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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Missile Defense Agency **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604880C: <i>LAND-BASED SM-3</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	281.378	306.595	-	306.595	149.320	60.628	41.417	154.842	Continuing	Continuing
MD68: <i>AEGIS Ashore</i>	-	281.378	295.511	-	295.511	143.066	57.908	39.647	148.242	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	-	-	11.084	-	11.084	6.254	2.720	1.770	6.600	Continuing	Continuing

Note

In accordance with the Missile Defense Agency's revised budget structure, content previously planned in PE 0603911C BMD European Capability for FY 2010 and is now captured in PE 0604880C, Land Based SM-3, project MD68, in FY 2011.

A. Mission Description and Budget Item Justification

The Phased Adaptive Approach (PAA) was developed in response to the increased development and proliferation of short and medium range ballistic missiles in Iran and around the world. The initial capability still addresses the threat posed to U.S. Allies and partners, as well as to U.S. deployed personnel and their accompanying families in the Middle East and in Europe. By leveraging recent advances in sensor and missile technologies, the United States will aggressively counter this growing regional threat with a more flexible and agile systems approach. Starting in Europe, the United States is pursuing a four phased approach which will provide a more effective missile defense capability for defense of NATO territories and enhance U.S. homeland defense. It will be complementary of and interoperable with those being developed by NATO, be applicable in other theaters around the world, and will be more adaptable and flexible to counter threat advances and provide increased defended areas over time. The initial phase includes the deployment of current and proven missile defense, including the sea-based Aegis Weapons System, the SM-3 missile (Block IA and IB), and sensors such as the forward-based Army Navy/Transportable Radar Surveillance Model 2 (AN/TPY-2). Subsequent phases will be implemented based on technical maturity, appropriate testing, and threat driven requirements. Aegis Ashore will be included in PAA Phase II and will provide proven Aegis Missile Defense capability against short and medium range ballistic missiles in an ashore configuration. It will be identical to Aegis At-Sea capability to facilitate training and logistical support by Navy. It also provides sophisticated engagement strategies including use of additional off board sensors like Airborne Infrared Radar (ABIR) and Space Tracking and Surveillance System (STSS). Test to demonstrate the use of off board sensor information executed in the at sea portion of the program and reduce vulnerability to countermeasures, forcing an enemy to alter or abandon tactics to penetrate the defensive system.

Aegis Ashore can adapt to the threat and be deployed/redeployed to areas needed to provide persistent coverage for the Geographic Combatant Commander. Aegis Ashore will build a test complex at the Pacific Missile Range Facility (PMRF) on Kauai, Hawaii in 2012/2013. The test complex is critical to the development of the Aegis Ashore capability and will be essential for verifying requirements and validating design capability prior to deployment.

MDA approved the acquisition strategy in FY 2010.

FY12 budget request recognizes that historical execution rates will result in FY11 funds available for support in FY12. The accomplishments reflect the use of the FY11 funding in addition to the FY12 request.

UNCLASSIFIED

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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	281.378	345.937	-	345.937
Current President's Budget	-	281.378	306.595	-	306.595
Total Adjustments	-	-	-39.342	-	-39.342
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment Detail	-	-	-39.342	-	-39.342

Change Summary Explanation

The FY 2012 \$39.342 million dollar decrease in this program element is the result of MDA programmatic changes and \$1.040 million in efficiency savings.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604880C: <i>LAND-BASED SM-3</i>	PROJECT MD68: <i>AEGIS Ashore</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD68: <i>AEGIS Ashore</i>	-	281.378	295.511	-	295.511	143.066	57.908	39.647	148.242	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

In 2012/2013, the Aegis Ashore program office will install the Aegis Ashore Missile Defense Test Complex (AAMDTC) at Pacific Missile Range Facility (PMRF) on Kauai, Hawaii to provide proof of concept, system verification and validation of the first shore-based operation, support deployment decisions and upgrades of future incremental capabilities. The AAMDS will use Advanced Capability Build (ACB) 12/Aegis BMD 5.0 and SM-3 Block IB being developed by the USN and MDA to be certified in 2013 and will provide the critical feedback required for refinement of the shore-based system architecture such that Initial Operational Capability (IOC) is achieved by 2015 in accordance with the MDA schedule for Aegis Ashore, and in accordance with Capability Delivery (CD)-06. This site will be able to be modified to support future computer program and missile variants.

