

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305238F / NATO AGS							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	221.589	232.851	197.486	-	197.486	39.292	-	-	-	-	691.218
676001: NATO AGS	-	221.589	232.851	197.486	-	197.486	39.292	-	-	-	-	691.218
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

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. The PMOU went into effect in Sept 2009 when 15 nations, including the United States, financially committed to support procurement and delivery of the NATO Commander's number one priority to the warfighter. Canada withdrew in 2011 and Poland joined in 2014 keeping the participating nations at 15.

In FY 2012, OSD transferred the NATO AGS program to the U.S. Air Force (USAF) for management and execution. The NATO AGS project funds the U.S. share of the cost for NATO to acquire an air-to-ground ground surveillance capability, improvements to the radar, and U.S. support of NATO AGS-related activities. Operations and continuing support will be funded through a future NATO Military Commanders' Capability Package funded within the NATO Security Investment Program (NSIP).

The AGS system will be a NATO-owned and operated airborne ground surveillance capability that provides continuous, wide area surveillance information in all weather conditions for use at the strategic, operational and tactical levels of command. Interoperable with other national assets, AGS will provide NATO decision makers with near real time, continuous information and situational awareness concerning friendly, neutral, and opposing ground and maritime forces to support mission planning and execution, including force protection and targeting.

The NATO AGS Program includes: an air segment consisting of five (5) NATO-developed air vehicles, incorporating elements of the United States Navy (USN) Triton (previously Broad Area Maritime Surveillance (BAMS)) command and control architecture and the U.S. Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar; a unique exportable configuration; a ground segment for air vehicle command and control and data exploitation and distribution that consists of fixed-based site and transportable/mobile ground stations; operation of an international management organization; development of operations and support concepts; and definition and establishment of an initial support capability. As part of the U.S. government agreement with NATO AGS Management Agency (NAGSMA), the U.S. will integrate Maritime Moving Target and Inverse Synthetic Aperture Radar capability into the MP-RTIP radar for NATO AGS. This design and development includes correcting deficiencies, flight testing on the modes and system level performance validation.

System level configuration changes include a unique configuration to allow for export of the system.

Support to NATO to maintain International Agreements allows for continuation of development.

NATO Alliance Ground Surveillance (AGS) is an Office of the Secretary of Defense (OSD) special interest program.

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015				
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force / BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0305238F / NATO AGS						
Deliveries are planned for 2016-2017. Follow-on sustainment and operations will be supported by all 28 NATO nations through their contributions of funding to the program. Mission elements will support two orbits. The Main Operating Base (MOB) air vehicles and mission Command and Control (C2) will be located at Sigonella Air Base, Italy. Exploitation at the MOB will be developed by Selex. EADS and Selex will develop the transportable and mobile general ground stations.								
The program, managed by NAGSMA, is composed of design, development, demonstration, and production, as well as Initial In-Service Support (IISS). While the current program includes IISS, the current Direct Commercial Sale (DCS) contract with Northrop Grumman does not include these tasks.								
The DCS contract between Northrop Grumman and NAGSMA was signed on 20 May 2012. This PE funds the U.S. cost share for the acquisition of the NATO airborne ground surveillance capability as well as the cost share associated with the IISS. IISS and In-Service Support (ISS) will be contracted under separate action. It is anticipated that ISS costs will be commonly funded through a future NATO Military Commanders' Capability Package, using the NATO Security Investment Program (NSIP). This funding also includes developmental activity for MP-RTIP to include additional functionality and configuration requirements, studies and analysis related to mission security and exportability, and current and future program planning, project execution, engineering, and program management support to NATO.								
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.								
B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total		
Previous President's Budget		221.589	232.851	138.400	-	138.400		
Current President's Budget		221.589	232.851	197.486	-	197.486		
Total Adjustments		-	-	59.086	-	59.086		
• Congressional General Reductions		-	-					
• Congressional Directed Reductions		-	-					
• Congressional Rescissions		-	-					
• Congressional Adds		-	-					
• Congressional Directed Transfers		-	-					
• Reprogrammings		-	-					
• SBIR/STTR Transfer		-	-					
• Other Adjustments		-	-	59.086	-	59.086		
Change Summary Explanation								
FY16 Base increase for NATO AWACS.								
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Design / Development of NATO Alliance Ground Surveillance (AGS)				174.774	217.882	118.440	-	118.440

