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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603892C / <i>AEGIS BMD</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	4,284.432	958.506	909.928	929.208	-	929.208	955.825	911.095	866.678	721.426	Continuing	Continuing
MD09: <i>Aegis BMD</i>	4,239.808	731.847	699.005	756.773	-	756.773	800.557	713.240	630.456	488.962	Continuing	Continuing
MC09: <i>Cyber Operations</i>	-	-	0.260	0.265	-	0.265	0.269	0.273	0.279	0.279	Continuing	Continuing
MT09: <i>Aegis BMD Test</i>	-	166.697	137.352	89.628	-	89.628	50.934	86.295	117.652	120.869	Continuing	Continuing
MX09: <i>Aegis BMD Development Support</i>	4.427	12.094	23.960	28.758	-	28.758	47.911	54.187	59.736	59.797	Continuing	Continuing
MD40: <i>Program-Wide Support</i>	40.197	47.868	49.351	53.784	-	53.784	56.154	57.100	58.555	51.519	Continuing	Continuing

MDAP/MAIS Code: 362

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

Note
N/A

A. Mission Description and Budget Item Justification

The Aegis Ballistic Missile Defense (Aegis BMD) mission is to deliver an enduring, operationally effective and supportable Ballistic Missile Defense capability to defend the nation, deployed forces, friends and allies, and to increase this capability by delivering evolutionary improvements as part of Ballistic Missile Defense System (BMDS) upgrades. The Aegis BMD element of the BMDS capitalizes upon and evolves from the existing U.S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short-Range Ballistic Missiles (SRBM), Medium-Range Ballistic Missiles (MRBM), and Intermediate-Range Ballistic Missiles (IRBM) in the midcourse phase of flight, and shorter range missiles in terminal phase. Aegis BMD also provides a Long Range Surveillance and Track (LRS&T) capability to the BMDS. Upgrades to both the Aegis BMD Weapon System and the Standard Missile-3 (SM-3) configuration enable Aegis BMD to provide effective, supportable defensive capability against longer range, more sophisticated threats and an enduring Aegis Ashore defensive capability.

Aegis BMD provides/will provide several capabilities in support of the objective to defend allies and deployed forces from intermediate threats:

Aegis BMD 4.0:
-Aegis BMD 4.0 and the SM-3 Block IB missile improve Aegis BMD's ability to engage longer range, more sophisticated ballistic missiles that may deploy countermeasures and are launched in larger raid sizes. Aegis Ballistic Missile Defense (BMD) sensor improvements include the AN/SPY-1 radar's signal processor and the Standard Missile-3 (SM-3) Block IB Kinetic Warhead's (KW) two-color infra-red (IR) seeker. The Aegis BMD Signal Processor provides a real-time discrimination and characterization capability. The two-color seeker with an Advanced Signal Processor improves sensitivity for longer range targets, high speed processing for multiple targets and improved performance against more sophisticated threats. Besides the two-color IR seeker, the SM-3 Block IB KW divert engine system has been upgraded

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<p>over the SM-3 Block IA. The new divert engine, the Throttleable Divert and Attitude Control System (TDACS), provides more flexible divert to maneuver the KW to intercept.</p> <p>Deploying FY 2014: -Aegis BMD 5.0 - Integrates Aegis BMD 4.0 capability into the Navy-developed Open Architecture (OA) computing environment. This change is necessary for Aegis BMD to remain compatible with Navy as ship modernization plans are executed. Improves human-systems interface through display enhancements; eliminates the need for a separate computing system specific to the BMD mission; enables more ships to serve in the BMD mission; supports the BMDS Integrated Build D; and provides the basis for Aegis Ashore.</p> <p>Deploying in the Future: -Aegis BMD 4.1 - Brings Aegis 5.0 Capability Upgrade (CU) EXO and ENDO capability back to the Aegis 4.0 computing architecture in FY2016 -Aegis BMD 5.0. Capability upgrade (CU) - Enhances Aegis BMD 5.0 by restoring the terminal defense layer, increasing raid size and expanding the threat set by FY 2015. -Aegis BMD computer program baseline and missile system modifications necessary to place Aegis BMD capability on land (Aegis Ashore) will take place by FY 2014. -SM-3 Block IIA - Aegis BMD and the Japan Ministry of Defense (JMOD) have undertaken an SM-3 Cooperative Development (SCD) program, which consists of a spiral upgrade to a 21-inch diameter SM-3 missile (SM-3 Block IIA). Missile development will be covered under the SCD project prior to the SM-3 Block IIA incorporation into the Aegis BMD 5.1 upgrade to the Aegis BMD system. The design will be completed by FY 2018; Initial Production by FY 2018; and production by FY 2020. -Aegis BMD 5.1- Integrates the SM-3 Block IIA missile and future missiles. It will provide an improved terminal defense capability in an Open Architecture (OA) environment. The SM-3 Block IIA missile will expand available battlespace and include Intermediate Range Ballistic Missile (IRBM) and selected longer-range threats, and when combined with additional weapon system modifications, will enable an Engage-on-Remote (EoR) capability. SM-3 Block IIA and Aegis BMD 5.1 will further extend Aegis BMDs range capability by capitalizing on globally-deployed BMDS sensor assets. The certification and deployment will take place by FY 2018.</p> <p>BMD Systems Engineering: Missile Defense Agency (MDA) Systems Engineering integrates element development and Integrated Master Test Plan (IMTP) work to optimize the capability of the BMDS. Modeling and simulation (M&S) activities support all phases of Aegis BMD's development, including development of Aegis Weapon System (AWS) and SM-3 variants, flight test missions, ground tests, war games, exercises, and performance assessment. Models and simulations are tailored to the specific need of a component in its current phase of development, ranging from low-to-medium fidelity analysis supporting concept definition studies, to high-fidelity models used to support engineering development, or testing and are integrated into the BMD Digital Simulations Architecture.</p> <p>Proving Missile Defense: Working with the Services' Operational Test Agencies (OTA), with the support of the Director of Operational Test and Evaluation (DOT&E), Missile Defense Agency (MDA) has developed a test program to improve confidence in missile defense capabilities under development and ensure the capabilities transferred to the war fighter are operationally effective, and suitable.</p>		

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD
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As part of the Agency's rigorous test program, System Pre-Flight predictions provide confidence in test execution by predicting element performance and exercising element interfaces. System Post Flight Reconstruction replicates the Ballistic Missile Defense System (BMDS) configuration and actual environmental conditions and target dynamics observed in flight to anchor modeling and simulation results. Testing includes SM-3 intercept using Space Tracking and Surveillance System (STSS) as a remote sensor.

The Integrated Master Test Plan (IMTP) is event-oriented and extends until the collection of all identified data is completed to ensure adequate data is collected to support Verification, Validation, and Accreditation (VV&A) for Missile Defense Modeling and Simulation (M&S).

MD40 Program-Wide Support (PWS) consists of essential non-headquarters management costs in support of the MDA functions and activities across the entire Ballistic Missile Defense System (BMDS).

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	992.407	937.056	987.729	-	987.729
Current President's Budget	958.506	909.928	929.208	-	929.208
Total Adjustments	-33.901	-27.128	-58.521	-	-58.521
• Congressional General Reductions	-1.946	-0.128			
• Congressional Directed Reductions	-	-27.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	56.076	-			
• SBIR/STTR Transfer	-11.847	-			
• Other Adjustment	-76.184	-	-58.521	-	-58.521

Change Summary Explanation

FY 2015 decrease of \$58.5M due to the following:

- \$36.0M was transferred from MD09 to PE 0604881C to provide support in order to increase schedule and performance of the Block IIA development.
- \$22.5M was a decrease in MT09 Aegis Ballistic Missile Defense (BMD) testing due to schedule changes within the Integrated Master Test Plan (IMTP).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD				Project (Number/Name) MD09 / Aegis BMD			
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
MD09: Aegis BMD	4,239.808	731.847	699.005	756.773	-	756.773	800.557	713.240	630.456	488.962	Continuing	Continuing
Quantity of RDT&E Articles	4.000	4.000	1.000	-	-	-	-	-	-	-		

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

Note

N/A

A. Mission Description and Budget Item Justification

Aegis Ballistic Missile Defense (BMD) continues development of a sea-based BMD capability in project MD09, in support of the Missile Defense Agency's mission to protect the homeland, deployed forces, friends and allies from ballistic missile threats of all ranges and in all stages of flight. Aegis BMD efforts will primarily fall into two categories of BMD initiatives:

Enhance Missile Defense to Defend Deployed Forces, Allies and Friends Against Theater Threats:

- By FY 2014 Aegis BMD 4.0 will improve radar tracking accuracy and Radio Frequency (RF) discrimination and increased raid capacity using Aegis BMD Signal Processor (BSP).
- SM-3 Block IB improved kinetic warhead by FY 2014.
- Aegis BMD 5.0 integrates BMD capability into the Navy's Aegis Modernization Program by FY 2015.
- Aegis BMD 5.0 Capability Upgrade (CU) expands threat set and further increased the raid size, adds improved terminal defense capability by FY 2015.
- Aegis BMD 4.1 backfits Aegis 5.0CU capability (ENDO and EXO) into the BMD 4.0 architecture by FY 2016.
- By FY 2018 the Aegis BMD 5.1 implementation of Standard Missile-3 (SM-3) Block IIA tactical capability will take place.
- BMD shipset installations aboard US Navy Cruisers and Destroyers are an ongoing effort.
- By FY 2014 the adaptation of Aegis BMD for use on land (Aegis Ashore) will take place.

Prove Missile Defense Works:

- Aegis BMD element-level testing.
- Participation in BMD System ground tests.
- Element Modeling & Simulation.

Aegis Ballistic Missile Defense (BMD) 3.6 provides midcourse defense against Short Range Ballistic missile (SRBM), Medium Range Ballistic Missile (MRBM) and Intermediate Range Ballistic Missile (IRBMs) using the Standard Missile (SM-3) Block IA and terminal defense against SRBM with SM-2 Block IV Missile. This configuration is deployed today supporting Combatant Commanders (COCOM) needs. It is a key element of U.S. regional missile defenses for the defense of deployed forces, allies, and partners in Europe, the Asia-Pacific, and the Middle East. Planned efforts include increasing the number of ships to 24 and continued integration with other elements of the Ballistic Missile Defense System (BMDS.)

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Aegis BMD 4.0 and SM-3 Blk IB address more sophisticated and evolving threats. The ship receives a new signal processor that increases radar resolution to provide more accurate and discriminated track information and triples the possible number of simultaneous ballistic missile engagements over Aegis BMD 3.6. The SM-3 receives a new kinetic warhead that includes a 2 color seeker, throttleable engine and upgraded signal processor.

Other capability enhancements include functionality to support BMDS integrated Builds C and D:

- Improvements in BMDS Command and Command and Control, Battle Management and Communications (C2BMC) to ensure future BMDS remote sensor enhancements and the resulting discrimination capabilities are able to be communicated, correlated, and acted upon. Improved engagement coordination capability with Terminal High Altitude Area Defense (THAAD) and Patriot to conserve upper tier missiles, including Patriot upper tier debris mitigation.

- Analysis for planned upgrades to the SM-3 missile to expand battlespace and improve discrimination, divert, and probability of mission success.

