

## UNCLASSIFIED

PE NUMBER: 0605807F

PE TITLE: Test and Evaluation Support

## Exhibit R-2, RDT&amp;E Budget Item Justification

DATE

February 2006

## BUDGET ACTIVITY

06 RDT&amp;E Management Support

## PE NUMBER AND TITLE

0605807F Test and Evaluation Support

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	358.584	685.657	742.522	716.414	718.918	744.452	736.117	Continuing	TBD
06TG 46 Test Group	23.175	25.611	32.914	27.954	28.632	29.868	30.144	Continuing	TBD
06TS Test and Evaluation Support	335.409	660.046	709.608	688.460	690.286	714.584	705.973	Continuing	TBD

(U) **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, 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).

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	358.218	692.665	672.848
(U) Current PBR/President's Budget	358.584	685.657	742.522
(U) Total Adjustments	0.366	-7.008	
(U) Congressional Program Reductions			
Congressional Rescissions	-3.134	-9.908	
Congressional Increases	3.500	2.900	
Reprogrammings			
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E Support, PE 0605807F.

## UNCLASSIFIED

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2006

BUDGET ACTIVITY

06 RDT&amp;E Management Support

PE NUMBER AND TITLE

0605807F Test and Evaluation  
Support

PROJECT NUMBER AND TITLE

06TG 46 Test Group

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
06TG 46 Test Group	23.175	25.611	32.914	27.954	28.632	29.868	30.144	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) **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), 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 bi-static 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 AF test and training operations at White Sands Missile Range (WSMR). A growing number of the WSMR tests support Directed Energy Systems. The 586th Flight Test Squadron provides flight test and flight test support for weapon system, missile, guided bomb, unmanned aerial vehicles/systems, and spaceplane test and evaluation. The 46th TG support services contracts are awarded on the basis of full and open competition. 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).

(U) **B. Accomplishments/Planned Program (\$ in Millions)**

FY 2005

FY 2006

FY 2007

(U) Accomplishments/Planned Program:

(U) Provide infrastructure to support testing of DoD, FMS and commercial weapon systems.

(U) Continue institutional test infrastructure support to enable testing for unclassified programs such as Miniaturized Airborne Global Positioning Upgrade, Joint Global Positioning System (GPS) Combat Effectiveness, GPS jamming and electronic countermeasures, NAVWAR, Federal Aviation Authority (FAA), GPS integrated and embedded Inertial Navigation System (INS) programs, aircraft navigation systems including B-2 and F-22, munitions navigation systems such as Joint Air-to-Surface Standoff Missile (JASSM), F-22 ejection seat, Advanced Concept Ejection Seat (ACES) II Cooperative Modification Project (CMP), SM-3 Live Fire T&E (LFT&E), Theater High Altitude Area Defense (THAAD) LFT&E, Compact Energy Missile (CKEM) LFT&E, RCS testing, as well as multiple classified programs. Continue GPS-Joint Program Office (JPO) Responsible Test Organization (RTO) responsibilities.	3.125	2.858	8.425
---	-------	-------	-------

(U) Utilities	0.031	0.213	0.254
---------------	-------	-------	-------

(U) Contractor Services (in-house contract support activities)	10.682	10.507	11.895
--	--------	--------	--------

(U) T&E Civilian Pay	9.337	11.071	11.271
----------------------	-------	--------	--------

Project 06TG

R-1 Shopping List - Item No. 110-2 of 110-6

Exhibit R-2a (PE 0605807F)

## UNCLASSIFIED

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2006

BUDGET ACTIVITY

06 RDT&amp;E Management Support

PE NUMBER AND TITLE

0605807F Test and Evaluation  
Support

PROJECT NUMBER AND TITLE

06TG 46 Test Group

(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Flying Hour Costs	0.000	0.962	1.069
(U) Total Cost	23.175	25.611	32.914