Aegis Ashore will leverage the proven Aegis BMD capability and deploy a second system at the Host Nation 1 site, Romania, in 2015. Host Nation 1 will employ ACB 12/Aegis BMD 5.0 and SM-3 Block 1B and will be upgraded to ACB16/Aegis BMD 5.1, SM-3 Block 1B and SM-3 Block IIA when Host Nation 2 (Poland) comes on line in 2018. This will provide an Aegis Ashore exoatmospheric defense against short to medium and some intermediate range ballistic missile threats in the later stages of flight.

If threat dictates, additional systems could be procured and deployed globally to support Geographic Combatant Commanders.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012
Title: AWS Development	-	253.039	260.789
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments:			
This task provides funding for the development of an Aegis Ashore capability using an SM-3 variant missile.			
<ul style="list-style-type: none"> -Conducted and completed Deckhouse concept studies -Conducted security assessment for an Aegis Ashore option -Conducted System Safety design trade studies -Awarded Aegis Ashore Engineering Agent (AAEA) letter contract -Procured long lead material 			
Funding for these FY 2010 accomplishments are in prior year budget project WX09 in PE 060392C. (\$45,915)			
FY 2011 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency		DATE: February 2011					
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2010	FY 2011	FY 2012	
<ul style="list-style-type: none"> -Completed System Requirements Review -Complete AAMDS Design -Award Deckhouse Fabrication Contract -Conduct System Design Review -Conduct Preliminary Design Review -Procure long lead material for PMRF/removable enclosures/deckhouse -Conduct development trades to support deployment decisions -Start construction at PMRF -Start construction in New Jersey -Conduct Critical Design Review -Start Integration and Test in New Jersey -Procure Spares -Modification of test missiles to meet PMRF testing requirements <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> -Finish Integration and Test in New Jersey -Deliver Multi-Mission Signal Processor (MMSP) #1 -Deliver equipment to Pacific Missile Range Facility (PMRF) -Procure long lead material for Host Nation (HN) 1 -Conduct Aegis Light-Off of completely integrated system -Ship Deckhouse and Aegis Weapon System components to Hawaii 							
<p>Title: Global Deployment Operations</p> <p>Description: See Description Below</p> <p>FY 2010 Accomplishments: N/A</p> <p>FY 2011 Plans: This effort provides operations support across all MDA Global Deployments. It provides for civilian salaries and travel. In addition, it provides other technical and business operations support services, technical oversight, and performance analysis provided by Federally Funded Research and Development Centers (FFRDCs) and Advisory & Assistance Services.</p> <p>FY 2012 Plans:</p>				Articles:	-	18.898	23.299
				0	0	0	

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604880C: <i>LAND-BASED SM-3</i>	PROJECT MD68: <i>AEGIS Ashore</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
This effort will continue to provide operations support as described for FY 2011. FFRDC analysis will ramp up to support integration, testing, and check-out for the Hawaii site.			
Title: Site Activation	-	9.441	11.423
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: N/A			
FY 2011 Plans: -Continue feasibility assessments in support of site selection Aegis Ashore. -Begin Site Activation for Aegis Ashore Missile Defense Test Complex at PMRF.			
FY 2012 Plans: -Continue Site Activation for Aegis Ashore site.			
Accomplishments/Planned Programs Subtotals	-	281.378	295.511

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	544.352	454.859	222.374		222.374	357.271	336.514	318.321	348.944	Continuing	Continuing
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	355.870	402.769	373.563		373.563	331.203	314.193	336.749	346.560	Continuing	Continuing
• 0603896C: <i>BMD C2BMC</i>	327.074	342.625	364.103		364.103	330.337	353.081	338.835	304.217	Continuing	Continuing

D. Acquisition Strategy

Aegis Ashore awarded a contract for an Aegis Ashore Engineering Agent (AAEA). Broadly stated, the AAEA is responsible for the design, development, integration and test of the Aegis Weapons System capability into a removable deckhouse. Furthermore, the AAEA will support deployment to PMRF and host Nations. Aegis Ashore intends to utilize existing Navy hardware procurement contracts to the maximum extent possible. Competition will be used for procurement of any products or services by FY 2015. Aegis Ashore will award one contract using both RDT&E and MILCON appropriations for the fabrication and installation of the AA Deckhouse, Launch Facility, and Deckhouse Support Facility. This will be a competitive award.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Missile Defense Agency **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0604880C: <i>LAND-BASED SM-3</i>	MD68: <i>AEGIS Ashore</i>