- Supports BMDS Integrated Build C functionality: In Aegis BMD, this functionality includes deliberate and crisis Ballistic Missile Defense planning, Warfighter situational awareness, and the initial capability to control Regional BMD engagement between local assets and near-term improvements to threat discrimination.

- Supports Integrated BMDS Build D functionality: In Aegis BMD, this functionality includes the Aegis BMD System (4.0 and Standard Missile (SM-3 Block IB)) that provides significant improvements to both Radio Frequency (RF) and Infrared (IR) discrimination allowing for engagement of complex threats. Additional improvements to Aegis increase its ability to launch SM-3 interceptors on BMD System remote sensor data and improve Aegis coordination with the THAAD and Patriot weapon systems.

- Approved additions to integrated Build D support initial Aegis BMD Ashore with control of engagement debris and refinements to BMD engagement coordination.

Aegis BMD 5.0 will integrate Aegis BMD 4.0 capability into the Navy-developed Open Architecture (OA) computing environment. This change is necessary for Aegis BMD to remain compatible with Navy as Navy ship modernization plans are executed. This change will improve human-systems interface through display enhancements and eliminate the need for a separate computing system specific to the BMD mission. This will also enable more ships to serve as candidates for the BMD mission. Aegis BMD 5.0 will support the BMDS Integrated Build D and provide the basis for Aegis Ashore.

Aegis BMD 5.0 Capability Upgrade (CU) will enhance Aegis BMD 5.0 by implementing Sea-Based Terminal Increment I ENDO engagement capabilities and integration of modified SM-2 BLK IV and modified SM-6, increasing the maximum number of SM-3's inflight simultaneously and expanding the threat set to include those for Phased Adaptive Approach (PAA) Phase II for defense of Europe and support of deployed forces, friends and allies and to increase this capability by delivering evolutionary improvements as part of (BMDS) upgrades.

Aegis BMD 4.1 builds upon Aegis BMD 4.0 and adds Aegis BMD 5.0CU capability providing EPAA Phase II Exo threat capability increase, SM-3 MAX MIF (Maximum number Missiles In Flight) improvements, Sea-Based Terminal Increment I ENDO engagement capabilities and integration of modified SM-2 BLK IV and modified SM-6 along with multi-mission (AntiAir Warfare (AAW) and BMD) warfare integration and signal processor, and MK 41 Vertical Launch System (VLS) and Mission Planner capabilities

Aegis Ballistic Missile Defense (BMD) 5.1 will integrate the Standard Missile-3 (SM-3) Block IIA missile and provide improved terminal defense capability. It will also incorporate the following Weapon System improvements:

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- An Aegis BMD module in Navy's Open Architecture computer program.
- Defeat a wide variety of ballistic missiles: Short Range Ballistic Missile (SRBMs), Medium Range Ballistic Missile (MRBMs), and Intermediate Range Ballistic Missile (IRBMs).
- Increased battlespace with the SM-3 Block IIA.
- Engage on Remote (EoR) engagements allows use active and passive off board sensor information to launch and guide the SM-3 to final intercept. EoR engagements will use more of the SM-3's kinematic envelope expanding battlespace, will increase the theoretical number of threats engaged over previous baselines both matching communications upgrades and make the overall architecture more resilient to adversary attempts to penetrate the Ballistic Missile Defense System (BMDS.)
- Enhanced conventional discrimination.
- Increased BMDS interoperability.
- Enhanced Sea-Based Terminal capability.

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

	FY 2013	FY 2014	FY 2015
<p>Title: Aegis Ballistic Missile Defense (BMD) 4.X Development</p> <p style="text-align: right;">Articles:</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Updated 4.0 Computer Program Based upon flight test results. - Prepared for and conducted BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. - Continued Command and Control Processor (C2P)/Common Data Link Monitoring System (CDLMS) V3.7 installations. - Continued deployment of Global Command and Control System Maritime (GCCS-M) on BMD platforms. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Prepare for and conduct Ballistic Missile Defense System (BMDS) Flight and Ground Test events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule. - Update 4.0 Computer Program based on testing and warfighter feedback. - Conduct Threat Adaptation Data update. <p>FY 2015 Plans:</p> <p>Prepare for and conduct Ballistic Missile Defense System (BMDS) Flight and Ground Test events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule</p> <ul style="list-style-type: none"> - Continue development of BMD 4.1 (backfit of BMD 5.0CU capability into the BMD 4.0 architecture) - Conduct an Engineering Evaluation of BMD 4.1 - Conduct a Test Readiness Review of BMD 4.1 	53.420	106.550	92.481
<p style="text-align: right;">Articles:</p>	-	-	-

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Decrease to funding levels from FY 2014 to FY 2015 due to Aegis BMD 4.0 continuing toward the end of the development stage and transitioning to fielding.				
<p>Title: Aegis Ballistic Missile Defense (BMD) 5.0 Development</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Conducted testing to verify full functionality of BMD Components. - Completed BMD 5.0 Prime Item Description Specs (PIDS)/Critical Items Description Specs (CIDS) testing. - Completed BMD 5.0 System Level Specification Verification. - Prepared and conducted BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. - Developed Capability Upgrade (CU) to BMD 5.0 - Conducted MRA's <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Conduct a Mission Readiness Assessment (MRA). - Conduct BMDS Flight and Ground Test events as reflected in the IMTP and the R-4 Exhibit. <p>FY 2014 decrease is due to Removal of Baseline 4 Cruiser`s, consolidation of 5.0/5.0 Capability Upgrade (CU) into one baseline, and current phase of program development.</p> <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> -Conduct Aegis Intercept Flight Test as reflected in the IMTP and the Exhibit R-4 schedule -Conduct a Mission Readiness Assessment (MRA) -Conduct an Engineering Assessment (EA) -Conduct Aegis Ashore Intercept Flight Test with Aegis BMD 5.0CU -Conduct Aegis Intercept Flight Test demonstrating Sea Based Terminal (SBT) -Continue development of BMD 4.1 (backfit of BMD 5.0CU capability into the BMD 4.0 architecture) <p>Decrease in funding levels from FY2014 to Fy2015 due to Aegis BMD 5.0 nearing the end of the development stage and transitioning to fielding, and the current phase of program development.</p>		<p>Articles:</p> <p>234.085</p> <p>-</p>	<p>153.777</p> <p>-</p>	<p>114.537</p> <p>-</p>
<p>Title: Aegis Ballistic Missile Defense (BMD) 5.1 Development</p> <p>Description: See Description below.</p>		<p>144.616</p> <p>-</p>	<p>212.253</p> <p>-</p>	<p>299.164</p> <p>-</p>

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p><i>FY 2013 Accomplishments:</i></p> <ul style="list-style-type: none"> - Continued systems engineering and analysis to complete the Aegis BMD 5.1 A-Spec. - Completed preparation for and execute BMD 5.1 System Design Review (SDR) #2 complete SDR #2 data package and conduct Navy Review Team (NRT) review. - Initiated systems engineering and analysis to develop the Aegis BMD 5.1 B1, B2, and B5-Specs - Initiated preparation for the BMD 5.1 PDR. - Continued analysis and systems engineering for development of Aegis BMD 5.1 EoR, and BMDS integration. - Completed system-level performance analysis in preparation for the SCD CDR, using updated surrogate BMD 5.1 AWS data. - Completed analysis and design of AWS/VLS/Missile interfaces and specifications. - Completed Vertical launch system (VLS) systems engineering, analysis, and design activities in support of VLS Preliminary Design Review (PDR). - Prepared for and conducted VLS PDR. - Initiated VLS systems engineering, analysis, and design activities in support of VLS CDR. <p><i>FY 2014 Plans:</i></p> <ul style="list-style-type: none"> - Complete preparations for Preliminary Design Review (PDR) which will finalize the Baseline Prime Item Development Specifications (PIDS/B1) and Critical Item Development Specifications (CIDS/B2) requirements for the BMD 5.1 Capability to include Engage on Remote (EoR) and BMDS integration, and will finalize the Computer Program Requirements Specifications (CPRS/B5) needed to support the BMD 5.1 Standard Missile-3 Cooperative Development (SCD) configuration for the SCD Flight Tests. - Conduct BMD 5.1 Preliminary Design Review (PDR) complete PDR data package and conduct Navy Review Team (NRT) review. - Commence software development for the BMD 5.1 Standard Missile-3 Cooperative Development Program (SCD) configuration for the SCD Flight Tests. - Conduct preparations for Critical Design Review (CDR) which will finalize the Baseline B5-Spec requirements for the of Ballistic Missile Defense (BMD) 5.1 Capability to include EoR and BMDS integration.-Complete development of BMD 5.1 ECS and A-Spec requirements needed to adapt BMD 5.1 for the Aegis Ashore configuration. - Conduct development of BMD 5.1 B1/B2-Spec requirements needed to adapt BMD 5.1 for the Aegis Ashore configuration. - Prepare for and conduct Vertical Launch System Critical Design Review. <p>FY 2014 increase is due to initiating software development and test for Organic and Launch on Remote (LoR), and completing critical detailed design for Engage on Remote (EoR).</p> <p><i>FY 2015 Plans:</i></p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014		FY 2015
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<ul style="list-style-type: none"> - Continue software development for the BMD 5.1 Standard Missile-3 Cooperative Development Program (SCD) configuration for the SCD Flight Tests. - Complete preparations for Critical Design Review (CDR) which will finalize the Baseline B5-Spec requirements for the of Ballistic Missile Defense (BMD) 5.1 Capability to include EoR and BMDS integration. - Conduct BMD 5.1 Critical Design Review (CDR) complete CDR data package and conduct Navy Review Team (NRT) review. - Commence software development for the BMD 5.1 Tactical Computer Program for the full capability scope. - Complete development of BMD 5.1 ECS and A-Spec requirements needed to adapt BMD 5.1 for the Aegis Ashore configuration. - Conduct development of BMD 5.1 B1/B2-Spec requirements needed to adapt BMD 5.1 for the Aegis Ashore configuration. - Conduct BMD 5.1 VLS Formal Integration and Qualification Testing. <p>Increase in funding levels from FY2014 to FY2015 due to continuing software development to include BMD 5.1 Tactical Computer Program for the full capability scope. Increases also for BMDS Integration as well as development to adapt BMD 5.1 for the Aegis Ashore configuration.</p>				
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Title: Standard Missile-3 (SM-3) Block IB Development				
Articles:	139.117	45.449		69.876
	-	-		-

Description: See Description below.

FY 2013 Accomplishments:

- Continued production line rate increase from 2 to 4 per month.
- Prepared for and conducted BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule.
- Supported Production decisions for Lot #2 and beyond (4Q FY 2013).
- Conducted Aegis BMD Flight Test Mission including SM-3 intercept using Space Tracking and Surveillance System (STSS) as a remote sensor.

FY 2014 Plans:

- Complete IB Threat Update (IBTU) for 5.0 Capability Upgrade (5.0CU) and additional threats.
- Prepare for and conduct Ballistic Missile Defense System (BMDS) flight test as reflected in the Integrated Master Test Plan (IMTP) and the exhibit R-4 schedule.

The decrease from FY 2013 to FY 2014, is due to SM-3 Block IB nearing the end of the development phase and transitioning to fielding.

