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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force **Date:** March 2014

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604422F / <i>Weather System Follow-on</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	123.681	-	-	39.901	-	39.901	76.614	110.493	138.130	142.539	164.818	796.176
644289: <i>Weather Satellite Follow-On</i>	123.681	-	-	39.901	-	39.901	76.614	110.493	138.130	142.539	164.818	796.176
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-	-	-

MDAP/MAIS Code: 488

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, the Weather System Follow-on (WSF) Project 644289, is a New Start.

A. Mission Description and Budget Item Justification

WSF is the Department of Defense's (DoD) follow-on system to the Defense Meteorological Satellite Program (DMSP) and other DoD environmental monitoring satellites.

WSF will be comprised of a group of systems to provide timely, reliable, and high quality space-based remote sensing capabilities that will make global environmental observations of atmospheric, terrestrial, oceanographic, solar-geophysical and other requirements validated by the Joint Staff.

The Space-Based Environmental Monitoring (SBEM) Analysis of Alternatives (AoA) concluded that all except one of the JROC endorsed Category A capability gaps demonstrated military utility. Some of these capability gaps may materialize immediately; therefore, the earliest possible launch is critical to mitigate potential gaps in meeting DoD's space-based weather requirements. The planned deployment for an operational weather satellite to fully meet validated requirements is in the early 2020s.

DoD established WSF as a Pre-Major Defense Acquisition Program (MDAP). Based on the SBEM AoA results, WSF's primary thrusts will be to enable:

- 1) DoD use of data collected by civil, international and other DoD space systems.
- 2) Timely weather collection over broad oceans in support of maneuver forces.
- 3) Space weather capabilities to characterize operational orbits, space situational awareness, and the ionosphere.

Secondary investments may be supported to address weather gaps identified in the SBEM AoA and validated by the Joint Staff.

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.

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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	2.000	-	-	-	-
Current President's Budget	-	-	39.901	-	39.901
Total Adjustments	-2.000	-	39.901	-	39.901
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-2.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	39.901	-	39.901
 Change Summary Explanation					
FY13: Congressional Directed Reduction -\$2.00 for carryover of fiscal year 2012 funds.					
FY15: Funding added for Weather System Follow-on development					

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: WSF	-	-	39.901
Description: The Weather System Follow-on (WSF) is the Department of Defense's follow-on system to the Defense Meteorological Satellite Program (DMSP) and other DoD environmental monitoring satellites. The program will be comprised of a group of systems to provide timely, reliable, and high quality space-based remote sensing capabilities that will make global environmental observations of atmospheric, terrestrial, oceanographic, solar-geophysical and other requirements validated by the Joint Staff.			
FY 2013 Accomplishments: N/A			
FY 2014 Plans: N/A			
FY 2015 Plans:			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Conduct requirements development, definition and analysis. Perform acquisition planning and development. Begin sensor interface design and development to cover mission area capability gaps as identified in the SBEM AoA. Begin ground processing system upgrades to ingest civil and international partner data. Fund program support activities.			
Accomplishments/Planned Programs Subtotals	-	-	39.901

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

N/A

Remarks

E. Acquisition Strategy

DoD established WSF as a Pre-Major Defense Acquisition Program (MDAP). The acquisition strategy for WSF will be informed by review and validation of the SBEM AoA results and the acquisition strategy development activities to be conducted in FY15.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force **Date:** March 2014

