Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604422F: Weather System Follow-on

BA 4: Advanced Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	123.681	2.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
644289: Weather Satellite Follow-On	-	123.681	2.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

<sup>&</sup>lt;sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

#### A. Mission Description and Budget Item Justification

The Defense Weather Satellite System (DWSS) program in RDT&E, AF PE 0305178F was terminated per Congressional direction in FY 2012. DoD will utilize the remaining Defense Meteorological Satellite Program (DMSP) satellites to satisfy DoD overhead weather requirements until a follow-on capability can be acquired.

Weather Satellite Follow-on (WSF) activities support requirements analysis, analysis of alternatives (AoA), and acquisition of capabilities which will satisfy DoD overhead terrestrial and space weather requirements during, and after, fly-out of DMSP.

WSF activities provide a foundation to transition from the current DMSP program to a future capability which will satisfy DoD overhead weather requirements. The range of WSF activities include requirements development and trades, analysis and possible implementation of alternative sources of weather data, architecture and systems engineering analysis, and technical risk reduction for viable sensor and spacecraft technologies. Use of affordable, mature technology will be emphasized for the WSF activities.

BA-4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

PE 0604422F: Weather System Follow-on

Air Force

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Ford	ce				DATE:	April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)			/eather System Follow-o		1		
B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 20	14 OCO	FY 2014	Total
Previous President's Budget	123.681	2.000	0.000		-	(	0.000
Current President's Budget	123.681	2.000	0.000		-	(	0.000
Total Adjustments	0.000	0.000	0.000		-	(	0.000
Congressional General Reductions	-	0.000					
<ul> <li>Congressional Directed Reductions</li> </ul>	-	0.000					
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000					
<ul> <li>Congressional Adds</li> </ul>	-	0.000					
<ul> <li>Congressional Directed Transfers</li> </ul>	-	0.000					
<ul> <li>Reprogrammings</li> </ul>	0.000	0.000					
<ul> <li>SBIR/STTR Transfer</li> </ul>	0.000	0.000					
Other Adjustments	0.000	0.000	0.000		-	(	0.000
Congressional Add Details (\$ in Millions, and Includes (	General Redu	<u>ıctions)</u>				FY 2012	FY 2013
Project: 644289: Weather Satellite Follow-On		-					
Congressional Add: Weather Satellite Follow-on (WSF)						123.681	-
		Cong	gressional Add Subtotals	for Projec	t: 644289	123.681	0.00
			Congressional Add T	otals for a	II Projects	123.681	0.00
C. Accomplishments/Planned Programs (\$ in Millions)					FY 2012	FY 2013	FY 2014
Title: WSF					0.000	2.000	0.00
<b>Description:</b> Weather Satellite Follow-on (WSF) activities support acquisition of capabilities which will satisfy DoD overhead terrestriathe Defense Meteorological Satellite Program (DMSP).							
FY 2013 Plans:  - Complete Analysis of Alternatives and a Technology Strategy to see Continue to execute contracts awarded under BAA.  - Continue development of analytical tools, conduct market researce continue to invest in risk reduction to mitigate operational gap.			ements development and	d			
FY 2014 Plans:							

PE 0604422F: Weather System Follow-on Air Force

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

R-1 ITEM NOMENCLATURE
PE 0604422F: Weather System Follow-on

BA 4: Advanced Component Development & Prototypes (ACD&P)

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2012	FY 2013	FY 2014
- The program is not funded in FY14. BAA technology development contract execution will conclude in early FY14 using FY12 funds.			
Accomplishments/Planned Programs Subtotals	0.000	2.000	0.000

	FY 2012	FY 2013
Congressional Add: Weather Satellite Follow-on (WSF)	123.681	-
<b>FY 2012 Accomplishments:</b> - WSF System Program Office (SPO) developed a plan to use Congressionally-added funds to stimulate the industrial base and buy down risk for future sensors and unique technologies for the weather mission.		
- The Executive Agent for Space completed a space-based environmental monitoring concept study to inform the Analysis of Alternatives (AoA). To support this, the SPO developed analytical tools to evaluate future architectures and conducted analysis to identify collection capability gaps in the Meteorological and Oceanographic Initial Capabilities Document (METOC ICD).		
- The SPO authored a technology investment strategy and issued a Broad Agency Announcement (BAA) to execute funds for sensor, spacecraft, space weather, and ground systems technology development. Using the strategy, the SPO started development of models and prototypes; demos necessary to define the materiel solution; materiel/non-materiel solutions; implementation of alternatives for exploitation of non-traditional weather data source to provide experimental satellite data to DoD users to mitigate risk of forecasting gaps.		
Congressional Adds Subtotals	123.681	0.000

## D. Other Program Funding Summary (\$ in Millions)

N/A

#### Remarks

## E. Acquisition Strategy

DoD directed initiation of an AoA and established the Weather Satellite Follow-on (WSF) as a Pre-Major Defense Acquisition Program (MDAP). The acquisition strategy for the Weather Satellite Follow-On (WSF) will be informed by an Analysis of Alternatives with an anticipated completion in 3Q FY 2013.

