ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
6 - Management support	**0605605A - DOD High Energy Laser Test Facility**	**E97**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
E97 DOD HELSTF	16135	8746	2835	2874	1911	1954	1998

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 devices, 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.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
In FY 2007 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 (USASMDC) 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 USASMDC, U.S. Air Force (USAF) and 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.	16135	8502	2835
Small Business Innovative Research / Small Business Technology Transfer Programs.		244	
Total	16135	8746	2835

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B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	16438	2801	2840
Current BES/President's Budget (FY 2009)	16135	8746	2835
Total Adjustments	-303	5945	-5
Congressional Program Reductions		-55	
Congressional Rescissions			
Congressional Increases		6000	
Reprogrammings	121		
SBIR/STTR Transfer	-424		
Adjustments to Budget Years			-5

FY08 Congressional increases $3.0 million for Mid-Infrared Advanced Chemical Laser and $3.0 million for Sea Lite Beam Director.