

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)					February 2004			
BUDGET ACTIVITY		PE NUMBER AND TITLE				PROJECT		
6 - Management support		0605702A - Meteorological Support to RDT&E Activities				128		
COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
128	MET SPT TO DTC ACTIVITY	6792	9359	8711	7952	8512	8828	9261
<p>A. Mission Description and Budget Item Justification: All functions and resources in this Program Element (PE) are managed by the U.S. Army Developmental Test Command, a subordinate command of the U.S. Army Test and Evaluation Command (ATEC). Meteorological support to research, development, testing and evaluation (RDTE) Activities provides standard and specialized weather forecasts and data for test reports to satisfy Army/DoD RDTE test requirements for modern weaponry, e.g., (1) unique atmospheric analysis and sampling to include atmospheric transmittance, extinction, optical scintillation, infrared temperature, aerosol/smoke cloud dispersion characteristics, ballistic meteorological measurements, snow characterization and crystal structure; (2) test event forecasting to include prediction of sound propagation for ballistic firing tests, specialized prediction of light levels and target to background measurements and predictions for electro-optical testing and ballistic meteorology; (3) advisory and warning products such as go-no-go test recommendations for ballistic and atmospheric probe missiles, smoke obscurant tests, hazard predictions for chemical agent munitions disposal, monitoring dispersion of simulant clouds for chemical/biological detector tests, simulated nuclear blasts, and weather warnings for test range safety. Provides technical support to Army Program Executive Officers (PEOs), Project Managers (PMs), and the Army test ranges and sites at: White Sands Missile Range (WSMR), NM; Electronic Proving Ground (EPG), Fort Huachuca, AZ; Dugway Proving Ground (DPG), UT; Aberdeen Test Center (ATC), Aberdeen Proving Ground, MD; Redstone Technical Test Center (RTTC), Redstone Arsenal, AL; Yuma Proving Ground (YPG), AZ (including the Cold Regions Test Center (CRTC), Fort Greely, AK); Fort Belvoir, VA; and Fort A.P. Hill, VA. Develops methodologies and acquires instrumentation and systems that allow meteorological teams to support current and future Army/DoD RDTE requirements. This PE finances indirect meteorological support operating costs not billable to customers and replacement/upgrade of meteorological instrumentation. Direct costs for meteorological support services are not funded by this PE, but are borne by the customer (i.e. materiel/weapons developers and project/product managers) in accordance with DoD Directive 7000.14R, October 1999. This program is integral to the accomplishment of the Army's developmental test and evaluation mission and its support of the Army Transformation from Current to Future Force.</p>								

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<u>Accomplishments/Planned Program</u>		FY 2003	FY 2004	FY 2005
Provides indirect costs (personnel salaries) for generating weather forecasts, severe weather warnings and advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test ranges, and alternate test sites as required. Provides full salaries for interns at each site. These new hires are essential to support increasing demands for detailed weather knowledge and technologies required to test modern weapon systems. Provides program management for meteorological support to the Army research, development, test and evaluation community and for technical review/assistance to ranges and meteorological support teams. Includes Verification, Validation and Accreditation (VV&A) for the Four-Dimensional Weather (4DWX) System.		2377	3092	3359
Provides funding for development and fielding of the 4DWX System, an advanced meteorological support system capable of providing highly accurate weather forecasts, analyses, and modeling and simulation capabilities in support of both developmental and operational testing. 4DWX provides a 3-dimensional structure of the atmosphere over time (4th dimension) used in test planning, conduct and forensics. Increased funding in FY04 allows advancement of 4DWX capabilities as well as much needed upgrades and modernization of meteorological instrumentation systems. Specifically, 4DWX development includes extending weather prediction techniques to concentrate on smaller volumes of atmosphere representative at specific test sites; providing the next generation of Linux PC clusters at the five 4DWX sites with mesoscale modeling capabilities; developing globally relocatable mesoscale modeling capability for safari operations and virtual testing; developing model links between 4DWX and other range applications such as ballistic trajectory models; and transitioning the system to the next generation Weather Research and Forecasting Model. Development and upgrade of range/site meteorological instrumentation and equipment includes upgrade and replacement of digital sensors and data analysis equipment; Surface Atmospheric Measurement System (SAMS) fixed and mobile remote automated weather station upgrades; replacement meteorological towers and sensors; replacement Doppler acoustic sounders for vertical wind profile measurements; replacement of aging laser ceilometers used to measure cloud layers; and replacement radar wind profilers which provide near-real-time measurements of wind profiles used to support test activities such as Chemical/Biological simulant releases and missile launches.		4415	6054	5352
Small Business Innovative Research/Small Business Technology Transfer Programs		0	213	0
Totals		6792	9359	8711

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<u>B. Program Change Summary</u>	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	6795	9669	9771
Current Budget (FY 2005 PB)	6792	9359	8711
Total Adjustments	-3	-310	-1060
Congressional program reductions		-82	
Congressional rescissions			
Congressional increases			
Reprogrammings	-3	-228	
SBIR/STTR Transfer			
Adjustments to Budget Years			-1060

Change Summary Explanation: Funding - FY 2005: Funds realigned to support higher priority requirements (-1060).