#### F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

PE 0604422F: Weather System Follow-on Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0604422F: Weather System Follow-on

**PROJECT** 

644289: Weather Satellite Follow-On

DATE: April 2013

Product Developmen	nt (\$ in M	illions)		FY 2	2012	FY 2	013	FY 2 Ba			2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost		Total Cost	Target Value of Contract
Microwave: Modify Legacy GMI Sensor Design	SS/CPFF	Ball Aerospace and Technologies Corp:Boulder, CO	-	5.794	Feb 2013	0.000		0.000		-		0.000	0.000	5.794	TBD
Microwave: Sensor Design Trades & Demonstration	SS/CPFF	Boeing Company Space and Intelligence Systems:El Segundo, CA	-	2.811	Feb 2013	0.000		0.000		-		0.000	0.000	2.811	TBD
Sys/Spacecraft: Hosted Payload on Highly Eliptical Orbit Study	SS/CPFF	Loral Space Communications:Palo Alto, CA	-	1.000	Feb 2013	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Microwave:Research Concepts to Decrease MW Sensors size	SS/CPFF	JPL:Pasadena, CA	-	1.796	Feb 2013	0.000		0.000		-		0.000	0.000	1.796	TBD
Systems/Spacecraft: Small Space Vehicle Options Study	SS/CPFF	Orbital Sciences Corp:Los Angeles, CA	-	3.545	Feb 2013	0.000		0.000		-		0.000	0.000	3.545	TBD
WSF requirements analysis, risk reduction, and early pre-acquisition activities	SS/ Various	Various:,	-	25.615	Apr 2013	0.000		0.000		-		0.000	0.000	25.615	TBD
EO/IR - Advanced Very High Resolution Radiometer (AVHRR) Sensor Design Update/ Demo	SS/CPFF	ITT Exelis:Fort Wayne, IN	-	12.706	Jan 2013	0.000		0.000		-		0.000	0.000	12.706	TBD
Electro-Optical/Infra-red (EO/IR) - Lightweight COTS	SS/CPFF	Johns Hopkins U Applied Physics Lab:Laurel, MD	-	8.844	Jan 2013	0.000		0.000		-		0.000	0.000	8.844	TBD
Systems/Spacecraft: Net- Centric Architecture study	SS/CPFF	Alliant Techsystems, Incorporated:Beltsville MD	, -	5.983	Dec 2012	0.000		0.000		-		0.000	0.000	5.983	TBD
System/Spacecraft: Ground Architecture Alternatives	SS/CPFF	Harris Government Communications Systems	-	2.034	Feb 2013	0.000		0.000		-		0.000	0.000	2.034	TBD

PE 0604422F: Weather System Follow-on Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0604422F: Weather System Follow-on

**PROJECT** 

644289: Weather Satellite Follow-On

DATE: April 2013

Product Developmer	nt (\$ in Mi	illions)		FY 2	2012	FY 2	2013	FY 2 Ba			2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Division:Melbourne, FL													
Systems/Spacecraft: Flight-proven Class C mission bus	SS/FP	Millennium Space Systems:Torrance, CA	-	1.944	Feb 2013	0.000		0.000		-		0.000	0.000	1.944	TBD
Sys/Spacecraft: Weather Architecture Trade Studies	SS/FP	U.S. Space LLC:Dulles, VA	-	1.592	Mar 2013	0.000		0.000		-		0.000	0.000	1.592	TBD
Sys/Spacecraft: High-TRL Sensor for Space Weather	SS/CPFF	John Hopkins U Applied Physics Lab:Laurel, MD	-	2.997	Mar 2013	0.000		0.000		-		0.000	0.000	2.997	TBD
Systems/Spacecraft: Leverage OPIR Data from Commercially Hosted Infra-red Payload (CHIRP)	SS/CPFF	SAIC:Seal Beach, CA	-	0.982	Mar 2013	0.000		0.000		-		0.000	0.000	0.982	TBD
Microwave:Compact MW Sensor Study for Ocean Surface Vector Wind	SS/CPFF	JPL:Pasadena, CA	-	1.584	Mar 2013	0.000		0.000		-		0.000	0.000	1.584	TBD
Spacecraft Risk Reduction Effort/Space Weather Launch Vehicle integration	SS/FP	Space Exploration Technology Corporation:Hawthorn CA	е,	3.030	Dec 2012	0.000		0.000		-		0.000	0.000	3.030	TBD
Dosimeter Study - low cost Particle Counter	Various	Various:Various,	-	4.275	Mar 2013	0.000		0.000		-		0.000	0.000	4.275	TBD
Risk Reduction - Microwave Sensor Activities	MIPR	Naval Research Laboratory:Washingto DC	n, -	9.900	Jul 2012	0.000		0.000		-		0.000	0.000	9.900	TBD
Analysis of Alternatives (AoA) activities	Various	AFSPC/A5:Peterson AFB, CO	-	7.000	Aug 2012	2.000		0.000		-		0.000	0.000	9.000	TBD
		Subtotal	0.000	103.432		2.000		0.000		0.000		0.000		·	

