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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603888C: Ballistic Missile Defense Test and Targets							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	906.952	823.333	1,113.425	0.000	1,113.425	1,105.959	951.371	871.929	829.608	0	6,602.577
AX04: Test & Evaluation Block 1.0	6.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	6.934
EX05: Targets & Countermeasures Supports Block 5.0	40.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	40.393
BX04: Test & Evaluation Block 2.0	32.989	0.792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	33.781
CX04: Test & Evaluation Block 3.0	32.370	4.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	37.003
EX04: Test & Evaluation Block 5.0	20.274	8.784	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	29.058
WX04: Test & Evaluation Capability Development	18.509	71.461	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	89.970
XX04: Concurrent, Test, Training & Ops (CTTO)	36.017	35.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	71.543
YX04: Test & Evaluation	278.457	273.491	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	551.948
MD04: Test Program	0.000	0.000	559.133	0.000	559.133	477.588	453.047	435.093	399.100	Continuing	Continuing
BX05: Targets & Countermeasures Supports Block 2.0	86.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	86.168
CX05: Targets & Countermeasures Supports Block 3.0	43.277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	43.277
WX05: Targets & Countermeasures Supports Capability Development	29.587	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	29.587
YX05: Targets and Countermeasures Core	258.816	405.905	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	664.721
MD05: Targets Program	0.000	0.000	517.065	0.000	517.065	587.940	467.401	409.499	401.416	Continuing	Continuing

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>								
ZX40: <i>Program-Wide Support</i>	23.161	22.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	45.902
MD40: <i>Program-Wide Support</i>	0.000	0.000	37.227	0.000	37.227	40.431	30.923	27.337	29.092	Continuing	Continuing	

Note

MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Projects AX04, CX04, DX04, EX04, WX04, XX04, and YX04 for FY 2009-FY 2010 is now captured in Project MD04. The content previously planned in Projects BX05, CX05, EX05, WX05, and YX05 for FY 2009-FY 2010 is now captured in Project MD05.

A. Mission Description and Budget Item Justification

The FY 2011 program is balanced reflecting the four focus areas of the current Missile Defense Program: to develop, rigorously test, and field an integrated Ballistic Missile Defense System (BMDS) architecture to counter existing regional threats, continue a viable Homeland Defense against rogue threats beyond 2030; demonstrate our proven technologies to show Missile Defense works; and develop technologies to hedge against future missile threat growth.

The best way to dissuade, deter, and defeat ballistic missile threats is through integrated ballistic missile defense capabilities -- weapons, sensors, and Command and Control Battle Management and Communications (C2BMC). A potential or actual attack may cross regions and may fly higher and faster than stand-alone, autonomous capabilities operated by a single Military Service can defend against. Integrated BMD capabilities draw on space-, land-, and sea-based assets operated by multiple Services to provide both the best sensor information on the enemy missile's location and track as well as a more diverse and effective set of weapon options for the Combatant Commander to defeat the attack -- all connected by a unifying C2BMC system. As a result, an effort funded in a Program Element may be critical to the success of efforts in the other Program Elements -- we refer to these connections as ``interdependencies``. Throughout the budget justification materials we have attempted to highlight interdependencies in order to fully explain the relationship between different parts of the proposed program.

As part of the total Ballistic Missile Defense System (BMDS), the Test and Targets Program Element (PE) provides the resources, including targets and countermeasures development, for an integrated system-level test approach, bringing together the capabilities of the BMDS elements.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	
<p>The BMD Test organization executes tests to prove out BMDS Integrated Build C and Build D capabilities of:</p> <ul style="list-style-type: none">Broad Ocean Area Boost Phase and Burn Out State DataC2BMC Generation of Link-16 based BMD System TrackAegis BMD Launch on Link-16 based BMD System TrackTerminal High Altitude Area Defense (THAAD) Extremely High FrequencyWarfighter Elements of Essential InformationPeer-to-Peer Engagement Coordination limited (Aegis-Aegis, THAAD-PATRIOT)Improved Sensor Registration (C2BMC, Aegis)Increased Peer-to-Peer Engagement Coordination <p>The Missile Defense Agency (MDA) recently initiated a systematic review of BMDS testing that will establish a new convention for setting test objectives that go beyond simply exercising newly delivered elements of the system. For the BMDS test Program, MDA is transitioning from ``architecture-based`` test objectives to ``technical parameter-based`` test objectives to anchor models and simulations (M&S). The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations and engagements.</p> <p>Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) are the conditions and events ;where data is obtained from flight and ground tests in order to anchor models and simulations. CECs and ;EMEs are utilized to design ;a test engagement to further advance the understanding and confidence of the modeling and simulation associated with all possible engagements. In FY 2009, BMD System Level CECs and EMEs were identified. By the end of FY10, BMD System Level CECs and EMEs are projected to yield 33% of the data collected in the Test Program reflected in the Integrated Master Test Plan (IMTP). For FY 2011, there are scheduled to be 928 collection opportunities for BMD System Level CECs and EMEs, yielding 47% of the data to be collected in the Test Program reflected in the IMTP. This yield is projected to reach 60% by end of FY 2012, 74% by end of FY 2013, 77% by end of FY 2014, and 94% by end of FY 2015.</p> <p>MDA testing is based on an integrated, comprehensive, and phased test program. MDA ground tests emulates the quality of service (that is, data of sufficient accuracy and low enough latency) of C2BMC and sensors. Testing Element systems, subsystems, and components early in the development is necessary prior to conducting BMD-System level testing. The Element Level testing is funded as part of an Element developmental program and contained in their respective Program Element (PE) submissions. This PE provides consolidated MDA-wide capabilities and resources for the, planning, design, execution, provision of infrastructure, and management</p>		

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<p>of BMD System testing. This PE also provides funding to the Operational Test Agencies (OTA) which are active in all phases of test planning, execution and post-test analysis, to include the development of the IMTP. The Missile Defense Agency IMTP established and documents the test requirements for the BMDS with specific focus on collecting the data needed for the Verification, Validation and Accreditation (VV&A) of the BMDS models and simulations.</p> <p>MDA has a set of Unifying Missile Defense Functions (UMDFs), which increase the effectiveness of the BMD System (including probability of engagement success, increase in defended area and raid size capacity, additional redundancy of architecture, unity of command) through the integration of MDA developed capabilities. These UMDF efforts are Sensor Registration (reporting of sensor errors / biases), Correlation (ensuring the information from multiple sensors seeing a threat relates to the same object), System Track (creating a single engageable track of a threat from multiple reports provided by different land, sea, and space based multiple sensors), Discrimination (identifying object details to determine the target from debris or decoys), Battle Management (combining the best sensors and shooters to ensure the highest probability of a kill), Hit / Kill Assessment (determining if the target selected was destroyed after missile impact), and Communications (providing the worldwide connection of sensors and shooters to command authorities). UMDFs are implemented across the BMDS elements to create and utilize system level data and decisions that allow Combatant Commanders the ability to automatically and manually optimize sensor coverage and interceptor inventory to defend against all ranges of ballistic threats.</p> <p>The Test and Targets Program Element is grouped into three major areas: Test Functional Area and Test Execution; Targets and Countermeasures; and Concurrent Test, Training, and Operations (CTTO). Other test related program content involving Engineering Test Analysis, Facilities Siting, and Environmental Management, and Fielding and Integration is also included within this Program Element.</p> <p>BMDS Test Program Functions:</p> <p>The Directorate for Test centralizes authority, control, and responsibility for all BMDS testing. Plans tests according to BMDS and Element objectives. Provides test ranges, instrumentation, and infrastructure. Develops MDA test policy. Plans and executes BMDS ground and flight tests. Demonstrates integrated BMDS capability. Addresses critical measurements for growth and capability. Collects data for BMDS analysis and manages MDA data centers.</p>		

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<p>Provides documentation of BMDS and Element performance results for use by MDA, the OTAs, the Combatant Commander`s, OSD, Director, Operational Test & Evaluation (DOT&E), and senior decision makers. Provides data and information to anchor the models and simulations used to verify BMDS capabilities and to support BMDS characterization and assessment.</p> <p>Test and Evaluation Contribution to the BMDS:</p> <p>Plan and conduct testing of the BMDS CECs and EMEs** developed by Systems Engineering. Collect and provide test data in order to support the effectiveness, suitability, survivability, and interoperability assessments of the BMDS. Provide infrastructure and environmental compliance necessary to support increasingly complex tests. Provide risk reduction for the BMDS through flight testing to include technology demonstration, algorithm and model validation, and threat characterization. Develop Missile Defense Agency (MDA) BMDS testing policy with common, repeatable processes.</p> <p>** CECs/EMEs are the conditions and events where data is obtained from flight and ground tests in order to anchor system models and simulations.</p> <p>Major Test and Evaluation Goals:</p> <p>Form one BMDS test team that is accountable to the MDA Director and Element program directors. Provide leadership and guidance for the planning, execution, analysis, and reporting of BMD system test events to support system verification. Provide leadership and guidance under for planning, execution, analysis, and reporting of BMD system test events to support system verification. Establish single BMD system test processes that reflect the best practices of existing Element processes. Benchmark and merge existing Elements and executing processes into BMDS processes. Develop Element Lessons Learned and Best Practices to support single BMDS test design processes. Provide required infrastructure and environmental compliance for robust BMD system testing. Ensure test readiness, realism, and accuracy and improve the quality of execution in test programs.</p> <p>BMDS Targets and Countermeasures Program:</p>		

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APPROPRIATION/BUDGET ACTIVITY
0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE
PE 0603888C: *Ballistic Missile Defense Test and Targets*

The BMDS Targets and Countermeasures program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program develops, acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions, with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for Targets and Countermeasures supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

Target Test Execution:

The Target Test Execution functional group provides expertise and consistency in target mission operations, target test designs, and cryptographic management to support effective orchestration and synchronization of the BMDS test program. The Target Test Execution Functional Group consists of Target Launch Operations, Test Engineering and COMSEC management functions. The Test Engineering function synchronizes test activities across target programs and Ballistic Missile Defense System elements. The Test Engineers conduct long range target test planning activities and provide target subject matter experts to Ballistic Missile Defense System test planning activities. The Target Launch Operations group conducts target mission planning, coordinates target range and mission requirements through the Universal Documentation System (UDS) and provides target technical information to the Missile Defense Agency`s General Council to support treaty approvals. The Target Launch Operations Group is the primary link between the target developer and the Ballistic Missile Defense System test community, incorporating target system constraints into the BMDS mission countdown and launch constraints. The Target COMSEC engineers coordinate with target program managers to obtain National Security Agency approvals for target encryption designs and coordinates with MDA Security Operations to obtain authority to operate.

BMDS Targets and Countermeasures Functions:

The Targets and Countermeasures program office centralizes authority, control, and responsibility in executing the development, procurement, and use of targets to support testing of the BMDS.
Provides threat representative targets for the BMDS to verify models and simulations, as well as to verify BMDS performance across a broad range of operational conditions.

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Targets and Countermeasures Contribution to the BMDS:

Provides the BMDS with multiple targets (3 types) across four target classes: Short Range Ballistic Missiles (SRBM), Medium Range Ballistic Missiles (MRBM), Intermediate Range Ballistic Missiles (IRBM), and Intercontinental Ballistic Missiles (ICBM).

Type 1 Targets are simple, baseline configurations

Type 2 Targets have increased capability or complexity

Type 3 Targets are one of a kind design/development or launch activity

Provides the BMDS risk reduction through measurements of flight testing to include technology demonstration algorithms, model validation, and threat and countermeasures characterization.

Collects and provides test data in order to support effectiveness, suitability, and interoperability assessments.

Major Targets and Countermeasures Goals:

Provides MDA cost effective, threat representative all up round targets, missions planning, BMDS modeling and simulation, and execution and launch services.

Concurrent Test, Training and Operations (CTTO)

The Ballistic Missile Defense System (BMDS) Concurrent Test, Training, and Operations (CTTO) provides comprehensive, in-place, geographically dispersed upgrades, testing, training, and sustainment while maintaining operational readiness across the complete Ballistic Missile Defense System (BMDS) Enterprise. This CTTO capability will enable simultaneous cross-element training events in the field during BMDS incremental and spiral development testing and sustained operational readiness conditions without degrading protection capability. The BMDS CTTO capability is required in the JFCC-IMD Modifications Requirement List (MRL).

Concurrent Test, Training and Operations Functions:

Increase confidence in the BMDS through rigorous concurrent test, training, and operations.

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<p>Enable BMDS testing and training in the field without degrading protection capability. Sustain Combatant Commanders BMDS operations while simultaneously supporting concurrent BMDS systems development and acquisition to defend the United States, its deployed forces, friends, and allies. Safely inject consistent high fidelity test and evaluation threat data on operational equipment to exercise all phases of the kill chain using all sensor/shooter combinations. Aid in Aegis Ballistic Missile Defense, THAAD, Ground-based Midcourse Defense, sensors and fire control standardization evaluation and certification for all BMDS personnel and ensures all crews are highly qualified to perform their mission-specific tasks by conducting exercises and wargames executed from actual equipment and networked configurations.</p> <p>Concurrent Test, Training, and Operations Contribution to the BMDS:</p> <p>Enables BMDS sustained operational capability and continued BMDS incremental and spiral development while providing Warfighters the ability to maintain an operational capability, participate in exercises, train, and mission rehearse. Provides comprehensive, in-place, geographically dispersed test, evaluation and training of the complete BMDS. Ensures horizontal and vertical test and evaluation scalability from Element through Global BMDS. Safely injects consistent high fidelity threat and scenario data on operational equipment to exercise all phases of the kill chain using all sensor/shooter combinations. Strategic end-state: BMDS available on-demand for test and evaluation, training, and operations that is transparent to real world operations.</p> <p>Major Concurrent Test, Training and Operations Goals:</p> <p>Develop and implement requirements, plan for and adequately resource through the Agency planning and budgeting process, for the capabilities necessary to achieve a CTTO capability for the BMDS. Increase Warfighter confidence in the BMDS. Enable BMDS testing and training in the field without degrading protection capability. Sustain BMDS operations while simultaneously supporting concurrent BMDS systems development and acquisition without degrading protection capability. Ensure horizontal and vertical CTTO scalability from MDA Element through global BMDS. Safely inject consistent high fidelity threat and scenario data on operational equipment to exercise all phases of the kill chain using all sensor and shooter combinations. Support the development and evaluation of Warfighter Tactics, Techniques, and Procedures at the BMDS level.</p>		

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	911.710	966.752	0.000	0.000	0.000
Current President's Budget	906.952	823.333	1,113.425	0.000	1,113.425
Total Adjustments	-4.758	-143.419	1,113.425	0.000	1,113.425
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-143.419			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	8.945	0.000			
• SBIR/STTR Transfer	-13.703	0.000			
• Other Adjustment Detail	0.000	0.000	1,113.425	0.000	1,113.425

Change Summary Explanation

FY 2009 decrease driven by SBIR/STTR transfer of budget out of the Test and Targets PE.

No FY 2011 data provided in PB10.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
AX04: <i>Test & Evaluation Block 1.0</i>	6.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	6.934
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project AX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Test and Evaluation (T&E) program has six primary purposes: 1) demonstrate and assess Ballistic Missile Defense System (BMDS); 2) demonstrate and assess Block capability; 3) identify areas where technology can increase overall system performance; 4) identify BMDS issues; 5) provide anchoring and validation data for modeling and simulation (M&S) tools; and 6) support early, partial, and full capability readiness decisions.

The Missile Defense Agency (MDA) recently initiated a systematic review of BMDS testing that will establish a new convention for setting test objectives that go beyond simply exercising newly delivered elements of the system. The BMDS Test Program in MDA is transitioning from ``architecture-based`` test objectives to ``technical parameter-based`` objectives to anchor models and simulations (M&S). The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations, engagement.

The BMDS test program: (1) encompasses activities associated with technology developments, demonstrations, experiments, research, deployment, and maintenance activities, (2) describes test methods and approaches the Directorate for Test (DT) uses to test element capabilities to meet the system capabilities delineated in the System Specification Documents and Interface Design Documents, and (3) provides test data to support assessments to document and determine BMDS effectiveness. BMDS testing addresses system wide test objectives, Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) to anchor M&S test environments, testing methodologies (i.e., M&S, Flight Test (FT), Ground Test (GT)), and identifies test resources (e.g., Test Bed, M&S tools, targets, ranges) required to provide test data that when combined with analysis of data from multiple sources, contribute to verification of the BMDS capability.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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Block 1.0 defends the U.S. from Limited North Korean long range threat. The integrated GTs and FTs are planned to provide the necessary data to demonstrate capability deliveries and BMDS capabilities. Block 1.0 is Ground-Based Midcourse Defense centric, focusing on integrating sensors, C2BMC, and other Elements. Sufficient data should be collected to ensure completion of the BMDS Block 1.0 test program in FY09.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test Analysis and Reporting See Description Below <i>FY 2009 Accomplishments:</i> Provided system mission management and test execution of BMDS system level test events: FTG-05, GTX-03x and FTG-05 SPFR. ; <i>FY 2010 Plans:</i> N/A <i>FY 2011 Base Plans:</i> N/A <i>FY 2011 OCO Plans:</i> NA	6.934	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	6.934	0.000	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314

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0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)			PE 0603888C: Ballistic Missile Defense Test and Targets				AX04: Test & Evaluation Block 1.0				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603881C: Ballistic Missile Defense Terminal Defense Segment											
• 0603882C: Ballistic Missile Defense Mid-Course Segment	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: Ballistic Missile Defense Boost Defense Segment	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: Ballistic Missile Defense Sensors	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: Ballistic Missile Defense System Interceptor	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: Ballistic Missile Defense Enabling Programs	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: SPECIAL PROGRAMS - MDA	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: BMD AEGIS	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: SPACE TRACKING & SURVEILLANCE SYSTEM	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: MULTIPLE KILL VEHICLE	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: BMD SYSTEM SPACE PROGRAM	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: BMD C2BMC	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: BMD HERCULES	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: BMD JOINT WARFIGHTER SUPPORT	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: DIRECTED ENERGY RESEARCH	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT AX04: <i>Test & Evaluation Block 1.0</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>											
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0901598C: <i>Management Headquarters-MDA</i>											

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation Block 1.0 BMDS Flight Test AX04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB	8.269	0.000		0.000		0.000		0.000	0	8.269	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		AL, NM, MA, HI & CA											
Test & Evaluation Block 1.0 BMDS Ground Test AX04	Various/ Various	MDIOC, Various CO, CA, AL, VA & MA	19.244	0.000		0.000		0.000		0.000	0	19.244	Continuing
Test & Evaluation Block 1.0 Test Analysis and Reporting AX04	Various/ Various	CTF TA&R Huntsville, AL	10.940	0.000		0.000		0.000		0.000	0	10.940	Continuing
Subtotal			38.453	0.000		0.000		0.000		0.000	0.000	38.453	

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	38.453	0.000	0.000	0.000	0.000	0.000	38.453	

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
FTG-05 (GMD Intercept Flight Test)	■																															
GTD-03 (Full BMDS Distributed Test)		■																														
FTG-05 SPFR (GMD System Post Flight Reconstruction)				■																												
GTX-03e (BMDS Strategic Focused HWIL Test)				■																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT AX04: <i>Test & Evaluation Block 1.0</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
FTG-05 (GMD Intercept Flight Test)	1	2009	1	2009
GTD-03 (Full BMDS Distributed Test)	2	2009	2	2009
FTG-05 SPFR (GMD System Post Flight Reconstruction)	4	2009	4	2009
GTX-03e (BMDS Strategic Focused HWIL Test)	4	2009	4	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				EX05: <i>Targets & Countermeasures Supports Block 5.0</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EX05: <i>Targets & Countermeasures Supports Block 5.0</i>	40.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	40.393
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2009 EX05 funding transitioned to the Targets and Countermeasures Program Element.

Starting in FY 2010 EX05 funding transitioned to YX05 project.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Targets and Countermeasures Supports Block 5.0 See Description Below	40.393	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FTX-06 Event 1 Initiated and/or continued target hardware development, target integration, mission planning, and range coordination for future missions of the following target types: 1 Launch Vehicle (LV-2) 2 Aegis Readiness Assessment Vehicles (ARAV-C) 1 Medium Range Target (MRT) Provided Quality Assurance and Mission Assurance compliance with Agency requirements for design, test, manufacturing, quality, safety, and reliability <i>FY 2010 Plans:</i> NA <i>FY 2011 Base Plans:</i> NA <i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	40.393	0.000	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603906C: <i>REGARDING TRENCH</i>											
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0901598C: <i>Management Headquarters-MDA</i>											

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).

In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3 Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
<p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p> <p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p> <p><u>E. Performance Metrics</u> NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 1 EX05	C/CPAF	Lockheed Martin Denver, CO	3.751	0.000		0.000		0.000		0.000	0	3.751	Continuing
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 2 EX05	TBD/TBD	Naval Surface Warfare Center, Port Hueneme, CA White Sands, NM	14.672	0.000		0.000		0.000		0.000	0	14.672	Continuing
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 3 EX05	TBD/TBD	Sandia National Labs Albuquerque, NM	5.892	0.000		0.000		0.000		0.000	0	5.892	Continuing
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 4 EX05	TBD/TBD	Defense Finance and Accounting Service Indianapolis, IN	3.941	0.000		0.000		0.000		0.000	0	3.941	Continuing
	C/CPAF	Orbital Science	6.000	0.000		0.000		0.000		0.000	0	6.000	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX05: <i>Targets & Countermeasures Supports Block 5.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 5 EX05		Chandler, AZ											
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 6 EX05	C/FFP	Northrop Grumman Space Systems Albuquerque, NM	0.114	0.000		0.000		0.000		0.000	0	0.114	Continuing
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 7 EX05	TBD/TBD	Naval Surface Warfare Center Crane, IN	0.008	0.000		0.000		0.000		0.000	0	0.008	Continuing
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 8 EX05	TBD/TBD	Aerospace Corporation Los Angeles, CA	0.270	0.000		0.000		0.000		0.000	0	0.270	Continuing
	TBD/TBD		2.043	0.000		0.000		0.000		0.000	0	2.043	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 5.0 Targets and Countermeasures Supports Block 5.0 - 9 EX05		United States Army Kwajalein Atoll											
Subtotal			36.691	0.000		0.000		0.000		0.000	0.000	36.691	

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
	36.691	0.000		0.000		0.000		0.000	0.000	36.691	

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
BX04: <i>Test & Evaluation Block 2.0</i>	32.989	0.792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	33.781
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project BX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) T&E program has six primary purposes: 1) demonstrate and assess Ballistic Missile Defense System (BMDS); 2) demonstrate and assess Block capability; 3) identify areas where technology can increase overall system performance; 4) identify BMDS issues; 5) provide anchoring and validation data for modeling and simulation (M&S) tools; and 6) support early, partial, and full capability readiness decisions.