FY 2015 Plans:

- Complete IB Threat Update (IBTU) for 5.0 Capability Upgrade (5.0CU) and additional threats.

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Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD		Project (Number/Name) MD09 / Aegis BMD
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>- Prepare for and conduct Ballistic Missile Defense System (BMDS) flight test as reflected in the Integrated Master Test Plan (IMTP) and the exhibit R-4 schedule.</p> <p>- Increase in FY2015 due to development of common avionics architecture between SM-3 IB and SM-3 IIA to support Diminishing Manufacturing Sources and Material Shortages (DMSMS) management, and provide long term cost savings in preparation of Foreign Military Sales.</p>				
<p>Title: Fielding - Aegis Weapon System (AWS)</p> <p>Articles:</p>		96.348 4.000	108.400 1.000	7.800 -
<p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Installed one (1) BMD 3.6 shipset. - Procured one (1) BMD 4.0 shipset. - Installed two (2) BMD 4.0 shipsets. - Procured two (2) BMD 5.0 shipsets. - Installed one (1) BMD 5.0 shipset. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Install three (3) Ballistic Missile Defense (BMD) 4.0 shipsets. - Purchase one (1) BMD 5.1 shipset. - Install one (1) BMD 5.0 shipset. <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Install three (3) AMOD (Aegis Modernization program) BMD 5.0CU DDGs shipsets inline. - Update BMD 4.0 to 4.1 software for current ships. <p>Decrease from FY2014 to FY2015 is due to hardware and installations transitioning to procurement articles.</p>				
<p>Title: SM-3 Manufacturing</p> <p>Articles:</p>		-	-	85.801 -
<p>Description: This activity initiates purchase of SM-3 Block IIA missiles for the purposes of flight testing and delivery to the fleet as operational assets. This activity further initiates the purchase of SM-3 Block IB missiles for the purposes of operational flight testing.</p> <p>FY 2013 Accomplishments:</p>				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Delivered ten (10) SM-3 Blk-IB missiles. FY 2014 Plans: N/A FY 2015 Plans: - Begin long lead funding for seventeen (17) SM-3 Block IIA missiles.				
Title: Fleet Integration Description: See Description below. FY 2013 Accomplishments: - Provided In-service Engineering support to Aegis BMD: Weapon System and (VLS). - Provided leadership and engineering/technical support to conduct Aegis Combat Systems Assessments. - Responded to Fleet issues related to Aegis BMD installations, BMD operations and BMD events. - Provided reach back analytical support to COCOMs for real world operations. - Provided maintenance and update of Force on Force Modeling and Simulation. FY 2014 Plans: - Provide leadership and engineering/technical support to conduct Aegis BMD Combat Systems Readiness Assessment - Provide In-service Engineering support to Aegis Ballistic Missile Defense (ABMD) Weapon system and Vertical Launch System (VLS) - Identify and resolve BMD specific material issues with maintenance, engineering and operability. - Respond to BMD readiness issues with maintenance, engineering and operability. - Respond to BMD readiness issues related to Aegis BMD capability, introduction, and employment. - Provide Management and oversight of ABMD Sustainment program. The FY 2013 to FY 2014 increase is due to an increase in the number of operational SM-3s and BMD capable Ships. FY 2015 Plans: - Provide In-service Engineering support to Aegis BMD - Provide leadership and engineering/technical support to conduct Aegis BMD Combat System Readiness - Respond to Fleet issues related to Aegis BMD installations, BMD operations and BMD events. - Provide reach back analytical support to the COCOMs for real world operations - Provide maintenance and update of Force on Force Modeling and Simulation		Articles: 4.627 -	5.931 -	6.463 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Provide BMD specific training to BMD ships, COCOM/Fleet Staffs; prepare/coordinate training documents for new BMD baselines.			
<p>Title: Modeling & Simulation HWIL Framework, Simulations, Models</p> <p align="right">Articles:</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Demonstrated the Single Stimulation Framework (SSF) has incorporated MDSE framework capabilities to support MDA exercises. - Provided SSF support to Post Flight Reconstruction activities. - Continued integration of the SSF with the digital models into the OSF. - Continued Optimistic Sensor Model (OSM), Extended Air Defense Simulation (EADSIM), and Missile Defense Space Warning Tool (MDST) integration with SSF. - Completed SSF Post Intercept Debris (PID) and Chuff Cloud Capability for interface with particular elements. - Provided for SSF sustainment, maintenance and product support. - Integrated the BMDS HWIL SSF with additional MDA and non-MDA Elements, as they are integrated into the BMDS architecture. - Began deployment and integration of BMDS HWIL SSF Objective Hardware for MDA Elements and a Releasable configuration for Allied and Coalition partners. - Continued installation of BMDS HWIL SSF software capability (funded by MDA/DESH) and necessary hardware/ maintenance (funded by MDA/DTR) to support a 2nd parallel test string (Ground Test assets only). - Demonstrated initial Open Architecture (OA) redesign capabilities. - Demonstrated improved Instantaneous Object Processing capabilities. - Continued OSF development producing a 1.0.1 baseline that is expected to provide GT-04 comparable capabilities. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Maintain Single Stimulation Framework (SSF) support to Post Flight Reconstruction activities. - Continue Optimistic Sensor Model (OSM) integration into SSF. - Continue deployment and integration of BMDS Hardware-in-the-loop (HWIL) SSF Objective Hardware for MDA Elements and a Releasable configuration for Allied and Coalition partners. - Continue integration of the SSF with the DSA into the Objective Simulation Framework (OSF). - Deliver the OSF Version 1.0 to begin the transition of HWIL capabilities. - Deliver improved debris and phenomenology modeling capabilities to support Aegis 4.0 and future baselines. 	34.616	39.444	40.076
	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Incorporate advanced Modeling and Simulation (M&S) capabilities into the next version of the OSF for Aegis Ballistic Missile Defense (BMD) for tracking, discrimination, engagement and associated upper tier mitigation for Phased Adaptive Approach (PAA) III. - Maintain BMDS HWIL SSF software capability and necessary hardware/ maintenance to support ground testing. - Continue SSF sustainment, maintenance and product support. <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Transition Single Stimulation Framework (SSF) support for Post Flight Reconstruction activities to Objective Simulation Framework (OSF). - Continue Optimistic Sensor Model (OSM) integration into OSF. - Complete integration of the SSF with the DSA into the Objective Simulation Framework (OSF). - Begin OSF sustainment, maintenance and product support for use in activities supporting MDA stakeholders and allies/coalition partners. - Deliver improved debris and phenomenology modeling capabilities to support Aegis future baselines. - Continue deployment and integration of BMDS Hardware-in-the-loop (HWIL) SSF and OSF Objective Hardware for MDA Elements and a Releasable configuration for Allied and Coalition partners. 				
<p>Title: Systems Engineering & Integration</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Continued support to the Combat Systems Engineering Development Site (CSEDS) for Aegis BMD system development. - Continued to produce all the threat data required to enable Ballistic Missile Defense System Ground Tests, Flight Tests, Ballistic Missile Defense System Performance Assessment, war games and exercises as documented in the BMDS Integrated Master Test Plan. - Continued to produce parametric threat space and scenario data for Element and Component design and assessment for Ballistic Missile Defense System in accordance to the Phased Adaptive Approach. - Continued to validate that Ballistic Missile Defense System test targets are threat representative. - Continued threat systems engineering work to support future systems design. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Continue support to the Combat Systems Engineering Development Site (CSEDS) for Aegis BMD system development. - Provide threat data required for BMDS Ground Tests, Flight Tests, Performance Assessment, war games and exercises as documented in the BMDS Integrated Master Test Plan. 		10.063	10.491	17.888
		Articles:	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Continue to produce parametric threat space and scenario data for Element and Component design and assessment for Ballistic Missile Defense System in accordance to the Phased Adaptive Approach. - Conduct system level performance analyses to support ongoing BMDS Architecture and Systems Engineering efforts. - Conduct extensive analysis of data collected in BMD test events to evaluate BMD operations and performance. <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Identify BMDS architecture alternatives that improve the system's performance and are complementary to and interoperable with NATO systems and theaters around the world. - Develop and refine Capability Planning specifications for future BMDS Elements/Components. - Develop functional performance, interface, and design suitability requirements in collaboration with BMDS element engineers to flow-down and allocate requirements to Programs. - Conduct system level performance analyses to support ongoing BMDS Architecture and Systems Engineering efforts. - Respond to Warfighter, COCOM and Other requests for analyses and requests for information; provide analytical support for real-world events. - Conduct non-advocate assessments of BMDS capabilities and limitations prior to capability delivery decisions to determine fielding readiness (including Defense of the Homeland, Defense of Israel and Theater/Regional BMD) - Conduct extensive analysis of data collected in BMD test events to evaluate BMD operations and performance. - FY 2015 increase is due to increased effort to identify and analyze future architecture alternatives for BMDS and Aegis BMD applications, and support assessment of capabilities to support Warfighter analyses and fielding decisions. 				
<p>Title: M&S Digital Framework, Simulation, Models</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Integrated, tested, functionally qualified, and delivered end-to-end BMDS simulations supporting various uses, including Real-time Digital Simulation (utilizing Missile Defense Space Warning Tool (MDST) and Element-provided medium-resolution models) to support Warfighter Exercises, Warfighter Training, Element spiral development, and Ground Test campaigns. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Incorporate advanced Modeling and Simulation (M&S) capabilities into the next version of the Objective Simulation Framework (OSF) for Aegis Ballistic Missile Defense (BMD) for tracking, discrimination, engagement and associated upper tier mitigation to satisfy Phased Adaptive Approach (PAA) Phase 2/3 needs in BMDS Performance Assessment test venues. - Begin the transition of real-time digital simulations to the OSF to support Warfighter Exercises, Warfighter Training, Element spiral development, and Ground Test campaigns. <p>FY 2015 Plans:</p>		<p>Articles:</p> <p>4.459</p> <p>-</p>	<p>4.983</p> <p>-</p>	<p>4.957</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Continue the transition of real-time digital simulation capability to the Objective Simulation Framework (OSF) to support Warfighter Exercises, Warfighter Training, Element spiral development, and Ground Test campaigns. - Integrate, test, functionally qualify, and deliver end to end BMDS simulations supporting various events (utilizing the OSF and Element-provided medium/high-resolution models) to support full-envelope BMDS Digital Performance Assessments. 				
<p>Title: BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations)</p> <p align="right">Articles:</p>		10.496	11.727	17.730
<p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Provided integrated VV&A of Missile Defense Agency (MDA) M&S at the system level for specific events, to include Technical Assessment, Performance Assessment, Ground Tests that support Ballistic Missile Defense System (BMDS) fielding decisions, and tier one Combatant Commanders (COCOM) exercises. - Developed integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for events as reflected in the Integrated Master Test Plan (IMTP). - Continued to demonstrate initial Open Architecture (OA) redesign capabilities and improved Instantaneous Object Processing capabilities. - Continued support to the Combat Systems Engineering Development Site (CSEDS) for Aegis BMD system development. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Provide integrated VV&A of Missile Defense Agency (MDA) M&S at the system level for specific events, to include Technical Assessment, Performance Assessment, Ground Tests that support Ballistic Missile Defense System (BMDS) fielding decisions, and tier one Combatant Commanders (COCOM) exercises. - Develop integrated Verification, Validation and Accreditation (VV&A) event Plans and Reports for events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule. - Conduct specified system post-flight reconstructions and pre-mission testing events so as to optimize the body of evidence and analysis supporting system-level Ballistic Missile Defense System (BMDS) accreditation perform all system-level VV&A associated with these events as reflected in the IMTP and the Exhibit R-4 schedule. - Conduct system-level verification and validation of threat trajectory and signature end-to-end environmental implementation is consistent and correct communications and architecture behave properly and interoperability is adequately addressed. <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Conduct verification and validation (V&V) in support of MDA BMD system level accreditation process in support of Ground Test and Performance Assessment events. - Develop integrated Verification, Validation and Accreditation (VV&A) and V&V event Plans and Reports for events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule. 		-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Conduct specified system post-flight reconstructions, element post-flight reconstructions, and pre-mission testing events so as to optimize the body of evidence and analysis supporting system-level Ballistic Missile Defense System (BMDS) accreditation. Perform all system-level V&V associated with these events as reflected in the IMTP and the Exhibit R-4 schedule.			
- Conduct system-level V&V of threat trajectory and signature end-to-end environmental implementation is consistent and correct communications and architecture behave properly and interoperability is adequately addressed.			
- FY 2015 increase is due to re-categorization of assessment efforts previously reported in budget project MT09.			
Accomplishments/Planned Programs Subtotals	731.847	699.005	756.773