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0604422F / <i>Weather System Follow-on</i>	Project (Number/Name) 644289 / <i>Weather Satellite Follow-On</i>
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
WSF Space Segment	TBD	TBD : ,	0.000	-		-		25.871	Jan 2015	-		25.871	485.267	511.138	TBD
WSF Ground Segment	TBD	TBD : ,	0.000	-		-		4.560	Jan 2015	-		4.560	54.843	59.403	TBD
Microwave: Modify Legacy GMI Sensor Design	SS/CPFF	Ball Aerospace and Technologies Corp : Boulder, CO	5.794	-		-		-		-		-	-	5.794	TBD
Microwave: Sensor Design Trades & Demonstration	SS/CPFF	Boeing Company Space and Intelligence Systems : El Segundo, CA	2.811	-		-		-		-		-	-	2.811	TBD
Sys/Spacecraft: Hosted Payload on Highly Elliptical Orbit Study	SS/CPFF	Loral Space Communications : Palo Alto, CA	1.000	-		-		-		-		-	-	1.000	TBD
Microwave: Research Concepts to Decrease MW Sensors size	SS/CPFF	JPL : Pasadena, CA	1.796	-		-		-		-		-	-	1.796	TBD
Systems/Spacecraft: Small Space Vehicle Options Study	SS/CPFF	Orbital Sciences Corp : Los Angeles, CA	3.545	-		-		-		-		-	-	3.545	TBD
WSF requirements analysis, risk reduction, and early pre-acquisition activities	SS/ Various	Various : ,	25.615	-		-		-		-		-	-	25.615	TBD
EO/IR - Advanced Very High Resolution Radiometer (AVHRR) Sensor Design Update/ Demo	SS/CPFF	ITT Exelis : Fort Wayne, IN	12.706	-		-		-		-		-	-	12.706	TBD
Electro-Optical/Infra-red (EO/IR) - Lightweight COTS	SS/CPFF	Johns Hopkins U Applied Physics Lab : Laurel, MD	8.844	-		-		-		-		-	-	8.844	TBD
Systems/Spacecraft: Net-Centric Architecture study	SS/CPFF	Alliant Techsystems, Incorporated : Beltsville, MD	5.983	-		-		-		-		-	-	5.983	TBD

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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System/Spacecraft: Ground Architecture Alternatives	SS/CPFF	Harris Government Communications Systems Division : Melbourne, FL	2.034	-		-		-		-		-	-	2.034	TBD
Systems/Spacecraft: Flight-proven Class C mission bus	SS/FP	Millennium Space Systems : Torrance, CA	1.944	-		-		-		-		-	-	1.944	TBD
Sys/Spacecraft: Weather Architecture Trade Studies	SS/FP	U.S. Space LLC : Dulles, VA	1.592	-		-		-		-		-	-	1.592	TBD
Sys/Spacecraft: High-TRL Sensor for Space Weather	SS/CPFF	John Hopkins U Applied Physics Lab : Laurel, MD	2.997	-		-		-		-		-	-	2.997	TBD
Systems/Spacecraft: Leverage OPIR Data from Commercially Hosted Infra-red Payload (CHIRP)	SS/CPFF	SAIC : Seal Beach, CA	0.982	-		-		-		-		-	-	0.982	TBD
Microwave: Compact MW Sensor Study for Ocean Surface Vector Wind	SS/CPFF	JPL : Pasadena, CA	1.584	-		-		-		-		-	-	1.584	TBD
Spacecraft Risk Reduction Effort/Space Weather Launch Vehicle integration	SS/FP	Space Exploration Technology Corporation : Hawthorne, CA	3.030	-		-		-		-		-	-	3.030	TBD
Dosimeter Study - low cost Particle Counter	Various	Various : Various,	4.275	-		-		-		-		-	-	4.275	TBD
Risk Reduction - Microwave Sensor Activities	MIPR	Naval Research Laboratory : Washington, DC	9.900	-		-		-		-		-	-	9.900	TBD
Analysis of Alternatives (AoA) activities	Various	AFSPC/A5 : Peterson AFB, CO	7.000	-		-		-		-		-	-	7.000	TBD
Subtotal			103.432	-		-		30.431		-		30.431	540.110	673.973	-

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Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 4				PE 0604422F / Weather System Follow-on				644289 / Weather Satellite Follow-On							
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 & Integration	TBD	Various : ,	0.000	-		-		1.899	Jun 2015	-		1.899	25.678	27.577	TBD
Requirements/Engineering Analysis Support	MIPR	Defense Information Technical Center (DTIC)/Survivac Contract : Los Angeles, CA	1.500	-		-		-		-		-	-	1.500	TBD
Engineering Risk Reduction Studies	Various	Various : ,	1.171	-		-		-		-		-	-	1.171	TBD
Subtotal			2.671	-		-		1.899		-		1.899	25.678	30.248	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Not specified.	TBD	Not specified. : ,	0.000	-		-		-		-		-	-	-	TBD
Subtotal			0.000	-		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	MIPR	Aerospace : Los Angeles, CA	11.863	-		-		5.100	Oct 2014	-		5.100	35.539	52.502	TBD
Program Office Support	Various	Various : ,	5.378	-		-		1.971	Nov 2014	-		1.971	19.567	26.916	TBD
Business Operations Support	Various	Various : ,	0.337	-		-		0.500	Nov 2014	-		0.500	11.700	12.537	TBD
Subtotal			17.578	-		-		7.571		-		7.571	66.806	91.955	-
Project Cost Totals			123.681	-		-		39.901		-		39.901	632.594	796.176	-