PE 0604422F: Weather System Follow-on

Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0604422F: Weather System Follow-on

**PROJECT** 

644289: Weather Satellite Follow-On

BA 4: Advanced Comp	onent De	evelopment & Proto	types (AC	CD&P)											
Support (\$ in Millions	s)			FY 2	2012	FY 2	013	FY 2 Ba	-	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Requirements/Engineering Analysis Support	MIPR	Defense Information Technical Center (DTIC)/Surviac Contract:Los Angeles, CA	-	1.500	Oct 2012	0.000		0.000		-		0.000	0.000	1.500	ТВС
Engineering Risk Reduction Studies	Various	Various:,	-	1.171	Feb 2013	0.000		0.000		-		0.000	0.000	1.171	TBC
		Subtotal	0.000	2.671		0.000		0.000		0.000		0.000	0.000	2.671	
Test and Evaluation	(\$ in Milli	ons)		FY 2	2012	FY 2	013	FY 2 Ba		FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Management Service	es (\$ in M	lillions)		FY 2	2012	FY 2	013	FY 2 Ba	-	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering (FFRDC) (PMA)	MIPR	Aerospace:Los Angeles, CA	-	11.863	Mar 2012	0.000		0.000		-		0.000	0.000	11.863	ТВС
Acquisition Contractor Support (PMA)	MIPR	Various:,	-	5.378	Mar 2012	0.000		0.000		-		0.000	0.000	5.378	TBC
Program Support (PMA)	Various	Space and Missile Systems Center:Los Angeles, CA	-	0.337	Mar 2012	0.000		0.000		-		0.000	0.000	0.337	TBD
		Subtotal	0.000	17.578		0.000		0.000		0.000		0.000	0.000	17.578	
			All Prior Years	FY 2	2012	FY 2	013	FY 2 Ba	-	FY 2		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	0.000	123.681		2.000		0.000		0.000		0.000			

PE 0604422F: Weather System Follow-on Air Force

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2	2014 Air Fc	rce					DATE	: April 201	13	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, BA 4: Advanced Component Development & Proto		D& <i>P</i> )	<b>R-1 ITEM NOM</b> PE 0604422F: I	<b>ENCLATURE</b> Weather System Fo	llow-on	<b>PROJEC</b> 644289:	-	r Satellite I	Follow-C	)n
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Remarks										
BA 4: Advanced Component Development & Proto	All Prior			FY 2014	FY 2	014	FY 2014	Cost To	Total	Targ Value

PE 0604422F: Weather System Follow-on Air Force

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

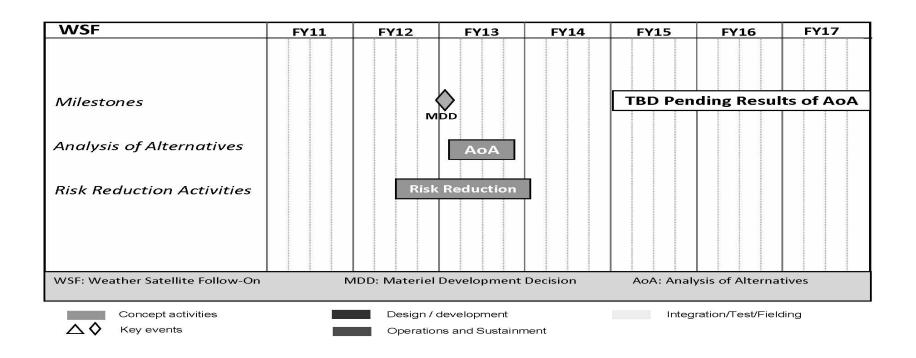
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0604422F: Weather System Follow-on

**PROJECT** 

644289: Weather Satellite Follow-On



PE 0604422F: Weather System Follow-on Air Force

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0604422F: Weather System Follow-on 644289: Weather Satellite Follow-On

BA 4: Advanced Component Development & Prototypes (ACD&P)

## Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
Materiel Development Decision	1	2013	1	2013
Analysis of Alternatives (AoA)	1	2013	3	2013
Risk Reduction Activities	3	2012	1	2014

PE 0604422F: Weather System Follow-on Air Force

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