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

Line Item	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
• 0604880C: Land Based SM-3 (LBSM3)	243.876	129.374	123.444	-	123.444	32.641	26.337	22.889	17.825	Continuing	Continuing
• 0604881C: AEGIS SM-3 Block IIA Co-Development	416.723	308.493	263.695	-	263.695	175.871	67.451	-	-	-	1,232.233

Remarks

D. Acquisition Strategy

The Aegis Ballistic Missile Defense (BMD) element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall Ballistic Missile Defense System (BMDS) capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the Standard Missile-3 (SM-3) missile and the Aegis BMD Weapon System, respectively.

The Modeling & Simulation (M&S) acquisition strategy utilizes full and open competition to develop, acquire and deliver the integrated architectures/frameworks, as well as develop and deliver models of AEGIS systems. The Digital and Hardware in the loop (HWIL) product centers integrate the suite of M&S into a composite simulation capability, all based on an open architecture. M&S achieves this end-state via close collaboration between its integrating contractor teams (Digital and HWIL) and those of the AEGIS BMD prime contractors, with additional technical standards and engineering oversight provided by Federally Funded Research and Development Centers and University Affiliated Research Centers.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
0400 / 4				PE 0603892C / AEGIS BMD					MD09 / Aegis BMD						
Product Development (\$ 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
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev MD09	MIPR	AEGIS TECHREP : Moorestown, NJ	0.000	0.324		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev MD09 - Crane	MIPR	NSWC Crane : Crane, IN	0.000	0.071		0.314		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev MD09 - PAC	MIPR	SPAWAR PAC : San Diego, CA	0.000	0.170		1.300		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev MD09 - SCSC	MIPR	Wallops Island : VA	0.000	0.751		0.200		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev.	MIPR	NAVSEA : VA	8.239	-		-		-		-		-	-	8.239	-
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - 201112203132279	MIPR	CORONA : CA	0.000	0.659		0.877	Oct 2013	1.398	Oct 2014	-		1.398	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09	MIPR	NSWC/DD : DAHLGREN, VA	63.180	11.948		5.710	Oct 2013	5.490	Oct 2014	-		5.490	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09 -	MIPR	MDA : VA	15.309	-		-		-		-		-	-	15.309	-
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD	MIPR	NSWC/PHD : PT. HUENEME, CA	11.848	1.224		0.522	Oct 2013	1.046	Oct 2014	-		1.046	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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				
4.0 Dev. - MD09 - 20117142293189																
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09 - 20117142293191	MIPR	JHU/APL/MD : COLUMBIA, MD	21.906	3.968		3.885	Oct 2013	4.144	Oct 2014	-		4.144	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09 - 20117142293195	SS/CPHF	LOCKHEED MARTIN : MOORESTOWN, NJ	662.743	19.078		24.556	Oct 2013	13.422	Oct 2014	-		13.422	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09 - 20117142293198	SS/CPAF	RAYTHEON/AZ : TUCSON, AZ	1.943	-		44.589	Oct 2013	-		-		-	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev. - MD09 Aegis	MIPR	AEGIS BMD : DAHLGREN, VA	71.221	-		-		-		-		-	-	71.221	-	
Aegis Ballistic Missile Defense (BMD) 4.X Development - C2BMC Program	MIPR	MDA : VA	0.000	6.150		-		-		-		-	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09	SS/CPHF	LOCKHEED MARTIN : MOORESTOWN, NJ	518.426	119.031		78.668	Oct 2013	75.156	Oct 2014	-		75.156	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 -	MIPR	MITRE : CECOM	0.665	1.164		1.169	Oct 2013	0.897	Oct 2014	-		0.897	Continuing	Continuing	Continuing	
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316263	MIPR	NSWC/DD : DAHLGREN, VA	45.945	18.182		17.612	Oct 2013	8.914	Oct 2014	-		8.914	Continuing	Continuing	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Product Development (\$ 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
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316266	MIPR	NSWC/PHD : PT. HUENEME, CA	2.786	1.299		1.315	Oct 2013	1.009	Oct 2014	-		1.009	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316267	MIPR	JHU/APL/MD : COLUMBIA, MD	27.343	7.010		15.681	Oct 2013	8.199	Oct 2014	-		8.199	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316272	C/CPAF	RAYTHEON/AZ : TUCSON, AZ	0.030	-		0.875	Oct 2013	0.672	Oct 2014	-		0.672	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316275	SS/CPAF	RAYTHEON/AZ : TUCSON, AZ	4.000	-		-		-		-		-	-	4.000	-
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316278	MIPR	AEGIS BMD : AZ, VA, CA	0.000	1.848		1.273	Oct 2013	0.977	Oct 2014	-		0.977	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142316278 - 2012628495024	MIPR	NSWC : CRANE	0.000	-		0.612	Oct 2013	0.470	Oct 2014	-		0.470	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - Aegis	MIPR	Aegis BMD : VA	44.594	-		1.075	Oct 2013	0.825	Oct 2014	-		0.825	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - Development Test	SS/CPIF	Lockheed Martin : Moorestown, NJ	0.000	21.169		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - LM	SS/CPIF	Lockheed Martin : Moorestown, NJ	0.000	24.600		-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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			
Aegis Ballistic Missile Defense (BMD) 5.1 Development - BMD 5.1 Development - MD09	MIPR	NSWC/CO : CA	0.000	3.737		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - BMD 5.1 Development - MD09 LM	MIPR	Lockheed Martin : MD	0.000	8.633		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - BMD 5.1 Development MD09	MIPR	Various : MA, MD, VA, NJ	0.000	2.022		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - C2BMC ADNS III	MIPR	Aegis BMD : VA	0.000	6.150		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09	MIPR	AEGIS BMD : AZ, VA, CA	54.407	-		2.465	Nov 2013	3.046	Nov 2014	-		3.046	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323679	MIPR	MDA : VA	22.088	-		2.864	Nov 2013	3.539	Nov 2014	-		3.539	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323680	MIPR	NSWC/DD : DAHLGREN, VA	30.519	4.683		8.143	Oct 2013	10.061	Oct 2014	-		10.061	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323684	MIPR	NSWC/PHD : PT HUENEME, CA	1.049	0.530		1.025	Nov 2013	1.266	Nov 2014	-		1.266	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323686	MIPR	JHU/APL/MD : COLUMBIA, MD	25.444	5.430		9.929	Oct 2013	12.267	Oct 2014	-		12.267	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Product Development (\$ 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
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323689	SS/CPAF	LOCKHEED MARTIN : MOORESTOWN, NJ	159.136	84.653		123.290	Oct 2013	223.003	Oct 2014	-		223.003	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142323691	SS/CPAF	RAYTHEON/AZ : TUCSON, AZ	0.210	-		4.326	Oct 2013	33.295	Oct 2014	-		33.295	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20126284501509	MIPR	SPAWAR : CA	2.629	4.200		4.956	Nov 2013	6.123	Nov 2014	-		6.123	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09	SS/CPAF	Raytheon : Tucson, AZ	879.144	95.372		20.690	Oct 2013	48.059	Oct 2014	-		48.059	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142332255	MIPR	NSWC/DD : Dahlgren, VA	32.800	2.969		1.795	Oct 2013	2.351	Oct 2014	-		2.351	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142332256	MIPR	JHU/APL/MD : Columbia, MD	35.638	8.593		5.628	Oct 2013	5.170	Oct 2014	-		5.170	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142332259	MIPR	NSWC/PHD : Port Huneme, CA	11.129	2.019		0.356	Oct 2013	1.880	Oct 2014	-		1.880	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142332261	MIPR	NSWC Carderock : MD	15.610	1.507		1.278	Oct 2013	0.940	Oct 2014	-		0.940	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - AFMETCAL	MIPR	AFMETCAL : Heath, OH	0.000	0.880		1.800		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - AFRL	MIPR	AFRL : Edward AFB, CA	0.000	0.273		1.200		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0603892C / AEGIS BMD				MD09 / Aegis BMD							
Product Development (\$ 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
Standard Missile-3 (SM-3) Block IB Development - MD09 - China Lake	MIPR	NAWC : China Lake, CA	0.000	1.568		1.300		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - Corona	MIPR	NSWC Corona : Corona, CA	0.000	0.579		-		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - Indian Head	MIPR	NSWC Indian Head : Indian Head, MD	0.000	0.806		0.778		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - NSA	MIPR	NSA : MD	0.000	0.180		-		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - Oak Ridge National Laboratory	MIPR	Oak Ridge National Laboratory : Oak Ridge, TN	0.000	0.017		-		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - SMC	MIPR	Space Missile Command : El Segundo, CA	0.000	0.161		0.096		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - USTRANSCOM	MIPR	USTRANSCOM : Scott Air Force Base Illinois	0.000	-		0.064		-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 Crane	MIPR	NSWC Crane : Crane, IN	0.000	0.548		0.647		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - MD09 - SWRMC	MIPR	SWRMC : San Diego, CA	0.000	-		8.000		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment	MIPR	MDA : Arlington Va	0.000	-		0.846	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and	MIPR	Norfolk Ship Support : Norfolk, VA	0.000	8.475		7.000		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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			
Deployment - Norfolk Ship Support															
Fielding - Aegis Weapon System (AWS) - Production and Deployment NSWCD	MIPR	NSWC CD : Philadelphia, PA	0.000	0.210		0.524		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - Aegis Tech	MIPR	AEGIS TECHREP : Moorestown, NJ	3.300	0.304		0.319	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - Crane	MIPR	NSWC Crane : Crane, IN	0.000	1.600		0.897		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - Dahlgren	MIPR	NSWC/DD : Dahlgren, VA	26.427	6.587		2.135	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - E CPFF	C/CPFF	Various : Dahlgren, VA	0.000	0.608		-		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - Ingalls	MIPR	Ingalls Planning Yard : Pascagoula, MS	0.000	0.101		0.189		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - LM	SS/CPIF	Lockheed Martin : Moorestown, NJ	178.389	52.438		62.020	Oct 2013	3.997	Oct 2014	-		3.997	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - NSWCD PHD	MIPR	NSWC/PHD : Port Hueneme, CA	30.171	12.733		10.557	Oct 2013	3.803	Oct 2014	-		3.803	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency												Date: March 2014			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)				Project (Number/Name)					
0400 / 4						PE 0603892C / AEGIS BMD				MD09 / Aegis BMD					
Product Development (\$ 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
Fielding - Aegis Weapon System (AWS) - Production and Deployment - PEO IWS	MIPR	PEO IWS : Washington Navy Yard, DC	35.100	1.592		6.547	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - Raytheon	C/CPAF	Raytheon : Washington, DC	12.187	0.792		3.031	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment - SupShip	MIPR	SUPSHIP : Bath. ME	0.000	5.700		3.700		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment NAVSEA	MIPR	NAVSEA : VA	109.548	4.926		2.000	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment SPAWAR CH	MIPR	SPAWAR CH : Charleston, SC	0.000	0.015		0.256		-		-		-	Continuing	Continuing	Continuing
Fielding - Aegis Weapon System (AWS) - Production and Deployment SPAWAR OAC	MIPR	SPAWAR PAC : San Diego, CA	0.000	0.267		0.379		-		-		-	Continuing	Continuing	Continuing
SM-3 Manufacturing - SM-3 BLK IB MANUFACTURING - MD09	SS/CPAF	Raytheon : Tucson, AZ	337.105	-		-		85.801	Oct 2014	-		85.801	-	422.906	-
Fleet Integration - 20098185191945	MIPR	NSWC/PHD : Port Hueneme, CA	16.615	0.423		1.663	Nov 2013	2.393	Nov 2014	-		2.393	Continuing	Continuing	Continuing
Fleet Integration - MD09	MIPR	SMDCA/ARSTRST : Huntsville, AL	8.623	0.119		0.144	Nov 2013	0.137	Nov 2014	-		0.137	Continuing	Continuing	Continuing
Fleet Integration - MD09 - 20117142371317	MIPR	CSCS : Dahlgren, VA	10.366	0.782		1.426	Nov 2013	1.360	Nov 2014	-		1.360	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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			
Fleet Integration - MD09 - 20117142371318	MIPR	JHU/APL/MD : Columbia, MD	5.181	1.236		0.987	Nov 2013	0.941	Nov 2014	-		0.941	Continuing	Continuing	Continuing
Fleet Integration - MD09 - 2011714237132	MIPR	NSWC/DD : Dahlgren, VA	13.766	2.067		1.600	Nov 2013	1.526	Nov 2014	-		1.526	Continuing	Continuing	Continuing
Fleet Integration - MD09 - 2012723031274	MIPR	MDA : VA	2.072	-		0.111	Nov 2013	0.106	Nov 2014	-		0.106	Continuing	Continuing	Continuing
Modeling & Simulation HWIL Framework, Simulations, Models - M&S HWIL Engineering - CSS Support	C/CPFF	Sparta : AL, CO	0.000	6.383		7.674	Nov 2013	7.973	Nov 2014	-		7.973	Continuing	Continuing	Continuing
Modeling & Simulation HWIL Framework, Simulations, Models - M&S HWIL Engineering - Engineering Support	C/CPAF	Northrop Grumman : CO	0.000	2.360		2.500	Nov 2013	2.500	Nov 2014	-		2.500	Continuing	Continuing	Continuing
Modeling & Simulation HWIL Framework, Simulations, Models - M&S HWIL Engineering - Integration	MIPR	AMRDEC : AL	0.000	1.935		2.570	Nov 2013	2.863	Nov 2014	-		2.863	Continuing	Continuing	Continuing
Modeling & Simulation HWIL Framework, Simulations, Models - M&S HWIL Engineering - Prime	C/CPFF	Teledyne Brown Engineering : AL, CO	0.000	23.938		26.700	Nov 2013	26.740	Nov 2014	-		26.740	Continuing	Continuing	Continuing
Modeling & Simulation HWIL Framework, Simulations, Models - Single Stimulation Framework & Objective Simulation Framework, Procure, Install, Test - MD09	C/CPAF	Boeing : AL	151.380	-		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering & Integration - CSS - MD09	C/CPFF	Cobham : CA	6.660	-		-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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			
Systems Engineering & Integration - Systems Engineering	MIPR	MDA : ARLINGTON, VA	31.822	3.608		3.673	Nov 2013	8.007	Nov 2014	-		8.007	Continuing	Continuing	Continuing
Systems Engineering & Integration - Systems Engineering - CSS	C/CPFF	CSC : VA	7.811	1.546		1.573	Nov 2013	1.000	Nov 2014	-		1.000	Continuing	Continuing	Continuing
Systems Engineering & Integration - Systems Engineering - Industry	C/CPAF	Boeing : VA	12.117	4.909		5.245	Nov 2013	6.600	Nov 2014	-		6.600	Continuing	Continuing	Continuing
Systems Engineering & Integration - Systems Engineering - OGA	MIPR	AMRDEC : AL	0.000	-		-		2.281	Nov 2014	-		2.281	Continuing	Continuing	Continuing
M&S Digital Framework, Simulation, Models - Digital Simulation Architecture - MD09	C/CPAF	Northrop Grumman : CO	10.533	4.459		4.983	Nov 2013	4.957	Nov 2014	-		4.957	Continuing	Continuing	Continuing
BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations) - Verification & Assessment - CSS Support	C/CPFF	CSC : AL	0.000	-		-		6.905	Nov 2014	-		6.905	Continuing	Continuing	Continuing
BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations) - Verification & Assessment - CSS Support (2)	C/CPFF	Sparta : AL	0.000	-		-		2.203	Nov 2014	-		2.203	Continuing	Continuing	Continuing
BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations) - Verification & Assessment - Industry	C/CPAF	Boeing : AL	0.000	-		-		1.365	Nov 2014	-		1.365	Continuing	Continuing	Continuing
BMDS Verification, Validation & Assessment	MIPR	AMRDEC : AL	0.000	-		-		7.257	Nov 2014	-		7.257	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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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			
(VV&A) (previously VV&A and Test Operations) - Verification & Assessment - OGA															
Subtotal			3,779.154	624.269		562.112		654.334		-		654.334	-	-	-