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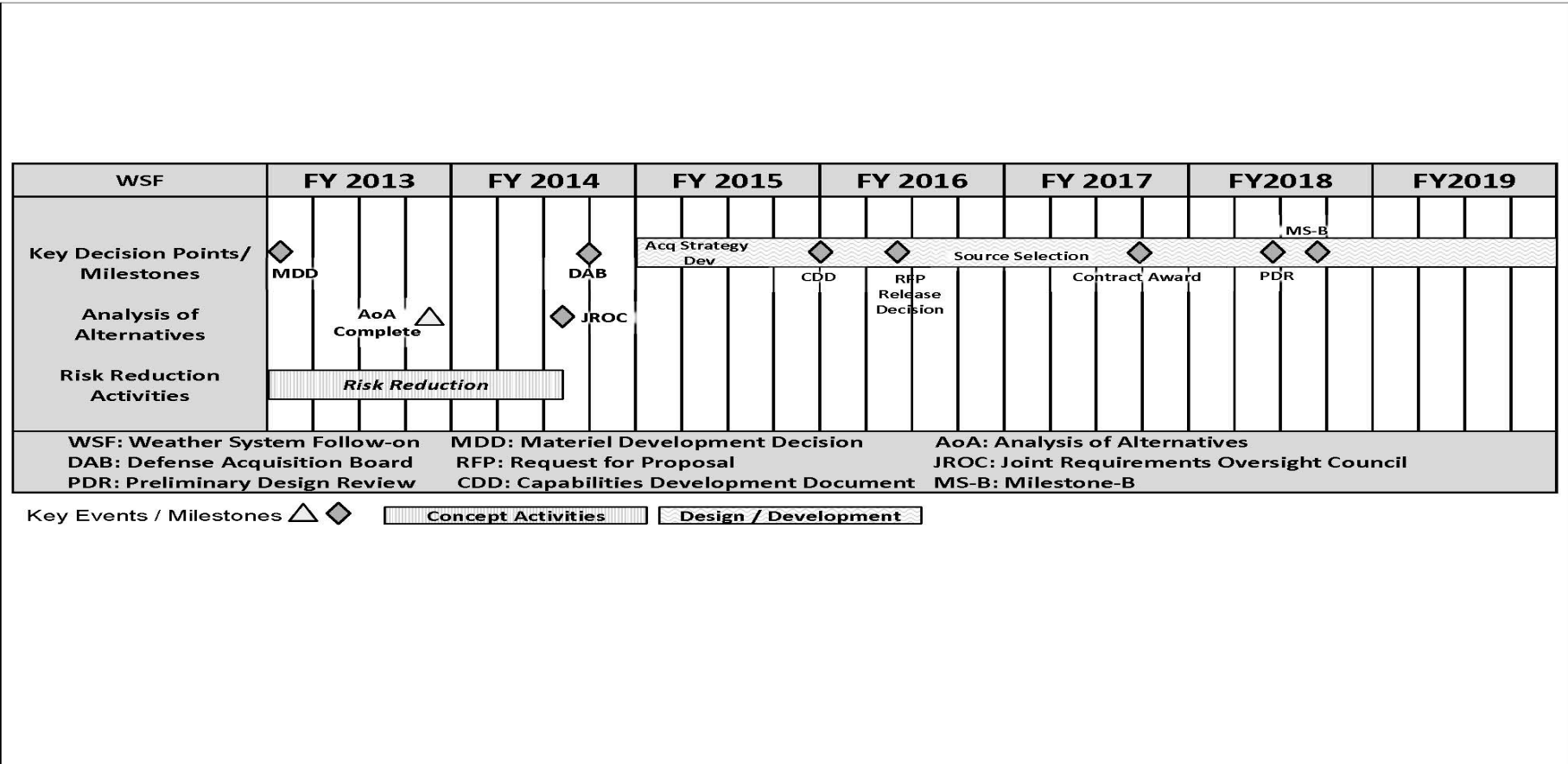
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	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force **Date:** March 2014

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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Analysis of Alternatives (AoA) analysis Completed	4	2013	4	2013
Joint Requirements Oversight Council (JROC) AoA Review	3	2014	3	2014
Defense Acquisition Board	3	2014	3	2014
Capabilities Development Document (CDD)	1	2016	1	2016
Contract Award	3	2017	3	2017
Preliminary Design Review (PDR)	2	2018	2	2018
Milestone B	3	2018	3	2018