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Related RDT&E: PE 0604759F, Major T&E Investment; PE 0604256F Threat Simulator Development; PE 0604940D, Central T&E Investments; PE 0605976F, Facility Restoration and Modernization - T&E and PE 0605978F Facility Sustainment - T&E Support									

(U) **D. Acquisition Strategy**

Not applicable

## UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification								DATE <b>February 2006</b>		
BUDGET ACTIVITY <b>06 RDT&amp;E Management Support</b>				PE NUMBER AND TITLE <b>0605807F Test and Evaluation Support</b>			PROJECT NUMBER AND TITLE <b>06TS Test and Evaluation Support</b>			
Cost (\$ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
06TS	Test and Evaluation Support	335.409	660.046	709.608	688.460	690.286	714.584	705.973	Continuing	TBD
Quantity of RDT&E Articles		0	0	0	0	0	0	0		

(U) **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, 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. The AFFTC mission includes the United States Air Force (USAF) Test Pilot School. (3) Air Armament Center (AAC) 46th Test Wing (TW) located at Eglin AFB, FL, is comprised of 724 square miles of land area, and approximately 123,000 square miles of water space. AAC 46TW provides the institutional test infrastructure required for the conduct of developmental and operational test and evaluation of non-nuclear air armaments (including aircraft guns, ammunition, bombs, and missiles); Command, Control, Communications, Computers and Intelligence (C4I) systems; target acquisition and weapon delivery systems; a multi-service climatic simulation capability, and determines target/test item spectral signatures for DOD and allied forces. AAC 46TW provides a scientific test process that supports the development and enhancement of munitions systems that support tri-service smart weapons development. AAC 46TW technology is compatible with weapon systems to be tested such as Advanced Medium Range Air-to-Air Missile (AMRAAM), Joint Direct Attack Munition (JDAM), Small Diameter Bomb (SDB), CSAR-X, Advanced Short Range Air-to-Air Missile (ASRAAM), Joint Tactical Information Distribution System (JTIDS), Joint Surveillance Target Attack Radar System (JSTARS), Combat Talon, etc. T&E support services contracts are awarded on the basis of full and open competition.

Budget Activity Justification:

## UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification			DATE February 2006		
BUDGET ACTIVITY 06 RDT&E Management Support		PE NUMBER AND TITLE 0605807F Test and Evaluation Support		PROJECT NUMBER AND TITLE 06TS Test and Evaluation Support	
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).					
(U)	<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>		<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U)	Accomplishments/Planned Program:				
(U)	Provide infrastructure to support testing of DoD, other Government Agencies, FMS and commercial weapon systems.				
(U)	ARNOLD ENGINEERING AND DEVELOPMENT CENTER (AEDC)				
(U)	Continue institutional test infrastructure support to enable ground testing for classified programs and unclassified programs (JSF-F135/136, F22-F119, B2/U2-F118, F15/F16-F100, A10-TF34-100B, FMS-JDA P-X, JSF, MMA, F/A-18 E/F, JASSM-ER, NASA CLV/CEV, Seek Eagle, Global Hawk, E-2 Hawkeye, SDB, J-UCAS, FALCON-CAV, F -16/F-15/F-22 Derivatives, Minuteman III PRP, Peacekeeper RSLP, MM-RVAP, Trident II-NSWC RSAP, Classified RS, ARROW, PAC-3, Space Shuttle, HyTECH SED, F22, Seek Eagle, Threat Airborne Simulator, CHSSI, Inlet/Eng Integration, T&E S&T Support, MSIC, ABL, Airborne Sensors, Tactical Tomahawk, Navy T45/F405, F414, Commercial-Genx/Trent 1000, Trident II/LMSSC Cables, AFSPC and AFRL Programs, MDA-NSM/KEI/GBI/THAAD/HFDP/PURE/Data Center/DES/and Exo-Experiments.		7.920	22.079	23.555
(U)	Utilities.		5.812	8.763	9.100
(U)	Contractor Services (in-house contract support activities).		81.334	100.030	107.306
(U)	T&E Civilian Pay.		13.950	14.201	14.272
(U)	AIR FORCE FLIGHT TEST CENTER (AFFTC)				
(U)	Continue to provide institutional test infrastructure support enabling testing of the B-1B, B-2, B-52 F-16, F-15, F-15E, F-22, F-117, F-35, C-17, CV-22, ATIC, ECCM, ABL, Predator, Global Hawk, etc.) communications, information systems, and classified programs. Operate the USAF Test Pilot School. Significant increase from FY04 to FY05/06/07 reflects the planned execution of a "direct conversion" of previously identified A-76 study personnel (mil to civ) into a High Performance Organization (HPO) manned by civilians. FY06 increase includes \$50M for specific KC-135 aircraft modifications to provide airborne communications and a secure communications test bed. FY06/07 increases are a direct result of the FY03 NDAA zero base transfers (ZBT) for indirect test costs.		43.334	57.674	43.537
(U)	Utilities.		1.820	5.594	6.185
(U)	Contractor services (in-house contract support activities)		3.972	74.470	34.164
(U)	T&E Civilian Pay		80.104	147.455	153.319
(U)	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 reparables (DLR); fuel and fuel price increase; and related support.		23.238	70.082	107.622
(U)	AIR ARMAMENT CENTER (AAC) 46th Test Wing (TW)				
Project 06TS		R-1 Shopping List - Item No. 110-5 of 110-6		Exhibit R-2a (PE 0605807F)	

## UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification		DATE <b>February 2006</b>	
BUDGET ACTIVITY <b>06 RDT&amp;E Management Support</b>	PE NUMBER AND TITLE <b>0605807F Test and Evaluation Support</b>	PROJECT NUMBER AND TITLE <b>06TS Test and Evaluation Support</b>	
(U) <b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>		<u>FY 2005</u>	<u>FY 2006</u>
(U) Continue institutional test infrastructure support for non-nuclear air armaments (JASSM, SEEK EAGLE, WCMD, F-22, AIM9X, AMRAAM, ASRAAM, Hellfire, PATRIOT, DIRCM, AAV, UCAF, etc.); C2 (TMBCS, Link 16, BISS, and aircraft software upgrades (AFMSS), etc).		7.224	8.288
(U) Utilities.		3.740	3.758
(U) Contractor Services (in-house contract support activities).		22.963	67.846
(U) T&E Civilian Pay		32.600	48.855
(U) Aircraft flying hours costs include: pilot proficiency flying for sustained readiness; deferred and projected programmed depot maintenance (PDM); engine overhauls; petroleum, oils, and lubricants (POL); depot level reparable (DLR); fuel and fuel price increases; and related support. Funds proficiency flying to minimum levels allowing AAC 46TW to meet proficiency flying goals.Funds proficiency flying to minimum levels allowing AAC 46TW to meet proficiency flying goals and funds the aircraft infrastructure to also support test flying requirements.		7.398	30.951
(U) Total Cost		335.409	660.046
(U) <b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>			
		<u>FY 2005</u>	<u>FY 2006</u>
		<u>Actual</u>	<u>Estimate</u>
		<u>FY 2007</u>	<u>FY 2008</u>
		<u>Estimate</u>	<u>Estimate</u>
		<u>FY 2009</u>	<u>FY 2010</u>
		<u>Estimate</u>	<u>Estimate</u>
		<u>FY 2011</u>	<u>Cost to</u>
		<u>Estimate</u>	<u>Complete</u>
(U) Related RDT&E: PE 0604759F, Major T&E Investment; PE 0604256F Threat Simulator Development; PE 0604940D, Central T&E Investments; PE 0605976F, Facility Restoration and Modernization - T&E and PE 0605978F Facility Sustainment -T&E Support			
(U) <b><u>D. Acquisition Strategy</u></b>			
Not applicable.			