The Missile Defense Agency (MDA) recently initiated a systematic review of BMDS testing that will establish a new convention for setting test objectives that go beyond simply exercising newly delivered elements of the system. The BMDS test Program is MDA is transitioning from ``architecture-based`` test objectives to ``technical parameter-based`` objectives to anchor models and simulations (M&S). The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations, engagement.

The BMDS test program: (1) encompasses activities associated with technology developments, demonstrations, experiments, research, deployment, and maintenance activities, (2) describes test methods and approaches the Directorate for Test (DT) uses to test element capabilities to meet the system capabilities delineated in the System Specification Documents and Interface Design Documents, and (3) provides test data to support assessments to document and determine BMDS effectiveness. BMDS testing addresses system wide test objectives, Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) to anchor M&S, test environments, testing methodologies (i.e., M&S, FT, GT), and identifies test resources (e.g., Test Bed, M&S tools, targets, ranges) required to provide test data that when combined with analysis of data from multiple sources, contribute to verification of the BMDS capability.

Engineering Test Analysis (formerly part of the CTF) conducts system level analysis for all BMD system flight and ground test events and reports the results to MDA Leadership and the BMDS Community. Analysis is performed and reported using the Joint Analysis Team (JAT) process where system analysts and analysts from

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each participating element work together to plan analysis requirements and analyze test results. Comprehensive joint analysis produces cohesive system-level analysis, reduces flight test risk, and identifies operational capabilities and limitations through the use of standardized processes, tools, and products across all test venues. This analysis enables MDA Leadership to make capability delivery declarations to support Warfighter requirements.

Block 2.0 defends allies and deployed forces from short- to medium-range threats in one region/theater. Initial Block 2.0 events test maturing BMDS Elements, including PATRIOT, Aegis BMD (SM-3), and THAAD. Events are identified to address the demonstration of PATRIOT Upper Tier Debris Mitigation capability and Aegis Weapon System SM-2 Block IV Sea-Based Terminal capability. Once baselined, Block 2.0 testing increases the number of concurrent participants across Elements, demonstrating operationally realistic multi-national communications networks, performing directed engagements and engagement coordination among all participants, and assessing increased capability with respect to BMDS measure of effectiveness (MOE). International partners include but are not limited to Japan, Israel, and other potential future BMD International Partners. Block 2.0 lays the ground work upon which Block 5.0 will continue to evolve additional capability for allies and deployed forces.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test & Evaluation Block 2.0 See Description Below <i>FY 2009 Accomplishments:</i> Provided system mission management and test execution of BMDS system level test events: JFTM-02, Pacific Blitz, Stellar Daggers, FTM-17 and FTT-10A. Executed International test Caravan-2 (USFT-3). Conducted Ground Test detailed test planning for FTT-10A Phase 5 (SPFR) and executed the test. Conducted planning for BMDS system level test events FTT-11, FTT-12 and JFTM-03. Initiated and conducted planning for FY10 BMDS system level test events. Supported BMDS Elements in planning and execution of their program specific GTs and FTs. Supported Warfighter requirements, integration of multiple Elements, OTA and test support team into BMDS system flight and ground tests. Refined scenario designs to support CECs and EMEs**.	32.989	0.792	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	32.989	0.792	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>											
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation Block 2.0 BMDS Flight Test BX04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB	21.371	0.792	Oct 2009	0.000		0.000		0.000	0	22.163	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		AL, NM, MA, HI & CA											
Test & Evaluation Block 2.0 BMDS Ground Test BX04	Various/ Various	MDIOC, Various CO, CA, AL, VA & MA	28.186	0.000		0.000		0.000		0.000	0	28.186	Continuing
Test & Evaluation Block 2.0 Test Analysis and Reporting BX04	Various/ Various	CTF TA&R Huntsville, AL	17.519	0.000	Oct 2009	0.000		0.000		0.000	0	17.519	Continuing
Subtotal			67.076	0.792		0.000		0.000		0.000	0.000	67.868	

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	67.076	0.792	0.000	0.000	0.000	0.000	67.868	

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
GTX-03c (Full BMDS Distributed Test)	■																											
GTD-03 (Full BMDS Distributed Test)		■																										
JFTM-02 E1, E2 (Japanese Cooperative Aegis Track Ex/US Sim Engagement)	■																											
FTT-10a (THAAD Operational Intercept Flight Test)		■																										
JDIE-08 (EIT #2) (Arrow HWIL Ground Test - Israeli Cooperative Program)			■																									
FTT-11 (THAAD Intercept Flight Test)				■																								
Caravan 2 USFT 3 (Israeli Program Intercept Flight Test)				■																								
FTT-12 (THAAD Intercept Flight Test)							■																					
JFTM-03 E1, E2 (Japanese Cooperative Aegis Track Ex/US Sim Engagement)				■																								
Caravan 2 USFT 4 (Israeli Program Intercept Flight Test)								■																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX04: <i>Test & Evaluation Block 2.0</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
GTX-03c (Full BMDS Distributed Test)	1	2009	1	2009
GTD-03 (Full BMDS Distributed Test)	2	2009	2	2009
JFTM-02 E1, E2 (Japanese Cooperative Aegis Track Ex/US Sim Engagement)	1	2009	1	2009
FTT-10a (THAAD Operational Intercept Flight Test)	2	2009	2	2009
JDIE-08 (EIT #2) (Arrow HWIL Ground Test - Israeli Cooperative Program)	3	2009	3	2009
FTT-11 (THAAD Intercept Flight Test)	1	2010	1	2010
Caravan 2 USFT 3 (Israeli Program Intercept Flight Test)	4	2009	4	2009
FTT-12 (THAAD Intercept Flight Test)	2	2010	2	2010
JFTM-03 E1, E2 (Japanese Cooperative Aegis Track Ex/US Sim Engagement)	1	2010	1	2010
Caravan 2 USFT 4 (Israeli Program Intercept Flight Test)	3	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>CX04: Test & Evaluation Block 3.0</i>	32.370	4.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	37.003
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project CX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) T&E program has six primary purposes: 1) demonstrate and assess Ballistic Missile Defense System (BMDS); 2) demonstrate and assess Block capability; 3) identify areas where technology can increase overall system performance; 4) identify BMDS issues; 5) provide anchoring and validation data for modeling and simulation (M&S) tools; and 6) support early, partial, and full capability readiness decisions.

The Missile Defense Agency (MDA) recently initiated a systematic review of BMDS testing that will establish a new convention for setting test objectives that go beyond simply exercising newly delivered elements of the system. The BMDS test Program is MDA is transitioning from ``architecture-based`` test objectives to ``technical parameter-based`` objectives to anchor models and simulations (M&S). The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations, engagement.

The BMDS test program: (1) encompasses activities associated with technology developments, demonstrations, experiments, research, deployment, and maintenance activities, (2) describes test methods and approaches the Directorate for Test (DT) uses to test element capabilities to meet the system capabilities delineated in the System Specification Documents and Interface Design Documents, and (3) provides test data to support assessments to document and determine BMDS effectiveness. BMDS testing addresses system wide test objectives, Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) to anchor M&S test environments, testing methodologies (i.e., M&S, flight tests (FT), ground tests (GT)), and identifies test resources (e.g., Test Bed, M&S tools, targets, ranges) required to provide test data that when combined with analysis of data from multiple sources, contribute to verification of the BMDS capability.

Engineering Test Analysis (formerly part of the CTF) conducts system level analysis for all BMD system flight and ground test events and reports the results to MDA Leadership and the BMDS Community. Analysis is performed and reported using the Joint Analysis Team (JAT) process where system analysts and analysts from

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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each participating element work together to plan analysis requirements and analyze test results. Comprehensive joint analysis produces cohesive system-level analysis, reduces flight test risk, and identifies operational capabilities and limitations through the use of standardized processes, tools, and products across all test venues. This analysis enables MDA Leadership to make capability delivery declarations to support Warfighter requirements.

Block 3.0 expands defense of the U.S. to include limited Iranian long-range threats. Block 3.0 testing will occur in GT campaign GT-09 with the HWIL demonstrations of both Fylingdales and Thule. A sensor characterization test, using a foreign cooperative target will occur late in FY09.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test & Evaluation Block 3.0 See Description Below <i>FY 2009 Accomplishments:</i> Provided system mission management and test execution of BMDS system level test events: FTG-05. Completed early planning for other FY10 BMDS test events: BVT-01, FTM-17 (Stellar Avenger), FTG-06. Completed BVT-01 Test Planning Review and preparations for Executive Test Planning Review (ETPR). Conducted initial preparations for FTG-06 Test Planning Review and ETPR. Conducted GTD-03 and GTX-03e. Initiated and conducted planning for FY 2010 BMDS system level test events. Supported BMDS Elements in planning and execution of their program specific GTs and FTs. Supported Warfighter requirements, integration of multiple Elements, OTA and test support team into BMDS system flight and ground tests. Refined scenario designs to support CECs and EMEs**. Developed, integrated, and tested Single Stimulation Framework (SSF) to provide a single event test driver for the BMDS HWIL/Distributed tests events. Provided system-level range support, mission assurance, logistics support, test specific support personnel, test specific communication, support equipment, and permission analysis and studies.	32.370	4.633	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Continue to populate the MARS Analysis Database with most current test data to support analysis and capability assessments.					
** CECs/EMEs are the conditions and events where data is obtained from flight and ground tests in order to anchor system models and simulations.					
<i>FY 2011 Base Plans:</i> N/A					
<i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	32.370	4.633	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT CX04: <i>Test & Evaluation Block 3.0</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>											
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>											
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
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E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation Block 3.0 BMDS Flight Test CX04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB	22.264	0.199	Oct 2009	0.000		0.000		0.000	0	22.463	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		AL, NM, MA, HI & CA											
Test & Evaluation Block 3.0 BMDS Ground Test CX04	Various/ Various	MDIOC, Various CO, CA, AL, VA & MA	18.625	3.559	Oct 2009	0.000		0.000		0.000	0	22.184	Continuing
Test & Evaluation Block 3.0 Test Analysis and Reporting CX04	Various/ Various	CTF TA&R Huntsville, AL	13.765	0.000	Oct 2009	0.000		0.000		0.000	0	13.765	Continuing
Test & Evaluation Block 3.0 Systems Engineering CX04	Various/ Various	-	0.000	0.875	Oct 2009	0.000		0.000		0.000	0	0.875	Continuing
Subtotal			54.654	4.633		0.000		0.000		0.000	0.000	59.287	

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	54.654	4.633	0.000	0.000	0.000	0.000	59.287	

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
FTG-05 (GMD Intercept Flight Test)	■																											
FTG-06 (GMD Intercept Flight Test)							■																					
FTX-07 (GT-200) (Aegis Glory Trip TOO)							■																					
FTX-08 (GT-201) (ABL Glory Trip TOO)								■																				
FTX-09 (GT-202) (ABL Glory Trip TOO)												■																
FTX-11 (GT-203) (Aegis Glory Trip TOO)																■												
Fast Shield II (Warfighter Contingency Ground Test)				■																								
GTD-03 (Full BMDS Distributed Test)			■																									
GTX-03e (BMDS Strategic Focused HWIL Test)				■																								
GTX-04a (Regional Focused HWIL Test)							■																					
GTX-04b (Full BMDS HWIL Test)								■																				
GTX-04c (Full BMDS Distributed Test)												■																

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX04: <i>Test & Evaluation Block 3.0</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
FTG-05 (GMD Intercept Flight Test)	1	2009	1	2009
FTG-06 (GMD Intercept Flight Test)	2	2010	2	2010
FTX-07 (GT-200) (Aegis Glory Trip TOO)	1	2010	1	2010
FTX-08 (GT-201) (ABL Glory Trip TOO)	3	2010	3	2010
FTX-09 (GT-202) (ABL Glory Trip TOO)	4	2010	4	2010
FTX-11 (GT-203) (Aegis Glory Trip TOO)	1	2011	1	2011
Fast Shield II (Warfighter Contingency Ground Test)	3	2009	3	2009
GTD-03 (Full BMDS Distributed Test)	2	2009	2	2009
GTX-03e (BMDS Strategic Focused HWIL Test)	4	2009	4	2009
GTX-04a (Regional Focused HWIL Test)	1	2010	1	2010
GTX-04b (Full BMDS HWIL Test)	2	2010	2	2010
GTX-04c (Full BMDS Distributed Test)	4	2010	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EX04: <i>Test & Evaluation Block 5.0</i>	20.274	8.784	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	29.058
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
In accordance with the Missile Defense Agency revised budget structure, the content planned in Project EX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Test and Evaluation (T&E) program has six primary purposes: 1) demonstrate and assess Ballistic Missile Defense System (BMDS); 2) demonstrate and assess Block capability; 3) identify areas where technology can increase overall system performance; 4) identify BMDS issues; 5) provide anchoring and validation data for modeling and simulation (M&S) tools; and 6) support early, partial, and full capability readiness decisions.

The Missile Defense Agency (MDA) recently initiated a systematic review of BMDS testing that will establish a new convention for setting test objectives that go beyond simply exercising newly delivered elements of the system. The BMDS test Program is MDA is transitioning from ``architecture-based`` test objectives to ``technical parameter-based`` objectives to anchor models and simulations (M&S). The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations, engagement.

The BMDS test program: (1) encompasses activities associated with technology developments, demonstrations, experiments, research, deployment, and maintenance activities, (2) describes test methods and approaches the Directorate for Test (DT) uses to test element capabilities to meet the system capabilities delineated in the System Specification Documents and Interface Design Documents, and (3) provides test data to support assessments to document and determine BMDS effectiveness. BMDS testing addresses system wide test objectives, Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) to anchor M&S test environments, testing methodologies (i.e., M&S, Flight Tests (FT), Ground Tests (GT)), and identifies test resources (e.g., Test Bed, M&S tools, targets, ranges) required to provide test data that when combined with analysis of data from multiple sources, contribute to verification of the BMDS capability.

Engineering Test Analysis (formerly part of the CTF) conducts system level analysis for all BMD system flight and ground test events and reports the results to MDA Leadership and the BMDS Community. Analysis is performed and reported using the Joint Analysis Team (JAT) process where system analysts and analysts from

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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each participating element work together to plan analysis requirements and analyze test results. Comprehensive joint analysis produces cohesive system-level analysis, reduces flight test risk, and identifies operational capabilities and limitations through the use of standardized processes, tools, and products across all test venues. This analysis enables MDA Leadership to make capability delivery declarations to support Warfighter requirements.

Block 5.0 fielding and development efforts are directed toward expanding defense of allies and deployed forces from short-to-intermediate range threats in two regions/theaters. The DT supports the developmental and integration efforts through test and assessment of , CECs and EMEs** attributed to Block 5.0.

** CECs/EMEs are the conditions and events where data is obtained from flight and ground tests in order to anchor system models and simulations.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test & Evaluation Block 5.0 See Description Below <i>FY 2009 Accomplishments:</i> Executed GTD-03, GTX-03c, GTX-03e, GTF-03b (FTX-03 System Post Flight Reconstruction (SPFR)) and FTG-05 SPFR/Phase 5 Executed real world test support events: Fast Shield II, Fast CAAT-East A (Distributed) and B (HWIL and Distributed). Completed detailed test planning for other upcoming FY09 BMDS missions: FTX-06(E1). Completed early planning for other FY10 BMDS test events: FTX-07, FTX-06(E2, E3, E4). Initiated and conducted planning for FY10 and FY11 BMDS system level test events. Supported BMDS Elements in planning and execution of their program specific GTs and FTs. Supported Warfighter requirements, integration of multiple Elements, OTA and test support team into BMDS system flight and ground tests. Refined scenario designs to support CECs and EMEs**.	20.274	8.784	0.000	0.000	0.000
Developed, integrated, and tested Single Stimulation Framework (SSF) to provide a single event test driver for the BMDS HWIL/Distributed tests events.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Lead Joint Analysis Teams (JAT) for BMDS test events listed in the IMTP. Develop, deliver, and brief Quick Look Brief (QLB), Executive QLB (EQLB), Mission Data Review (MDR), and Executive MDR (EMDR) for BMDS test events listed in the IMTP. Incorporate software changes to Modular Analysis and Reporting Suite (MARS) to enhance analyst efficiency and capability.</p> <p>** CECs/EMEs are the conditions and events where data is obtained from flight and ground tests in order to anchor system models and simulations.</p> <p><i>FY 2011 Base Plans:</i> N/A</p> <p><i>FY 2011 OCO Plans:</i> NA</p>					
Accomplishments/Planned Programs Subtotals	20.274	8.784	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)			PE 0603888C: Ballistic Missile Defense Test and Targets				EX04: Test & Evaluation Block 5.0				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603884C: Ballistic Missile Defense Sensors	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: Ballistic Missile Defense System Interceptor	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: Ballistic Missile Defense Enabling Programs	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: SPECIAL PROGRAMS - MDA	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: BMD AEGIS	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: SPACE TRACKING & SURVEILLANCE SYSTEM	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: MULTIPLE KILL VEHICLE	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: BMD SYSTEM SPACE PROGRAM	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: BMD C2BMC	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: BMD HERCULES	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: BMD JOINT WARFIGHTER SUPPORT	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: DIRECTED ENERGY RESEARCH	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: REGARDING TRENCH	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: SEA BASED X-BAND RADAR (SBX)	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>											
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
<p>executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.</p> <p><u>E. Performance Metrics</u> NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation Block 5.0 BMDS Flight Test EX04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB	2.380	0.625	Oct 2009	0.000		0.000		0.000	0	3.005	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		AL, NM, MA, HI & CA											
Test & Evaluation Block 5.0 BMDS Ground Test EX04	Various/ Various	MDIOC, Various CO, CA, AL, VA & MA	24.435	8.159	Oct 2009	0.000		0.000		0.000	0	32.594	Continuing
Test & Evaluation Block 5.0 Test Analysis and Reporting EX04	Various/ Various	CTF TA&R Huntsville, AL	1.262	0.000	Oct 2009	0.000		0.000		0.000	0	1.262	Continuing
Subtotal			28.077	8.784		0.000		0.000		0.000	0.000	36.861	

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	28.077	8.784	0.000	0.000	0.000	0.000	36.861	

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
GTX-04a (Regional Focused HWIL Test)				■																								
FTX-06 E2, E3, E4 (Aegis Simulated Intercept Flight Test)				■																								
FCE-C Distributed (Regional Distributed Contingency Test)				■																								
FCE-C HWIL (Regional HWIL Contingency Test)				■																								
FTM-17 (Aegis Track Ex Risk Reduction for JFTM-03)			■																									
FTX-06 E1 (Aegis Track Ex)			■																									
FTX-07 (GT-200) (Aegis Glory Trip TOO)					■																							
GTX-04b (Full BMDS HWIL Test)					■																							
GTX-04c (Full BMDS Distributed Test)								■																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT EX04: <i>Test & Evaluation Block 5.0</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
GTX-04a (Regional Focused HWIL Test)	1	2010	1	2010
FTX-06 E2, E3, E4 (Aegis Simulated Intercept Flight Test)	1	2010	1	2010
FCE-C Distributed (Regional Distributed Contingency Test)	1	2010	1	2010
FCE-C HWIL (Regional HWIL Contingency Test)	1	2010	1	2010
FTM-17 (Aegis Track Ex Risk Reduction for JFTM-03)	4	2009	4	2009
FTX-06 E1 (Aegis Track Ex)	4	2009	4	2009
FTX-07 (GT-200) (Aegis Glory Trip TOO)	2	2010	2	2010
GTX-04b (Full BMDS HWIL Test)	2	2010	2	2010
GTX-04c (Full BMDS Distributed Test)	4	2010	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT WX04: <i>Test & Evaluation Capability Development</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>WX04: Test & Evaluation Capability Development</i>	18.509	71.461	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	89.970
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project WX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Test and Evaluation (T&E) program has six primary purposes: 1) collect data to demonstrate and assess the Ballistic Missile Defense System (BMDS); 2) collect data to demonstrate and assess the block capability; 3) identify areas where technology can increase system performance; 4) identify BMDS issues; 5) provide anchoring and validation data for modeling and simulation (M&S) tools; and 6) support early, partial, and full capability readiness decisions.

The BMDS developmental and operational test program encompasses all T&E activities associated with technology developments, demonstrations, experiments, research, deployment, and maintenance activities. The T&E program describes test methods and approaches that the Directorate for Test uses to test element capabilities to meet the system-necessary capabilities delineated in the System Specification Documents and Interface Design Documents. The MDA T&E program provides test data to support assessments used to document and determine BMDS effectiveness.

