$89.46 versus the current fuel composite rate of \$118.02. This would require \$4.313M ; \$3.291M is requested in the FY10 supplemental and \$1.022M will be funded through an anticipated reprogramming.			
FY11:			
The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.			

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605807F: Test and Evaluation Support				PROJECT 6606TG: 46 Test Group			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
6606TG: 46 Test Group	30.715	28.949	31.009	0.000	31.009	32.828	36.888	37.635	37.606	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Project infrastructure support is provided for the unique capabilities of the 46th Test Group (TG) facilities: Central Inertial Guidance Test Facility (CIGTF/746th Test Squadron), the Holloman High Speed Test Track (HHSTT/846th Test Squadron) and the National Radar Cross Section (RCS) Test Facility (NRTF/781st Test Squadron), the 586th Flight Test Squadron and Detachment 1 (Det 1). CIGTF provides independent test and evaluation of inertial, Global Positioning System, and integrated systems used for aircraft navigation and missile guidance systems, including vulnerability to electronic interference. HHSTT capabilities include full-scale testing in flight environments, realistic live-fire simulations, test item and target fragment recovery, and precision trajectory analysis and high speed photography. NRTF provides radar cross section (RCS) monostatic and bistatic amplitude and phase measurements, antenna pattern measurements, glint and near field measurements for low observable targets. Det 1 provides the liaison function for coordinating and scheduling all US Air Force test and training operations at White Sands Missile Range (WSMR). OL-AA provides test support for the Air Force Research Lab (AFRL) Directed Energy Division. The 586th Flight Test Squadron executes flight test and test support for advanced avionics and weapons development of joint, international and commercial test programs. The 46th TG support services contracts are awarded on the basis of full and open competition.											
Budget Activity Justification: This Program Element is in Budget Activity 6, RDT&E Management Support, because it funds institutional infrastructure resources (civilians, aircraft, facilities and ranges) to operate the Air Force test activities which are included in the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB).											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Provide infrastructure at the 46th Test Group (TG) to support testing of DoD, other Government Agencies, foreign military sales, and commercial weapon systems.						30.715	28.418	31.009	0.000	31.009	

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> In FY 2009: Total consists of utilities, contractor services, civilian pay, and aircraft flying costs. Aircraft flying costs include test, test support, and pilot proficiency for sustained readiness. Costs include programmed depot maintenance (PDM), engine overhauls, petroleum, oils, and lubricants (POL), depot level repairable (DLR); fuel and related support.</p> <p><i>FY 2010 Plans:</i> In FY 2010: Total consists of utilities, contractor services, civilian pay, and aircraft flying costs. Contractor Services (in-house contract support activities) decrease in FY 2010 due to contractor to civilian conversions. Increase in civilian pay due to conversions.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Total consists of utilities, contractor services, civilian pay, and aircraft flying costs. Increase in civilian pay due to contractor to civilian conversions.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.</p>					
Accomplishments/Planned Programs Subtotals	30.715	28.418	31.009	0.000	31.009
	FY 2009	FY 2010			
<p>Congressional Add: Assist with contractor to civilian conversion.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: N/A.</p>	0.000	0.531			