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015		
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				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<b>Description:</b> U.S. contribution to NATO for AGS development acquisition and initial fielding.  Supports configuration changes at a system level.  <b>FY 2014 Accomplishments:</b> - Continued U.S. contribution to NATO for AGS development acquisition and initial fielding. - Supported configuration changes at a system level.  <b>FY 2015 Plans:</b> - Continue U.S. contribution to NATO for AGS development acquisition and initial fielding. - Supports configuration changes at a system level.  <b>FY 2016 Base Plans:</b> - Will continue U.S. contribution to NATO for AGS development acquisition and initial fielding. - Will Support configuration changes at a system level.  <b>FY 2016 OCO Plans:</b> N/A						
<b>Title:</b> Design/Development of Maritime Modes  <b>Description:</b> 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.  <b>FY 2014 Accomplishments:</b> - Supported development and flight testing of maritime modes capability - Supported additional configuration changes that cannot be performed under the direct commercial sale contract between Northrop Grumman and NAGSMA.  <b>FY 2015 Plans:</b> - Continue 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. - Flight testing to be completed in Q1 FY15.  <b>FY 2016 Base Plans:</b>		44.862	9.444	18.400	-	18.400

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force				Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0305238F / NATO AGS				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Will continue 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. <b>FY 2016 OCO Plans:</b> N/A						
<b>Title:</b> Technical Support for NATO Alliance Ground Surveillance (AGS) <b>Description:</b> Provide engineering and logistics support for NATO AGS development and initial fielding. Establish and support a program office for U.S. Government support to NATO for AGS development and initial fielding. Serve as interface to the U.S. program offices and the prime contractor for NATO AGS capability. <b>FY 2014 Accomplishments:</b> - Continued engineering and logistics support for NATO AGS development and initial fielding. - Supported a program office for U.S. Government support to NATO for AGS development and initial fielding. - Served as interface to the U.S. program offices and the prime contractor for NATO AGS capability. <b>FY 2015 Plans:</b> - Continue engineering and logistics support for NATO AGS development and initial fielding. - Continue support of a program office for U.S. Government support to NATO for AGS development and initial fielding. - Continue to serve as interface to the U.S. program offices and the prime contractor for NATO AGS capability. <b>FY 2016 Base Plans:</b> - Will continue engineering and logistics support for NATO AGS development and initial fielding. - Will continue support of a program office for U.S. Government support to NATO for AGS development and initial fielding. - Will continue to serve as interface to the U.S. program offices and the prime contractor for NATO AGS capability. <b>FY 2016 OCO Plans:</b> N/A		1.681	1.345	1.385	-	1.385
<b>Title:</b> Test and Evaluation Support for NATO Alliance Ground Surveillance (AGS) <b>Description:</b> Provide testing and evaluation via the Air Force Flight Test Center. <b>FY 2014 Accomplishments:</b>		0.272	4.180	0.175	-	0.175

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Air Force										<b>Date:</b> February 2015	
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>					<b>R-1 Program Element (Number/Name)</b> PE 0305238F / NATO AGS						
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>											
					<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>		
Completed detailed test and evaluation planning with the Air Force Flight Test Center.											
<b>FY 2015 Plans:</b> Complete detailed test and evaluation planning with the Air Force Flight Test Center.											
<b>FY 2016 Base Plans:</b> Will complete detailed test and evaluation planning with the Air Force Flight Test Center.											
<b>FY 2016 OCO Plans:</b> N/A											
<b>Title:</b> Support to NATO to maintain International Agreements					-	-	59.086	-	59.086		
<b>Description:</b> Provides continuation of development											
<b>FY 2014 Accomplishments:</b> N/A											
<b>FY 2015 Plans:</b> N/A											
<b>FY 2016 Base Plans:</b> Provide continuation of development											
<b>FY 2016 OCO Plans:</b> N/A											
<b>Accomplishments/Planned Programs Subtotals</b>					221.589	232.851	197.486	-	197.486		
<b>D. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTE: BA 07: PE 0305220F: RQ-4 UAV	120.180	244.514	316.148	-	316.148	291.794	269.718	287.012	292.178	Continuing	Continuing
<b>Remarks</b>											