T&E Capability Development funding supports detailed planning and execution of flight test events plus test analysis and reporting functions: Capability development provides funding for efforts which address technologies, functionalities and capabilities not mature enough for fielding under the Block Construct, are experimental in nature or do not support one of the five blocks. The Directorate for Test supports the developmental and integration efforts through test and assessment of Critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) to anchor M&S. Funding provides manpower, range and logistics support for system Flight Test (FT) planning, integration, execution, data collection, and analysis and range and auxiliary sensor support. Funding supports overlaying system-level objectives onto element flight tests (FTs) where appropriate and non-element specific testing. Funding also support BMDS Flight Test Targets of Opportunity (TOO) and experimental flight tests to support Capability Development.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
<p>BMD System Flight Tests (FTs): Capability Development programs such as STSS, ABL, Arrow, KEI, etc. examine the capability of the BMDS to detect, track, and engage targets. More advanced tests are planned that will provide data to support verification of more complex CECs and EMEs. These projects will provide analysis of each system test event through the Joint Analysis Team (JAT). BMDS Flight Tests related to Capability Development include but are not limited to:</p> <p>Emerging Technologies: programs that develop technologies and test future capabilities; including programs such as STSS and ABL. Other programs that complement the BMDS such as Patriot are included. Certain technologies in early development and potential future capabilities such as Next Generation Sensor Producibility (NGSP) and Near Field Infrared Experiment (NFIRE) are tested in this program.</p> <p>Targets of Opportunity (TOO)s: Events (e.g., Minuteman FT, Air Force Space Command operations, or approved foreign launches) that afford the opportunity to exercise some portion of BMDS, conduct on-board and off-board experiments, and gather phenomenology data on representative objects and events. These events are categorized as domestic, foreign co-operative, or non-cooperative tests. TOOs support risk reduction through early identification of integration issues. Specifically, TOOs provide a cost-effective means of exercising and collecting data on component interfaces in real-time; exercising communication links and connectivity, real-time element loading, timing, cueing, tracking capabilities, algorithm development, and test checklists for the Integrated Test Team.</p> <p>Critical Measurements and Counter Measures (CMCM) FTs: Events that provide a venue for risk reduction, addressing phenomenology (understanding the physics of what was observed and its effects on BMDS sensors), countermeasures and counter-countermeasures requirements, providing critical measurements to support development and validation of algorithms, M&S, discrimination, and new technology demonstrations. CMCM FTs augment various MDA and Elements test programs and ensure a coherent, complete, cost effective, and disciplined approach to collecting data/measurements to support characterization of the BMDS mission space (i.e., provide an understanding of how the BMDS visible, infrared and radar sensors perform when observing ballistic missile targets and countermeasures during flight).</p> <p>Engineering Test Analysis (formerly part of the CTF) conducts system level analysis for all BMD system flight and ground test events and reports the results to MDA Leadership and the BMDS Community. Analysis is performed and reported using the Joint Analysis Team (JAT) process where system analysts and analysts from each participating element work together to plan analysis requirements and analyze test results. Comprehensive joint analysis produces cohesive system-level analysis, reduces flight test risk, and identifies operational capabilities and limitations through the use of standardized processes, tools, and products across all test venues. This analysis enables MDA Leadership to make capability delivery declarations to support Warfighter requirements.</p> <p>Target certification assures that a target recommended for certification meets the mission and test objectives with the target characteristics identified for that test event. The Target Accreditation Report, the basis for certification, compares the target's capabilities against the capabilities required by the BMDS Target Requirements Document and the test event described in the IMTP (Integrated Master Test Plan).</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
<p>The WX04 budget project also includes Modeling and Simulation efforts as detailed below.</p> <p>The mission of the Modeling and Simulation (M&S) program is to engineer and deliver validated, integrated simulation solutions for the primary uses of Ballistic Missile Defense System (BMDS) Performance Assessment and Ground Test, with additional capability to support BMDS-Element integration, missile defense Wargames and exercises (national and international), BMDS training, and BMDS concept analysis. In this role, M&S provides cost-effective and proactive tools to assess the fielded capabilities of the BMDS, analyze and foster accelerated integration of Element and component capability into the BMDS, and is a valuable training and planning tool for Warfighting Concept of Operations and missile defense planning.</p> <p>BMDS Digital Modeling and Simulation:</p> <p>BMDS Digital Modeling and Simulation produces and integrates digital M&S assets for use with the Digital Simulation Architecture to form system-level constructive simulations for full-envelope BMDS performance assessment with surrogate capability for BMDS ground tests. Digital M&S creates system-level stimulus for Element integration testing and system-level M&S capabilities which augment BMDS flight tests. Other mission areas include digital M&S capability for system-level concept definition and exploration; real-time, interactive system-level M&S capability to support Warfighter-in-the-loop Wargaming, training and exercises, and capabilities to support rapid, flexible scenario development and execution control.</p> <p>Verification, Validation, and Accreditation (VV&A): Accredited system-level models and simulations (M&S) anchored to real-world events, are required to perform an accurate and comprehensive assessment of the BMDS. The implementation and documentation system-level M&S verification, validation, and accreditation will establish credibility and increase confidence in the M&S that provides a cornerstone for the Agency's simulation-based acquisition approach. The individual MDA elements and components are responsible for conducting the VV&A of their own models and providing that evidence to system-level VV&A for each event. This includes benchmarking their M&S to higher fidelity simulations, anchoring to real world events, and planning and conducting post-flight reconstruction. Verifying, validating and, accrediting multiple MDA events to include Performance Assessment, Ground Tests which supports BMDS fielding decisions, and tier one Combatant Commanders (COCOM) exercises will be performed. Development and promulgation of system-level VV&A policies and standards, benchmarked against leading industry practices will be assessed. Providing model, simulation, and event credibility across Performance Assessment, Ground Tests, Element Integration, Wargames and Exercises, Training, will be conducted and all associated infrastructure that supports BMDS fielding decisions. Through the consistent practice of verifying model representations benchmarked to other higher-fidelity models, and anchored to operational tests, increase model confidence and acceptability by outside agencies like the Operational Test Agency will be achieved. The implementation of the Model-Test-Model process requires close collaboration with the test community, and the capability to predict system-level test results and perform post-flight test reconstruction in order to improve model confidence and future performance. Robust VV&A</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>				
requires flexibility and capability to explore new BMDS concepts, and evaluate new Element representations to identify and correct flaws early in the development process. BMDS HWIL Modeling and Simulation:						
<p>BMDS HWIL Modeling and Simulation is responsible to provide and integrate the BMDS system-level HWIL stimulation framework to support full-envelope BMDS ground test, flight test, and training events based upon Agency and warfighter needs. BMDS HWIL provides development, integration, and test funding to both MDA and non-MDA Elements participating in the BMDS ground test campaigns. BMDS HWIL also provides the core Lethality and Phenomenology models for use in analysis of BMDS and Element mission requirements.</p>						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test & Evaluation Capability Development See Description Below <i>FY 2009 Accomplishments:</i> Executed BMDS Target of Opportunity event GT-198. Executed International tests AST-13. Initiated planning for FY10 BMDS system level test events. Supported BMDS Elements in planning and execution of their program specific GTs and FTs. Conducted early planning for FY10 major BMDS system level test events. Supported Warfighter requirements, integration of multiple Elements, OTA and test support team into BMDS system flight and ground tests. Refined scenario designs to support CECs and EMEs**. Developed, integrated, and tested Single Stimulation Framework (SSF) to provide a single event test driver for the BMDS HWIL/Distributed tests events. Provided system-level range support, mission assurance, logistics support, test specific support personnel, test specific communication, support equipment, and permission analysis and studies. Performed system-level analysis and interoperability analysis for FCE-A, FCE-B, AST-13, and GT-199. Developed Analysis Execution Plans (AEP) for GT-198, FCE-A, FCE-B, AST-13, and GT-199.		17.876	2.164	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> NA						
Target Certification See Description Below <i>FY 2009 Accomplishments:</i> Target certification conducted. Certification assures that a target meets mission and test objectives with the proper target characteristics that were identified for a particular test event. Target Accreditation Reports were issued that compare the target's capabilities against the capabilities required by the BMDS Target Requirements Document and the test event described in the IMTP (Integrated Master Test Plan). <i>FY 2010 Plans:</i> Conduct Target Certification to ;assure that a target meets mission and test objectives with the proper target characteristics that were identified for a particular test event. Issue Target Accreditation Reports that compare the target's capabilities against the capabilities required by the BMDS Target Requirements Document and the test event described in the IMTP (Integrated Master Test Plan). <i>FY 2011 Base Plans:</i> N/A <i>FY 2011 OCO Plans:</i> NA		0.633	0.679	0.000	0.000	0.000
Engineering Test Analysis See Description Below		0.000	68.618	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> NA					
<i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	18.509	71.461	0.000	0.000	0.000

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT WX04: <i>Test & Evaluation Capability Development</i>				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603913C: <i>ISRAELI COOPERATIVE</i>											
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The DT directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

The M&S acquisition strategy is to develop, acquire and deliver the integrated architectures/frameworks while the Elements develop and deliver models of their system. The Digital and HWIL product centers integrate this suite of Elements models into the overall simulation framework achieving a simulated BMDS wide capability while maintaining the open architecture standards. M&S achieves this end-state via close collaboration between its integrating contractor teams (Digital and HWIL) and those of the Element prime contractors, with additional technical standards and engineering oversight provided by FFRDC and UARCs.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	WX04: <i>Test & Evaluation Capability Development</i>

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Test Analysis Single Stimulation Framework Increment 1 Phase 2.0 WX04	Various/ Various	- -	0.000	46.538	Oct 2009	0.000		0.000		0.000	0	46.538	Continuing
Engineering Test Analysis Digital M&S and VV&A WX04	Various/ Various	- -	0.000	22.080	Oct 2009	0.000		0.000		0.000	0	22.080	Continuing
Subtotal			0.000	68.618		0.000		0.000		0.000	0.000	68.618	

Remarks

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation Capability Development BMDS Flight Test WX04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB AL, NM, MA, HI & CA	12.943	2.164		0.000		0.000		0.000	0	15.107	Continuing
Test & Evaluation Capability Development Test Analysis and Reporting WX04	Various/ Various	CTF TA&R Huntsville, AL	8.323	0.000		0.000		0.000		0.000	0	8.323	Continuing
Target Certification Target Certification WX04	Various/ Various	USASMDC Huntsville, AL	0.633	0.679	Oct 2009	0.000		0.000		0.000	0	1.312	Continuing
Subtotal			21.899	2.843		0.000		0.000		0.000	0.000	24.742	

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
NA

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	21.899	71.461	0.000	0.000	0.000	0.000	93.360	

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
PATRIOT 7-2 (PATRIOT Intercept Flight Test)		■																										
FTL-01 E1, E2 (ABL Intercept Flight Test)							■																					
GT-198 (Glory Trip TOO)		■																										
GT-195 (Glory Trip TOO)				■																								
PIM-01 (6.5-2 PATRIOT Intercept Flight Test)							■																					
JUNO RRF (HERA Risk Reduction Flight)							■																					
FTS-01 (STSS Demonstrator Flight Test)																												
FTL-02 (ABL Intercept Flight Test)																												
ATM-48 (PATRIOT Intercept Flight Test)							■																					
FCE-C Distributed (Regional Distributed Contingency Test)							■																					
FCE-C HWIL (Regional HWIL Contingency Test)							■																					
FTX-07 (GT-200) (Aegis Glory Trip TOO)							■																					
FTX-08 (GT-201) (ABL Glory Trip TOO)																												
FTX-09 (GT-202) (ABL Glory Trip TOO)																												
FTX-10 (Cobra Dane Tracking Test)																												
FTX-11 (GT-203) (Aegis Glory Trip TOO)																												
GT-199 (Glory Trip TOO)				■																								
GTX-04b (Full BMDS HWIL Test)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
PATRIOT 6.5-2 (PATRIOT Intercept Flight Test)																												
PATRIOT 7-2A (PATRIOT Intercept Flight Test)						█																						
STSS-SVL (STSS Development Test)				█																								

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PATRIOT 7-2 (PATRIOT Intercept Flight Test)	2	2009	2	2009
FTL-01 E1, E2 (ABL Intercept Flight Test)	2	2010	2	2010
GT-198 (Glory Trip TOO)	1	2009	1	2009
GT-195 (Glory Trip TOO)	4	2009	4	2009
PIM-01 (6.5-2 PATRIOT Intercept Flight Test)	1	2010	1	2010
JUNO RRF (HERA Risk Reduction Flight)	1	2010	1	2010
FTS-01 (STSS Demonstrator Flight Test)	3	2010	3	2010
FTL-02 (ABL Intercept Flight Test)	3	2010	3	2010
ATM-48 (PATRIOT Intercept Flight Test)	1	2010	1	2010
FCE-C Distributed (Regional Distributed Contingency Test)	1	2010	1	2010
FCE-C HWIL (Regional HWIL Contingency Test)	1	2010	1	2010
FTX-07 (GT-200) (Aegis Glory Trip TOO)	1	2010	1	2010
FTX-08 (GT-201) (ABL Glory Trip TOO)	3	2010	3	2010
FTX-09 (GT-202) (ABL Glory Trip TOO)	4	2010	4	2010
FTX-10 (Cobra Dane Tracking Test)	4	2010	4	2010
FTX-11 (GT-203) (Aegis Glory Trip TOO)	1	2011	1	2011
GT-199 (Glory Trip TOO)	3	2009	3	2009
GTX-04b (Full BMDS HWIL Test)	3	2010	3	2010

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX04: <i>Test & Evaluation Capability Development</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
PATRIOT 6.5-2 (PATRIOT Intercept Flight Test)	2	2010	2	2010
PATRIOT 7-2A (PATRIOT Intercept Flight Test)	2	2010	2	2010
STSS-SVL (STSS Development Test)	4	2009	4	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>	36.017	35.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	71.543
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project XX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The purpose of the BMDS Concurrent Test, Training, and Operations (CTTO) effort is to address the Unified Combatant Commanders high priority requirement for a capability to sustain BMDS operations while simultaneously supporting concurrent research, development, test, and evaluation; maintenance; training; and system upgrade activities without degrading the ability to defend the United States, its deployed forces, friends, and allies. CTTO will enable continued BMDS incremental and spiral development and testing while providing the Unified Combatant Commanders the ability to maintain their operational capability, participate in exercises, train, and rehearse mission scenarios while the system is in an operational state or ``on alert.`` The functions of the CTTO are to:

Increase confidence in the BMDS through rigorous concurrent test, training, and operations.

Enable BMDS testing and training in the field without degrading protection capability.

Sustain Unified Combatant Commanders BMDS operations while simultaneously supporting concurrent BMDS systems development and acquisition to defend the United States, its deployed forces, friends, and allies.

Safely inject consistent high fidelity test and evaluation threat data on operational equipment to exercise all phases of the kill chain using all sensor/shooter combinations.

Aid in Aegis Ballistic Missile Defense, Terminal High Altitude Air Defense, Ground-based Midcourse Defense, Sensors, and Fire Control standardization evaluation and certification for all BMDS personnel and ensures all crews are highly qualified to perform their mission-specific tasks by conducting exercises and wargames executed from actual equipment and networked configurations.

The Distributed Multi-Echelon Training System (DMETS) will specifically addresses the high priority Unified Combatant Commanders requirement to conduct distributed, high fidelity, and end-to-end strategic and operational training for missile defense operations that incorporates missile warning activity in any or all of the

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>				
BMDS Elements. The system will allow for scalable testing of the BMDS over the operational architecture as well as allow operators to train where they fight using a parallel architecture either physically separated or logically separated from the operational one; training will be scalable as well; from individual BMD assets to regional BMDS capabilities to the full BMDS global community.						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
DMETS See Description Below <i>FY 2009 Accomplishments:</i> Delivered the Enterprise Service Framework (ESF) software version 1.0 capability. Operated and Sustained DMETS training and exercise suites and associated hardware and software at 80 hours per week. ; Continued providing BMD training events across the Unified Combatant Commands while maintaining the existing architecture. <i>FY 2010 Plans:</i> Operate and Sustain DMETS training and exercise suites and associated hardware and software at 80 hours per week. Continue providing BMD training events across the Unified Combatant Commands while maintaining the existing architecture. <i>FY 2011 Base Plans:</i> FY 2011 plans are captured in Budget Project MD04 <i>FY 2011 OCO Plans:</i> NA		10.361	9.066	0.000	0.000	0.000
CTTO See Description Below		25.656	26.460	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Demonstrated an implementation of situational awareness screens for Configuration Awareness (BMDS Event Activity Monitor (BEAM))</p> <p>Demonstrated a core network prototype, which included evaluation of safety control for concurrency using physical and virtual separation techniques (data separation), differentiated Quality of Services (data accuracies and latencies), and Network Management and Control (including controls for removal and attachment of components to the network).</p> <p><i>FY 2010 Plans:</i></p> <p>Demonstrate initial network architecture and network enhancements, C2BMC Network Interface Processor Plus (CNIP+) and BEAM with representations of Element interactions.</p> <p>Coordinate and integrate BMDS CTTO Element-level activities and capabilities for the Change Notice to implement CTTO content into the technical baseline</p> <p>Prototype, if dictated by the Agency system engineering verification process, impacted Element implementations to validate requirements development process.</p> <p>As an initial implementation, plan, architect, design, and deploy, a Regional Test Network to support Agency integration of it Integrated Master Test Plan</p> <p><i>FY 2011 Base Plans:</i></p> <p>NA</p> <p><i>FY 2011 OCO Plans:</i></p> <p>NA</p>						
Accomplishments/Planned Programs Subtotals		36.017	35.526	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The CTTO systems design and acquisition will follow the MDA's capability-based acquisition strategy that emphasizes fielding capabilities that address particular threats. The design and development of the BMDS CTTO capability is a collaborative effort. The government is the task manager to integrate the technical effort and manage the contracting efforts. The government, using existing competitively awarded contract structures, established a CTTO Project Office, determine BMDS CTTO requirements and standardization, determine BMDS Core Protocol and Standards, upgrades, technology insertion points, and synchronize BMDS Element level activities, training exercises and events and capabilities. The long term acquisition strategy is to normalize CTTO requirements into existing contract structures. The intent is to develop a fully capable CTTO capability that provides comprehensive, in-place, geographically dispersed test, training and evaluation of the complete BMDS. The CTTO approach supports evolutionary development, continuously building upon demonstrated capabilities to advance the BMDS capabilities.

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DMETS Integrated Training Operation and Sustainment XX04	C/CPAF	MDIOC/GM/Boeing/MNTB Colorado Springs, CO/Huntsville, AL/Arlington, VA	13.914	7.100	Jul 2010	0.000		0.000		0.000	0	21.014	Continuing
DMETS Expand Integration Training Audience XX04	C/CPAF	MDIOC/MNTB Colorado Springs, CO/Arlington, VA	2.274	0.650	Jul 2010	0.000		0.000		0.000	0	2.924	Continuing
DMETS Improve Training Availability XX04	C/CPAF	MDIOC/MNTB Colorado Springs, CO/Arlington, VA	3.114	0.600	Jul 2010	0.000		0.000		0.000	0	3.714	Continuing
DMETS Improve Training Effectiveness XX04	C/CPAF	MDIOC/MNTB Colorado Springs, CO/Arlington, VA	2.964	0.610	Jul 2010	0.000		0.000		0.000	0	3.574	Continuing
DMETS Improve Training Quality XX04	C/CPAF	MDIOC/MNTB Colorado Springs, CO/Arlington, VA	0.594	0.106	Jul 2010	0.000		0.000		0.000	0	0.700	Continuing
CTTO CTTO Rapid Prototyping XX04	C/CPAF	MDIOC/GM/Boeing/MNTB Colorado Springs, CO/Arlington, VA/Huntsville, AL	35.007	12.460	Jul 2010	0.000		0.000		0.000	0	47.467	Continuing
CTTO Initial CTTO Staging and Integration XX04	C/CPAF	MDIOC/MNTB Colorado Springs, CO/Arlington, VA	8.297	13.000	Jul 2010	0.000		0.000		0.000	0	21.297	Continuing
	C/CPAF	MDIOC/MNTB	3.223	0.500	Apr 2010	0.000		0.000		0.000	0	3.723	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CTTO Initial Training with Operations and Test XX04		Colorado Springs, CO/Arlington, VA											
CTTO Initiate Fielding to COCOM's XX04	C/CPAF	MNTB Arlington, VA	7.152	0.500	Apr 2010	0.000		0.000		0.000	0	7.652	Continuing
Subtotal			76.539	35.526		0.000		0.000		0.000	0.000	112.065	

Remarks
NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
	76.539	35.526		0.000		0.000		0.000	0.000	0.000	112.065	

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: *Research, Development, Test & Evaluation, Defense-Wide*
 BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE

PE 0603888C: *Ballistic Missile Defense Test and Targets*

PROJECT

XX04: *Concurrent, Test, Training & Ops (CTTO)*

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Expand Training Audience to Aegis BMD	■	■																										
Integrate THAAD Operator Training			■	■																								
Operated DMETS 50 Hours a Week	■	■																										
Sustain DMETS 50 Hours a Week			■	■																								
Operated DMETS 76 Hours a Week					■	■																						
Sustain DMETS 76 Hours a Week							■	■																				
Demonstrate Stimulation for AN/TPY-2			■	■																								
Demonstrate Improved Truth Network			■	■																								
Initiate BMDS Build E Requirements					■	■																						
Prototype Element CTTO Instantiations							■	■																				
CTTO Functionality Processes/Procedures							■	■																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT XX04: <i>Concurrent, Test, Training & Ops (CTTO)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Expand Training Audience to Aegis BMD	1	2009	2	2009
Integrate THAAD Operator Training	3	2009	4	2009
Operated DMETS 50 Hours a Week	1	2009	2	2009
Sustain DMETS 50 Hours a Week	3	2009	4	2009
Operated DMETS 76 Hours a Week	1	2010	2	2010
Sustain DMETS 76 Hours a Week	3	2010	4	2010
Demonstrate Stimulation for AN/TPY-2	3	2009	4	2009
Demonstrate Improved Truth Network	3	2009	4	2009
Initiate BMDS Build E Requirements	1	2010	2	2010
Prototype Element CTTO Instantiations	3	2010	4	2010
CTTO Functionality Processes/Procedures	3	2010	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX04: <i>Test & Evaluation</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
YX04: <i>Test & Evaluation</i>	278.457	273.491	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	551.948
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content planned in Project YX04 in FY 2009-FY 2010 is captured in Project MD04 in FY 2011-FY 2015.

