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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					PE 0604869A: Patriot/MEADS Combined Aggregate Program (CAP)							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	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	-	377.610	400.861	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
M06: PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	-	377.610	400.861	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

The U.S. rendered a MEADS program decision in Feb 2011 to continue the Design and Development (D&D) phase focusing remaining activities to implement a "demonstration of capabilities" through 2013; no resources are budgeted to support these efforts after 2013. None of the funds authorized to be appropriated or otherwise made available for fiscal year 2013 for the Department of Defense may be obligated or expended for the Medium Extended Air Defense System (MEADS).

A. Mission Description and Budget Item Justification

Medium Extended Air Defense System (MEADS) provides joint and coalition forces critical asset and defended area protection against multiple and simultaneous attacks by short-to-medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems, and tactical air-to-surface missiles. This system leverages current technology for an Integrated Air and Missile Defense Fire Control System/capability.

MEADS is a tri-national co-development program among the United States, Germany, and Italy to replace the PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the D&D MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a \$3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005.

MEADS is designed to provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems and tactical air-to-surface missiles. MEADS is being developed to have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, designed to be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE)interceptor; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and

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APPROPRIATION/BUDGET ACTIVITY

2040: *Research, Development, Test & Evaluation, Army*
 BA 5: *System Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0604869A: *Patriot/MEADS Combined Aggregate Program (CAP)*

near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.

The U.S. rendered a MEADS program decision in Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through 2013 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract amendment on 31 October 2011.

The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the MSE and has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements. PAC-3 is reported under Program Element 0605456A.

US financial support completed with FY13 funds. None of the funds authorized to be appropriated or otherwise made available for fiscal year 2013 for the Department of Defense may be obligated or expended for the Medium Extended Air Defense System (MEADS).

B. Program Change Summary (\$ in Millions)	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014 Base</u>	<u>FY 2014 OCO</u>	<u>FY 2014 Total</u>
Previous President's Budget	389.630	400.861	0.000	-	0.000
Current President's Budget	377.610	400.861	0.000	-	0.000
Total Adjustments	-12.020	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-12.020	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604869A: Patriot/MEADS Combined Aggregate Program (CAP)				PROJECT M06: PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
M06: PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	-	377.610	400.861	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

The U.S. rendered a MEADS program decision in Feb 2011 to continue the Design and Development (D&D) phase focusing remaining activities to implement a "demonstration of capabilities" through 2013; no resources are budgeted to support these efforts after 2013. None of the funds authorized to be appropriated or otherwise made available for fiscal year 2013 for the Department of Defense may be obligated or expended for the Medium Extended Air Defense System (MEADS).

A. Mission Description and Budget Item Justification

MEADS provides joint and coalition forces critical asset and defended area protection against multiple and simultaneous attacks by short-to-medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems, and tactical air-to-surface missiles. This system leverages current technology for an Integrated Air and Missile Defense Fire Control System/capability.

Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the D&D MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a \$3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005.

MEADS is designed to provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, manned and unmanned aerial systems and tactical air-to-surface missiles. MEADS is being developed to have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, designed to be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE)interceptor; an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree

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coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search.					
The U.S. rendered a MEADS program decision in Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through 2013 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract amendment on 31 October 2011. None of the funds authorized to be appropriated or otherwise made available for fiscal year 2013 for the Department of Defense may be obligated or expended for the Medium Extended Air Defense System (MEADS).					
The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the MSE and has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements. PAC-3 is reported under Program Element 0605456A.					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
Title: Medium Extended Air Defense Missile System (MEADS) Design and Development (D&D) Articles: Description: U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) budgets to manage the Design and Development (D&D) Phase Contract. FY 2012 Accomplishments: Continue the U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) budgets to manage the Design and Development (D&D) Phase Contract to implement a demonstration of capabilities effort. FY 2013 Plans: Continue the U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) budgets to manage the Design and Development (D&D) Phase Contract to design, build, test and evaluate the production representative MEADS Hardware.			328.480 0	328.200 0	0.000
Title: MEADS Design and Development Program Integration Articles: Description: Implement program integration efforts focusing the remaining activities on a demonstration of capabilities effort.			25.536 0	46.387 0	0.000

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined Aggregate Program (CAP)</i>		PROJECT M06: <i>PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Continue to implement program integration efforts focusing on activities to implement a demonstration of capabilities effort.					
FY 2013 Plans: Continue to implement program integration efforts to support transition from PATRIOT to development and fielding of the US MEADS capability. Assessment of performance against US Threat. Identify gaps / shortfalls; development and management of US MEADS programs to address unique US requirements; MEADS-IBCS compatibility; development of a US MEADS testbed, US MEADS sensor performance upgrades; PAC-3 CRI compatibility; and US MEADS Production and Fielding efforts (required materiel release certifications, planning for US MEADS IOT&E, and required US logistics facilitization and training efforts).					
Title: National and International Program Office Support			12.808	14.749	0.000
Articles:			0	0	
Description: Management, support and salaries for the MEADS National and International program offices.					
FY 2012 Accomplishments: Continue Management, support and salaries for the MEADS National and International program offices, focusing on Design and Development (D&D) activities to implement a demonstration of capabilities effort.					
FY 2013 Plans: Continue management, support and salaries for the MEADS National and International program offices.					
Title: MEADS US Only Efforts			10.786	11.525	0.000
Articles:			0	0	
Description: US only efforts to support Exciter and Exportable Missile Model					
FY 2012 Accomplishments: Continue support for the U.S.-developed and technology-restricted Exciter and Exportable Missile Model.					
FY 2013 Plans: Continue US Exciter support effort and Exportable Missile Model.					
Accomplishments/Planned Programs Subtotals			377.610	400.861	0.000

