

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

June 2001

BUDGET ACTIVITY

6 - MANAGEMENT SUPPORT

PE NUMBER AND TITLE

0605702A - Meteorological Support to RDTE Activities

PROJECT

128

COST (In Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
128 MET SPT TO DTC ACTIVITY	6751	6864	6890	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

PLEASE NOTE: This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

All functions and resources in this PE are managed by the U.S. Army Developmental Test Command, a subordinate command of the U.S. Army Test and Evaluation Command (ATEC) established in October 1999. Meteorological Support to Research, Development, Testing & Evaluation (RDT&E) Activities: provides standard and specialized weather forecasts and data for test reports to satisfy Army/DoD RDT&E test requirements for modern weaponry, i.e., (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 recommendations for ballistic and atmospheric probe missiles, smoke obscurant tests, hazard predictions for chemical agent munitions disposal, 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 (including the 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), Huntsville, 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 Campaign Plan (TCP).

FY 2000 Accomplishments

- 1473 Provided indirect costs for generating weather forecasts, severe weather warnings/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at 10 Army sites/test ranges and, when required, to sites other than the Army's test ranges.

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- 4284 Modernized operational equipment to meet customer requirements for meteorological support. Began installation and maintained Major Range Test Facility Base (MRTFB) Four-Dimensional Weather (4DWX) System at YPG and completed 4DWX installation at ATC. 4DWX is a leading-edge, predictive meteorology system that synthesizes national and real-time range meteorology data sets into very high-resolution analyses and forecasts (to 1.1Km resolution) in time and space. This capability leads the science of meteorology internationally, and provides unparalleled meteorological test support. Sustained the Mobile Meteorological Support Systems (MOMSS). Installed and evaluated auto-nowcasting (automated and precise forecasting of weather conditions starting "now" and continuing for one hour into the future) at ATC. Began integration of meteorological instrumentation into MRTFB 4DWX Weather System at DPG.
- 994 Provided program management for meteorological support to the research, development, test and evaluation community and technical review/assistance to ranges and meteorological teams. Provided weather forecast support systems/data - continued development of meteorological data sets for environmental modules to virtual testing.

Total 6751

FY 2001 Planned Program

- 1546 Provide indirect costs for generating weather forecasts, severe weather warnings/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test ranges (support of Tooele Army Depot no longer included in this PE)and alternative test sites as required.
- 4128 Modernize operational equipment to meet customer requirements for meteorological support. Sustainment of the MOMSS and atmospheric profilers. Complete integration of meteorological instrumentation into MRTFB 4DWX Weather System at DPG. Develop and install the fifth generation mezoscale meteorological code (MM5) as the basic component of the real time four dimensional data assimilation package at DPG and YPG. Complete MRTFB 4DWX Weather System installation at YPG and provide system sustainment. Install NOAAPort/4DWX "Light" (reduced capability) at CRTC. Evaluate solid state Sonic Detection and Ranging as replacement for meteorological towers.
- 1034 Provide program management for meteorological support to the research, development, test and evaluation community and technical review/assistance to ranges and meteorological teams. Provide weather forecast support systems/data - improve/modify/increase data sets for environmental modules to virtual testing.
- 156 Small Business & Innovation Research (SBIR)/Small Business & Technology Program (STTR)

Total 6864

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Activities**

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128

FY 2002 Planned Program

- 1449 Provide indirect costs for generating weather forecasts, severe weather warnings/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at nine Army sites/test ranges and alternative test sites, as required.
- 4366 Modernize operational equipment to meet customer requirements for meteorological support. Evaluate Coherent Laser Light Detection and Ranging (LIDAR) at WSMR. Develop and install, using MM5 as the basic component, a real time four dimensional data assimilation package at WSMR and ATC. Upgrade and sustain the MOMSS and atmospheric sounders/profilers to increase automation, fidelity and reliability. Begin integration of meteorological instrumentation into MRTFB 4DWX Weather System at WSMR and YPG. Install NOAAPort/4DWX "Light" at EPG. Begin development of Globally Relocatable 4DWX at DPG.
- 1075 Provide program management for meteorological support to the research, development, test and evaluation community and technical review/assistance to ranges and meteorological teams. Provide weather forecast support systems/data - improve/modify/increase data sets for environmental modules to virtual testing.

Total 6890

<u>B. Program Change Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	6823	6927	6856	0
Appropriated Value	6843	6927	0	0
Adjustments to Appropriated Value	0	0	0	0
a. Congressional General Reductions	0	0	0	0
b. SBIR / STTR	-72	0	0	0
c. Omnibus or Other Above Threshold Reduction	-11	0	0	0
d. Below Threshold Reprogramming	0	0	0	0
e. Rescissions	-9	-63	0	0
Adjustments to Budget Years Since FY2001 PB	0	0	34	0
Current Budget Submit (FY 2002/2003 PB)	6751	6864	6890	0