A. Mission Description and Budget Item Justification

The Test and Evaluation (T&E) projects provide consolidated MDA capabilities and resources to support the management and execution of Ballistic Missile Defense System (BMDS) and Element-level testing. With the evolution of the BMDS, testing needs have expanded beyond those of the individual Elements to include testing of BMDS Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) to anchor modeling and simulations. The Directorate for Test centralizes all authority and responsibility for all BMDS testing. The Directorate for Test relies on the BMD System Engineering to provide the system test objectives to define the test architecture. The Directorate for Test plans and executes BMD system test events. The Directorate for Test also develops the necessary test policy, test plans, and test infrastructure to conduct an effective test program. Directorate for Test activities are grouped into five functional areas: Test Resources; Test Operations; Test Planning and Design; Test Policy, Budget and Personnel; and Test Readiness and Truth. Other test related program content involving Facilities, Siting, and Environmental Management, and Fielding and Integration is also included within this T&E project.

Test Resources

The Test Resources Program develops, sustains, and modernizes the core T&E assets of the BMDS Test Bed to support System and Element-level Flight and Ground testing and assessment. This includes development, sustainment and modernization of the MDA mobile instrumentation tool box, BMD-unique ground test facilities, and MDA data centers. The mobile instrumentation tool box includes telemetry, radar, and optical data collection assets such as four (4) test aircraft equipped with optical sensors, mobile telemetry systems, the Kwajalein Mobile Range Safety System, the Mobile Launch Platform (MLP), the Telemetry and Instrumentation Ship and the Pacific Tracker X-Band Transportable Radar Ship (under development). These assets are required to collect the spatial data needed to execute the Flight Tests safely and collect the measurement data needed for BMDS performance evaluation. The Test Resources Program also makes focused investments to improve MDA-unique capability at Major Range & Test Facility Base activities. All of these assets enable robust Flight Testing and support mandatory safety and analysis data requirements in support of BMDS test activities. Because this core test capability is corporately sustained, the BMDS Test programs or the individual BMDS Elements pay only the direct costs associated with their specific test efforts. The Test Resources Program also provides for the development, sustainment and modernization

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX04: <i>Test & Evaluation</i>
<p>of Element Hardware-In-the-Loop (HWIL) representations to support robust system-level ground testing. The Test Resources program also provides continuous improvement, expansion, and sustainment of System Ground Test Infrastructure. The Test Resources Program uses the Systems Engineer's products as the basis to evaluate the future resource needs of the BMDS. An annual analysis of data collection requirements and test scenarios versus existing and planned test assets identifies the test infrastructure needed to test the BMDS Elements as part of the test campaign. The Test Resources Program also includes the Pacific Range Support Team (PRST) to support the BMDS Test teams with range mission planning and execution expertise, development of common standards and mission assurance, and to recommend development or modification of mobile instrumentation to support MDA testing. We are expanding the PRST management philosophy to our ground test assets and this philosophy will include test resource-related improvements to training and integration efforts.</p> <p>Test Operations</p> <p>Test Operations executes the unified BMD test process. The Test Operations function prepares detailed plans and conducts all BMD system test events in conjunction with MDA and Non-MDA Elements. The Test Operations function consolidates personnel, processes, and resources in the elements and across MDA involved in flight and ground test execution into a cohesive team, relying heavily upon BMDS system test objectives determined by Systems Engineering. Engineering Test Analysis conducts system level analysis for all BMD system flight and ground test events and reports the results to MDA Leadership and the BMDS Community. Analysis is performed and reported using the Joint Analysis Team (JAT) process where system analysts and analysts from each participating element work together to plan analysis requirements and analyze test results. Comprehensive joint analysis produces cohesive system-level analysis, reduces flight test risk, and identifies operational capabilities and limitations through the use of standardized processes, tools, and products across all test venues. This analysis enables MDA Leadership to make capability delivery declarations to support Warfighter requirements.</p> <p>Test Planning and Design</p> <p>The Test Planning and Design program employs a three-phased strategy which will result in a process that produces an event-oriented test plan in the form of the BMDS Integrated Master Test Plan (IMTP) that extends out as many years as necessary to collect all data required to demonstrate specific missile defense functions. Phase I - Test Requirements Generation is the process by which the Director of Engineering, with support from Element programs, develops a comprehensive set of prioritized and configured test requirements. The IMTP contains the system-level objectives along with the critical Engagement Conditions (CECs) and Empirical Measurement Events (EMEs) assigned to each event for data collection and model-anchoring purposes. Phase II - Test Design and Planning is designed to realize program objectives within current and future requirements, without imposed cost or resource constraints. Phase III - Aligned and Executable Baseline is to align the Phase II test designs so they are executable, affordable and efficient. The steady state test requirements development process requires the overall three phase approach to be conducted in concert with all supporting organizations. New test requirements will enter the process as the result of new BMDS functionality, test event data collection shortfalls, and other circumstances. The primary output of this process is the IMTP, which will be updated quarterly. Test Planning and Design will also develop detailed test designs and perform necessary feasibility analysis supporting MDA System Engineering, OTA, and Warfighter Test Objectives. The Test Planning and Design organization consists of three sub-components: Test Design, responsible for design of both ground and flight tests; Test Planning, responsible for planning</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX04: <i>Test & Evaluation</i>
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test events; and Test Integration, primarily responsible for configuration management of the IMTP and BMDS Test Baseline. The Test Planning and Design directorate chairs the Test Planning Working Group (TPWG).

Test Policy, Budget, and Personnel

The Test Policy, Budget, and Personnel program supports the development and implementation of test policy, standards, directives, and procedures for creating unified BMD test processes which reflect the best practices of existing element processes. The Test Policy, Budget, and Personnel program also develops training and certification plans and International policy for the Directorate for Test. The Test Policy, Budget, and Personnel program provides policy and guidance on Knowledge Management (KM) practices, establishing standardized documentation for test planning, test reporting, and data archiving. The program also develops, coordinates, and manages Directorate for Test inputs into the overall BMDS Program Plans, Directorate for Test Base Closure and Realignment Commission (BRAC) related Transition Planning, and relocation of personnel. The program also coordinates Directorate for Test budget planning and execution activities, as well as Test Functional Area (TFA) activities. The Test Policy, Budget, and Personnel program supports two major assessments of the BMDS: The BMDS Capability Assessment (BCA) Team and System-Level Operational Test Agencies` (OTA) assessments. The BCA Team provides a non-advocate, independent assessment of the BMDS throughout its life cycle. Where possible, BCA Team members will recommend changes to the current test program and mitigation efforts to reduce performance degradation, implementation, and integration risks. Operational Test Agency (OTA) funding is consolidated within the Directorate for Test so they can provide operational assessments of the BMDS. The OTA maintains their assessments in the OTA database, which is a living document of the BMDS assessment.

Test Readiness and Truth

The Test Readiness and Truth program (formerly known as the BMDS Readiness program) is responsible for improving the quality, design, execution, and efficiency of the BMDS test programs in order to produce complete truth data products. The Test Readiness and Truth program is responsible for assuring readiness, training test personnel, ensuring realism, assessing adequacy, and tracking test risk process. The Test Readiness and Truth program will assess readiness processes and metrics for these programs and evaluate the outcomes. Test Readiness and Truth increases the efficiency and effectiveness of the BMDS test program by integrating key strategies and objectives into the Directorate for Test program by identifying and improving test processes. Test Readiness and Truth assesses test adequacy by conducting: Test assessments to identify data voids and unfulfilled objectives; Test design reviews to ensure tests are configured to support assessment activity; and Mission planning meetings to ensure the proper data will be collected for analysis and assessment.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test Resources	131.220	128.796	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>		PROJECT YX04: <i>Test & Evaluation</i>	
B. Accomplishments/Planned Program (\$ in Millions)					
See Description Below					
<p><i>FY 2009 Accomplishments:</i></p> <p>Developed, maintained, integrated and upgraded MDA unique range facilities and instrumentation at the following ranges in accordance with Defense Test Resource Management Center (DTRMC) Guidance: White Sands Missile Range (WSMR), Kauai Test Facility (KTF), Wake Island, Pacific Missile Range Facility (PMRF), Reagan Test Site (RTS), Western Range / Vandenberg Air Force Base (VAFB), Naval Air Warfare Center (NAWC), the Kodiak Launch Complex (KLC), and other test sites as required.</p> <p>Operated High Altitude Observatory II (HALO-II), Wide-body Airborne Sensor Program (WASP), High Altitude Observatory I (HALO-I) for data collection services of BMD Flight Test.</p> <p>Completed the development of High Altitude Observatory III (HALO-III) as an Airborne Diagnostic Target (ADT) for Airborne Laser (ABL).</p> <p>Maintained and upgraded MDA unique Ground Test Facilities to support all the BMDS developmental program hardware and software testing. These facilities provided HWIL capability, threat signature measurement capability, and sensor calibration standards.</p> <p>Maintained and upgraded MDA unique Ground Test Facilities to support BMDS system-level Ground Tests. This included basic Ground Test Control as well as some Element representations.</p> <p>Continued to operate and maintain the telemetry and instrumentation ship to support off-range BMDS testing and increasingly complex test scenarios.</p> <p>Operated and maintained two Transportable Telemetry Systems (TTS), which provided long range missile telemetry acquisition, processing and archiving capability.</p> <p>Used the Pacific Range Support Team (PRST) to provide efficient planning, coordination and management of range resources and infrastructure in support of BMDS Flight Testing throughout the Pacific Test Bed.</p> <p>Continued development and independent verification and validation (IV&V) of the Range Safety Modeling Toolkit (RSMT) to provide common safety analysis tools.</p>					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX04: <i>Test & Evaluation</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> Upgrade DMETS to mirror the deployed systems. Includes technical refresh. Expand training audience to include regional and theater training. Integrate additional BMDS assets to support training on current and next BMDS configuration. Begin initial integration efforts with evolving Agency modeling and simulation development efforts.</p> <p><i>FY 2011 Base Plans:</i> FY 2011 plans are captured in budget project MD04.</p> <p><i>FY 2011 OCO Plans:</i> NA</p>					
Accomplishments/Planned Programs Subtotals	278.457	273.491	0.000	0.000	0.000

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT YX04: <i>Test & Evaluation</i>				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>											
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The MDA Test Program acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDC, and other MDA programs to execute the various diverse efforts within the BMDS test program. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent, the acquisition strategy that conforms to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

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E. Performance Metrics

NA

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Resources Ground Test Facilities YX04	Various/ Various	Army, Air Force AL, FL, MD, TN	43.546	26.862	Oct 2009	0.000		0.000		0.000	0	70.408	Continuing

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Resources Ranges and Instrumentation YX04	Various/ Various	Various CA, HI, NM, Marshall Islands, AK	173.562	68.600	Oct 2009	0.000		0.000		0.000	0	242.162	Continuing
Test Resources Airborne Sensors YX04	C/CPAF	L3 Communications OK, RTSC, CA	53.453	4.596	Oct 2009	0.000		0.000		0.000	0	58.049	Continuing
Test Resources Data Centers YX04	Various/ Various	Various TN, CO, AL, CA	18.766	12.168	Oct 2009	0.000		0.000		0.000	0	30.934	Continuing
Test Resources Target Launch Services YX04	Various/ Various	Various Various	18.000	0.000		0.000		0.000		0.000	0	18.000	Continuing
Test Operations, Design, and Analysis Targets YX04	Various/ Various	Various Various	19.616	0.000		0.000		0.000		0.000	0	19.616	Continuing
Test Policy, Budget and Personnel BCAT YX04	Various/ Various	Various NJ, CO, MD, MA	21.762	10.502	Oct 2009	0.000		0.000		0.000	0	32.264	Continuing
Test Policy, Budget and Personnel Operational Test Agency Participation in System Test YX04	Various/ Various	OTAs Various	30.954	16.000	Oct 2009	0.000		0.000		0.000	0	46.954	Continuing
Test Policy, Budget and Personnel Target Certification YX04	Various/ Various	USASMDC Huntsville, AL	0.497	0.000		0.000		0.000		0.000	0	0.497	Continuing
Test Planning and Design Test Planning and Design YX04	Various/ Various	Various Various	15.283	13.468	Oct 2009	0.000		0.000		0.000	0	28.751	Continuing

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Readiness and Truth Continuous Process Improvement YX04	Various/ Various	Various Various	6.637	0.000	Oct 2009	0.000		0.000		0.000	0	6.637	Continuing
Test Readiness and Truth Independent Assessment YX04	Various/ Various	Various Various	2.465	0.000	Oct 2009	0.000		0.000		0.000	0	2.465	Continuing
Test Readiness and Truth Truth Data YX04	Various/ Various	Various Various	0.000	7.900		0.000		0.000		0.000	0	7.900	Continuing
Test Readiness and Truth Test Training and Readiness YX04	Various/ Various	Various Various	0.000	3.126		0.000		0.000		0.000	0	3.126	Continuing
MDA Infrastructure MDA Infrastructure YX04	Various/ Various	Various Various	5.643	0.000		0.000		0.000		0.000	0	5.643	Continuing
MDA Infrastructure HSV IT O&M YX04	C/CPAF	Advanced Systems Development Huntsville, AL	3.097	0.000		0.000		0.000		0.000	0	3.097	Continuing
MDA Infrastructure Defend Systems & Networks YX04	C/CPAF	Northrop Grumman CO	1.478	0.000		0.000		0.000		0.000	0	1.478	Continuing
MDA Infrastructure Service/IM/IT YX04	TBD/TBD	Advanced Systems Development Huntsville, AL	0.896	0.000		0.000		0.000		0.000	0	0.896	Continuing
	C/CPFF	General Dynamics	1.063	0.000		0.000		0.000		0.000	0	1.063	Continuing

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MDA Infrastructure Information Assurance C&A YX04		Information Technology VA											
Concurrent Test, Training and Operations (DMETS) Test, Training and Integration Enablers YX04	Various/ Various	Various Various	0.000	15.972	Oct 2009	0.000		0.000		0.000	0	15.972	Continuing
Subtotal			416.718	179.194		0.000		0.000		0.000	0.000	595.912	

Remarks

Test Resources Notes:

- Ground Test Facility (GTF) Funding is issued from MDA to the Army and Air Force. The services provide funds to the Kinetic Hardware in-the-loop (HWIL) Simulator in FL, and the Arnold Engineering Development Center in TN. Each Facility then places funds on contract and/or retains funding to support on-site personnel.

- Ranges and Instrumentation funding is distributed to executing agents through the services and issued directly from MDA. The Army (SMDC) MIPRs funds to the Reagan Test Site in the Marshall Islands for range operations, instrumentation upgrades, and various PRST efforts. The Air Force issues funding to Wake Island for test operations support. The remaining funds are issued directly from MDA. Funds are MIPRed to members of the Pacific Range Support Team (PRST) (Patrick AFB, Vandenberg AFB, Pacific Missile Range Facility, Naval Air Warfare Center/Patuxent River & Pt Mugu, White Sands Missile Range, and Sandia National Labs), MIT/LL (Airborne Sensor support, Test Infrastructure support, and XTR-1 development), Naval Research Lab (NRL) (BMDS Test Communications), and DOT/Maritime Administration (Telemetry and Instrumentation ship Operations and Maintenance and Pacific Tracker Activation). Funds are placed directly on an MDA contract with the Alaska Aerospace Development Corporation (AADC) for Kodiak Launch Complex Operations and Sustainment.

- Data Center Funding is issued from MDA to the Army, Air Force, and Navy. The services provide funds to the Army Missile Signature Center in TN, Naval Surface Warfare/ Weapons Center (Corona) in CA, Missile Defense Data Center in AL. The Data Centers place the funds on contract and/or retain funding to support on-site personnel.

- Project includes Congressional additions for test and training range support and upgrades.

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Resources SMDC Government Salaries YX04	TBD/TBD	USASMDC Huntsville, AL	0.100	0.000		0.000		0.000		0.000	0	0.100	Continuing
Test Resources Support Contracts YX04	C/FFP	Northrop Grumman Arlington, VA	24.466	16.570	Oct 2009	0.000		0.000		0.000	0	41.036	Continuing
Test Operations, Design, and Analysis Support Contracts YX04	C/FFP	, TASC, Sparta, RND Arlington, VA	75.537	13.376	Oct 2009	0.000		0.000		0.000	0	88.913	Continuing
Test Operations, Design, and Analysis Joint Analysis Team YX04	C/FFP	Various Various	0.000	17.288		0.000		0.000		0.000	0	17.288	Continuing
Test Policy, Budget and Personnel TE Government Salaries YX04	TBD/TBD	- Washington, DC	27.519	16.528	Oct 2009	0.000		0.000		0.000	0	44.047	Continuing
Test Policy, Budget and Personnel Support Contracts YX04	C/FFP	TASC, Sparta Arlington, VA	14.213	18.565	Oct 2009	0.000		0.000		0.000	0	32.778	Continuing
Test Policy, Budget and Personnel TE Travel YX04	TBD/TBD	-	2.651	1.345	Oct 2009	0.000		0.000		0.000	0	3.996	Continuing
Test Policy, Budget and Personnel International Programs YX04	TBD/TBD	- Washington, DC	0.917	0.000	Oct 2009	0.000		0.000		0.000	0	0.917	Continuing
	C/FFP	Various/TASC, Sparta	5.017	0.000	Oct 2009	0.000		0.000		0.000	0	5.017	Continuing

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Readiness and Truth Support Contracts YX04		Arlington, VA											
Facilities Siting, and Environmental Support Contracts YX04	C/FFP	ICF, SciComm VA, MD	7.542	3.801	Oct 2009	0.000		0.000		0.000	0	11.343	Continuing
Fielding and Integration Government Salaries YX04	TBD/TBD	Washington, DC	0.924	0.956	Oct 2009	0.000		0.000		0.000	0	1.880	Continuing
Fielding and Integration Support Contracts YX04	C/CPAF	Computer Sciences Corp. Falls Church, VA	6.594	5.868	Oct 2009	0.000		0.000		0.000	0	12.462	Continuing
Subtotal			165.480	94.297		0.000		0.000		0.000	0.000	259.777	

Remarks

NA

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	582.198	273.491			0.000		0.000	0.000	0.000	855.689	

Remarks

NA

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MD04: <i>Test Program</i>	0.000	0.000	559.133	0.000	559.133	477.588	453.047	435.093	399.100	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Projects YX04, XX04, AX04, BX04, CX04, DX04, EX04, and WX04 for FY 2009-FY 2010 is now captured in Project MD04.

All funding in this budget project supports the budgetary objective of Proving BMDS.

MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.

A. Mission Description and Budget Item Justification

The Test and Evaluation (T&E) projects provide consolidated Missile Defense Agency (MDA) capabilities and resources to support the management and execution of Ballistic Missile Defense System (BMDS) and Element-level testing. With the evolution of the BMDS, testing needs have expanded beyond those of the individual Elements to include testing of BMDS Critical Engagement Conditions (CEC) and Empirical Measurement Events (EME) to anchor modeling and simulations. The Directorate for Test centralizes all authority and responsibility for all BMDS testing. The Directorate for Test relies on BMD Systems Engineering to provide the system test objectives to define the test architecture. The Directorate for Test plans and executes BMD system test events. The Directorate for Test also develops the necessary test policy, test plans, and test infrastructure to conduct an effective test program. Directorate for Test activities are grouped into six major areas: Test Policy, Budget, and Functional Management; Test Planning and Design; Test Mission Management and Integration; Test Operations; Test Data Management; and Test Resources. Other test related program content involving Engineering Test Analysis, Concurrent Test, Training, and Operations, Fielding and Integration, and Facilities, Siting, and Environmental Management, is also included within this T&E project.

