PE NUMBER: 0305160F
PE TITLE: Defense Meteorological Satellite Program

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186
4758 DMSP Program	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day). DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Fully redundant Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office is also evaluating a range of possible service life extension options to maximize longevity of the remaining satellites. DMSPs F-17 through F-20 will launch on Evolved Expendable Launch Vehicle (EELV) boosters. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 launch is scheduled for 4th Quarter FY06.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**

(U) B. Program Change Summary ($ in Millions)

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	3.908	0.958
(U)	Current PBR/President's Budget	0.000	3.852	0.969
(U)	Total Adjustments	0.000	-0.056	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.056	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305160F Defense Meteorological Satellite Program	4758 DMSP Program

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4758 DMSP Program	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day). DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Fully redundant Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office is also evaluating a range of possible service life extension options to maximize longevity of the remaining satellites. DMSPs F-17 through F-20 will launch on Evolved Expendable Launch Vehicle (EELV) boosters. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 launch is scheduled for 4th Quarter FY06.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue system integration and test, studies, and related support activities		2.775	0.969
(U) Continue EELV interface design (transition to EELV)		1.077	0.000
(U) Total Cost	0.000	3.852	0.969

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**	PROJECT NUMBER AND TITLE **4758 DMSP Program**

(U) C. Other Program Funding Summary ($ in Millions)

(U) Missile Procurement/PE 0305160F (P-24)	88.017	66.285	86.720	80.829	75.373	74.137	74.853	103.700	2,872.716

Related RDT&E:

PE 0305178F, National Polar-orbiting Operational Environmental Satellite System (NPOESS)

PE 0305160N, Navy Meteorological and Oceanographic Sensor-Space (METOC) (provides funds for Navy unique studies)

(U) D. Acquisition Strategy

Support and services contracts for the spacecraft, sensors, ground systems, and supporting software have been awarded to various contractors. No major milestone decisions remain. Production of DMSP satellites has been completed. Remaining effort is to continue spacecraft and sensor integration and test and successfully launch remaining DMSP satellites.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305160F Defense Meteorological Satellite Program**

PROJECT NUMBER AND TITLE: **4758 DMSP Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed -Martin	SS/CPAF		3.764								3.764	
Lockheed-Martin	SS/CPAF		11.064								11.064	
Northrop-Grumman (CSS&S)	SS/CPAF		13.208								13.208	
Lockheed-Martin	C/CPAF		39.513								39.513	
Lockheed-Martin	C/CPAF		6.456			3.852	Feb-06	0.969	Oct-06		11.277	
Harris (SSMIS/STT SW)	C/CPAF		8.617								8.617	
Det 11/GSA (Mark IVB P3I)	MIPR		2.986								2.986	
Lockheed-Martin (Titan II Msn Unique Studies)	SS/CPAF		5.953								5.953	
Boeing (EELV Msn Unique Studies & Services)	SS/CPAF		2.585								2.585	
Aerojet	SS/CPAF		2.530								2.530	
Aerojet	C/CPAF/FFP		85.979								85.979	
Aerojet (SSM/TW/IS S&S & Model + SSMIS)	SS/CPAF		2.183								2.183	
Raytheon, formerly Hughes (SSMI Spt & Svc)	SS/CPFF		0.236								0.236	
AFRL	MIPR/PD		5.838								5.838	
NRL	MIPR/Var		15.782								15.782	
APL	MIPR/Var		4.332								4.332	
SMC (Det 3 SSSG/NPOESS)	FCA/MIPR		2.506								2.506	
Sandia	MIPR/Var		0.820								0.820	
NOAA			0.034								0.034	
Other	Various		6.671								6.671	
Historical Satellite Blocks	Various		583.786								583.786	
NONE											0.000	
Subtotal Product Development			804.843	0.000		3.852		0.969		0.000	809.664	0.000
Remarks:												
(U) Support												
FFRDC	AF 277		25.623								25.623	
PRC/BD Systems/TASS	C/CPAF		9.515								9.515	
Program Mgmt			22.720								22.720	
Litigation Support			1.809								1.809	
Other	Various		4.325								4.325	
Historical Satellite Blocks	Various		38.530								38.530	
NONE											0.000	
Subtotal Support			102.522	0.000		0.000		0.000		0.000	102.522	0.000
Remarks:												
(U) Test & Evaluation												
NONE											0.000	
NONE											0.000	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305160F Defense Meteorological Satellite Program**	**4758 DMSP Program**

	Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Management							
							0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Total Cost	907.365	0.000	3.852	0.969	0.000	912.186	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**	PROJECT NUMBER AND TITLE **4758 DMSP Program**

DMSP Schedule

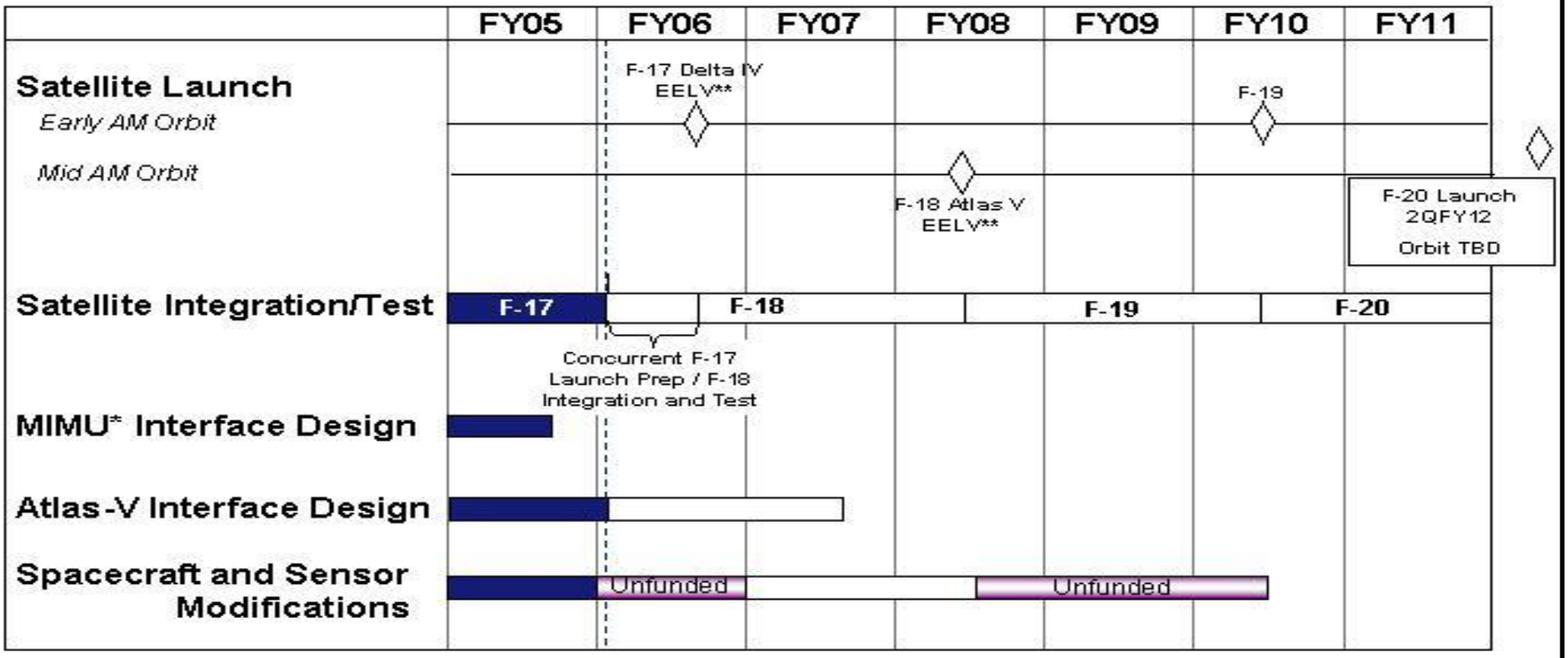

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) F-17 Satellite Launch		4Q	