

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE February 2000			
BUDGET ACTIVITY 6 - Management and Support				PE NUMBER AND TITLE 0605702A Meteorological Support to Research, Development, Testing & Evaluation Activities				PROJECT D128		
COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost	
D128 Meteorological Support to TECOM Activities	6539	6823	6927	6856	7027	9810	10014	Continuing	Continuing	
<p><b>A. <u>Mission Description and Justification:</u></b> Effective 1 October 1999, the US Army Operational Test and Evaluation Command (OPTEC) was redesignated as the US Army Test and Evaluation Command (ATEC). The three subordinate commands assigned to ATEC are: the Army Evaluation Center (AEC), the Operational Test Command (OTC) formerly the Test and Experimental Command (TEXCOM), and the Developmental Test Command (DTC) formerly the US Army Materiel Command's Test and Evaluation Command (TECOM). All functions and resources in this PE are managed by the Developmental Test Command.</p> <p>Project D128 provides standard and specialized weather forecasts and data for test reports to satisfy Army/DoD RDT&amp;E-unique 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) unique consultation forecasting to include prediction of sound propagation for ballistic tests, specialized prediction of light level and target to background predictions for electro-optical testing and ballistic meteorology; (3) advisory and warning products such as go-no-go advisories for ballistic and atmospheric probe missiles, smoke obscurant tests, hazard predictions for chemical agent munitions disposal, simulated nuclear blasts, and weather warnings for range/test 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), APG, MD; Redstone Technical Test Center (RTTC), Huntsville, AL; Yuma Proving Ground (YPG), AZ (including the Cold Regions Test Center (CRTC), Fort Greely, AK); Ft Belvoir, VA; Ft A.P. Hill, VA; Cold Regions Research and Engineering Laboratory (FY99), Hanover, NH and Deseret Chemical Depot, Tooele, UT. Develops methodologies and acquires instrumentation/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).</p> <p><b>FY 1999 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 2258 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 11 Army sites/test ranges and off-range test sites.</li> <li>• 3245 Modernized operational equipment to meet customer requirements for meteorological support.             <ul style="list-style-type: none"> <li>- Installed and maintained Major Range Test Facility Base (MRTFB) Four-Dimensional Weather (4DWX) System at ATC and completed installation at WSMR. 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.</li> </ul> </li> </ul>										
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<b>FY 1999 Accomplishments: (continued)</b>		
<ul style="list-style-type: none"> <li>- Sustained mobile meteorological support systems.</li> <li>- Installed and evaluated auto-nowcasting (automated and precise forecasting of weather conditions starting “now” and continuing for one hour into the future) at RTTC.</li> </ul>		
•	1036	Provided program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams. <ul style="list-style-type: none"> <li>- Weather forecast support systems/data: continuing development of meteorological data sets for environmental modules to virtual testing.</li> </ul>
Total	6539	
<b>FY 2000 Planned Program:</b>		
•	1473	Provide weather forecast, severe weather/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at 10 Army sites/test ranges and off-range test sites.
•	4284	Modernize operational equipment to meet customer requirements for meteorological support. <ul style="list-style-type: none"> <li>- Sustainment of mobile systems and atmospheric profilers.</li> <li>- Integrate meteorological instrumentation into MRTFB 4DWX Weather System at DPG.</li> <li>- Install and maintain MRTFB 4DWX weather system at YPG and refined the characteristics of the 4DWX at ATC.</li> </ul>
•	994	Provide program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams. <ul style="list-style-type: none"> <li>- Weather forecast support systems/data: Improve/modify/increase data sets for environmental modules to virtual testing.</li> </ul>
•	72	Small Business Innovative Research/Small Business Technical Transfer (SBIR/STTR) Program.
Total	6823	.
<b>FY 2001 Planned Program:</b>		
•	1532	Provide weather forecast, severe weather/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at 10 Army sites/test ranges and off-range test sites.
•	4361	Modernize operational equipment to meet customer requirements for meteorological support. <ul style="list-style-type: none"> <li>- Evaluate Coherent Laser Light Detection and Ranging (LIDAR) at WSMR.</li> <li>- Evaluate solid state Sonic Detection and Ranging (SODAR) as replacement for meteorological towers.</li> <li>- Upgrade and sustain mobile systems and atmospheric sounders/profilers to increase automation (of this labor-intensive manual function), fidelity and reliability.               <ul style="list-style-type: none"> <li>- Continue integration of meteorological instrumentation into MRTFB 4DWX Weather System at DPG and begin integration of meteorological instrumentation into WSMR 4DWX.</li> <li>- Complete MRTFB 4DWX Weather System installation at YPG and provide system Sustainment through contract support.</li> </ul> </li> </ul>

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**FY 2001 Planned Program: (continued)**

- 1034 Provide program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams.
  - Weather forecast support systems/data: Improve/modify/increase data sets for environmental modules to virtual testing.
  - Initiate dedicated 4DWX support contract.

Total 6927

<b>B. Program Change Summary</b>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	6628	6843	6952
Appropriated Value	6691		
Adjustments to Appropriated Value			
a. Congressional General Reductions	-63		
b. SBIR / STTR	-56		
c. Omnibus or Other Above Threshold Reduction		-11	
d. Below Threshold Reprogramming	-7		
e. Rescissions	-26	-9	
Adjustments to Budget Years Since <u>FY 2000/2001 PB</u>			-25
Current Budget Submit (FY 2001 PB)	6539	6823	6927