Proving BMDS

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<p>Funding within this budget project supports the budgetary objective of Proving BMDS. The goals of this budgetary objective are to continue and improve a robust testing program, and to enhance modeling and simulation efforts to provide, in conjunction with flight and ground testing, confidence to the warfighter that the missile defense system works.</p> <p>The MDA test program conducts a rigorous review involving MDA, along with the Army, Navy, Air Force and Operational Test Agencies to review BMDS models and simulations to determine the data needed to accredit them using a comprehensive Verification, Validation and Accreditation process. Working with the Services, Operational Test Agencies (OTA), with the support of the Director of Operational Test and Evaluation (DOT&E), the test program was restructured to improve confidence in the missile defense capabilities under development and ensure the capabilities transferred to the warfighter are operationally effective, suitable, and survivable.</p> <p>Test Policy, Budget, and Functional Management</p> <p>The Test Policy, Budget, and Functional Management program supports the development and implementation of test policy, standards, directives, and procedures for creating unified BMD test processes which reflect the best practices of existing element processes. The Test Policy, Budget, and Functional Management program also develops training and certification plans and International policy for the Directorate of Test. The Test Policy, Budget, and Functional Management program provides policy and guidance on Knowledge Management (KM) practices, establishing standardized documentation for test planning, test reporting, and data archiving. The program also develops, coordinates, and manages Directorate for Test inputs into the overall BMDS Program Plans, Directorate for Test Base Closure and Realignment Commission (BRAC) related Transition Planning, and relocation of personnel. The program also coordinates Directorate for Test budget planning and execution activities, as well as Test Functional Area (TFA) activities. The Test Policy, Budget and Functional Management program also supports System-Level Operational Test Agencies` (OTA) assessments. OTA funding is consolidated within the Directorate for Test so they can provide operational assessments of the BMDS. The OTA maintains their assessments in the OTA database, which is a living document of the BMDS assessment.</p> <p>Test Planning and Design</p> <p>Test Planning and Design performs campaign-level planning and design functions for the BMDS Test program. This includes the collection and adjudication of test objectives from BMD Systems Engineering, the OTA, and the warfighters; development of ground and flight test campaigns; validation of test venues and test scenarios; adaptive test planning; contingency planning; definition of test resource requirements, establishing a baseline test campaign timeline, and interfacing with co-located OTA and stakeholder representatives. These efforts culminate in the development and publication of the Integrated Master Test Plan (IMTP) which documents the test component of the BMDS Test Baseline across the Future Years Defense Plan (FYDP).</p> <p>The Test Planning and Design function employs a three-phased strategy which will result in a process that produces an event-oriented test plan in the form of the BMDS IMTP that extends out as many years as necessary to collect all data required to demonstrate specific missile defense functions. During this three-phase</p>		

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<p>comprehensive test review, MDA in conjunction with the Army, Navy, and Air Force OTAs reviewed the BMDS models and simulations to determine the data needed to accredit them using a comprehensive Verification, Validation, and Accreditation (VV&A) process. Much of the data needed to understand and assess system survivability, operational performance, reliability, and supportability can only be measured through ground tests and flight tests.</p> <p>The steady state test requirements development process requires the overall three phase approach to be conducted in concert with all supporting organizations. New test requirements will enter the process as the result of new BMDS functionality, test event data collection shortfalls, and other circumstances. The primary output of this process is the IMTP, which will be updated quarterly.</p> <p>Test Mission Management and Integration</p> <p>The Test Mission Management and Integration program plans, programs, and budgets the unified BMD test process. The Mission Management and Integration program prepares detailed plans and integrates all BMD system test events in conjunction with MDA and non-MDA elements. The Test Mission Management and Integration program consolidates personnel, processes, and resources in the elements and across MDA involved in Flight Test (FT) and Ground Test (GT) planning into a cohesive team, relying heavily upon BMDS system test objectives determined by BMD Systems Engineering. The Test Mission Management and Integration program performs BMDS test configuration control and asset management and integrates Flight and Ground Test scheduling and deconfliction. Mission Management function also provides end-to-end test cost oversight on flight and ground tests. Test Mission Management and Integration personnel form the core of the Integrated Event Test Teams for FTs, GTs and Contingency Operations providing the System Mission Manager (SMM) and technical support who perform mission management and integration functions initiating 18 months prior to the test date. The SMM provides leadership and continuity throughout the test life cycle, and serves as the test expert matrixed to the senior MDA leadership in charge of each of the five phases of testing from requirements generation through planning, readiness, execution, and data reduction and analysis. The mission management team synchronizes efforts from each of the Elements, BMD System Engineering, Test Data Management, Test Operations, and Test Resources to develop all mission documentation including Test Directives, Executive Reviews, resource requirements, mission viewing plans, and financial management of mission event funds.</p> <p>Test Operations</p> <p>The Test Operations division is responsible for executing all BMDS Ground Tests (GTs) and Flight Tests (FTs), which are necessary to provide the necessary data to demonstrate capability deliveries and BMDS capabilities. Test Operations provides mission Test Directors (TDs), who work in concert with their respective SMMs to ensure mission readiness for test, and who are then responsible for execution of BMDS system level execution activities during the run-up to test and on mission day. Test operations also manages, assigns, and dispositions mission related risk items via the Mission Risk Working group (MRWG) for BMDS test events and maintains a data base of BMDS Test Incident Reports (BTIRs) for those events from which lessons learned are extracted and applied to future tests. Test Operations is responsible for developing and maintaining a formal training and certification program for BMD management and execution personnel from each of the elements, as well as for other DT console operators. Test events include tests for Ground-Based Mid-Course Defense program, Aegis BMD, THAAD, sensors (SBX, AN/TPY-2, SN/</p>		

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
<p>SPY-1), C2BMC, allied weapon systems, and other developing elements like Airborne Laser and Space Tracking and Surveillance System (STSS). The test events are used to anchor system models and provide data to warfighters and senior decision makers regarding fielding and capability deliveries. The test events also address the demonstration of PATRIOT Upper Tier Debris Mitigation capability and the Aegis Weapon System SM-2 Block IV Sea-Based Terminal capability, demonstrate operationally realistic multi-national communication networks, perform directed engagements and engagement coordination among different participants, and assess MDA's increased capability to support Critical Empirical Conditions (CECs) and Empirical Measurement Events (EMEs)** identified in the BMDS Integrated Master Test Plan (IMTP). International partners include but are not limited to Japan, Israel, and other potential future BMD International Partners.</p> <p>** CECs/EMEs are the conditions and events where data is obtained from flight and ground tests in order to anchor system models and simulations.</p> <p>Test Data Management</p> <p>The Test Data Management program performs truth data analysis for all BMDS tests, performs data requirements definition, facilitates data collection, and manages Data Center functions for all BMDS tests. The Test Data Management program assures readiness, trains test personnel, ensures realism, assesses adequacy, and tracks test risk process. The Test Data Management program will assess readiness processes and metrics for these programs and evaluate the outcomes. Test Data Management program increases the efficiency and effectiveness of the BMDS test program by integrating key strategies and objectives into the Directorate for Test program by identifying and improving test processes. Test Data Management program assesses test adequacy by conducting: test assessments to identify data voids and unfulfilled objectives; test design reviews to ensure tests are configured to support assessment activity; and Mission planning meetings to ensure the proper data will be collected for analysis and assessment. The test training program provides BMDS operations, test operations, missile and range instrumentation training to test personnel to prepare them for Flight and Ground test console operations. The training program conducts console training exercises in the Advanced Research Center (ARC) Training and Operations Center. The training program also monitors, documents, and records operator and team performance in preparation for specific missions at the mission control site in an automated database. The Test Data Management program develops, sustains, and modernizes the Missile Defense Data Center (MDDC).</p> <p>Test Resources</p> <p>The Test Resources program develops, sustains, and modernizes the core T&E assets of the BMDS Test Bed to support System and Element-level Flight and Ground testing and assessment. This includes development, sustainment, and modernization of the MDA mobile instrumentation tool box, and BMD-unique ground test facilities. The mobile instrumentation tool box includes telemetry, radar, and optical data collection assets such as four (4) test aircraft equipped with optical sensors, mobile telemetry systems, the Kwajalein Mobile Range Safety System, the Mobile Launch Platform (MLP), the Telemetry and Instrumentation Ship, and the Pacific Tracker X-Band Transportable Radar Ship (under development). These assets are required to collect the spatial data needed to execute the flight tests safely and collect the measurement data needed for BMDS performance evaluation. The Test Resources program also makes focused investments to improve MDA-unique capability at Major Range & Test Facility Base activities. All of these assets enable robust flight testing and support mandatory safety and analysis data requirements</p>		

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<p>in support of BMDS test activities. This core test capability is corporately sustained for the BMDS Test Program. The Test Resources program also provides for the development, sustainment, and modernization of Element Hardware-In-the-Loop (HWIL) representations to support robust System-level ground testing. The Test Resources program also provides continuous improvement, expansion, and sustainment of System Ground Test Infrastructure. The Test Resources program uses the BMD Systems Engineer`s products as the basis to evaluate the future resource needs of the BMDS. An annual analysis of data collection requirements and test scenarios versus existing and planned test assets identifies the test infrastructure needed to test the BMDS Elements as part of test campaign. The Test Resources program also includes the Pacific Range Support Team (PRST) to support the BMDS test teams with range mission planning and execution expertise, development of common standards and mission assurance, and to recommend development or modification of mobile instrumentation to support MDA testing. The Test Resources program is expanding the PRST management philosophy to Test Resources ground test assets and this philosophy will include test resource-related improvements to training and integration efforts.</p> <p>The BMD Digital Simulations Architecture (DSA) is the primary Modeling and Simulations (M&S) System framework used to integrate Elements baselines prior to flight or ground testing, facilitate technical trade-offs, concept analysis and trade studies, as well as providing support to Wargames and exercises within the BMDS Program. Each BMDS Element supports the M&S Program by providing digital representations ready for integration into the BMDS system-level framework. The DSA-performance architecture and Element and component high fidelity models support PA events, which provide critical system level performance data relative to all elements, system engineers, M&S developers, the Operational Test Agency, and Warfighters. The DSA-virtual architecture supports Element baseline integration, training, portions of ground testing and exercises.</p> <p>The BMD Single Stimulation Framework (SSF) utilizes Hardware-in-the-Loop (HWIL) assets to support primarily BMDS ground testing, pre and post flight test mission construction and reconstruction, portions of the training capability, Wargames, exercises, BMDS contingency studies, as well as various other use cases to enable BMDS performance in a simulated environment. Each BMDS Element supports the Modeling and Simulation Program by providing HWIL representations ready for integration into the BMDS system-level framework to support full-envelope BMDS ground test, flight test, and training events based upon MDA and Warfighter needs. The Test Resources Program supports the ground test program by providing the infrastructure required to support execution of these tests.</p> <p>Engineering Test Analysis</p> <p>Engineering Test Analysis provides the leadership, tools, and processes to conduct pre- and post-mission system level analysis for all BMD system flight and ground test events. Analysis is performed and reported using the Joint Analysis Team (JAT). Pre-mission analysis provides essential risk reduction analysis used to optimize conditions for successful accomplishment of the primary mission objectives. Post-mission analysis is performed to assess the primary and secondary test objectives and to identify mission-specific performance enhancements or anomalies that were observed.</p> <p>The BMDS Capability Assessment team (BCAT) team conducts non-advocate assessments of the BMDS readiness and investigates BMDS performance issues and proposes mitigation plans.</p>		

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Target and Countermeasures Requirements Directorate is responsible for the development of BMDS level target and countermeasures class capabilities and mission specific requirements that meet system and element flight and ground test requirements. Target requirements development requires expertise in countermeasures, signatures, RV dynamics, trajectory assessments, threat capabilities, sensors, and current/predicted threat capabilities as well as weapon system capabilities to provide leadership information/data at a sufficient level and in an adequate timeframe for decision making and planning.

Target certification assures that a target recommended for certification meets the mission and test objectives with the target characteristics identified for that test event. The Target Accreditation Report, the basis for certification, compares the target's capabilities against the capabilities required by the BMDS Target Requirements Document and the test event described in the IMTP.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Test Policy, Budget and Functional Management See Description Below <i>FY 2009 Accomplishments:</i> FY 2009 accomplishments are captured in Budget Project YX04. <i>FY 2010 Plans:</i> FY 2010 plans are captured in Budget Project YX04. <i>FY 2011 Base Plans:</i> Integrate mission assurance and best practices and lessons learned. Communicate and interaction between the Ballistic Missile Defense System (BMDS) development community and Operational Test Agencies (OTA). Provide a BMDS operational assessment based on warfighter defended areas in the areas of effectiveness, suitability, survivability, interoperability, and transition. Develop and implement test policy, standards, directives, and procedures for creating unified BMD test processes.	0.000	0.000	44.699	0.000	44.699

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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Promote awareness and understanding of environmental management in all phases of MDA's acquisition mission and provide appropriate training to all MDA personnel. Conduct required Agency reporting on environmental liabilities and environmental expenditures. <i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	0.000	0.000	559.133	0.000	559.133

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)			PE 0603888C: Ballistic Missile Defense Test and Targets				MD04: Test Program				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011	FY 2011	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Cost To	
			Base	OCO	Total					Complete	Total Cost
• 0603892C: BMD AEGIS	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: SPACE TRACKING & SURVEILLANCE SYSTEM	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: MULTIPLE KILL VEHICLE	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: BMD SYSTEM SPACE PROGRAM	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: BMD C2BMC	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: BMD HERCULES	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: BMD JOINT WARFIGHTER SUPPORT	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: DIRECTED ENERGY RESEARCH	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: REGARDING TRENCH	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: SEA BASED X-BAND RADAR (SBX)	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: BMD EUROPEAN INTERCEPTOR SITE	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: BMD EUROPEAN MIDCOURSE RADAR	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: BMD EUROPEAN CAPABILITY	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: BMD European Comm Support	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603913C: <i>ISRAELI COOPERATIVE</i>											
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The Directorate for Test acquisition strategy is consistent with the MDA capabilities based acquisition strategy that emphasizes testing, evolutionary acquisition, and knowledge based funding. The Directorate for Test directs a team of various internal staff (Government and Scientific, Engineering and Technical Assistance support), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, Federally Funded Research and Development Center (FFRDC), and other MDA programs to execute the various diverse efforts within the Ballistic Missile Defense System (BMDS) test program through competition. When a specific effort/activity being conducted, acquired, or maintained, requires the use of an executing agent the acquisition strategy that conform to their respective headquarters regulations are used. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (AA&S) approach to support the BMDS mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services. The Directorate for Test will recomplete contracts in accordance with the MDA's MiDAESS initiative.

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	MD04: <i>Test Program</i>

E. Performance Metrics

NA

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Test Analysis BMDS Capability Assessment Team MD04	Various/ Various	Various NJ, CO, MD, VA	0.000	0.000		10.134	Oct 2010	0.000		10.134	Continuing	Continuing	Continuing
Engineering Test Analysis Target Certification MD04	Various/ Various	USASMDC Huntsville, AL	0.000	0.000		0.699	Oct 2010	0.000		0.699	Continuing	Continuing	Continuing
Engineering Test Analysis Joint Analysis Team MD04	Various/ Various	Various Various	0.000	0.000		28.806	Oct 2010	0.000		28.806	Continuing	Continuing	Continuing
Concurrent Test, Training and Operations DMETS MD04	C/CPAF	Various Various	0.000	0.000		27.766		0.000		27.766	Continuing	Continuing	Continuing
	C/CPAF	Various Various	0.000	0.000		23.653	Oct 2010	0.000		23.653	Continuing	Continuing	Continuing

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Concurrent Test, Training and Operations CTTO MD04													
Fielding and Integration Support Contracts MD04	C/CPAF	Computer Sciences Corp. Falls Church, VA	0.000	0.000		9.110	Oct 2010	0.000		9.110	Continuing	Continuing	Continuing
Facilities Siting, and Environmental Support Contracts MD04	Various/ Various	Various Various	0.000	0.000		3.901	Oct 2010	0.000		3.901	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		104.069		0.000		104.069			

Remarks

NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Policy, Budget and Functional Management Operational Test Agency Participation in System Test MD04	Various/ Various	OTAs Various	0.000	0.000		18.510	Oct 2010	0.000		18.510	Continuing	Continuing	Continuing
		NA	0.000	0.000		16.315	Oct 2010	0.000		16.315	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Policy, Budget and Functional Management T&E Government Salaries MD04	Various/ Various	Washington, DC											
Test Policy, Budget and Functional Management Support Contracts MD04	C/FFP	TASC, Sparta Arlington, VA	0.000	0.000		8.513	Oct 2010	0.000		8.513	Continuing	Continuing	Continuing
Test Policy, Budget and Functional Management T&E Travel MD04	Various/ Various	NA Washington, DC	0.000	0.000		1.361	Oct 2010	0.000		1.361	Continuing	Continuing	Continuing
Test Planning and Design Test Planning and Design MD04	Various/ Various	Various Various	0.000	0.000		5.058	Oct 2010	0.000		5.058	Continuing	Continuing	Continuing
Test Planning and Design Support Contracts MD04	Various/ Various	Various Various	0.000	0.000		7.570	Oct 2010	0.000		7.570	Continuing	Continuing	Continuing
Test Operations, Mission Management and Integration BMDS Flight Test MD04	Various/ Various	USASMDC, WSMR, MITLL, MDIOC & VAFB AL, NM, MA, HI & CA	0.000	0.000		8.671	Oct 2010	0.000		8.671	Continuing	Continuing	Continuing
Test Operations, Mission Management and Integration BMDS Ground Test MD04	Various/ Various	MDIOC, Various CO, CA, AL, VA & MA	0.000	0.000		64.796	Oct 2010	0.000		64.796	Continuing	Continuing	Continuing
Test Operations, Mission Management and	Various/ Various	Various Various	0.000	0.000		0.882	Oct 2010	0.000		0.882	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integration Third Site Testing MD04													
Test Operations, Mission Management and Integration Support Contracts MD04	C/FFP	TASC, Sparta, RND Various	0.000	0.000		17.044	Oct 2010	0.000		17.044	Continuing	Continuing	Continuing
Test Data Management Continuous Process Improvement MD04	Various/ Various	Various Various	0.000	0.000		2.280	Oct 2010	0.000		2.280	Continuing	Continuing	Continuing
Test Data Management Independent Assessment MD04	Various/ Various	Various Various	0.000	0.000		1.589	Oct 2010	0.000		1.589	Continuing	Continuing	Continuing
Test Data Management Support Contracts MD04	C/FFP	TASC, Sparta Arlington, VA	0.000	0.000		3.942	Oct 2010	0.000		3.942	Continuing	Continuing	Continuing
Test Data Management Data Centers MD04	Various/ Various	Various TN, CO, AL, CA	0.000	0.000		15.899		0.000		15.899	Continuing	Continuing	Continuing
Test Resources Ground Test Facilities MD04	Various/ Various	Army, Air Force AL, FL, MD, TN	0.000	0.000		104.202	Oct 2010	0.000		104.202	Continuing	Continuing	Continuing
Test Resources Ranges and Instrumentation MD04	Various/ Various	Various CA, HI, NM, Marshall Islands, AK	0.000	0.000		130.189	Oct 2010	0.000		130.189	Continuing	Continuing	Continuing
Test Resources Airborne Sensors MD04	C/C/PAF	L3 Communications OK, RTSC, CA	0.000	0.000		27.711	Oct 2010	0.000		27.711	Continuing	Continuing	Continuing
	C/FFP		0.000	0.000		20.532	Oct 2010	0.000		20.532	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Resources Support Contracts MD04		Northrop Grumman Arlington, VA											
Subtotal			0.000	0.000		455.064		0.000		455.064			

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		0.000	0.000	559.133	0.000	559.133		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>			PROJECT MD04: <i>Test Program</i>			
	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks NA									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
AST-14 (Israeli Cooperative Intercept Flight Test)										█																		
AST-15 (Israeli Cooperative Intercept Flight Test)															█													
AST-16 (Israeli Cooperative Intercept Flight Test)																			█									
BVT-01 (Two Stage Booster Flight Test)							█																					
CTV-1 (Aegis Interceptor Only Test)																			█									
CTV-2 (Aegis Interceptor Only Test)																							█					
Caravan 3 (USFT-5) (Israeli Program Intercept Flight Test)																												█
Caravan 3 (USFT-6) (Israeli Program Intercept Flight Test)																												█
EPOCH-1 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)																			█									
EPOCH-2 (GMD/Aegis/THAAD/Patriot Multiple Engagement Flight Test)																												█
FTG-08 (GMD Intercept Flight Test)															█													
FTG-09 (GMD Salvo Flight Test)											█																	
FTG-11 (GMD Intercept Flight Test)																							█					
FTM-15 (Aegis Intercept Flight Test)											█																	
										█																		

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
FTM-16 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept)																												
FTM-18 (Aegis Intercept Flight Test)														■														
FTM-19 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept)													■															
FTM-20 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept), E3 (Simulated Intercept)														■														
FTM-21 (Aegis Intercept Flight Test)																			■									
FTM-22 (Aegis Intercept Flight Test)																				■								
FTM-23 (Aegis Flight Test) E1 (Salvo), E2 and E3 (Intercept)																					■							
FTS-02 (STSS Demonstrator Flight Test)																						■						
FTT-13 (THAAD Intercept Flight Test)											■																	
FTT-14 (THAAD Intercept Flight Test)												■																
FTT-15 (THAAD Intercept Flight Test)													■															
FTT-16 (THAAD Intercept Flight Test)																					■							
FTT-17 (THAAD Intercept Flight Test)																						■						
FTT-18 (THAAD Intercept Flight Test)																							■					
FTT-19 (THAAD Intercept Flight Test)																									■			
FTX-12 (UEWR Tracking Test)																												
FTX-13 (GMD Risk Reduction Flight)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
PTV-1 (Aegis Interceptor Only Test)																					■											
Patriot 7-3 (Patriot Multiple Simultaneous Engagement)									■																							
SFTM-1 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Interceptor Only)																													■			
SFTM-2 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Non Intercept)																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
AST-14 (Israeli Cooperative Intercept Flight Test)	2	2011	2	2011
AST-15 (Israeli Cooperative Intercept Flight Test)	1	2013	1	2013
AST-16 (Israeli Cooperative Intercept Flight Test)	1	2014	1	2014
BVT-01 (Two Stage Booster Flight Test)	3	2010	3	2010
CTV-1 (Aegis Interceptor Only Test)	2	2014	2	2014
CTV-2 (Aegis Interceptor Only Test)	4	2014	4	2014
Caravan 3 (USFT-5) (Israeli Program Intercept Flight Test)	4	2015	4	2015
Caravan 3 (USFT-6) (Israeli Program Intercept Flight Test)	4	2015	4	2015
EPOCH-1 (Aegis/THAAD/Patriot Multiple Engagement Flight Test)	4	2013	4	2013
EPOCH-2 (GMD/Aegis/THAAD/Patriot Multiple Engagement Flight Test)	3	2015	3	2015
FTG-08 (GMD Intercept Flight Test)	4	2012	4	2012
FTG-09 (GMD Salvo Flight Test)	3	2011	3	2011
FTG-11 (GMD Intercept Flight Test)	4	2014	4	2014
FTM-15 (Aegis Intercept Flight Test)	3	2011	3	2011
FTM-16 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept)	2	2011	2	2011
FTM-18 (Aegis Intercept Flight Test)	3	2012	3	2012
FTM-19 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept)	1	2012	1	2012
FTM-20 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Intercept), E3 (Simulated Intercept)	3	2012	3	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
FTM-21 (Aegis Intercept Flight Test)	2	2013	2	2013
FTM-22 (Aegis Intercept Flight Test)	3	2013	3	2013
FTM-23 (Aegis Flight Test) E1 (Salvo), E2 and E3 (Intercept)	4	2013	4	2013
FTS-02 (STSS Demonstrator Flight Test)	1	2014	1	2014
FTT-13 (THAAD Intercept Flight Test)	2	2011	2	2011
FTT-14 (THAAD Intercept Flight Test)	4	2011	4	2011
FTT-15 (THAAD Intercept Flight Test)	2	2012	2	2012
FTT-16 (THAAD Intercept Flight Test)	2	2013	2	2013
FTT-17 (THAAD Intercept Flight Test)	1	2014	1	2014
FTT-18 (THAAD Intercept Flight Test)	3	2014	3	2014
FTT-19 (THAAD Intercept Flight Test)	1	2015	1	2015
FTX-12 (UEWR Tracking Test)	2	2013	2	2013
FTX-13 (GMD Risk Reduction Flight)	3	2014	3	2014
FTX-15 (ECM Test Flight)	1	2015	1	2015
GTD-04 (Full BMDS Distributed Test)	2	2012	2	2012
GTD-05 (Full BMDS Distributed Test)	3	2014	3	2014
GTD-06 (Full BMDS Distributed Test)	3	2015	3	2015
GTI-04 (EXE) (Full BMDS HWIL Test)	4	2011	4	2011
GTI-04 (INT) (Full BMDS HWIL Test)	3	2011	3	2011
GTI-05 (EXE) (Full BMDS HWIL Test)	1	2014	1	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD04: <i>Test Program</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
GTI-05 (INT) (Full BMDS HWIL Test)	3	2013	3	2013
GTI-06 (EXE) (Full BMDS HWIL Test)	2	2015	2	2015
GTI-06 (INT) (Full BMDS HWIL Test)	4	2014	4	2014
GTX-04d (Full BMDS HWIL Test)	1	2011	1	2011
GTX-04e (Regional Focused HWIL Test)	3	2011	3	2011
GTX-05a (Regional Focused HWIL Test)	4	2012	4	2012
GTX-05b (Strategic Focused HWIL Test)	1	2013	1	2013
GTX-06a (BMDS Focused HWIL Test)	3	2013	3	2013
GTX-06b (BMDS Focused HWIL Test)	4	2013	4	2013
GTX-06c (BMDS Focused HWIL Test)	2	2014	2	2014
HWIL Contingency Test	4	2015	4	2015
JFTM-04 E1, E2 (Japanese Cooperative Aegis Track Ex/US Sim Engagement)	1	2011	1	2011
PTV-1 (Aegis Interceptor Only Test)	1	2014	1	2014
Patriot 7-3 (Patriot Multiple Simultaneous Engagement)	1	2011	1	2011
SFTM-1 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Interceptor Only)	1	2015	1	2015
SFTM-2 (Aegis Flight Test) E1 (Simulated Intercept), E2 (Non Intercept)	2	2015	2	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				BX05: <i>Targets & Countermeasures Supports Block 2.0</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
BX05: <i>Targets & Countermeasures Supports Block 2.0</i>	86.168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	86.168
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2009 BX05 funding transitioned to the Targets and Countermeasures Program Element.