Remarks
N/A

Support (\$ 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			
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09	MIPR	MDA MIDAESS : Arlington, VA	0.000	3.789		10.824	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 -	MIPR	Dahlgren : Dahlgren, VA	4.817	-		1.203	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 0	MIPR	MDA : Arlington, VA	38.376	3.256		5.616	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 20117142431989	MIPR	NAVSEA : Washington, DC	19.430	1.312		2.920	Oct 2013	9.000		-		9.000	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 20117142432002	C/CPIF	Lockheed Martin : Arlington, VA	2.006	-		0.293	Nov 2013	25.000		-		25.000	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 4				PE 0603892C / AEGIS BMD				MD09 / Aegis BMD							
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
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 20117142432014	C/CPAF	Raytheon : Arlington, VA	1.960	-		0.274	Nov 2013	25.981		-		25.981	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 20117142432019	MIPR	Aegis BMD : Dahlgren, VA	3.148	0.686		0.328	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 20117142432022	MIPR	MDA : Arlington, VA	24.262	0.034		2.734	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 4.X Development - BMD 4.0 Dev - MD09 - 2012722816284	MIPR	JHU/APL : Columbia MD	0.000	-		0.405	Nov 2013	7.000		-		7.000	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09	MIPR	MDA : Arlington, VA	18.282	14.270		8.105	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 -	MIPR	JHU/APL : Columbia MD	0.000	-		0.584	Nov 2013	2.000		-		2.000	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454161	MIPR	NAVSEA : Washington, DC	11.125	5.750		4.214	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454173	MIPR	Dahlgren : Dahlgren, VA	9.022	-		1.736	Nov 2013	2.000		-		2.000	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0	C/CPIF	Lockheed Martin : Arlington, VA	0.849	-		0.423	Nov 2013	13.418		-		13.418	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Support (\$ 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			
Development - MD09 - 20117142454175															
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454178	C/CPAF	Raytheon : Arlington, VA	0.287	-		0.395	Nov 2013	-		-		-	-	0.682	-
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454181	MIPR	Aegis BMD : Dahlgren, VA	21.306	3.006		0.474	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454184	MIPR	MDA : Arlington, VA	33.554	0.150		3.945	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.0 Development - MD09 - 20117142454188	MIPR	MDA MIDAESS : Arlington, VA	0.000	16.606		15.621	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09	MIPR	MDA : Arlington, VA	3.383	8.815		12.615	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 2011714247033	MIPR	NAVSEA : Washington, DC	2.637	3.552		6.560	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470341	MIPR	Dahlgren : Dahlgren, VA	6.069	-		2.702	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470344	C/CPIF	Lockheed Martin : Arlington, VA	0.225	-		0.659	Nov 2013	6.564		-		6.564	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1	C/CPAF	Raytheon : Arlington, VA	0.182	-		0.615	Nov 2013	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Support (\$ 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			
Development - MD09 - 20117142470352															
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470355	MIPR	Aegis BMD : Dahlgren, VA	2.529	1.860		0.738	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470358	MIPR	MDA : Arlington, VA	21.432	0.091		6.141	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470359	MIPR	MDA MIDAESS : Arlington, VA	0.000	10.260		24.315	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) 5.1 Development - MD09 - 20117142470359 - 2012722862854	MIPR	JHU/APL : Columbia MD	0.000	-		0.910	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09	MIPR	JHU/APL : Columbia MD	0.000	-		0.173	Nov 2013	2.000		-		2.000	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 -	MIPR	MDA : Arlington, VA	20.908	8.478		1.720	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487038	MIPR	NAVSEA : Washington, DC	77.894	3.417		1.246	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487073	MIPR	Dahlgren : Dahlgren, VA	9.053	-		0.513	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487113	C/CPIF	Lockheed Martin : Arlington, VA	2.009	-		0.125	Nov 2013	9.476		-		9.476	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Support (\$ 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			
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487117	C/CPAF	Raytheon : Arlington, VA	0.318	-		0.117	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487119	MIPR	Aegis BMD : Dahlgren, VA	37.659	1.790		0.140	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487125	MIPR	MDA : Arlington, VA	26.989	0.090		1.166	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Standard Missile-3 (SM-3) Block IB Development - MD09 - 20117142487128	MIPR	MDA MIDAESS : Arlington, VA	0.000	9.870		4.617	Oct 2013	-		-		-	Continuing	Continuing	Continuing
Subtotal			399.711	97.082		125.166		102.439		-		102.439	-	-	-

Remarks
N/A

Test and Evaluation (\$ 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			
BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations) - M&S VV&A and Test Operations - MD09	C/CPAF	Northrop Grumman : VA	60.943	-		-		-		-		-	-	60.943	-
BMDS Verification, Validation & Assessment (VV&A) (previously VV&A and Test Operations) - M&S VV&A and Test Operations - OGA	MIPR	AMRDEC : AL	0.000	7.482		9.340	Nov 2013	-		-		-	Continuing	Continuing	Continuing
BMDS Verification, Validation & Assessment	MIPR	Various : VA, AL, CO	0.000	3.014		2.387	Nov 2013	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Test and Evaluation (\$ 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			
(VV&A) (previously VV&A and Test Operations) - Validation & Verification Support															
Subtotal			60.943	10.496		11.727		-		-		-	-	-	-

Remarks
N/A

Management Services (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4,239.808	731.847	699.005	756.773	-	756.773	-	-	-

Remarks
Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, MIPRs, and civilian salaries on the R-3.

