

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 6 - Management and Support	PE NUMBER AND TITLE 0605702A Meteorological Support to Research, Development, Testing & Evaluation Activities	PROJECT D128
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COST (<i>In Thousands</i>)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
D128 Meteorological Support to TECOM Activities	6235	6628	6843	6952	6896	7090	7930	8175	Continuing	Continuing

A. Mission Development and Budget Item Justification: Provides standard and specialized weather forecasts and data for test reports to satisfy Army/DoD RDT&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 WSMR, NM, Dugway Proving Ground, UT, Aberdeen Test Center, APG, MD, Redstone Technical Test Center, Huntsville, AL, Electronic Proving Ground, FT Huachuca, AZ, Yuma Proving Ground, AZ, Cold Regions Test Center, AK, FT Belvoir, VA, FT A.P. Hill, VA, CRREL, Hanover, NH, 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 developers and project/product managers).

FY 1998 Accomplishments:

- 2920 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 as safari to off-range test sites.
- 2279 Modernized operational equipment to meet customer requirements for meteorological support.
 - Installed Major Range Test Facility Base (MRTFB) Four-Dimensional Weather (4DWX) System at Dugway Proving Ground (DPG), UT. 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.
 - Sustainment of mobile meteorological support systems.
 - Global Positioning System (GPS) upgrades to upper atmospheric sampling systems.
 - Installed and evaluated auto-nowcasting (automated and precise forecasting of weather conditions starting “now” and continuing for one hour into the future) at White Sands Missile Range (WSMR), NM.

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FY 1998 Accomplishments: (continued)		
<ul style="list-style-type: none"> • 1036 	Provided program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams. <ul style="list-style-type: none"> - Weather forecast support systems/data: evaluated initial meteorological data sets for environmental modules to virtual testing. - Purchased Y2K compliant upgrades for seven remote atmospheric profilers. - Initiated installation of "4DWX" at Aberdeen Test Center (ATC), MD. 	
Total	6235	
FY 1999 Planned Program:		
<ul style="list-style-type: none"> • 2258 	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 as safari to off-range test sites.	
<ul style="list-style-type: none"> • 3237 	Modernize operational equipment to meet customer requirements for meteorological support. <ul style="list-style-type: none"> - Sustainment of mobile systems and atmospheric profilers. - Integrate meteorological instrumentation into MRTFB "4DWX" Weather System at DPG. - Install MRTFB "4DWX" weather system at Redstone Technical Test Center (RTTC), AL, complete "4DWX" installation at ATC. 	
<ul style="list-style-type: none"> • 1077 	Provide program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams. <ul style="list-style-type: none"> - Weather forecast support systems/data: Improve/modify data sets for environmental modules to virtual testing. 	
<ul style="list-style-type: none"> • 56 	Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs	
Total	6628	
FY 2000 Planned Program:		
<ul style="list-style-type: none"> • 1739 	Provide weather forecast, severe weather/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at 9 Army sites/test ranges and as safari to off-range test sites.	
<ul style="list-style-type: none"> • 3993 	Modernize operational equipment to meet customer requirements for meteorological support. <ul style="list-style-type: none"> - Upgrade and sustainment of mobile systems and atmospheric sounders/profilers to increase automation (of this labor-intensive manual function), fidelity and reliability. - Continue integration of meteorological instrumentation into MRTFB "4DWX" Weather System at DPG. - Install MRTFB "4DWX" Weather System at Yuma Proving Ground (YPG), AZ and provide system sustainment through contract support. 	
<ul style="list-style-type: none"> • 1111 	Provide program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams. <ul style="list-style-type: none"> - Weather forecast support systems/data: Improve/modify data sets for environmental modules to virtual testing. 	
Total	6843	
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FY 2001 Planned Program:

- 1808 Provide weather forecast, severe weather/advisories, staff meteorological services, and atmospheric measurements in support of Army/DoD tests and projects at 10 Army test sites/ranges and as safari to off-range test sites.
- 2488 Modernize operational equipment to meet customer requirements for meteorological support.
 - Upgrade and sustainment of mobile systems and atmospheric sounders/profilers to increase reliability and programmed manpower reductions.
 - Upgrade "4DWX" supporting instrumentation to support upgraded model requirements.
- 2656 Provide program management for meteorological support to RDTE and technical review/assistance to ranges and meteorological teams.
 - Weather forecast support systems/data: Improve/modify data sets for environmental modules for virtual testing.
 - Install a dedicated "4DWX" support contract.

Total 6952

B. Program Change Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 1999 PB)	6235	6691	6712	6911
Appropriated Value	6434	6691		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-199	-63		
b. SBIR / STTR				
c. Omnibus or Other Above Threshold Reduction				
d. Below Threshold Reprogramming				
e. Rescissions				
Adjustments to Budget Years Since <u>FY 1999 PB</u>			+131	+41
Current Budget Submit (FY 2000/2001 PB)	6235	6628	6843	6952

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