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B. Accomplishments/Planned Program (\$ in Millions)											
								FY 2009	FY 2010		
<i>FY 2010 Plans:</i> In FY 2010: Additional civilian pay conversion funding.											
Congressional Adds Subtotals								0.000	0.531		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0604256F: <i>Threat Simulator Development</i>	33.951	23.331	21.245	0.000	21.245	22.495	23.337	23.546	22.699	0.000	0.000
• PE 0604759F: <i>Major Test and Evaluation Investment</i>	69.898	67.797	61.587	0.000	61.587	62.413	62.553	62.029	61.250	0.000	0.000
• PE 0605976F: <i>Facility Restoration and Modernization - T&E</i>	47.339	54.809	46.327	0.000	46.327	47.073	48.148	49.020	46.560	0.000	0.000
• PE 0606978F: <i>Facility Sustainment - T&E Support</i>	29.618	29.683	27.579	0.000	27.579	28.046	28.174	28.603	29.038	0.000	0.000
D. Acquisition Strategy											
Not applicable											
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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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
6606TS: <i>Test and Evaluation Support</i>	725.612	720.807	728.859	0.000	728.859	725.431	695.400	711.220	740.203	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides resources to operate the Air Force test activities which are included in the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB). Test facilities/capabilities operated through this program include wind tunnels, rocket and jet engine test cells, hypersonic and subsonic testing, modeling and simulation, technology, limited space environmental simulation chambers, armament test ranges, hardware-in-the-loop test facilities, climatic test facilities, avionics test facilities, aircraft testbeds, dry lakebed landing sites, instrumented test ranges, and test aircraft maintenance, as well as USAF Test Pilot School. Test and Evaluation (T&E) Support funds institutional test infrastructure activities including: Command and supervisory staffs; supply stocks; maintenance, repair, and replacement of worn or obsolete test equipment and facilities; test infrastructure for data collection, transmission, reduction, and analysis; civilian salaries; temporary duty travel; range operations and material support contract costs for hardware and software engineering and maintenance; and minor improvement and modernization projects. It also funds institutional test aircraft depot level maintenance such as: Programmed Depot Maintenance (PDM), the calendar-based cyclic scheduling of aircraft into depots for update/inspection; modifications and any other depot level repairs required by the aircraft System Program Directors (SPD); engine overhauls; depot-provided area assistance; and assorted ground support equipment overhauls. Three major Air Force test centers are supported by this project: (1) Arnold Engineering and Development Center (AEDC), located at Arnold Air Force Base (AFB), TN, whose institutional test infrastructure supports operations of the largest complex of ground test facilities in the world (includes transonic, supersonic, and hypersonic wind tunnels; rocket motor and turbine engine test cells; space environmental test chambers, hyperballistic ranges; and other specialized facilities). Included are operations at the National Full-Scale Aerodynamic Complex (NFAC) located at NASA's Ames Research Center, California as well as operations at Tunnel 9 located at White Oak, Maryland. (2) Air Force Flight Test Center (AFFTC), located at Edwards AFB, CA, whose institutional test infrastructure supports weapons system development and operational test and evaluation for aircraft, aircraft subsystems and aircraft weapon systems, aerospace research vehicles, unmanned miniature vehicles, cruise missiles, parachute delivery/recovery systems, cargo handling systems, communications, information operations, and Electronic Warfare (EW) systems for DoD and allied forces. Included are operations at Air Force Electronic Warfare Evaluation Simulator (AFEWES) located at AF Plant 4 in Ft. Worth, TX. The AFFTC mission includes the USAF Test Pilot School. (3) Air Armament Center (AAC) 46th Test Wing (TW) located at Eglin AFB, FL, is a joint test and training complex of 724 square miles of land area, and approximately 123,000 square miles of water area. AAC 46TW provides the institutional test infrastructure required to conduct developmental and operational test and evaluation of non-nuclear air armaments (including aircraft guns, ammunition, and air-to-surface and air-to-air guided munitions); Command, Control, Communications, Computers and Intelligence/Surveillance/Reconnaissance (C4ISR) systems; target acquisition and weapon delivery systems; multi-service climatic simulation capability; and special operations aircraft systems. AAC 46TW provides a scientific test process that supports the development, production, sustainment, and enhancement of