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	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
BMD 3.6.1 Ship Installations	✧	✧	✧	✧																								
BMD 5.1 Demo																												
BMD 5.1 Development	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧								
BMD 5.1 Preliminary Design Review (PDR)								△																				
BMD 5.1 Critical Design Review (CDR)												△																
BMD 5.0 CU Certification																△												
BMD 5.0 CU Development	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧																
BMD 5.0 CU Demo	▲																											
BMD 4.0 Ship Installations	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧								
BMD 5.0 Ship Installations	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧	✧								
BMD 5.1 Certification																												
BMD 5.1 System Design Review (SDR) #2	▲																											
SM-3 Blk IB Missile Deliveries		✦	✦	✦																								
SM-3 Blk IB Hazard Assessment Testing	✦	✦																										
FTI-01 (FTO-01 Risk Reduction Flight Test)	▲																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD09 / Aegis BMD
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
BMD 3.6.1 Ship Installations	1	2013	1	2014
BMD 5.1 Demo	2	2017	2	2017
BMD 5.1 Development	1	2013	4	2017
BMD 5.1 Preliminary Design Review (PDR)	1	2014	1	2014
BMD 5.1 Critical Design Review (CDR)	1	2015	1	2015
BMD 5.0 CU Certification	3	2015	3	2015
BMD 5.0 CU Development	1	2013	2	2015
BMD 5.0 CU Demo	1	2013	1	2013
BMD 4.0 Ship Installations	1	2013	1	2015
BMD 5.0 Ship Installations	1	2013	4	2017
BMD 5.1 Certification	2	2018	2	2018
BMD 5.1 System Design Review (SDR) #2	1	2013	1	2013
SM-3 Blk IB Missile Deliveries	2	2013	4	2013
SM-3 Blk IB Hazard Assessment Testing	1	2013	2	2013
FTI-01 (FTO-01 Risk Reduction Flight Test)	1	2013	1	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD				Project (Number/Name) MC09 / Cyber Operations			
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
MC09: <i>Cyber Operations</i>	-	-	0.260	0.265	-	0.265	0.269	0.273	0.279	0.279	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

Project MC09 is a new Defensive Cyber Operations Project established in this Program Element (PE) for PB 2014. Funds were previously reported in Project MD09 of this PE 0603892C.

A. Mission Description and Budget Item Justification

The funds in this project sustain Missile Defense Agency (MDA) DoD Information Assurance Certification and Accreditation Program (DIACAP) and Controls Validation Testing (CVT) activities, analysis of validation results, risk assessments and reviews of proposed Program Manager/Information Assurance Manager (PM/IAM) Plans of Action and Milestones (POA&Ms) for MDA Aegis Ballistic Missile Defense mission systems. It maintains the Certification and Accreditation (C&A) data repository, capturing the DIACAP documentation (artifacts, validation results, and Information Assurance Risk Assessment results, and Designated Approving Authority (DAA) accreditation decisions) and POA&M on all MDA information systems.

This project supports the monitoring and tracking of Cyber security mitigations detailed in Information Technology security POA&Ms. Activities include preparation of C&A documentation and accreditation recommendations to the MDA Senior Information Assurance Officer (SIAO)/Certification Authority (CA) and DAA. Independent Verification and Validation (IV&V) team actions ensure the availability, integrity, authentication, confidentiality and non-repudiation of the MDA mission, test and administrative systems. Activities in the Project are necessary to comply with the Federal Information Security Management Act (FISMA).

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

	FY 2013	FY 2014	FY 2015
<p>Title: Network / System Certification and Accreditation (C&A)</p> <p align="right">Articles:</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments: See MD09 for FY 2013 plans.</p> <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Conduct cyber security / information assurance engineering and architecture planning for Aegis BMD information technology systems. - Plan and test the Information Assurance (IA) controls for Ballistic Missile Defense System (BMDS) Aegis BMD systems. - Develop Aegis BMD DIACAP certification and accreditation packages. 	<p>-</p> <p>-</p>	<p>0.260</p> <p>-</p>	<p>0.265</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MC09 / Cyber Operations

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Conduct Controls Validation Testing (CVT) of Aegis BMD mission systems and provide Plan of Action and Milestones to mitigate information assurance deficiencies. - Conduct annual information assurance reviews on the Aegis BMD enclaves to assess compliance in implementing and maintaining IA controls. FY 2015 Plans: - Conduct cyber security / information assurance engineering and architecture planning for Aegis BMD information technology systems. - Plan and test the IA controls for Ballistic Missile Defense System (BMDS) Aegis BMD systems. - Develop Aegis BMD DIACAP certification and accreditation packages. - Conduct Controls Validation Testing (CVT) of Aegis BMD mission systems and provide Plan of Action and Milestones to mitigate information assurance deficiencies. - Conduct annual information assurance reviews on the Aegis BMD enclaves to assess compliance in implementing and maintaining IA controls.			
Accomplishments/Planned Programs Subtotals	-	0.260	0.265

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

Line Item	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
• 0603175C: <i>Ballistic Missile Defense Technology</i>	69.438	9.321	38.800	-	38.800	76.400	52.000	112.800	178.000	-	536.759
• 0603882C: <i>Ballistic Missile Defense Midcourse Defense Segment</i>	923.506	910.852	1,003.768	-	1,003.768	1,131.060	937.998	690.524	628.342	Continuing	Continuing
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	306.896	366.590	392.893	-	392.893	462.030	448.763	403.272	368.125	Continuing	Continuing
• 0603896C: <i>Ballistic Missile Defense Command and Control, Battle Management & Communication</i>	344.431	405.319	443.484	-	443.484	456.182	462.525	452.937	465.638	Continuing	Continuing
• 0603898C: <i>Ballistic Missile Defense Joint Warfighter Support</i>	47.710	42.619	46.387	-	46.387	52.619	53.552	54.699	56.252	Continuing	Continuing
• 0603904C: <i>Missile Defense Integration and Operations Center (MDIOC)</i>	61.684	52.095	58.530	-	58.530	51.738	61.594	53.885	55.414	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MC09 / Cyber Operations
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0604880C: Land Based SM-3 (LBSM3)	243.876	129.374	123.444	-	123.444	32.641	26.337	22.889	17.825	Continuing	Continuing
• 0901598C: Management HQ - MDA	31.674	34.712	36.998	-	36.998	36.343	35.441	34.675	33.650	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MC09 / Cyber Operations
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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
Network / System Certification and Accreditation (C&A) - CND/IA Advisory and Assistance Services	C/CPIF	Torch Technologies : Huntsville, AL	0.000	-		0.260	Jul 2014	0.265	Oct 2014	-		0.265	Continuing	Continuing	Continuing
Subtotal			0.000	-		0.260		0.265		-		0.265	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	0.260	0.265	-	0.265	-	-	-

Remarks
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD				Project (Number/Name) MT09 / Aegis BMD Test			
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
MT09: <i>Aegis BMD Test</i>	-	166.697	137.352	89.628	-	89.628	50.934	86.295	117.652	120.869	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

N/A

A. Mission Description and Budget Item Justification

The Aegis Ballistic Missile Defense (Aegis BMD) mission is to deliver an enduring, operationally effective and supportable Ballistic Missile Defense capability to defend the nation, deployed forces, friends and allies, and to increase this capability by delivering evolutionary improvements as part of Ballistic Missile Defense System (BMDS) upgrades. The Aegis BMD element of the BMDS capitalizes upon and evolves from the existing U.S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short-Range Ballistic Missiles (SRBM), Medium-Range Ballistic Missiles (MRBM), and Intermediate-Range Ballistic Missiles (IRBM) in the midcourse phase of flight and shorter range missile in terminal phase. Aegis BMD also provides a Long Range Surveillance and Track (LRS&T) capability to the BMDS. Upgrades to both the Aegis BMD Weapon System and the SM-3 configuration enable Aegis BMD to provide effective, supportable defensive capability against longer range, more sophisticated threats and an enduring Aegis Ashore defensive capability.

Proving Missile Defense:

- Working with the Services' Operational Test Agencies (OTA), with the support of the Director of Operational Test and Evaluation (DOT&E), Missile Defense Agency (MDA) has developed a test program to improve confidence in missile defense capabilities under development and ensure the capabilities transferred to the war fighter are operationally effective, suitable, and survivable.
- As part of the Agency's rigorous test program, System Pre-Flight predictions provide confidence in test execution by predicting element performance and exercising element interfaces. System Post Flight Reconstruction replicates the Ballistic Missile Defense System configuration and actual environmental conditions and target dynamics observed in flight to anchor modeling and simulation results.
- The Integrated Master Test Plan (IMTP) is event-oriented and extends until the collection of all identified data is completed to ensure adequate test investments.