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C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• PE 0605456A: Proj PA3, PAC-3/ MSE Missile	86.139	69.029	68.843		68.843	129.627	63.506	65.179	65.734	Continuing	Continuing	
• SSN C53101: MSE Missile	74.953	12.850	540.401		540.401	540.520	559.623	566.757	655.184	Continuing	Continuing	
• PE 0102419A: Proj E55, JLENS	317.382	190.422	98.450		98.450	46.600	47.450	37.830	2.600	Continuing	Continuing	
• PE 0605455A: Proj S35 SLAMRAAM	1.186									Continuing	Continuing	
• PE 0604319A: Proj DU3, IFPC2 (FY12 PE0603305A IFPCI II Intercept)	8.834	76.039	79.232		79.232	107.587	146.463	151.769	159.700	Continuing	Continuing	
• PE 0605457A: PE 0605457A Proj S40, Army Integrated Air and Missile Defense (AIAMD)	262.032	262.211	364.649		364.649	382.869	221.306	141.908	79.338	Continuing	Continuing	
• SSN BZ5075: Army IAMD Battle Command System (IBCS)			21.200		21.200	100.700	315.370	482.640	446.130	Continuing	Continuing	
• PE 0604820A: Proj E10, SENTINEL	3.093	3.486	1.549		1.549	5.264	5.911	6.307	6.053	Continuing	Continuing	
• PE 654741: Project Numbers 126, 146 and 149	57.050	73.333	18.294		18.294	20.898	20.557	18.009	11.015	Continuing	Continuing	
Remarks												
PAC-3 / MEADS CAP RDTE funding was combined under PE0604869A beginning in FY 2006. This program is an integral part of the PEO, Missiles and Space Integrated Air and Missile Defense (IAMD) architecture. Beginning in FY 2011, PAC-3/MSE Missile was reported under PE 0605456A, Project PA3.												
D. Acquisition Strategy												
On 1 July 2004, the Defense Acquisition Board approved the Acquisition Strategy (AS) for the PATRIOT/MEADS CAP Milestone B. On 6 April 2006, the Lower Tier Project Manager submitted a Program Deviation Report (PDR) to notify the Under Secretary of Defense for Acquisition, Technology, and Logistics, of changes affecting the 6 August 2004, approved PATRIOT/MEADS CAP Acquisition Program Baseline (APB). On 9 February 2006, the Army System Acquisition Review Council (ASARC) approved establishment of the Integrated Air and Missile Defense (IAMD) Project Office (PO) to lead development efforts for the Army IAMD. On 8 May 2006, the Army established the IAMD PO which will manage the U.S. Army's initiatives to implement the user's operational concept from a System-Centric focus to a Network-Centric, Component-Based (Plug and Fight) architecture. The PATRIOT/MEADS CAP Acquisition Program Baseline and Acquisition Strategy will be modified to reflect these changes. The U.S. rendered a MEADS program decision on 11 Feb 2011 to continue the D&D phase focusing remaining activities to implement a "demonstration of capabilities" through 2013 with the remaining MOU funds to provide a meaningful capability for Germany and Italy and a possible future option for the												

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U.S. Based on this decision, NAMEADSMA developed a new D&D detailed program schedule and the Board of Directors (BoD) approved it via a signed contract on 31 October 2011.		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
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Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
International Operating	Various	NAMEADSMA:Huntsville, AL	38.991	2.102	Dec 2011	9.000		-		-		-	0.000	50.093	0.000
Gov't Program Services/ Mgmt	Various	Lower Tier Project Office:Huntsville, AL	3.000	1.500	Dec 2011	1.500		-		-		-	0.000	6.000	0.000
Subtotal			41.991	3.602		10.500		0.000		0.000		0.000	0.000	56.093	0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		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
Design and Development	Various	NAMEADSMA:Huntsville, AL	1,544.000	328.480	Dec 2011	328.200		-		-		-	0.000	2,200.680	0.000
Program Integration	Various	Various:Huntsville, AL	143.890	13.361	Dec 2011	27.698		-		-		-	0.000	184.949	0.000
Product Development Support	Various	Program Office:Huntsville, AL	51.082	6.406	Dec 2011	6.400		-		-		-	0.000	63.888	0.000
U.S. Only Security / Exciter	SS/CPFF	Lockheed Martin:Syracuse, NY; Dallas, TX & Orlando, FL	73.035	7.500	Feb 2012	7.276		-		-		-	0.000	87.811	0.000
U. S. Other Government Agencies (OGA's)	Various	Various:Huntsville, AL	42.120	5.132	Dec 2011	5.972		-		-		-	0.000	53.224	0.000
International Program Office	Various	NAMEADSMA:Huntsville, AL	23.042	4.729	Feb 2012	5.500		-		-		-	0.000	33.271	0.000
Systems Engineering	Various	AMRDEC:Huntsville, AL	30.667	3.200	Dec 2011	3.600		-		-		-	0.000	37.467	0.000
U.S. Contracts	Various	Various:Huntsville, AL	61.947	5.200	Feb 2012	5.715		-		-		-	0.000	72.862	0.000
Subtotal			1,969.783	374.008		390.361		0.000		0.000		0.000	0.000	2,734.152	0.000

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		All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		2,011.774	377.610		400.861		0.000		0.000		0.000	0.000	2,790.245	0.000
Remarks														