Starting in FY 2010 BX05 funding transitioned to YX05 project.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Targets and Countermeasures Supports Block 2.0 See Description Below	86.168	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Flight tests for Terminal High Altitude Area Defense (THAAD) Interceptors (1)</p> <p>FTT-10a Flight tests for Aegis Interceptors (2)</p> <p>Stellar Daggers JFTM-2 E2 Flight test with Arrow Interceptors (1)</p> <p>FTA-03 Conducted mission planning and range coordination activity for 3 missions:</p> <p>FTT-11 FTA-04a FTA-04b Initiated and/or continued target hardware development, target integration, mission planning, and range coordination for future missions of the following target types:</p> <p>2 Enhanced Long Range Air Launch Targets (E-LRALT) 1 Short Range Air Launch Target (SRALT) 1 Medium Range Target (MRT) Provided quality assurance and mission assurance compliance with Agency requirements for design, test, manufacturing, quality, safety, and reliability</p> <p><i>FY 2010 Plans:</i> NA</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> NA					
<i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	86.168	0.000	0.000	0.000	0.000

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603913C: <i>ISRAELI COOPERATIVE</i>											
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
<p>In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3 Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.</p> <p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p> <p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>

E. Performance Metrics

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 1 BX05	C/CPAF	Lockheed Martin Denver, CO	26.583	0.000		0.000		0.000		0.000	0	26.583	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 2 BX05	C/FFP	Coleman Aerospace Orlando, FL	21.650	0.000		0.000		0.000		0.000	0	21.650	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 3 BX05	TBD/TBD	Naval Air Warfare Center Port Hueneme White Sands, NM	0.022	0.000		0.000		0.000		0.000	0	0.022	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 4 BX05	C/FFP	Northrop Grumman Albuquerque, NM	4.917	0.000		0.000		0.000		0.000	0	4.917	Continuing
	TBD/TBD		1.614	0.000		0.000		0.000		0.000	0	1.614	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 5 BX05		Pacific Missile Range and Facility Barking Sands, HI											
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 6 BX05	TBD/TBD	Defense Finance and Accounting Service Indianapolis, IN	7.878	0.000		0.000		0.000		0.000	0	7.878	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 7 BX05	C/FFP	Teledyne Solutions Huntsville, AL	0.305	0.000		0.000		0.000		0.000	0	0.305	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 8 BX05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.233	0.000		0.000		0.000		0.000	0	0.233	Continuing
	TBD/TBD	Aerospace	1.241	0.000		0.000		0.000		0.000	0	1.241	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 9 BX05		Los Angeles, CA											
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 10 BX05	TBD/TBD	NAWC-WD Albuquerque, NM	4.508	0.000		0.000		0.000		0.000	0	4.508	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 11 BX05	TBD/TBD	RTS China Lake, CA	4.580	0.000		0.000		0.000		0.000	0	4.580	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 12 BX05	TBD/TBD	NAWC-PAX Kwajalein, Marshall Islands	4.581	0.000		0.000		0.000		0.000	0	4.581	Continuing
	TBD/TBD	RTTC	0.897	0.000		0.000		0.000		0.000	0	0.897	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 13 BX05		Redstone Arsenal, AL											
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 14 BX05	TBD/TBD	309th Missile Maintenance Wing Hill AFB, UT	0.923	0.000		0.000		0.000		0.000	0	0.923	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 15 BX05	TBD/TBD	USAF Research Labs Wright-Patterson AFB, OH	0.764	0.000		0.000		0.000		0.000	0	0.764	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 16 BX05	TBD/TBD	USAF Air Mobility Scott AFB, IL	5.106	0.000		0.000		0.000		0.000	0	5.106	Continuing
	TBD/TBD	YUMA	1.193	0.000		0.000		0.000		0.000	0	1.193	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 17 BX05		Yuma, AZ											
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 18 BX05	TBD/TBD	MSI Hollister, CA	0.191	0.000		0.000		0.000		0.000	0	0.191	Continuing
Targets and Countermeasures Supports Block 2.0 Targets and Countermeasures Support Block 2 - 19 BX05	TBD/TBD	NSWC-DD Dahlgren, VA	0.095	0.000		0.000		0.000		0.000	0	0.095	Continuing
Subtotal			87.281	0.000		0.000		0.000		0.000	0.000	87.281	

Remarks
NA

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT BX05: <i>Targets & Countermeasures Supports Block 2.0</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Remarks NA													
			Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract			
Project Cost Totals			87.281	0.000	0.000	0.000	0.000	0.000	0.000	87.281			

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE					PROJECT			
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>					CX05: <i>Targets & Countermeasures Supports Block 3.0</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
CX05: <i>Targets & Countermeasures Supports Block 3.0</i>	43.277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	43.277
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2009 CX05 funding transitioned to the Targets and Countermeasures Program Element.

Starting in FY 2010 CX05 funding transitioned to YX05 project.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Targets and Countermeasures support Block 3.0 See Description Below	43.277	0.000	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FTG-05 Conducted mission planning and range coordination activity for one mission with Ground Missile Defense (GMD) Interceptors: FTG-06 Initiated and/or continued target hardware development, target integration, mission planning, and range coordination for future missions of the following target types: 1 Launch Vehicle (LV-2) Provided Quality Assurance and Mission Assurance compliance with Agency requirements for design, test, manufacturing, quality, safety, and reliability <i>FY 2010 Plans:</i> NA <i>FY 2011 Base Plans:</i> NA <i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	43.277	0.000	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)			PE 0603888C: Ballistic Missile Defense Test and Targets				CX05: Targets & Countermeasures Supports Block 3.0				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603881C: Ballistic Missile Defense Terminal Defense Segment											
• 0603882C: Ballistic Missile Defense Mid-Course Segment	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: Ballistic Missile Defense Boost Defense Segment	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: Ballistic Missile Defense Sensors	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: Ballistic Missile Defense System Interceptor	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: Ballistic Missile Defense Enabling Programs	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: SPECIAL PROGRAMS - MDA	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: BMD AEGIS	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: SPACE TRACKING & SURVEILLANCE SYSTEM	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: MULTIPLE KILL VEHICLE	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: BMD SYSTEM SPACE PROGRAM	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: BMD C2BMC	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: BMD HERCULES	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: BMD JOINT WARFIGHTER SUPPORT	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: DIRECTED ENERGY RESEARCH	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>											
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0901598C: <i>Management Headquarters-MDA</i>											

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).

In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3 Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
<p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p> <p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p> <p><u>E. Performance Metrics</u> NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 1 CX05	C/CPAF	Lockheed Martin Space Systems Denver, CO	15.277	0.000		0.000		0.000		0.000	0	15.277	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 2 CX05	TBD/TBD	Sandia National Labs Albuquerque, NM	8.051	0.000		0.000		0.000		0.000	0	8.051	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 3 CX05	C/FFP	Northrop Grumman Space Systems Albuquerque, NM	0.448	0.000		0.000		0.000		0.000	0	0.448	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 4 CX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	1.096	0.000		0.000		0.000		0.000	0	1.096	Continuing
	TBD/TBD		2.975	0.000		0.000		0.000		0.000	0	2.975	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 5 CX05		Defense Finance & Accounting Service Indianapolis, IN											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 6 CX05	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.112	0.000		0.000		0.000		0.000	0	0.112	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 7 CX05	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	0.704	0.000		0.000		0.000		0.000	0	0.704	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 8 CX05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.105	0.000		0.000		0.000		0.000	0	0.105	Continuing
	TBD/TBD		0.113	0.000		0.000		0.000		0.000	0	0.113	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 9 CX05		Naval Surface Warfare Center Crane, IN											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 10 CX05	TBD/TBD	Ronald Reagan BMD Test Site Kwajalein, Marshall Islands	2.972	0.000		0.000		0.000		0.000	0	2.972	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 11 CX05	TBD/TBD	Alaska Aerospace Development Corporation Kodiak Island, AK	1.103	0.000		0.000		0.000		0.000	0	1.103	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 12 CX05	C/CPAF	Coleman Aerospace Orlando, FL	10.003	0.000		0.000		0.000		0.000	0	10.003	Continuing
	TBD/TBD		0.010	0.000		0.000		0.000		0.000	0	0.010	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 13 CX05		Missile Defense Data Center US Army SMDC Albuquerque, NM											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 14 CX05	TBD/TBD	Defense Information Systems Agency Scott AFB, IL	0.283	0.000		0.000		0.000		0.000	0	0.283	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 15 CX05	TBD/TBD	Aerospace Los Angeles, CA	0.568	0.000		0.000		0.000		0.000	0	0.568	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 16 CX05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.022	0.000		0.000		0.000		0.000	0	0.022	Continuing
	TBD/TBD	Hanscom AFB	0.163	0.000		0.000		0.000		0.000	0	0.163	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 17 CX05		Bedford, MA											
Subtotal			44.005	0.000		0.000		0.000		0.000	0.000	44.005	

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 1 CX05	C/CPAF	Lockheed Martin Space Systems Denver, CO	15.277	0.000		0.000		0.000		0.000	0	15.277	Continuing
Targets and Countermeasures	TBD/TBD	Sandia National Labs	8.051	0.000		0.000		0.000		0.000	0	8.051	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
support Block 3.0 Targets and Countermeasures Support Block 3 - 2 CX05		Albuquerque, NM											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 3 CX05	C/FFP	Northrop Grumman Space Systems Albuquerque, NM	0.448	0.000		0.000		0.000		0.000	0	0.448	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 4 CX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	1.096	0.000		0.000		0.000		0.000	0	1.096	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 5 CX05	TBD/TBD	Defense Finance & Accounting Service Indianapolis, IN	2.975	0.000		0.000		0.000		0.000	0	2.975	Continuing
Targets and Countermeasures support Block	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.112	0.000		0.000		0.000		0.000	0	0.112	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
3.0 Targets and Countermeasures Support Block 3 - 6 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 7 CX05	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	0.704	0.000		0.000		0.000		0.000	0	0.704	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 8 CX05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.105	0.000		0.000		0.000		0.000	0	0.105	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 9 CX05	TBD/TBD	Naval Surface Warfare Center Crane, IN	0.113	0.000		0.000		0.000		0.000	0	0.113	Continuing
Targets and Countermeasures support Block 3.0 Targets and	TBD/TBD	Ronald Reagan BMD Test Site Kwajalein, Marshall Islands	2.972	0.000		0.000		0.000		0.000	0	2.972	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Countermeasures Support Block 3 - 10 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 11 CX05	TBD/TBD	Alaska Aerospace Development Corporation Kodiak Island, AK	1.103	0.000		0.000		0.000		0.000	0	1.103	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 12 CX05	C/CPAF	Coleman Aerospace Orlando, FL	10.003	0.000		0.000		0.000		0.000	0	10.003	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 13 CX05	TBD/TBD	Missile Defense Data Center US Army SMDC Albuquerque, NM	0.010	0.000		0.000		0.000		0.000	0	0.010	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures	TBD/TBD	Defense Information Systems Agency Scott AFB, IL	0.283	0.000		0.000		0.000		0.000	0	0.283	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Block 3 - 14 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 15 CX05	TBD/TBD	Aerospace Los Angeles, CA	0.568	0.000		0.000		0.000		0.000	0	0.568	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 16 CX05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.022	0.000		0.000		0.000		0.000	0	0.022	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 17 CX05	TBD/TBD	Hanscom AFB Bedford, MA	0.163	0.000		0.000		0.000		0.000	0	0.163	Continuing
Subtotal			44.005	0.000		0.000		0.000		0.000	0.000	44.005	

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 1 CX05	C/CPAF	Lockheed Martin Space Systems Denver, CO	15.277	0.000		0.000		0.000		0.000	0	15.277	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 2 CX05	TBD/TBD	Sandia National Labs Albuquerque, NM	8.051	0.000		0.000		0.000		0.000	0	8.051	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 3 CX05	C/FFP	Northrop Grumman Space Systems Albuquerque, NM	0.448	0.000		0.000		0.000		0.000	0	0.448	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 4 CX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	1.096	0.000		0.000		0.000		0.000	0	1.096	Continuing
	TBD/TBD		2.975	0.000		0.000		0.000		0.000	0	2.975	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 5 CX05		Defense Finance & Accounting Service Indianapolis, IN											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 6 CX05	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.112	0.000		0.000		0.000		0.000	0	0.112	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 7 CX05	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	0.704	0.000		0.000		0.000		0.000	0	0.704	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 8 CX05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.105	0.000		0.000		0.000		0.000	0	0.105	Continuing
	TBD/TBD		0.113	0.000		0.000		0.000		0.000	0	0.113	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 9 CX05		Naval Surface Warfare Center Crane, IN											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 10 CX05	TBD/TBD	Ronald Reagan BMD Test Site Kwajalein, Marshall Islands	2.972	0.000		0.000		0.000		0.000	0	2.972	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 11 CX05	TBD/TBD	Alaska Aerospace Development Corporation Kodiak Island, AK	1.103	0.000		0.000		0.000		0.000	0	1.103	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 12 CX05	C/CPAF	Coleman Aerospace Orlando, FL	10.003	0.000		0.000		0.000		0.000	0	10.003	Continuing
	TBD/TBD		0.010	0.000		0.000		0.000		0.000	0	0.010	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 13 CX05		Missile Defense Data Center US Army SMDC Albuquerque, NM											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 14 CX05	TBD/TBD	Defense Information Systems Agency Scott AFB, IL	0.283	0.000		0.000		0.000		0.000	0	0.283	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 15 CX05	TBD/TBD	Aerospace Los Angeles, CA	0.568	0.000		0.000		0.000		0.000	0	0.568	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 16 CX05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.022	0.000		0.000		0.000		0.000	0	0.022	Continuing
	TBD/TBD	Hanscom AFB	0.163	0.000		0.000		0.000		0.000	0	0.163	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 17 CX05		Bedford, MA											
Subtotal			44.005	0.000		0.000		0.000		0.000	0.000	44.005	

Remarks

NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 1 CX05	C/CPAF	Lockheed Martin Space Systems Denver, CO	15.277	0.000		0.000		0.000		0.000	0	15.277	Continuing
Targets and Countermeasures	TBD/TBD	Sandia National Labs	8.051	0.000		0.000		0.000		0.000	0	8.051	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
support Block 3.0 Targets and Countermeasures Support Block 3 - 2 CX05		Albuquerque, NM											
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 3 CX05	C/FFP	Northrop Grumman Space Systems Albuquerque, NM	0.448	0.000		0.000		0.000		0.000	0	0.448	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 4 CX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	1.096	0.000		0.000		0.000		0.000	0	1.096	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 5 CX05	TBD/TBD	Defense Finance & Accounting Service Indianapolis, IN	2.975	0.000		0.000		0.000		0.000	0	2.975	Continuing
Targets and Countermeasures support Block	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.112	0.000		0.000		0.000		0.000	0	0.112	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
3.0 Targets and Countermeasures Support Block 3 - 6 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 7 CX05	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	0.704	0.000		0.000		0.000		0.000	0	0.704	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 8 CX05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.105	0.000		0.000		0.000		0.000	0	0.105	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 9 CX05	TBD/TBD	Naval Surface Warfare Center Crane, IN	0.113	0.000		0.000		0.000		0.000	0	0.113	Continuing
Targets and Countermeasures support Block 3.0 Targets and	TBD/TBD	Ronald Reagan BMD Test Site Kwajalein, Marshall Islands	2.972	0.000		0.000		0.000		0.000	0	2.972	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Countermeasures Support Block 3 - 10 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 11 CX05	TBD/TBD	Alaska Aerospace Development Corporation Kodiak Island, AK	1.103	0.000		0.000		0.000		0.000	0	1.103	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 12 CX05	C/CPAF	Coleman Aerospace Orlando, FL	10.003	0.000		0.000		0.000		0.000	0	10.003	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 13 CX05	TBD/TBD	Missile Defense Data Center US Army SMDC Albuquerque, NM	0.010	0.000		0.000		0.000		0.000	0	0.010	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures	TBD/TBD	Defense Information Systems Agency Scott AFB, IL	0.283	0.000		0.000		0.000		0.000	0	0.283	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Block 3 - 14 CX05													
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 15 CX05	TBD/TBD	Aerospace Los Angeles, CA	0.568	0.000		0.000		0.000		0.000	0	0.568	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 16 CX05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.022	0.000		0.000		0.000		0.000	0	0.022	Continuing
Targets and Countermeasures support Block 3.0 Targets and Countermeasures Support Block 3 - 17 CX05	TBD/TBD	Hanscom AFB Bedford, MA	0.163	0.000		0.000		0.000		0.000	0	0.163	Continuing
Subtotal			44.005	0.000		0.000		0.000		0.000	0.000	44.005	

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT CX05: <i>Targets & Countermeasures Supports Block 3.0</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	176.020	0.000	0.000	0.000	0.000	0.000	176.020	

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
WX05: <i>Targets & Countermeasures Supports Capability Development</i>	29.587	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	29.587
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2009 WX05 funding transitioned to the Targets and Countermeasures Program Element.

Starting in FY 2010 WX05 funding transitioned to YX05 project.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Targets and Countermeasures supports the BMDS Capability Development	29.587	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).

In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3 Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
<p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p> <p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p> <p><u>E. Performance Metrics</u> NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets and Countermeasures supports the BMDS Capability Development Targets and Countermeasures Supports Capability Development - 1 WX05	TBD/TBD	Coleman Aerospace Orlando, FL	1.823	0.000		0.000		0.000		0.000	0	1.823	Continuing
Targets and Countermeasures supports the BMDS Capability Development Targets and Countermeasures Supports Capability Development - 2 WX05	C/CPAF	(LMSS) Lockheed Martin Space Systems Denver, CO	19.922	0.000		0.000		0.000		0.000	0	19.922	Continuing
Targets and Countermeasures supports the BMDS Capability Development Targets and Countermeasures Supports Capability Development - 3 WX05	TBD/TBD	Sandia National Labs Albuquerque, NM	4.566	0.000		0.000		0.000		0.000	0	4.566	Continuing
Targets and Countermeasures supports the BMDS Capability Development Targets	TBD/TBD	DFAS Indianapolis, IN	1.931	0.000		0.000		0.000		0.000	0	1.931	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
and Countermeasures Supports Capability Development - 4 WX05													
Targets and Countermeasures supports the BMDS Capability Development Targets and Countermeasures Supports Capability Development - 5 WX05	TBD/TBD	Aerospace Los Angeles, CA	0.221	0.000		0.000		0.000		0.000	0	0.221	Continuing
Subtotal			28.463	0.000		0.000		0.000		0.000	0.000	28.463	

Remarks

NA

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT WX05: <i>Targets & Countermeasures Supports Capability Development</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
	28.463	0.000		0.000		0.000		0.000	0.000	28.463	

Remarks
NA

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
YX05: <i>Targets and Countermeasures Core</i>	258.816	405.905	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	664.721
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2010 YX05 funding includes funding transitioned from projects BX05, CX05 and WX05.