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

	FY 2013	FY 2014	FY 2015
Title: Aegis Ballistic Missile Defense (BMD) Testing	41.986	55.160	39.332
Articles:	-	-	-
Description: See Description below.			
FY 2013 Accomplishments:			
- Conducted Aegis BMD-specific analysis during pre- and post-mission analysis phases.			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Began test planning for FY 2014 Aegis flight test missions: prepared target, developed models and simulations, and readied the range for test. - Prepared for and conducted BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. - Participated in BMD special technology experiments. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Continue to conduct Aegis BMD-specific analysis during pre and post-mission analysis phases. - Begin test planning for FY 2015 Aegis flight test missions: prepare target, develop models and simulations, and ready the range for test. - Continue to conduct Post Flight Analysis for test conducted in FY 2014 Aegis flight test missions. - Prepare for and conduct Ballistic Missile Defense System (BMDS) Flight and Ground Test events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule. - Participate in BMD special technology experiments. <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Continue to conduct Aegis BMD-specific analysis during pre and post-mission analysis phases. - Begin test planning for FY 2016 Aegis flight test missions: prepare target, develop models and simulations, and ready the range for test. - Continue to conduct Post Flight Analysis for test conducted in FY 2015 Aegis flight test missions. - Prepare for and conduct Ballistic Missile Defense System (BMDS) Flight and Ground Test events as reflected in the Integrated Master Test Plan (IMTP) and the Exhibit R-4 schedule. - Participate in BMD special technology experiments. 				
Title: BMDS Level Testing		103.605	63.040	38.000
		Articles:	-	-
Description: See Description below.				
FY 2013 Accomplishments:				
<ul style="list-style-type: none"> - Prepared for and conducted BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. - Exercised Phase II capability of the Phased Adaptive Approach. 				
FY 2014 Plans:				
<ul style="list-style-type: none"> - Prepare for and conduct BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. - Exercise of Phase II capability of the Phased Adaptive Approach. 				
FY 2015 Plans:				
<ul style="list-style-type: none"> - Prepare for and conduct BMDS Flight and Ground Test events as reflected in the IMTP and the Exhibit R-4 schedule. 				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014		
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
- Exercise of Phase II capability of the Phased Adaptive Approach				
<p>Title: Modeling & Simulation Hardware-In-the-Loop (HWIL) Framework, Simulations, Models</p> <p align="right">Articles:</p> <p>Description: See Description below.</p> <p>FY 2013 Accomplishments:</p> <ul style="list-style-type: none"> - Continued to deploy and integrated BMDS Hardware in the Loop (HWIL) stimulation framework-Single Stimulation Framework (SSF) with Elements for BMDS ground, Flight tests and training - Implemented upgrades to the BMDS HWIL SSF that supported execution of increasingly more complex BMDS ground test campaigns. - Supported BMDS HWIL SSF V&V and data analysis for BMDS ground tests and demos. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Deliver the Objective Simulation Framework (OSF) Version 1.0 to begin the transition of Hardware-in-the-Loop capabilities. - Deliver improved debris and phenomenology modeling changes to support Aegis 4.0 and future baselines. - Incorporate advanced M&S capabilities into the next version of the OSF for Aegis BMD for tracking, discrimination, engagement and associated upper tier mitigation to satisfy PAA Phase II/III needs. <p>FY 2014 decrease is due to initial consolidation of Digital and HWIL frameworks as part of OSF implementation.</p> <p>FY 2015 Plans:</p> <p>No funding requested due to completion of consolidation of Digital and HWIL frameworks as part of OSF implementation.</p> <p>The FY 2015 plans for this activity are realigned within new MT23 Accomplishment/Planned Program: Engineering and Analysis.</p>		21.106	19.152	-
		-	-	-
<p>Title: Engineering & Analysis</p> <p align="right">Articles:</p> <p>Description: N/A</p> <p>FY 2013 Accomplishments:</p> <p>N/A</p> <p>FY 2014 Plans:</p> <p>N/A</p> <p>FY 2015 Plans:</p>		-	-	12.296
		-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Provide engineering support for planning, execution, and analysis of the test events listed in the Integrated Master Test Plan (IMTP): - Design test architecture, define target requirements, and generate appropriate scenarios for ground and flight tests. - Track Critical Engagement Condition (CEC) and Empirical Measurement Events (EME) data requirements and sufficiency. - Participate in major test reviews. - Utilize models and simulations (M&S) for pre-test assessment and post-test review, as well as M&S updates. - Provide Systems Engineering and Integration (SE&I) test configuration management; risk assessment; and anomaly/deficiency review, assessment and closure to support data gathering for BMDS hardware/software reliability improvements. - Develop and establish hardware-in-the-loop (HWIL) M&S integration test cases for ground and flight tests (pre-post mission). - Provide modeling and technical analysis support during Combatant Command (COCOM) wargames and exercises.			
Accomplishments/Planned Programs Subtotals	166.697	137.352	89.628

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

Line Item	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
• 0604881C: AEGIS SM-3 Block IIA Co-Development	416.723	308.493	263.695	-	263.695	175.871	67.451	-	-	-	1,232.233

Remarks

D. Acquisition Strategy

The Aegis Ballistic Missile Defense (BMD) element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall Ballistic Missile Defense System (BMDS) capability. Competition will be maximized for procurement of any products or services in FY 2014, as appropriate.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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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			
Subtotal			-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks
N/A

Support (\$ 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			
Subtotal			-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks
N/A

Test and Evaluation (\$ 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			
Aegis Ballistic Missile Defense (BMD) Testing - MT09 -	MIPR	NSWC : DAHLGREN, VA	0.000	8.254		6.804	Oct 2013	4.853	Oct 2014	-		4.853	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202597076	MIPR	PMRF Barking Sands : Kauai, HI	0.000	-		3.589	Oct 2013	2.559	Oct 2014	-		2.559	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202597078	MIPR	NAWC/ PM PT : MUGU, CA	0.000	-		3.663	Oct 2013	2.612	Oct 2014	-		2.612	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202597082	MIPR	NSWC DD/ : DAHLGREN, VA	0.000	-		2.456	Oct 2013	1.751	Oct 2014	-		1.751	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202630564	MIPR	JHU/APL/ MD : COLUMBIA, MD	0.000	16.750		14.576	Nov 2013	10.393	Nov 2014	-		10.393	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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Test and Evaluation (\$ 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			
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202630567	MIPR	Aegis BMD : VA	0.000	1.591		4.604	Oct 2013	3.283	Oct 2014	-		3.283	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 201112202630569	SS/CPIF	Lockheed Martin : Moorestown, NJ	0.000	-		6.801	Oct 2013	4.849	Oct 2014	-		4.849	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 20111220263057	MIPR	SPAWAR : San Diego, CA	0.000	1.800		5.153	Oct 2013	3.674	Oct 2014	-		3.674	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - 20111220266947	MIPR	NSWC/PHD PT. : HUENEME, CA	0.000	6.900		7.514	Oct 2013	5.358	Oct 2014	-		5.358	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09 - NAVSEA	MIPR	NAVSEA : VA	0.000	0.480		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09- Corona	MIPR	NSWC Corona : CA	0.000	4.105		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense (BMD) Testing - MT09- Various	Various	Various : HI, VA, CA, MA	0.000	2.106		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - MT09	MIPR	NSWC PHD PT. : HUENEME, CA	0.000	11.764		4.108	Oct 2013	2.477	Oct 2014	-		2.477	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - 201112202535339	MIPR	JHU/APL/MD : COLUMBIA, MD	0.000	11.455		10.425	Oct 2013	6.284	Oct 2014	-		6.284	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - 20111220253534	MIPR	NAVSEA : VA	0.000	0.625		13.282	Oct 2013	8.006	Oct 2014	-		8.006	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - 201112202535342	MIPR	SPAWAR SAN DIEGO : CA	0.000	8.549		1.913	Oct 2013	1.153	Oct 2014	-		1.153	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - 201112202535344	MIPR	CORONA : CA	0.000	5.435		2.112	Oct 2013	1.273	Oct 2014	-		1.273	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - 201112202535347	MIPR	LOCKHEED MARTIN : MOORESTOWN NJ	0.000	9.865		5.231	Oct 2013	3.153	Oct 2014	-		3.153	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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Test and Evaluation (\$ 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			
BMDS Level Testing - MT09 - 201112202535348	MIPR	MDA : VA	0.000	6.187		25.969	Oct 2013	15.654	Oct 2014	-		15.654	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - NSWC DD	MIPR	NSWC DD : Dahlgren, VA	0.000	4.595		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - PM PT	MIPR	NAWC/ PM PT : MUGU, CA	0.000	5.750		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - PMRF	MIPR	PMRF Barking Sands : Hawaii	0.000	10.932		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - Pearl Harbor	MIPR	Commander Pacific Fleet : Pearl Harbor, HI	0.000	6.150		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - MT09 - Target Hardware	MIPR	MDA : VA	0.000	15.110		-		-		-		-	Continuing	Continuing	Continuing
BMDS Level Testing - Various	MIPR	Various : VA, MD, CA, DC, MA, AL, TN, NM	0.000	7.188		-		-		-		-	Continuing	Continuing	Continuing
Modeling & Simulation Hardware-In-the-Loop (HWIL) Framework, Simulations, Models - Objective Simulation Framework, Procure, Install, Test	C/CPAF	Boeing : AL	0.000	11.369		12.790	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Modeling & Simulation Hardware-In-the-Loop (HWIL) Framework, Simulations, Models - Test Analysis Support	MIPR	Various : AL, CO, VA	0.000	2.013		1.522	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Modeling & Simulation Hardware-In-the-Loop (HWIL) Framework, Simulations, Models - Test Engineering Support	MIPR	MDA : Various	0.000	7.724		4.840	Nov 2013	-		-		-	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis	MIPR	Various : AL, CO, VA	0.000	-		-		6.257	Nov 2014	-		6.257	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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Test and Evaluation (\$ 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			
Engineering & Analysis - Engineering & Analysis - Engineering Support	C/CPAF	Northrop Grumman : AL, CO	0.000	-		-		1.360	Nov 2014	-		1.360	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis - Industry	C/CPAF	Boeing : AL	0.000	-		-		1.079	Nov 2014	-		1.079	Continuing	Continuing	Continuing
Engineering & Analysis - Engineering & Analysis - OGA	MIPR	AMRDEC : AL	0.000	-		-		3.600	Nov 2014	-		3.600	Continuing	Continuing	Continuing
Subtotal			0.000	166.697		137.352		89.628		-		89.628	-	-	-

Remarks
N/A

Management Services (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	166.697	137.352	89.628	-	89.628	-	-	-

Remarks
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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Significant Event Complete ▲ Milestone Decision Complete ★ Element Test Complete ◆ System Level Test Complete ● Complete Activity ✦
 Significant Event Planned △ Milestone Decision Planned ☆ Element Test Planned ◇ System Level Test Planned ○ Planned Activity ✧

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019							
	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				
FTI-01 (FTO-01 Risk Reduction Flight Test)	▲																															
FTM-20 (Aegis Simulated Intercept Flight Test)		▲																														
FTM-22 (Aegis Intercept Flight Test)								▲																								
FTM-21 (Aegis Intercept Flight Test) (Salvo)																																
FTO-01 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)																																
FTX-20 (Aegis Simulated Intercept Flight Test)												△																				
GTD-04E												△																				
FTX-18 (Aegis Simulated Intercept Flight Test)												△																				
FTX-19 (Aegis Simulated Intercept Flight Test)																△																
AA CTV-01 (Aegis Ashore Flight Test)																																
Fast Event 2																																
Fast Event 1																																
FTM-24 (Aegis Intercept Flight Test)																																
FTM-26 (Aegis Intercept Flight Test)																																
FTO-02 E1 (Aegis Ashore Intercept Flight Test)																																
FTM-25 (Aegis Intercept Flight Test)																																
FTO-02 E2 (AA/Aegis/THAAD/Patriot Multiple Engagement Flight Test)																																
FTX-23 (Aegis Flight Test)																																△
FTM-29 (Aegis Intercept Flight Test)																																
FTO-03 E2 (Aegis Multiple Engagement Flight Test)																																△