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munitions systems that support tri-service digital weapons development. AAC 46TW technology is compatible with weapon systems requiring test such as the next generation Advanced Medium Air-to-Air Missile (AMRAAM), Laser Joint Direct Attack Munition (JDAM), next generation Small Diameter Bomb (SDB), Extended Range Joint Air-to-Surface Standoff Missile (JASSM-ER), Joint Tactical Information Distribution System (JTIDS), ALR-69A Radar Warning Receiver, Full Scale Aerial Target, Distributed Common Ground System (DCGS), Miniature Air Launched Decoy (MALD) and Jammer (MALD-J), Combat Talon, etc. T&E support services contracts are awarded on the basis of full and open competition.								
Budget Activity Justification: This program element is in Budget Activity 6, RDT&E Management Support, because it funds institutional infrastructure resources (civilians, aircraft, facilities and ranges) to operate the Air Force test activities which are included in the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB).								
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Provide infrastructure to support testing of DoD, other Government Agencies, FMS and commercial weapon systems at Arnold Engineering and Development Center (AEDC).				166.551	172.467	176.910	0.000	176.910
FY 2009 Accomplishments: In FY 2009: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Aircraft flying costs include test, test support, and pilot proficiency for sustained readiness. Costs include programmed depot maintenance (PDM), engine overhauls, petroleum, oils, and lubricants (POL), depot level repairables (DLR), fuel and related support.								
FY 2010 Plans: In FY 2010: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Decrease in contractor services in FY 2010 due to contractor to civilian conversion.								
FY 2011 Base Plans: In FY 2011: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Increase in FY 2011 due to civilian pay with contractor to civilian conversion.								
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.								

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Continue to provide institutional test infrastructure support at the Air Force Flight Test Center (AFFTC) and continue to operate the USAF Test Pilot School. FY 2009 Accomplishments: In FY 2009: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Aircraft flying costs include test, test support, and pilot proficiency for sustained readiness. Costs include programmed depot maintenance (PDM), engine overhauls, petroleum, oils, and lubricants (POL), depot level repairables (DLR), fuel and related support. FY 2010 Plans: In FY 2010: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Decrease in contractor services in FY 2010 due to contractor to civilian conversion. FY 2011 Base Plans: In FY 2011: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Increase in FY 2011 due to civilian pay with contractor to civilian conversion. FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.	368.697	368.342	372.184	0.000	372.184
MAJOR THRUST: Continue institutional test infrastructure support at Air Armament Center (AAC) 46th Test Wing (TW), for non-nuclear air armaments. FY 2009 Accomplishments: In FY 2009: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Aircraft flying costs include test, test support, and pilot proficiency for sustained readiness. Costs include programmed depot maintenance (PDM), engine overhauls, petroleum, oils, and lubricants (POL), depot level repairables (DLR), fuel and related support.	190.364	170.529	179.765	0.000	179.765

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Decrease in contractor services in FY 2010 due to contractor to civilian conversion.					
FY 2011 Base Plans: In FY 2011: Total consists of utilities, contractor services, civilian pay, an aircraft flying costs. Increase in FY 2011 due to civilian pay with contractor to civilian conversion.					
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.					
T&E Civilian Pay. Increase in FY11 due to contractor to civilian conversions.	0.000	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: In FY 2009: Not Applicable.					
FY 2010 Plans: In FY 2010: Not Applicable.					
FY 2011 Base Plans: In FY 2011: Not Applicable.					
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.					
Accomplishments/Planned Programs Subtotals	725.612	711.338	728.859	0.000	728.859
	FY 2009	FY 2010			
	0.000	9.469			

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B. Accomplishments/Planned Program (\$ in Millions)											
								FY 2009	FY 2010		
Congressional Add: Assist with contractor to civilian conversion. <i>FY 2009 Accomplishments:</i> In FY 2009: N/A. <i>FY 2010 Plans:</i> In FY 2010: Additional civilian pay conversion funding.											
Congressional Adds Subtotals								0.000	9.469		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0604256F: <i>Threat Simulator Development</i>	33.951	23.331	21.245	0.000	21.245	22.495	23.337	23.546	22.699	0.000	0.000
• PE 0604759F: <i>Major Test and Evaluation Investment</i>	69.898	67.797	61.587	0.000	61.587	62.413	62.553	62.029	61.250	0.000	0.000
• PE 0605976F: <i>Facility Restoration and Modernization-T&E</i>	47.339	54.809	46.327	0.000	46.327	47.073	48.148	49.020	46.560	0.000	0.000
• PE 0606978F: <i>Facility Sustainment - T&E Support</i>	29.618	29.683	27.579	0.000	27.579	28.046	28.174	28.603	29.038	0.000	0.000
D. Acquisition Strategy Not applicable.											
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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