All Project YX05 funds support BMDS-Level Testing.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program Operations See Description Below	54.908	55.110	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>		PROJECT YX05: <i>Targets and Countermeasures Core</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i></p> <p>Associated Objects (AO) development effort provides for non-recurring development of countermeasures (CM) to make more challenging, threat representative target scenarios for Ballistic Missile Defense System (BMDS) flight tests. It includes requirements decomposition, analysis, design, and test for all countermeasures activities based on best available threat and capabilities information. Additional activities include characterization, ground testing, and pre- and post-mission data analysis. This effort addresses producibility, manufacturing maturity and affordability for AO. Further support includes program reviews, design reviews, and technical interchange meetings to ensure mission success.</p> <p>Conducted countermeasures qualification testing in preparation for mission execution Developed Family 1G NRE countermeasures in support of future flight test requirements. Design and build prototypes to analyze against signature requirements Developed Family 1C NRE countermeasures in support of future flight test requirements. Design and build prototypes to analyze against signature requirements Developed Family 2D-2 NRE countermeasures in support of future flight test requirements. Design and build prototypes to analyze against signature requirements</p> <p><i>FY 2010 Plans:</i></p> <p>Modify existing Family 1 countermeasures hardware for use in future flight tests Initiate the design and development of Family 3, 4, and 5 countermeasures hardware in support of future flight tests Initiate Critical Design Review (CDR) level design for the United Kingdom payload concept</p> <p><i>FY 2011 Base Plans:</i></p> <p>NA</p>								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>		PROJECT YX05: <i>Targets and Countermeasures Core</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2011 Base Plans:</i> NA</p> <p><i>FY 2011 OCO Plans:</i> NA</p>								
<p>Logistics</p> <p>See Description Below</p> <p><i>FY 2009 Accomplishments:</i> Logistics effort provides Missile Defense Agency (MDA) with inventory storage, aging surveillance, and transportation of Targets and Countermeasures (TC) hardware in support of Ballistic Missile Defense System (BMDS) testing. These efforts are essential in providing a dependable and reliable target system that enables the Missile Defense Agency to build more operational realistic targets to emulate known threats or potential threats. This effort includes integrated logistics support for all TC material including facilities, inventory maintenance; spare parts, aging surveillance, and special testing for Government Furnished Equipment (GFE) target rocket motor propellants and other hazardous material handling. This task provides for management and execution of the Consolidated Missile Asset Reuse for Targets (CMART) Program and provides all required facilities and monitoring for explosive storage and Foreign Materiel Acquisitions (FMA).</p> <p>Initiated Forward Exit Ring Crack/static fire analysis to characterize the risk of the forward exit ring crack on C-4 first stage motors.</p> <p>Continued inventory, storage, maintenance, and aging surveillance program for MDA's rocket motors, ground/launch support equipment and associated hardware</p> <p>Continued maintenance of existing support equipment and facilities at Redstone Arsenal, China Lake, Camp Navajo, Eglin AFB, Hawthorne Western Ammunition Depot, White Sands Missile Range, Kodiak Launch Complex, Courtland and Pacific Missile Range Facility</p>				30.985	38.305	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Inventory/spares effort provides inventory to support program risk reduction for Ballistic Missile Defense System (BMDS) testing. It includes short, medium, intermediate, and long range target spares at various levels of build up including full up components (e.g. Re-entry Vehicle) and all up integrated target rounds. This effort addresses producibility, manufacturing maturity and affordability for inventory/spares. This effort enables quicker turn around in the event there is a test target failure and to quickly react to emerging flight test requirements, which will ultimately result in reduced BMDS costs. MDA/TC will utilize a rolling spare concept to ensure inventory is available when required.</p> <p>Note: Beginning in FY10, funds associated with Spares for this effort are being captured in the applicable target-type sub-section of this R-2A document. Fund associated with Inventory are being captured in the Logistics sub-section of this R-2A.</p> <p>Completed procurement of 5 Castor IVB motors for future missions Procured 2 Advanced Tactical Munitions Systems (ATACMS) Flight Termination Systems and 5 ATACMS motors Completed Generic Rest of World (GROW) rolling spare Initiated build of one two-stage Launch Vehicle (LV-2) spare Completed build of one Aegis Readiness Assessment Vehicle (ARAV-C) spare Completed build of one Foreign Materiel Acquisition (FMA) spare Procured Communications Security (COMSEC) equipment and encryptors</p> <p><i>FY 2010 Plans:</i></p> <p><i>FY 2011 Base Plans:</i> NA</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Initiate and/or continue target hardware development, target integration, mission planning, and range coordination for future missions of the following target types: 1 E-LRALT 1 Medium Range Target (MRT) 1 Foreign Materiel Acquisition-1 (FMA-1) Backup Provide Quality Assurance and Mission Assurance compliance with Agency requirements for design, test, manufacturing, quality, safety, and reliability <i>FY 2011 Base Plans:</i> NA <i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	258.816	405.905	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>											
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
<p>The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).</p> <p>In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3 Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. The Agency has released the Request for Proposal for the MRBM Type 1 and anticipates awarding the contract in FY10. Release of Request for Proposals for IRBM and ICBM will be in FY10 with contract award in FY11. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.</p> <p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p>		

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<p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p> <p><u>E. Performance Metrics</u> NA</p>		

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations Government Personnel and Travel YX05	Various/ Various	MDA Washington, DC	16.523	9.765	Jul 2010	0.000		0.000		0.000	0	26.288	Continuing
Program Operations Personnel Support - 1 YX05	C/FFP	Teledyne Solutions Huntsville, AL	24.884	20.597	Apr 2010	0.000		0.000		0.000	0	45.481	Continuing
Program Operations Personnel Support - 2 YX05	TBD/TBD	Cobham, Inc. Huntsville, AL	13.341	7.925	Apr 2010	0.000		0.000		0.000	0	21.266	Continuing
Program Operations Government Support - 1 YX05	C/FFP	US Army Space and Missile Defense Command Redstone Arsenal, AL	15.768	0.562	Jan 2010	0.000		0.000		0.000	0	16.330	Continuing
Program Operations Personnel Support - 3 YX05	C/FFP	Northrop Grumman Albuquerque, NM	9.966	5.708	Apr 2010	0.000		0.000		0.000	0	15.674	Continuing
Program Operations Personnel Support - 4 YX05	TBD/TBD	Tecolote Huntsville, AL	1.731	0.424	Apr 2010	0.000		0.000		0.000	0	2.155	Continuing
Program Operations Personnel Support - 5 YX05	TBD/TBD	US Army Aviation and Missile Command Redstone Arsenal, AL	1.717	0.802	Jan 2010	0.000		0.000		0.000	0	2.519	Continuing
	TBD/TBD	AMRDEC	0.447	0.900	Jan 2010	0.000		0.000		0.000	0	1.347	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations Government Support - 2 YX05		Huntsville, AL											
Program Operations Personnel Support - 6 YX05	C/FFP	SRS Redstone Arsenal, AL	0.782	0.789	Apr 2010	0.000		0.000		0.000	0	1.571	Continuing
Program Operations Personnel Support - 7 YX05	TBD/TBD	Johns Hopkins University Applied Physics Lab Baltimore, MD	1.337	0.456	Apr 2010	0.000		0.000		0.000	0	1.793	Continuing
Program Operations Personnel Support - 8 YX05	TBD/TBD	SMC US Air Force Space and Missile Systems Center Kirtland AFB, NM	0.630	0.541	Jul 2010	0.000		0.000		0.000	0	1.171	Continuing
Program Operations Personnel Support - 9 YX05	C/CPFF	Paradigm Technologies Arlington, VA	0.020	1.684	Jan 2010	0.000		0.000		0.000	0	1.704	Continuing
Program Operations Personnel Support - 10 YX05	TBD/TBD	AMRDC UAH	0.028	0.000		0.000		0.000		0.000	0	0.028	Continuing
Program Operations Personnel Support - 11 YX05	TBD/TBD	USAASC Redstone Arsenal, AL	0.652	0.000	Jan 2010	0.000		0.000		0.000	0	0.652	Continuing
Program Operations Personnel Support - 12 YX05	TBD/TBD	Patuxie Partnership Huntsville, AL	0.336	0.000	Apr 2010	0.000		0.000		0.000	0	0.336	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations BAE Systems YX05	C/CPFF	BAE Systems Huntsville, AL	0.000	0.305		0.000		0.000		0.000	0	0.305	Continuing
Program Operations CACI YX05	C/CPFF	CACI Huntsville, AL	0.000	0.400		0.000		0.000		0.000	0	0.400	Continuing
Program Operations Computer Science Corp YX05	C/CPFF	CSC Huntsville, AL	0.000	0.712		0.000		0.000		0.000	0	0.712	Continuing
Program Operations Coleman Technology YX05	C/CPFF	Coleman Huntsville, AL	0.000	0.560		0.000		0.000		0.000	0	0.560	Continuing
Program Operations Missile Defense Agency YX05	Various/ Various	Missile Defense Agency Huntsville	0.000	2.980		0.000		0.000		0.000	0	2.980	Continuing
Launch Vehicle Development NRE Launch Vehicle Development NRE - 1 YX05	C/CPAF	Lockheed Martin Denver, CO	88.446	4.436	Jul 2010	0.000		0.000		0.000	0	92.882	Continuing
Launch Vehicle Development NRE Launch Vehicle Development NRE - 2 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	6.711	0.000		0.000		0.000		0.000	0	6.711	Continuing
Launch Vehicle Development NRE Launch Vehicle	TBD/TBD	Naval Air Warfare Center Port Hueneme (Detachment)	4.842	0.000	Jul 2010	0.000		0.000		0.000	0	4.842	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development NRE - 3 YX05		White Sands, NM											
Launch Vehicle Development NRE Launch Vehicle Development NRE - 4 YX05	TBD/TBD	United States Army Space & Missile Defense Command Redstone Arsenal, AL	0.994	0.000		0.000		0.000		0.000	0	0.994	Continuing
Launch Vehicle Development NRE Launch Vehicle Development - 1 YX05	C/FFP	Coleman Aerospace Orlando, FL	4.411	5.309		0.000		0.000		0.000	0	9.720	Continuing
Launch Vehicle Development NRE Launch Vehicle Development - 2 YX05	C/CPAF	Northrop Grumman Albuquerque, NM	0.483	0.000		0.000		0.000		0.000	0	0.483	Continuing
Launch Vehicle Development NRE Launch Vehicle Development - 3 YX05	TBD/TBD	AMC White Sands, NM	0.330	0.000		0.000		0.000		0.000	0	0.330	Continuing
Launch Vehicle Development NRE Launch Vehicle Development - 4 YX05	TBD/TBD	Naval Air Warfare Center Port Hueneme Division White Sands, NM	0.348	0.000		0.000		0.000		0.000	0	0.348	Continuing
Launch Vehicle Development NRE Launch Vehicle	C/TBD	TBD TBD	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development NRE - new RFP YX05													
Re-entry Vehicle (RV) Development NRE Re-entry Vehicle (RV) Development NRE - 1 YX05	C/CPAF	Lockheed Martin Denver, CO	16.607	2.090	Jul 2010	0.000		0.000		0.000	0	18.697	Continuing
Re-entry Vehicle (RV) Development NRE Re-entry Vehicle (RV) Development NRE - 2 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	2.942	0.000	Jan 2010	0.000		0.000		0.000	0	2.942	Continuing
Re-entry Vehicle (RV) Development NRE Re-entry Vehicle (RV) Development NRE - 3 YX05	TBD/TBD	SMDC/US Army Space and Missile Defense Command -	0.578	0.000		0.000		0.000		0.000	0	0.578	Continuing
Re-entry Vehicle (RV) Development NRE Re-entry Vehicle (RV) Development NRE - new RFP YX05	C/TBD	TBD TBD	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing
Associated Objects Development Associated Objects - 1 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	18.476	0.492	Jan 2010	0.000		0.000		0.000	0	18.968	Continuing
Associated Objects Development Associated Objects - 2 YX05	TBD/TBD	Massachusetts Institute of	1.771	2.389	Jan 2010	0.000		0.000		0.000	0	4.160	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Technology/ Lincoln Lexington, MA											
Associated Objects Development Associated Objects - 3 YX05	TBD/TBD	Military Defense Technologies Pt. Mugu, CA	0.759	0.000		0.000		0.000		0.000	0	0.759	Continuing
Associated Objects Development Associated Objects - 4 YX05	Various/ Various	Various Various	0.556	0.987	Jul 2010	0.000		0.000		0.000	0	1.543	Continuing
Associated Objects Development Associated Objects - new RFP YX05	C/TBD	TBD TBD	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing
Associated Objects Development Lockheed Martin Space Systems (UK) YX05	Various/ Various	Lockheed Martin UK	0.000	3.185		0.000		0.000		0.000	0	3.185	Continuing
System Engineering/ Program Management System Engineering - 1 YX05	C/CPAF	(LMSS) Lockheed Martin Space Systems Courtland, AL	60.978	21.890	Jul 2010	0.000		0.000		0.000	0	82.868	Continuing
System Engineering/ Program Management System Engineering - 2 YX05	TBD/TBD	Johns Hopkins University Applied Physics Lab Baltimore, MD	2.167	2.072	Apr 2010	0.000		0.000		0.000	0	4.239	Continuing
System Engineering/ Program Management	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	4.258	3.794	Apr 2010	0.000		0.000		0.000	0	8.052	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering - 3 YX05													
System Engineering/ Program Management System Engineering - 4 YX05	C/FFP	Colsa, Inc. Huntsville, AL	1.814	1.982	Apr 2010	0.000		0.000		0.000	0	3.796	Continuing
System Engineering/ Program Management System Engineering - 5 YX05	TBD/TBD	MIT/Lincoln Labs Lexington, MA	0.689	0.000		0.000		0.000		0.000	0	0.689	Continuing
System Engineering/ Program Management System Engineering - 6 YX05	TBD/TBD	Air Launch LLC Kirkland, WA	0.580	0.000		0.000		0.000		0.000	0	0.580	Continuing
System Engineering/ Program Management System Engineering - 7 YX05	C/FFP	TSI/Earth-To-Sky Huntsville, AL	0.260	0.000		0.000		0.000		0.000	0	0.260	Continuing
System Engineering/ Program Management System Engineering - 8 YX05	TBD/TBD	SMC/US Army Space & Missile Systems Center Albuquerque, NM	0.403	0.531		0.000		0.000		0.000	0	0.934	Continuing
System Engineering/ Program Management System Engineering - 9 YX05	TBD/TBD	NAWC Pax River, MD	0.039	0.000		0.000		0.000		0.000	0	0.039	Continuing
	TBD/TBD		0.101	0.000		0.000		0.000		0.000	0	0.101	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering/ Program Management System Engineering - 10 YX05		Raytheon Company White Sands, NM											
System Engineering/ Program Management System Engineering - 11 YX05	TBD/TBD	Military Defense Technology Pt. Mugu, CA	0.121	0.000		0.000		0.000		0.000	0	0.121	Continuing
System Engineering/ Program Management System Engineering - 12 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	0.202	0.000	Apr 2010	0.000		0.000		0.000	0	0.202	Continuing
System Engineering/ Program Management System Engineering - 13 YX05	C/FFP	Boeing Huntsville, AL	0.076	0.106	Jan 2010	0.000		0.000		0.000	0	0.182	Continuing
System Engineering/ Program Management System Engineering - 14 YX05	TBD/TBD	MDT/Toyon/SRA Various	0.304	0.000		0.000		0.000		0.000	0	0.304	Continuing
System Engineering/ Program Management System Engineering - 15 YX05	C/FFP	Paradigm Huntsville, AL	0.234	0.127	Apr 2010	0.000		0.000		0.000	0	0.361	Continuing
System Engineering/ Program Management MRBM T2 RFP YX05	C/TBD	TBD TBD	0.000	1.963	Apr 2010	0.000		0.000		0.000	0	1.963	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering/ Program Management US Army Aviation Research, Devel, and Engineering YX05	TBD/TBD	US Army Huntsville	0.000	4.300		0.000		0.000		0.000	0	4.300	Continuing
System Engineering/ Program Management IRBM RFP YX05	C/TBD	TBD TBD	0.000	0.105		0.000		0.000		0.000	0	0.105	Continuing
System Engineering/ Program Management Wyle Industries YX05	C/CPFF	Wyle Industries Huntsville, AL	0.000	1.281		0.000		0.000		0.000	0	1.281	Continuing
Logistics Logistics - 1 YX05	C/CPAF	Lockheed Martin Courtland, AL	7.770	8.758	Jul 2010	0.000		0.000		0.000	0	16.528	Continuing
Logistics Logistics - 2 YX05	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	4.427	1.617	Jul 2010	0.000		0.000		0.000	0	6.044	Continuing
Logistics Logistics - 3 YX05	C/CPFF	Alliant Techsystems Magna, UT	6.437	8.870	Jul 2010	0.000		0.000		0.000	0	15.307	Continuing
Logistics Logistics - 4 YX05	TBD/TBD	United States Air Force Space & Missile Systems Kirtland AFB, NM	0.100	0.000		0.000		0.000		0.000	0	0.100	Continuing
Logistics Logistics - 5 YX05	TBD/TBD	United States Property & Fiscal Office for Arizona Phoenix, AZ	3.721	2.123	Apr 2010	0.000		0.000		0.000	0	5.844	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Logistics - 6 YX05	TBD/TBD	New Mexico State University Physical Sciences Lab Las Cruces, NM	1.065	0.637	Apr 2010	0.000		0.000		0.000	0	1.702	Continuing
Logistics Logistics - 7 YX05	TBD/TBD	Naval Air Warfare Center Weapons Division China Lake, CA	2.050	1.593	Jul 2010	0.000		0.000		0.000	0	3.643	Continuing
Logistics Logistics - 8 YX05	TBD/TBD	Defense Finance and Accounting Services Indianapolis, IN	2.116	1.398	Jul 2010	0.000		0.000		0.000	0	3.514	Continuing
Logistics Logistics - 9 YX05	TBD/TBD	US Naval Surface Warfare Center Crane, IN	0.629	5.924	Jan 2010	0.000		0.000		0.000	0	6.553	Continuing
Logistics Logistics - 10 YX05	TBD/TBD	US Army Aviation and Missile Command Redstone Arsenal, AL	0.334	0.000	Jan 2010	0.000		0.000		0.000	0	0.334	Continuing
Logistics Logistics - 11 YX05	TBD/TBD	CECOM Eglin AFB, FL	0.098	0.061	Jan 2010	0.000		0.000		0.000	0	0.159	Continuing
Logistics Logistics - 12 YX05	TBD/TBD	DISA Scott, AFB	0.012	0.039	Jan 2010	0.000		0.000		0.000	0	0.051	Continuing
Logistics Logistics - 13 YX05	TBD/TBD	Vandenberg AFB Vandenberg, CA	0.116	0.000		0.000		0.000		0.000	0	0.116	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Logistics - 14 YX05	TBD/TBD	NSWC Port Hueneme (Detachment) White Sands, NM	0.119	0.122	Jan 2010	0.000		0.000		0.000	0	0.241	Continuing
Logistics Logistics - 15 YX05	TBD/TBD	US Army Joint Munitions Command Hawthorne Army Depot, NV	0.144	0.926	Apr 2010	0.000		0.000		0.000	0	1.070	Continuing
Logistics Logistics - 16 YX05	TBD/TBD	Naval Surface Warfare Center Indian Head, MD	0.115	0.000	Apr 2010	0.000		0.000		0.000	0	0.115	Continuing
Logistics Logistics - 17 YX05	C/CPAF	Lockheed Martin Denver, CO	1.037	0.000	Jul 2010	0.000		0.000		0.000	0	1.037	Continuing
Logistics Logistics - 18 YX05	TBD/TBD	SRCC Redstone Arsenal, AL	1.000	0.000		0.000		0.000		0.000	0	1.000	Continuing
Logistics Logistics - 19 YX05	TBD/TBD	PMRF Bark Sands, HI	0.039	0.000		0.000		0.000		0.000	0	0.039	Continuing
Logistics Logistics - 20 YX05	TBD/TBD	Chugach Development Corp. Anchorage, AK	0.002	0.000		0.000		0.000		0.000	0	0.002	Continuing
Logistics Logistics - 21 YX05	Various/ Various	Various Various	0.380	0.253	Apr 2010	0.000		0.000		0.000	0	0.633	Continuing
Logistics Logistics - 22 YX05	TBD/TBD	Sandia National Labs	3.060	0.000	Jul 2010	0.000		0.000		0.000	0	3.060	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Albuquerque, NM											
Logistics Logistics - 23 YX05	TBD/TBD	SMDC Huntsville, AL	0.036	0.000		0.000		0.000		0.000	0	0.036	Continuing
Logistics Logistics - 24 YX05	TBD/TBD	Aerojet Albuquerque, NM	1.439	0.406	Jan 2010	0.000		0.000		0.000	0	1.845	Continuing
Logistics Logistics - 25 YX05	TBD/TBD	AMC White Sands, NM	0.351	0.000	Jan 2010	0.000		0.000		0.000	0	0.351	Continuing
Logistics Logistics - 26 YX05	C/FFP	Northrop Grumman Albuquerque, NM	0.434	0.655	Apr 2010	0.000		0.000		0.000	0	1.089	Continuing
Logistics Logistics - 27 YX05	TBD/TBD	Chugach Support Services Huntsville, AL	0.330	0.000		0.000		0.000		0.000	0	0.330	Continuing
Logistics Logistics - 28 YX05	TBD/TBD	Hill Air Force Base Hill AFB	0.618	0.931	Jan 2010	0.000		0.000		0.000	0	1.549	Continuing
Logistics Logistics - 29 YX05	TBD/TBD	RTTC Redstone Arsenal, AL	0.638	1.136	Jan 2010	0.000		0.000		0.000	0	1.774	Continuing
Logistics Logistics - 30 YX05	TBD/TBD	SAIC Huntsville, AL	0.891	0.168	Apr 2010	0.000		0.000		0.000	0	1.059	Continuing
Logistics Logistics - 31 YX05	TBD/TBD	Camp Navajo Bellemont, AZ	0.031	0.000		0.000		0.000		0.000	0	0.031	Continuing
Logistics Logistics - 32 YX05	TBD/TBD	DESC San Antonio, TX	0.217	0.065	Jan 2010	0.000		0.000		0.000	0	0.282	Continuing
	TBD/TBD	Navy-SSP	0.323	0.496	Jan 2010	0.000		0.000		0.000	0	0.819	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Logistics - 33 YX05		Arlington, VA											
Logistics Logistics - 34 YX05	TBD/TBD	NAWC-Pax Pax River, MD	0.697	0.000		0.000		0.000		0.000	0	0.697	Continuing
Logistics Logistics - 35 YX05	TBD/TBD	OO-ALC Hill AFB, UT	0.152	0.000		0.000		0.000		0.000	0	0.152	Continuing
Logistics Logistics - 36 YX05	TBD/TBD	309th Missile Maintenance Wing Hill AFB, UT	0.455	0.000	Apr 2010	0.000		0.000		0.000	0	0.455	Continuing
Logistics Logistics - 37 YX05	TBD/TBD	ADMC Anniston, AL	0.057	0.032	Jan 2010	0.000		0.000		0.000	0	0.089	Continuing
Logistics Logistics - 38 YX05	TBD/TBD	AFCESA Courtland, AL	0.085	0.000		0.000		0.000		0.000	0	0.085	Continuing
Logistics Logistics - 39 YX05	TBD/TBD	AST Huntsville, AL	0.005	0.000		0.000		0.000		0.000	0	0.005	Continuing
Logistics Logistics - 40 YX05	C/FFP	Gray Research Huntsville, AL	0.000	0.079	Jan 2010	0.000		0.000		0.000	0	0.079	Continuing
Logistics Logistics - 41 YX05	C/FFP	Interstate Battery System Albuquerque, NM	0.000	0.021	Apr 2010	0.000		0.000		0.000	0	0.021	Continuing
Logistics Logistics - 42 YX05	TBD/TBD	National Security Agency Albuquerque, NM	0.000	0.059	Jan 2010	0.000		0.000		0.000	0	0.059	Continuing
Logistics MRBM T1 RFP YX05	C/TBD	TBD TBD	0.000	1.062	Apr 2010	0.000		0.000		0.000	0	1.062	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Edwards Air Force Base YX05	TBD/TBD	Edwards Air Force Base Albuquerque, NM	0.000	0.544		0.000		0.000		0.000	0	0.544	Continuing
Logistics White Sands Missile Range YX05	TBD/TBD	White Sands Missile Range New Mexico	0.000	0.150		0.000		0.000		0.000	0	0.150	Continuing
Logistics US Army Aviation and Missile Research, Development and Engineering YX05	TBD/TBD	AMRDEC Huntsville AL	0.000	0.180		0.000		0.000		0.000	0	0.180	Continuing
Support Equipment Support Equipment - 1 YX05	C/CPAF	Lockheed Martin Courtland, AL	23.287	2.554	Jul 2010	0.000		0.000		0.000	0	25.841	Continuing
Support Equipment Support Equipment - 2 YX05	TBD/TBD	Defense Finance and Accounting Services Indianapolis, IN	0.145	0.000	Jul 2010	0.000		0.000		0.000	0	0.145	Continuing
Support Equipment Support Equipment - 3 YX05	TBD/TBD	Ronald Reagan Ballistic Missile Defense Test Site Kwajalein, Marshall Islands	0.000	0.212	Apr 2010	0.000		0.000		0.000	0	0.212	Continuing
Support Equipment Support Equipment - 4 YX05	TBD/TBD	SAIC Huntsville, AL	2.571	0.000		0.000		0.000		0.000	0	2.571	Continuing
	TBD/TBD	Redstone Arsenal Garrison	0.165	0.000		0.000		0.000		0.000	0	0.165	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Equipment Support Equipment - 5 YX05		Huntsville, AL											
Support Equipment Support Equipment - 6 YX05	TBD/TBD	US Naval Surface Warfare Center Crane, IN	0.107	0.000		0.000		0.000		0.000	0	0.107	Continuing
Support Equipment Support Equipment - 7 YX05	C/CPFF	Coleman Aerospace Orlando, FL	0.000	2.442		0.000		0.000		0.000	0	2.442	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 1 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	0.000	4.720	Jul 2010	0.000		0.000		0.000	0	4.720	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 2 YX05	C/CPAF	Lockheed Martin Courtland, AL	0.000	50.112	Jul 2010	0.000		0.000		0.000	0	50.112	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 3 YX05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	0.320	Jan 2010	0.000		0.000		0.000	0	0.320	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 4 YX05	TBD/TBD	Coleman Aerospace Orlando, FL	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
	TBD/TBD		0.000	0.531	Jul 2010	0.000		0.000		0.000	0	0.531	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 5 YX05		Defense Finance & Accounting Services Indianapolis, IN											
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 6 YX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	0.000	0.378	Jan 2010	0.000		0.000		0.000	0	0.378	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 7 YX05	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 8 YX05	C/FFP	Teledyne Solutions Huntsville, AL	0.000	0.792	Apr 2010	0.000		0.000		0.000	0	0.792	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 9 YX05	TBD/TBD	MDIOC Shriever AFB, CO	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 10 YX05	TBD/TBD	NSWC-Crane Division Crane, IN	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 11 YX05	TBD/TBD	Aerospace Corporation Los Angeles, CA	0.000	0.879	Apr 2010	0.000		0.000		0.000	0	0.879	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 12 YX05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.000	0.000	Oct 2009	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 13 YX05	TBD/TBD	Alaska Aerospace Kodiak Island, AK	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 14 YX05	TBD/TBD	Defense Information Systems Agency (DISA) Scott AFB, IL	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 15 YX05	TBD/TBD	Missile Defense Data Center (MDDC) Albuquerque, NM	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 16 YX05	TBD/TBD	Hanscom Air Force Base Bedford, MA	0.000	0.000	Jan 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 17 YX05	TBD/TBD	Naval Air Warfare Center Patuxent River, MD	0.000	0.000	Apr 2010	0.000		0.000		0.000	0	0	Continuing
Intermediate Range Ballistic Missile (IRBM)	TBD/TBD	US Army Kwajalein Atoll	0.000	1.575		0.000		0.000		0.000	0	1.575	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Missions IRBM Missions - 18 YX05													
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 19 YX05	Various/ Various	Various Various	0.000	0.414		0.000		0.000		0.000	0	0.414	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 1 YX05	TBD/TBD	Sandia National Labs Albuquerque, NM	0.000	0.625	Jul 2010	0.000		0.000		0.000	0	0.625	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 2 YX05	C/CPAF	Lockheed Martin Courtland, AL	0.000	22.373	Jul 2010	0.000		0.000		0.000	0	22.373	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 3 YX05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	2.038	Apr 2010	0.000		0.000		0.000	0	2.038	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 4 YX05	C/CPAF	Coleman Aerospace Orlando, FL	0.000	10.944	Jul 2010	0.000		0.000		0.000	0	10.944	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 5 YX05	TBD/TBD	DFAS Indianapolis, IN	0.000	8.240	Jul 2010	0.000		0.000		0.000	0	8.240	Continuing
	TBD/TBD		0.000	31.665	Jul 2010	0.000		0.000		0.000	0	31.665	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 6 YX05		NSWC-Port Hueneme (Detachment) White Sands, NM											
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 7 YX05	TBD/TBD	PMRF Barking Sands, HI	0.000	0.406	Apr 2010	0.000		0.000		0.000	0	0.406	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 8 YX05	C/FFP	Teledyne Solutions Huntsville, AL	0.000	0.466	Jan 2010	0.000		0.000		0.000	0	0.466	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 9 YX05	TBD/TBD	MDIOC Schriever AFB, CO	0.000	0.242	Jul 2010	0.000		0.000		0.000	0	0.242	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 13 YX05	TBD/TBD	NAWC-WD China Lake, CA	0.000	3.758	Jan 2010	0.000		0.000		0.000	0	3.758	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 14 YX05	TBD/TBD	NAWC-Pax Patuxent River, MD	0.000	6.394	Jul 2010	0.000		0.000		0.000	0	6.394	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 15 YX05	TBD/TBD	AMC USAF Scott AFB, IL	0.000	5.628	Jul 2010	0.000		0.000		0.000	0	5.628	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - new RFP YX05	C/TBD	TBD TBD	0.000	0.458	Apr 2010	0.000		0.000		0.000	0	0.458	Continuing
Short Range Ballistic Missile (SRBM) Missions Aero Space Corp YX05	TBD/TBD	AeroSpace Corp Los Angeles, CA	0.000	1.018		0.000		0.000		0.000	0	1.018	Continuing
Short Range Ballistic Missile (SRBM) Missions MRBM T1 RFP YX05	C/TBD	TBD TBD	0.000	0.405		0.000		0.000		0.000	0	0.405	Continuing
Short Range Ballistic Missile (SRBM) Missions Ronald Reagan Ballistic Missile Defense Site YX05	TBD/TBD	Ronald Reagan Ballistic Missile Defense Site Kwajalein Atoll	0.000	0.186		0.000		0.000		0.000	0	0.186	Continuing
Short Range Ballistic Missile (SRBM) Missions Redstone Technical Test Center YX05	TBD/TBD	Redstone Technical Test Center Huntsville, AL	0.000	0.150		0.000		0.000		0.000	0	0.150	Continuing
Short Range Ballistic Missile (SRBM) Missions US Army White Sands Missile Range YX05	TBD/TBD	US Army White Sands, NM	0.000	0.690		0.000		0.000		0.000	0	0.690	Continuing
Short Range Ballistic Missile (SRBM) Missions Various YX05	C/TBD	Various Various	0.000	0.322		0.000		0.000		0.000	0	0.322	Continuing
	TBD/TBD	NSWC, PHD	0.000	2.976		0.000		0.000		0.000	0	2.976	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Short Range Ballistic Missile (SRBM) Missions Naval Surface Warfare Center YX05		Port Hueneme, CA											
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 1 YX05	TBD/TBD	Aerospace Corporation Los Angeles, CA	0.000	0.461	Jan 2010	0.000		0.000		0.000	0	0.461	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 3 YX05	C/CPFF	Coleman Aerospace Orlando, FL	0.000	71.531	Jul 2010	0.000		0.000		0.000	0	71.531	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 4 YX05	TBD/TBD	Defense Finance and Accounting Service Indianapolis, IN	0.000	2.230	Apr 2010	0.000		0.000		0.000	0	2.230	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 5 YX05	TBD/TBD	Naval Air Warfare Center - Weapons Division China Lake, CA	0.000	0.106	Jan 2010	0.000		0.000		0.000	0	0.106	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 6 YX05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	4.052	Jul 2010	0.000		0.000		0.000	0	4.052	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 9 YX05	TBD/TBD	309th Missile Maintenance Wing Hill AFB	0.000	0.849		0.000		0.000		0.000	0	0.849	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 10 YX05	TBD/TBD	MDIOC Schriever AFB	0.000	0.106		0.000		0.000		0.000	0	0.106	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions -11 YX05	C/CPFF	Orbital Sciences Corp Chandler, AZ	0.000	9.135		0.000		0.000		0.000	0	9.135	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions -12 YX05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	0.000	0.319		0.000		0.000		0.000	0	0.319	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions -13 YX05	TBD/TBD	Ronald Regan Ballistic Missile Defense Site Kwajalein Atoll	0.000	0.610		0.000		0.000		0.000	0	0.610	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions -14 YX05	TBD/TBD	US Army Kwajalein Atoll	0.000	0.016		0.000		0.000		0.000	0	0.016	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 15 YX05	C/TBD	Alliant Systems Magna UT	0.000	2.123		0.000		0.000		0.000	0	2.123	Continuing
Subtotal			376.447	405.905		0.000		0.000		0.000	0.000	782.352	