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MT09 / Aegis BMD Test
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FTI-01 (FTO-01 Risk Reduction Flight Test)	1	2013	1	2013
FTM-20 (Aegis Simulated Intercept Flight Test)	2	2013	2	2013
FTM-22 (Aegis Intercept Flight Test)	1	2014	1	2014
FTM-21 (Aegis Intercept Flight Test) (Salvo)	4	2013	4	2013
FTO-01 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)	4	2013	4	2013
FTX-20 (Aegis Simulated Intercept Flight Test)	1	2015	1	2015
GTD-04E	1	2015	1	2015
FTX-18 (Aegis Simulated Intercept Flight Test)	1	2015	1	2015
FTX-19 (Aegis Simulated Intercept Flight Test)	2	2015	2	2015
AA CTV-01 (Aegis Ashore Flight Test)	3	2014	3	2014
Fast Event 2	4	2014	4	2014
Fast Event 1	4	2014	4	2014
FTM-24 (Aegis Intercept Flight Test)	3	2015	3	2015
FTM-26 (Aegis Intercept Flight Test)	1	2015	1	2015
FTO-02 E1 (Aegis Ashore Intercept Flight Test)	3	2015	3	2015
FTM-25 (Aegis Intercept Flight Test)	1	2015	1	2015
FTO-02 E2 (AA/Aegis/THAAD/Patriot Multiple Engagement Flight Test)	4	2015	4	2015
FTX-23 (Aegis Flight Test)	4	2019	4	2019
FTM-29 (Aegis Intercept Flight Test)	1	2018	1	2018
FTO-03 E2 (Aegis Multiple Engagement Flight Test)	3	2018	3	2018
FTO-03 E3 (GM/AA/Aegis/THAAD/Patriot Multiple Engagement Flight Test)	4	2018	4	2018
FTM-35 (Aegis Intercept Flight Test)	4	2019	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MX09 / Aegis BMD Development Support
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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
MX09: Aegis BMD Development Support	4.427	12.094	23.960	28.758	-	28.758	47.911	54.187	59.736	59.797	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

Aegis Ballistic Missile Defense, in accordance with negotiated agreements between the U. S. Navy and the Missile Defense Agency has identified and segregated funding for Operations and Sustainment of Aegis BMD specific elements resident aboard Aegis capable Navy ships. This support is identified under several categories. First, Computer Program Sustainment, consisting of, but not limited to, review of Trouble Observation Reports (TORs) that are generated by ship crews during exercises or deployments, determination of root causes and preparation of Computer Program Change Request (CPCR) to correct TORs, updates to the in-service computer program to apply, test and certify multiple CPCRs, and tests installation of Aegis Weapon System (AN/SPY-radar / Fire Control Section (FCS)) alignment updates (as required). Second, provide Support to Annual Integration Events (AIEs) to ensure any updated Aegis Combat System (ACS) computer programs do not degrade BMD equipped ships and provide distance and technical support for BMD equipped ships. Fourth, provide technical support documentation updates and provide an In-Service Engineering Agent (Naval Surface Warfare Center Port Hueneme Division) for annual technical evaluations of training, logistics, and material readiness, to include any corrective actions required prior to a BMDS mission. Finally, provide Shipboard Sustainment, consisting of, but not limited to BMDS unique parts and material support for parts as listed in the Cost Analysis and Requirements Document (CARD) and parts as identified by the Commercial off the Shelf (COTS) Obsolescence / Diminished Manufacturing Support Engineering (DMS).

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

	FY 2013	FY 2014	FY 2015
Title: Aegis Ballistic Missile Defense Operations and Support	12.094	23.960	28.758
Articles:	-	-	-
Description: See Description below.			
FY 2013 Accomplishments:			
- Provided In-service Engineering support to Aegis BMD.			
- Provided operational and maintenance training for Aegis BMD ship crews.			
- Provided logistics support (including technical manuals, spares, and Reliability, Maintainability, and Availability analysis and products) for Aegis BMD.			
- Provided initial sustainment to Land Based SM-3 Pacific Missile Range Facility (PMRF).			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MX09 / Aegis BMD Development Support

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<ul style="list-style-type: none"> - Provided Sustainment of BMD 3.6 Computer Program. - Provided Sustainment of Shipboard BMD Specific Equipment. - Provided Sustainment of SM-3. - Provided support to EPAA Phase III/IV system engineering studies. <p>FY 2014 Plans:</p> <ul style="list-style-type: none"> - Maintain and operate the facility at PMRF and ensure Aegis Ashore mission. - Provide Sustainment of BMD 3.6 Computer Program to include the engineering and development of all 3.6 baseline update software and associated safety, system engineering, configuration management, performance verification, supporting documentation, labs, information assurance, certification, and critical emergent code corrections based on test data. - Provide Shipboard Sustainment of BMD specific equipment to include In-service sustainment of BMD Baseline Aegis Combat System (ACS) and Vertical Launch System Global Positioning System (VLS GPS) Interface (VGI) hardware configuration management and integrated logistics support certifications submission and approval, Commercial Off-The-Shelf management Technical documentation updates. - Provide Sustainment of Standard Missile-3 (SM-3) to include Recertification, Transportation, Integrated Logistics Support, VLS Canister Support, Quality and Reliability, Minor repairs, and Surveillance. - Provide In-service Engineering support to Aegis BMD. - Provide capability and maintenance training for Aegis BMD ship crews. <p>The FY 2014 increase is due to the increase in the number of operational SM-3s and BMD capable ships.</p> <p>FY 2015 Plans:</p> <ul style="list-style-type: none"> - Provide Sustainment of BMD 3.6 Computer Program to include the engineering and development of all 3.6 baseline update software and associated safety, system engineering, configuration management, performance verification, supporting documentation, labs, information assurance, certification, and critical emergent code corrections based on test data. - Provide Shipboard Sustainment of BMD specific equipment to include In-service sustainment of BMD Baseline Aegis Combat System (ACS) and Vertical Launch System Global Positioning System (VLS GPS) Interface (VGI) hardware configuration management and integrated logistics support certifications submission and approval, Commercial Off-The-Shelf management Technical documentation updates. - Provide Sustainment of Standard Missile-3 (SM-3) to include Recertification, Transportation, Integrated Logistics Support, VLS Canister Support, Quality and Reliability, Minor repairs, and Surveillance. - Provide In-service Engineering support to Aegis BMD. - Provide capability and maintenance training for Aegis BMD ship crews. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency		Date: March 2014
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MX09 / Aegis BMD Development Support

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Increase in request from FY2014 to FY2015 due to the increase in sustainment support for additional shipsets.			
Accomplishments/Planned Programs Subtotals	12.094	23.960	28.758

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

Line Item	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
• 0603902C: Next Generation Aegis Missile (Standard Missile-3 Block IIB (SM-3 IIB))	58.952	-	-	-	-	-	-	-	-	-	58.952
• 0604880C: Land Based SM-3 (LBSM3)	243.876	129.374	123.444	-	123.444	32.641	26.337	22.889	17.825	Continuing	Continuing
• 0604881C: AEGIS SM-3 Block IIA Co-Development	416.723	308.493	263.695	-	263.695	175.871	67.451	-	-	-	1,232.233

Remarks

D. Acquisition Strategy

The Aegis Ballistic Missile Defense (BMD) element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall Ballistic Missile Defense System (BMDS) capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the Standard Missile-3 (SM-3) missile and the Aegis BMD Weapon System, respectively.

Competition will be maximized for purchase of any products or services in FY 2014, as appropriate.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MX09 / Aegis BMD Development Support
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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			
Aegis Ballistic Missile Defense Operations and Support - ABMD O&S - MX09	MIPR	JHU/APL : MD	4.427	0.604		23.960	Oct 2013	28.758	Oct 2014	-		28.758	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09 - Corona	MIPR	NSWC Corona : Corona, CA	0.000	0.706		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09 - DD	MIPR	NSWC/DD : VA	0.000	5.100		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09 - NAVSEA	MIPR	NAVSEA : Wash Navy Yard	0.000	0.862		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09 - NSWC CD	MIPR	NSWC Carderock : MD	0.000	1.171		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09 - PHD	MIPR	NSWC PHD : Port Hueneme, CA	0.000	0.927		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09- LM	C/CPFF	Lockheed Martin : Moorestown, NJ	0.000	1.754		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09- PMRF	MIPR	PMRF : Hawaii	0.000	0.175		-		-		-		-	Continuing	Continuing	Continuing
Aegis Ballistic Missile Defense Operations and Support - MX09- Tech Rep	MIPR	Tech Rep : Moorestown, NJ	0.000	0.795		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			4.427	12.094		23.960		28.758		-		28.758	-	-	-

Remarks
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MX09 / Aegis BMD Development Support
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Support (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

Test and Evaluation (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

Management Services (\$ 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			
Subtotal			-	-		-		-		-		-	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	4.427	12.094	23.960	28.758	-	28.758	-	-	-

Remarks
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency										Date: March 2014		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD				Project (Number/Name) MD40 / Program-Wide Support			
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
MD40: <i>Program-Wide Support</i>	40.197	47.868	49.351	53.784	-	53.784	56.154	57.100	58.555	51.519	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Note

In FY 2013, Program Wide Support reflects a proportional change as a result of increases to BMD Aegis. Funding in the All Prior Years column represents a summary of Prior Years Total Costs for active contracts, Military Interdepartmental Purchase Requests, and civilian salaries on the R-3.

A. Mission Description and Budget Item Justification

Program-Wide Support (PWS) contains non-headquarters management costs in support of Missile Defense Agency (MDA) functions and activities across the entire Ballistic Missile Defense System (BMDS). It Includes Government Civilians, Contract Support Service, and Federally Funded Research and Development Center (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. In addition, includes Global Deployment personnel and support performing deployment site preparation and activation. Other costs included provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and agency training, office and equipment leases, utilities, data and unified communications support, supplies and maintenance, materiel and readiness and central property management of equipment, and similar operating expenses. Also includes legal settlements. In keeping with congressional intent, Program Wide Support is allocated on a pro-rata basis and therefore, fluctuates by year based on the total MDA budget.

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

	FY 2013	FY 2014	FY 2015
Title: Program Wide Support	47.868	49.351	53.784
Articles:	-	-	-
Description: See Description below.			
FY 2013 Accomplishments: See paragraph A: Mission Description and Budget Item Justification			
FY 2014 Plans: See paragraph A: Mission Description and Budget Item Justification			
FY 2015 Plans: See paragraph A: Mission Description and Budget Item Justification			
Accomplishments/Planned Programs Subtotals	47.868	49.351	53.784

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / <i>AEGIS BMD</i>	Project (Number/Name) MD40 / <i>Program-Wide Support</i>
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C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Missile Defense Agency **Date:** March 2014

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0603892C / AEGIS BMD	Project (Number/Name) MD40 / Program-Wide Support
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Support (\$ 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			
Program Wide Support - Agency Operations Management	C/CPAF	Various : Multi: AL, CA, CO, VA	0.000	-		1.621	Mar 2014	-		-		-	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Civilian Salaries	Allot	MDA : Multi: AK, AL, CO, CA, VA	24.331	37.248		34.363	Oct 2013	43.397	Nov 2014	-		43.397	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Other Agency Services	MIPR	Various : Multi: AK/AL/CA/CO/HI/MD/VA/NJ/NY/OCONUS	1.500	8.982		5.450	Mar 2014	6.100	Mar 2015	-		6.100	Continuing	Continuing	Continuing
Program Wide Support - Agency Operations and Support Services	C/CPFF	Various : Multi: AL, CA, CO, VA	14.366	0.581		7.917		4.287	Jan 2015	-		4.287	Continuing	Continuing	Continuing
Program Wide Support - FFRDC/UARC	MIPR	Various : Multi: AL, CA, CO, VA	0.000	1.057		-		-		-		-	1.615	2.672	-
Subtotal			40.197	47.868		49.351		53.784		-		53.784	-	-	-

Remarks
N/A

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	40.197	47.868	49.351	53.784	-	53.784	-	-	-

Remarks
N/A