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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305238F I NATO AGS							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	131.900	38.904	44.729	0.000	44.729	38.915	25.812	1.800	0.802	0.000	282.862
676001: NATO AGS	-	131.900	38.904	44.729	0.000	44.729	38.915	25.812	1.800	0.802	0.000	282.862
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program funds the U.S. contribution to the Alliance Ground Surveillance (AGS) system, a North Atlantic Treaty Organization (NATO), Direct Commercial Sale acquisition. AGS is an airborne ground surveillance capability that provides continuous, wide area surveillance in all weather conditions. It will provide NATO decision makers with near real time information and situational awareness concerning friendly, neutral and opposing ground and maritime forces to support mission planning and execution, including force protection and targeting. All NATO nations will have access to AGS collection data, creating opportunities for burden sharing with similar U.S. assets.

The AGS program includes: air and ground segment acquisitions, operations of the NATO AGS Management Agency (NAGSMA), development of operations and support concepts and definition and establishment of an initial support capability. The air segment consists of five (5) air vehicles based on unique exportable configurations of the United States Air Force Global Hawk air frame, Navy Triton command and control architecture and the U.S. Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar. The U.S. will also integrate new Maritime Moving Target and Inverse Synthetic Aperture Radar capability into the MP-RTIP radar for NATO AGS. The ground segment consists of fixed site and transportable/mobile ground stations for air vehicle Command and Control (C2), data exploitation and distribution. Operations and continuing In-Service Support will be funded through a future NATO Military Commanders' Capability Package funded within the NATO Security Investment Program (NSIP).

U.S. participation in NATO AGS was ratified by Secretary of Defense (SECDEF) signature/approval of the NATO AGS Program Memorandum of Understanding (PMOU) in June 2009 and includes 15 nations. In FY 2012, OSD transferred the NATO AGS program to the U.S. Air Force (USAF) for management and execution of the Research and Development effort.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

UNCLASSIFIED

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B. Program Change Summary (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget		138.400	38.904	0.000	0.000	0.000
Current President's Budget		131.900	38.904	44.729	0.000	44.729
Total Adjustments		-6.500	0.000	44.729	0.000	44.729
• Congressional General Reductions		0.000	0.000			
• Congressional Directed Reductions		0.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		-6.500	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• Other Adjustments		0.000	0.000	44.729	0.000	44.729
Change Summary Explanation						
FY2016: \$6.5M reprogrammed for higher USAF priorities						
FY2018: \$44.729M to continue development and testing of maritime modes for MP-RTIP						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: Design / Development of NATO Alliance Ground Surveillance (AGS)				111.940	34.139	11.142
Description: U.S. contribution to NATO for AGS development acquisition and initial fielding.						
Supports configuration changes at a system level.						
FY 2016 Accomplishments:						
- Continued U.S. contribution to NATO for AGS development acquisition and initial fielding						
- Supported configuration changes at a system level						
FY 2017 Plans:						
- Will continue U.S. contribution to NATO for AGS development acquisition and initial fielding						
- Will continue configuration changes at a system level						
FY 2018 Plans:						
- Will continue U.S. contribution to NATO for AGS development acquisition and initial fielding						
- Will continue configuration changes at a system level						
- Aircraft #1 & #2 will be delivered to NATO						

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0305238F / NATO AGS		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
- Aircraft #3, #4 and #5 will be delivered to NATO				
Title: Design/Development of Maritime Modes Description: Supports development and flight testing of maritime modes capability for RTIP and additional configuration changes that cannot be performed under the direct commercial sale contract between Northrop Grumman and NAGSMA. FY 2016 Accomplishments: - Continued to support development of maritime modes capability and additional configuration changes that cannot be performed under the direct commercial sale contract between Northrop Grumman and NAGSMA - NAGSMA declared a successful NATO design review FY 2017 Plans: - Will continue development of maritime modes capability and additional configuration changes that cannot be performed under the direct commercial sale contract between Northrop Grumman and NAGSMA FY 2018 Plans: - Will continue development of maritime modes capability and additional configuration changes that cannot be performed under the direct commercial sale contract between Northrop Grumman and NAGSMA		18.400	3.889	33.487
Title: Technical Support for NATO Alliance Ground Surveillance (AGS) Description: Provide engineering and logistics support for NATO AGS development and initial fielding. FY 2016 Accomplishments: - Continued engineering, logistics and program office support for NATO AGS development and initial fielding FY 2017 Plans: - Will continue engineering, logistics and program office support for NATO AGS development and initial fielding. FY 2018 Plans: - Will continue engineering, logistics and program office support for NATO AGS development and initial fielding.		1.385	0.570	0.100
Title: Test and Evaluation Support for NATO Alliance Ground Surveillance (AGS) Description: Provide testing and evaluation via the Air Force Flight Test Center. FY 2016 Accomplishments: - Accomplished first flight of aircraft #1 from production facility to Air Force Flight Test Center and initial flight test		0.175	0.306	0.000

