

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY 6 - Management support	PE NUMBER AND TITLE 0605605A - DOD High Energy Laser Test Facility						PROJECT E97	
COST (In Thousands)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
E97 DOD HELSTF	16940	16438	2801	2840	2876	1906	1948	1991

A. Mission Description and Budget Item Justification: The High Energy Laser Systems Test Facility (HELSTF) provides a one-of-a-kind, broad based high energy laser (HEL) test and evaluation capability which directly supports testing of laser variants of the Future Combat Systems (FCS). Specifically, HEL weapons will play a major role in the Counter Rockets, Artillery and Mortars (CRAM) initiative and can be a key component of the Future Force supporting Full Dimensional Protection. HELSTF is part of the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB) and supports Tri-Service HEL research and development to include damage, vulnerability, propagation, and lethality laser testing as well as HEL weapon developmental and operational test and evaluation (DTE&OTE). The HELSTF's laser development support capabilities include a fully certified open-air HEL test range, test cells for bringing breadboard to brassboard test device, fully integrated Command, Control, Communications & Intelligence (C3I) systems and a suite of beam directors to perform both static and dynamic tracking tests. Other capabilities include an extensive array of fully instrumented test sites, full laser meteorological support, and an approved site for above-the-horizon dynamic HEL testing certified for predictive avoidance by the Laser Clearing House. HELSTF's location on White Sands Missile Range (WSMR) provides unparalleled testing flexibility because of WSMR's 3200 square miles of controlled land mass and 7000 square miles of controlled airspace. This location also enables HELSTF to leverage the existing WSMR T&E infrastructure. Current HELSTF facilities include the Sea Lite Beam Director (SLBD), the Mid-Infrared Advanced Chemical Laser (MIRACL), the Large Vacuum Chamber (LVC) with associated Vacuum Test System (VTS), the Solid State Laser testbed, the Tactical High Energy Laser (THEL) testbed, and the Low Power Chemical Laser (LPCL). This multiple use facility supports testing of laser effects for targets ranging from material coupon testing up through full-scale static and dynamic targets, explosive targets, and testing of targets in a high altitude space environment. HELSTF has embarked on its own modernization to fully upgrade its mission control systems, develop state-of-the-art HEL diagnostic capabilities, data reduction, and a mobile HEL diagnostic test suite to support DTE and OTE for potential HEL weapons in the Army Future Force in all relevant combat environments.

<u>Accomplishments/Planned Program:</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
In FY 2006-07 continued to perform operation, maintenance and base operations support functions in support of the Army, Department of Defense and other agencies (Missile Defense Agency (MDA) MUDPACK program, Special Operations Command (SOCOM) Advanced Tactical Laser (ATL), Air Force Airborne Laser (ABL) program, Full Scale Airflow Static Test (FAST) program, the US Army Space & Missile Defense Command (USASMD) Technical Center High Energy Laser Technology Demonstrator (HEL-TD) program, and Navy HEL Low Aspect Target Tracking (HEL-LATT), and other laser programs). Conducted a variety of tracking tests with SLBD to support US Army Space and Missile Defense Command (USASMD), U.S. Air Force (USAF) and Missile Defense Agency (MDA) missions. Complete Solid State Laser Lethality Testbed and Solid State Laser Transition Testbed based on the ex-THEL Pointer-Tracker System (THEL-PTS) in FY2007. In FY 2008, HELSTF will continue to provide limited support to the Laser T&E programs of all Services and DoD Agencies using the Solid State Laser (SSL) Lethality Testbed and the SSL Transition Testbed.	16940	16014	2801	2840
Small Business Innovative Research / Small Business Technology Transfer Programs.		424		
Total	16940	16438	2801	2840

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<u>B. Program Change Summary</u>	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	19505	16622	16404	16424
Current BES/President's Budget (FY 2008/2009)	54039	80467	74391	75067
Total Adjustments	34534	63845	57987	58643
Congressional Program Reductions		-63		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-2565	-121		
SBIR/STTR Transfer				
Adjustments to Budget Years			-13603	-13584

Change Summary Explanation: FY08/09 funds realigned to higher priority requirements.