UNCLASSIFIED

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Air Force		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305238F / NATO AGS	
<b>E. Acquisition Strategy</b> The U.S. signed the Program Memorandum of Understanding (PMOU) committing the U.S. Government to NATO-derived cost shares of the Alliance Ground Surveillance (AGS) prime contract for design, development, demonstration, and initial production of the NATO AGS system. 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).		
<b>F. Performance Metrics</b> 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.		

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
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 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Design / Development of NATO AGS	SS/FFP	NATO AGS Management Agency : Brussels, Belgium,	-	166.201	Oct 2013	200.432	Oct 2014	118.440	Oct 2015	-		118.440	Continuing	Continuing	-
System Level Configuration Changes	SS/FFP	AFLCMC/WI : Wright Patterson, AFB, OH	-	8.573	Aug 2014	17.451	May 2015	-		-		-	Continuing	Continuing	-
Design / Development of RTIP	SS/FFP	AFLCMC/HB : Hanscom AFB, MA	-	44.862	Oct 2013	9.444	May 2015	18.400	Oct 2015	-		18.400	Continuing	Continuing	-
Subtotal			-	219.636		227.327		136.840		-		136.840	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Technical Support for NATO AGS	SS/FFP	Multiple : Hanscom, WPAFB,	-	0.471	Apr 2014	0.542	Apr 2015	0.748	Apr 2016	-		0.748	Continuing	Continuing	-
Support International Agreements	SS/FFP	Multiple : Brussels,	-	-		-		59.086	Jan 2016	-		59.086	Continuing	Continuing	-
Subtotal			-	0.471		0.542		59.834		-		59.834	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Test and Evaluation Support for NATO AGS	SS/FFP	Multiple : Hanscom, WPAFB, Edwards,	-	0.272	Apr 2014	4.180	Apr 2015	0.175	Apr 2016	-		0.175	Continuing	Continuing	-
Subtotal			-	0.272		4.180		0.175		-		0.175	-	-	-

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305238F / NATO AGS				Project (Number/Name) 676001 / NATO AGS					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 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
Management Services for NATO AGS	SS/FFP	Multiple : Hanscom, WPAFB, Pax River,	-	1.210	Jul 2014	0.802	Jul 2015	0.637	Jul 2016	-		0.637	Continuing	Continuing	-
Subtotal			-	1.210		0.802		0.637		-		0.637	-	-	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	221.589		232.851		197.486		-		197.486	-	-	-
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 CG. The management services support of the NATO AGS program includes Advisory & Assistance Services.															



**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2016 Air Force																<b>Date:</b> February 2015			
<b>Appropriation/Budget Activity</b> 3600 / 7								<b>R-1 Program Element (Number/Name)</b> PE 0305238F / NATO AGS								<b>Project (Number/Name)</b> 676001 / NATO AGS			

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
IOC																												
FOC																												
Design and Development - NATO AGS																												
Design and Development - Maritime Mode																												
Test and Evaluation Support - NATO AGS																												
Flight Test - NATO AGS																												
Tech Support - NATO AGS																												
Aircraft Delivery - NATO AGS																												
Ground Station Delivery - NATO AGS																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Air Force			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305238F / NATO AGS	<b>Project (Number/Name)</b> 676001 / NATO AGS	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
IOC	1	2017	1	2017
FOC	3	2017	3	2017
Design and Development - NATO AGS	1	2014	1	2017
Design and Development - Maritime Mode	1	2014	3	2015
Test and Evaluation Support - NATO AGS	1	2014	3	2017
Flight Test - NATO AGS	3	2015	3	2016
Tech Support - NATO AGS	1	2014	4	2017
Aircraft Delivery - NATO AGS	4	2016	2	2017
Ground Station Delivery - NATO AGS	4	2016	3	2017