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
- Continued detailed test and evaluation planning with the Air Force Flight Test Center FY 2017 Plans: - Will continue detailed test and evaluation planning with the Air Force Flight Test Center - Will support Aircraft #1 ferry flight from Air Force Flight Test Center to AGS Main Operating Base on Sigonella, Italy - Will support system level performance verification and integration with ground systems testing on aircraft #1 following its arrival to Sigonella, Italy FY 2018 Plans: N/A			
Accomplishments/Planned Programs Subtotals		131.900	38.904
D. Other Program Funding Summary (\$ in Millions)			
Line Item	FY 2016	FY 2017	FY 2018 Base OCO FY 2018 Total
• RDTE: BA 07: PE	188.053	256.307	321.807
0305220F: RQ-4 UAV			0.000
			321.807
			260.038
			300.498
			235.024
			0.000
			Continuing
			Continuing
Remarks			
E. Acquisition Strategy			
Acquisition of the AGS system is being accomplished via a single delivery strategy. The system will be delivered via a fixed price direct commercial sale contract between Northrop Grumman Integrated Sensor Systems International, Incorporated (NGISSI) & NATO, which was signed on 20 May 2012. The program is managed by the NATO AGS Management Agency (NAGSMA).			
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: FY 2018 Air Force												Date: May 2017			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305238F / NATO AGS				Project (Number/Name) 676001 / NATO AGS					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
NATO AGS Design / Development	SS/FFP	NATO AGS Management Agency : Brussels, Belgium	-	111.940	Oct 2015	34.139	Oct 2016	10.217	Oct 2017	0.000		10.217	0.000	156.296	-
NATO AGS System Level Configuration Changes	SS/FFP	AFLCMC/WI : Wright Patterson, AFB, OH	-	0.000		0.000		0.000		0.000		0.000	0.000	0.000	-
MP-RTIP for NATO AGS Design / Development	SS/FFP	AFLCMC/HB : Hanscom AFB, MA	-	18.400	Oct 2015	3.889	Oct 2016	33.487	Dec 2017	0.000		33.487	0.000	55.776	-
Subtotal			-	130.340		38.028		43.704		0.000		43.704	0.000	212.072	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
NATO AGS Technical Support	SS/FFP	Multiple : Hanscom, WPAFB	-	0.748	Apr 2016	0.295	Apr 2017	0.100	Dec 2017	0.000		0.100	0.000	1.143	-
Subtotal			-	0.748		0.295		0.100		0.000		0.100	0.000	1.143	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
NATO AGS Test and Evaluation Support	SS/FFP	Multiple: AFLCMC/ WI, AFLCMC/HB, 412 TW, 88 CG : Hanscom, WPAFB, Edwards	-	0.175	Apr 2016	0.306	Apr 2017	0.000		0.000		0.000	0.000	0.481	-
Subtotal			-	0.175		0.306		0.000		0.000		0.000	0.000	0.481	-

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Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
NATO AGS Management Services	SS/FFP	Multiple : Hanscom, WPAFB, Pax River	-	0.637	Jul 2016	0.275	Jul 2017	0.925	Jul 2017	0.000		0.925	0.000	1.837	-
Subtotal			-	0.637		0.275		0.925		0.000		0.925	0.000	1.837	-

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	131.900		38.904		44.729		0.000		44.729	0.000	215.533	-

Remarks

The Industrial Structure consists of Northrop Grumman (NGISSII) prime contractor, three subcontractors, and 15 participating nation industries that will receive direct work. There are no indirect offsets. The technical support of the NATO AGS program includes MITRE Engineering, U.S. Navy's Triton program office support, U.S. government travel, and supplies. The test and evaluation support of the NATO AGS program includes the AFMC 412 Test Wing support of Flight Testing and Frequency Management by the AFMC 88 Communication Group. The management services support of the NATO AGS program includes Advisory & Assistance Services.

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force			Date: May 2017		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0305238F / NATO AGS			Project (Number/Name) 676001 / NATO AGS

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Design and Development - NATO AGS																												
Aircraft #1 Ferry Flight to Main Ops Base (October 2017)																												
Aircraft #2 Delivery to Main Ops Base (December 2017)																												
Aircraft #3, #4 & #5 Delivery to Main Ops Base																												
System Level Performance Verification																												
IOC (December 2018)																												
FOC (December 2022)																												
Flight Test - NATO AGS																												
Design, Development, & Test - Maritime Mode																												
Ground Station Delivery																												
Tech Support - NATO AGS																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305238F / NATO AGS	Project (Number/Name) 676001 / NATO AGS	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design and Development - NATO AGS	1	2016	4	2017
Aircraft #1 Ferry Flight to Main Ops Base (October 2017)	1	2018	1	2018
Aircraft #2 Delivery to Main Ops Base (December 2017)	1	2018	1	2018
Aircraft #3, #4 & #5 Delivery to Main Ops Base	2	2018	3	2018
System Level Performance Verification	2	2018	3	2018
IOC (December 2018)	1	2019	1	2019
FOC (December 2022)	4	2022	4	2022
Flight Test - NATO AGS	1	2016	4	2017
Design, Development, & Test - Maritime Mode	1	2016	1	2022
Ground Station Delivery	3	2016	3	2017
Tech Support - NATO AGS	1	2016	4	2022