Competition is the intended Acquisition Strategy for Phase III and IV.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Missile Defense Agency **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0604880C: <i>LAND-BASED SM-3</i>	PROJECT MD68: <i>AEGIS Ashore</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AWS Development AWS Development MD68	SS/CPAF	Lockheed Martin:Moorestown, NJ	28.942	199.432	Jan 2011	198.313	Jan 2012	-		198.313	Continuing	Continuing	Continuing
AWS Development AWS Development - 200912143066533 MD68	MIPR	JHU/APL:Columbia, MD	3.500	3.600	Nov 2010	4.291	Nov 2011	-		4.291	Continuing	Continuing	Continuing
AWS Development AWS Development - 200912143066536 MD68	MIPR	NSWC PHD:Port Huneme, CA	2.500	2.500	Nov 2010	3.208	Nov 2011	-		3.208	Continuing	Continuing	Continuing
AWS Development AWS Development - 200912143066541 MD68	MIPR	NSWC Dahlgren:Dahlgren, VA	7.000	8.007	Nov 2010	12.310	Nov 2011	-		12.310	Continuing	Continuing	Continuing
AWS Development VLS Development - 200912143066545 MD68	MIPR	LM/BAE:Baltimore	-	5.100	Dec 2010	11.592	Dec 2011	-		11.592	Continuing	Continuing	Continuing
AWS Development AWS Development - 200912143066552 MD68	MIPR	Various:VA, MD, CA, NJ, AV, HI	-	1.000	Dec 2010	22.715	Dec 2011	-		22.715	Continuing	Continuing	Continuing
AWS Development Flight Safety Support MD68	SS/CPAF	Raytheon:Tuscon, AZ	3.000	5.800	Dec 2010	8.360	Dec 2011	-		8.360	Continuing	Continuing	Continuing
AWS Development C4I (SW, T&E, Spares, SEPM, ILS) MD68	MIPR	SPAWAR:San Diego, CA	-	6.100	Dec 2010	-		-		-	Continuing	Continuing	Continuing
AWS Development Deckhouse Development MD68	SS/CPAF	Various:VA, MD CA, NJ	4.000	21.500	May 2011	-		-		-	Continuing	Continuing	Continuing
Global Deployment Operations Global Deployment Operations MD68	C/CPIF	Various:Various	-	18.898	Oct 2010	23.299	Oct 2011	-		23.299	Continuing	Continuing	Continuing
Site Activation Site Activation MD68	C/CPIF	Various:Various	-	9.441	Oct 2010	11.423	Nov 2011	-		11.423	Continuing	Continuing	Continuing
Subtotal			48.942	281.378		295.511		-		295.511			

Remarks
FY12 increase attributable to Non-Tactical Hardware and Technical Design Agent requirements.

UNCLASSIFIED

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Missile Defense Agency		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Missile Defense Agency		DATE: February 2011
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Aegis Ashore System Requirements Review	1	2011	1	2011
Aegis Ashore System Design Review	2	2011	2	2011
Aegis Ashore Preliminary Design Review	3	2011	3	2011
Aegis Ashore Critical Design Review	4	2011	4	2011
AA Controlled Test Vehicle-01 (CTV-01)	4	2013	4	2013
AA Flight Test Mission-01 (FTM-01)	3	2014	3	2014
AA Flight Test Operational - 02 (FTO-02)	4	2015	4	2015

UNCLASSIFIED

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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
MD40: <i>Program-Wide Support</i>	-	-	11.084	-	11.084	6.254	2.720	1.770	6.600	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0		0	0	0	0	0		

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of MDA functions and activities across the entire Ballistic Missile Defense System (BMDS). Includes Government Civilians, Advisory and Assistance Services, and Federally Funded Research and Development Contracts (FFRDC) providing integrity and oversight of the BMDS as well as supporting MDA in enabling the development and evaluation of technologies that will respond to the changing threat. Other costs included provide facility capabilities for MDA Executing Agent locations (with the exception of Federal Office Building 2 after FY 2011), such as physical and technical security, legal services, travel and agency training, office and equipment leases, rents and utilities, data and unified communications support, supplies and maintenance, and similar operating expenses. Also includes legal settlements, and foreign currency fluctuations on a limited number of foreign contracts. In keeping with congressional intent, PWS is allocated among the PEs on a pro-rata basis and therefore fluctuates by year based on the total MDA budget and the individual PE's budget amount.

The budget project did not exist in program wide support in FY2010.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2010	FY 2011	FY 2012
Title: Civilian Salaries and Support	-	-	11.084
Articles:	0	0	0
Description: See Description Below			
FY 2010 Accomplishments: The budget project did not exist in program wide support in FY2010.			
FY 2011 Plans: See paragraph A, Mission Description and Budget Item Justification			
FY 2012 Plans: See paragraph A, Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	-	-	11.084

UNCLASSIFIED

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

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

NA