Remarks
All Project YX05 funds support BMDS-Level Testing.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Remarks NA													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			376.447	405.905		0.000		0.000		0.000	0.000	782.352	

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
Enhanced Long Range Air Launch Target (E-LRALT)					■	■	■	■																								
Aegis Readiness Assessment Vehicle (ARAV-C)	■	■	■	■																												
LV-2 Development	■	■	■	■	■	■	■	■																								
Family 1 & 2 Development	■	■	■	■	■	■	■	■																								
Family 3, 4, 5 NRE/Development	■	■	■	■	■	■	■	■																								
UK Project Agreement					■	■	■	■																								
MBRV-2 Development	■	■	■	■	■	■	■	■																								

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT YX05: <i>Targets and Countermeasures Core</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Enhanced Long Range Air Launch Target (E-LRALT)	1	2010	4	2010
Aegis Readiness Assessment Vehicle (ARAV-C)	1	2009	4	2009
LV-2 Development	1	2009	4	2010
Family 1 & 2 Development	1	2009	4	2010
Family 3, 4, 5 NRE/Development	1	2009	4	2010
UK Project Agreement	1	2010	4	2010
MBRV-2 Development	1	2009	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
MD05: <i>Targets Program</i>	0.000	0.000	517.065	0.000	517.065	587.940	467.401	409.499	401.416	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Starting in FY 2011 MD05 funding includes funding transitioned from project YX05.

All Project MD05 funds support BMDS-Level Testing.

A. Mission Description and Budget Item Justification

The Missile Defense Agency (MDA) Targets and Countermeasures (TC) program provides threat representative targets to effectively demonstrate capability of the evolving layered missile defense system in a simultaneous test and operations operating environment. Based on the systems engineering assessments of realistic threat scenarios, the targets and countermeasures program acquires and launches short, medium, intermediate, and long range capability-based targets, to include Foreign Materiel Acquisitions (FMAs), with enhanced payloads to test, verify, and validate the performance of the BMDS.

Funding for the TC program supports the continuation of the target program`s source activities which include the requirements, design, build, and test of BMDS targets, associated payloads, and flight missions. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters and target components, as well as the purchase of long lead material assets and asset management items for short, medium, intermediate, and long-range target components.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program Operations See Description Below	0.000	0.000	64.643	0.000	64.643

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>		PROJECT MD05: <i>Targets Program</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> NA</p> <p><i>FY 2010 Plans:</i> NA</p> <p><i>FY 2011 Base Plans:</i> BMD Systems Engineering provides System Description Documents and System Specifications for elements to design, build, integrate and test BMDS components. These products optimize performance at the system level and further ensure that the assessment of the designed BMD System is based on sufficient ground and flight testing. Compliance of Targets and Countermeasures (TC) to BMD System level requirements is monitored in a series of requirements and design reviews both at the system and element levels.</p> <p>System engineering/program management effort includes activities by TC prime contractors as well as non-prime systems engineering efforts. This effort provides target program technical direction to meet program requirements while balancing cost, schedule, performance, and risk. This effort utilizes the spiral development process for long-range plans initiating new developments. It conducts functional requirements allocation to product lines, defines product line specifications/interfaces, and follows guidelines for design reviews. It performs target system analysis to verify system performance, defines target program baselines, controls flight test configurations, and conducts pre and post-flight analysis. It identifies treaty and environmental issues and develops plans for issue resolution. Efforts not on the prime contracts in support of the ;TC program include Modeling and Simulation (M&S) execution and improvements to evolve TC M&S capability; trajectory analyses; signature analyses and characterization; studies to assess alternative target and platform solutions; assessments of risk and mission assurance; and design approval of government furnished equipment (GFE).</p>								

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> NA					
Accomplishments/Planned Programs Subtotals	0.000	0.000	517.065	0.000	517.065

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
• 0603913C: <i>ISRAELI COOPERATIVE</i>	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>											
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

The Missile Defense Agency's Targets and Countermeasures program office provides for the development and procurement of ballistic missile targets and countermeasures for the Ballistic Missile Defense System in support of the Missile Defense Agency's flight test program. Target requirements are derived from the Agency's Integrated Master Test Plan.

The Agency currently procures targets through the Targets and Countermeasures Prime Contract with Lockheed Martin and additional contracts including the Orbital Medium Range Target (MRT) Contract, and the ATK rocket motor sustainment contract. In addition the Agency utilizes existing United States Air Force contracts such as the Orbital/Suborbital Program contract and the Sounding Rockets Program contracts administered by the United States Air Force Space Development and Test Wing in Albuquerque, New Mexico. Further, the Agency procures Lance targets through a cooperative agreement with New Mexico State University's Physical Sciences Lab and ARAV targets through the Naval Surface Warfare Center Port Hueneme Division White Sands contracts. Targets and Countermeasures has assumed a 50/50 cost-share with the Japanese Ministry of Defense for the future Standard Missile-3 (SM-3) Cooperative Development (SCD) Flight Test Missions (SFTM).

In our new strategy starting in FY 2010, we will compete our future Medium, Intermediate, and Intercontinental Range Ballistic Missile Targets. The targets the Agency procures are categorized into three types: Type 1 Targets are simple, baseline configurations; Type 2 Targets have increased capability or complexity; and Type 3

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
<p>Targets are a one of a kind design/development or launch activity. This will result in a single contractor award for each Target class that provides the Agency the best value solution with the exception of unique target configurations procured in low unit quantities (Type 3 Targets). Type 3 Targets in a given class may be awarded to a contractor different than the contractor who is awarded the rest of the line items associated with the respective target class. The Agency is currently preparing requests for proposals to procure targets by class under Target Systems Performance Specifications to support target execution requirements through the Future Years Defense Plan. These targets will be procured as All-Up-Rounds from vendors who are responsible for all aspects of target performance from tip to tail. This Request for Proposal specifies just-in-time delivery dates to meet Integrated Master Test Plan (IMTP) flight test requirements and also requests proposals suggest phasing for economic order quantity deliveries. The Agency will procure pre and post mission planning, data products, support to modeling and simulation and ground test, inventory sustainment and management, and flight test execution. The Agency has released the Request for Proposal for MRBM Type 1 and anticipates awarding the contract in FY10. Request for Proposals for IRBM and ICBM will be in FY10 with contract awards taking place in FY11. Backup targets are also being procured to reduce risk of delays to the BMDS flight test program due to primary target failure or weapon system problems.</p> <p>Foreign Materiel Acquisitions will continue to be procured under the existing Lockheed Martin Contract HQ0006-04-D-0006. The Agency will review lessons learned and available documentation and determine the feasibility of procuring additional Foreign Materiel Acquisitions under the Lockheed Martin or other available contracts in 2010. Additionally, the Lockheed Martin contract will be utilized to procure an additional two (2) LV-2s above those under Delivery Order-8, and a single Short Range Air Launch Target.</p> <p>Establishing a manufacturing approach to target procurements is key to our strategy and allows for economic order quantity purchasing opportunities. We seek to acquire the full spectrum of target capabilities with the minimum number of production lines. The Agency seeks to promote high quality, repeatable production capability, including robust management of sub-tier supplier manufacturing capabilities.</p> <p>As we transition from our current approach using just in time for each target to an inventory approach with simple product lines to meet multiple test requirements, the current work ongoing will not transition to new contracts. Work under existing contracts/orders will run to completion rather than being transitioned to a new prime contractor.</p> <p>MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
<p>agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.</p>		
<p><u>E. Performance Metrics</u> NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations Government Personnel and Travel MD05	TBD/TBD	MDA Washington, DC	0.000	0.000		19.197	Jul 2011	0.000		19.197	Continuing	Continuing	Continuing
Program Operations Personnel Support - 1 MD05	C/FFP	Teledyne Solutions Huntsville, AL	0.000	0.000		22.539	Jul 2011	0.000		22.539	Continuing	Continuing	Continuing
Program Operations Personnel Support - 2 MD05	C/FFP	Cobham, Inc. Huntsville, AL	0.000	0.000		8.321	Jul 2011	0.000		8.321	Continuing	Continuing	Continuing
Program Operations Personnel Support - 3 MD05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	0.000		5.741	Jul 2011	0.000		5.741	Continuing	Continuing	Continuing
Program Operations Personnel Support - 4 MD05	C/FFP	Tecolote Huntsville, AL	0.000	0.000		0.426	Jul 2011	0.000		0.426	Continuing	Continuing	Continuing
Program Operations Government Support - 1 MD05	TBD/TBD	AMRDEC Huntsville, AL	0.000	0.000		0.892	Jul 2011	0.000		0.892	Continuing	Continuing	Continuing
Program Operations Personnel Support - 5 MD05	C/FFP	SRS Huntsville, AL	0.000	0.000		0.793	Jul 2011	0.000		0.793	Continuing	Continuing	Continuing
Program Operations Personnel Support - 6 MD05	TBD/TBD	Johns Hopkins University Applied Physics Lab Laurel, MD	0.000	0.000		0.461	Jul 2011	0.000		0.461	Continuing	Continuing	Continuing
	TBD/TBD	SMC US Air Force Space and	0.000	0.000		0.536	Jul 2011	0.000		0.536	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Operations Personnel Support - 7 MD05		Missile Systems Center Kirtland AFB, NM											
Program Operations Personnel Support - 8 MD05	TBD/TBD	US Army Aviation and Missile Command Huntsville, AL	0.000	0.000		0.873	Jul 2011	0.000		0.873	Continuing	Continuing	Continuing
Program Operations Personnel Support - 9 MD05	C/FFP	BAE Systems Huntsville, AL	0.000	0.000		0.307	Jul 2011	0.000		0.307	Continuing	Continuing	Continuing
Program Operations Personnel Support - 10 MD05	C/CPFF	Paradigm Technologies Arlington, VA	0.000	0.000		1.809	Jul 2011	0.000		1.809	Continuing	Continuing	Continuing
Program Operations Personnel Support - 11 MD05	TBD/TBD	US Army Space & Missile Defense Command Huntsville, AL	0.000	0.000		1.053	Jul 2011	0.000		1.053	Continuing	Continuing	Continuing
Program Operations Personnel Support - 12 MD05	C/FFP	CACI Huntsville, AL	0.000	0.000		0.408	Jul 2011	0.000		0.408	Continuing	Continuing	Continuing
Program Operations Personnel Support - 13 MD05	C/FFP	Computer Sciences Corp. Huntsville, AL	0.000	0.000		0.721		0.000		0.721	Continuing	Continuing	Continuing
Program Operations Personnel Support - 14 MD05	C/FFP	Coleman Technology, Inc. Huntsville, AL	0.000	0.000		0.566		0.000		0.566	Continuing	Continuing	Continuing
	C/CPAF		0.000	0.000		4.524	Jul 2011	0.000		4.524	Continuing	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Target Development (NRE) Target Development (NRE) - 1 MD05		Lockheed Martin Space Systems Courtland, AL											
Target Development (NRE) Target Development (NRE) - 2 MD05	TBD/TBD	Sandia National Labs Albuquerque, NM	0.000	0.000		3.848	Jul 2011	0.000		3.848	Continuing	Continuing	Continuing
Target Development (NRE) Target Development (NRE) - 3 MD05	C/CPFF	Teledyne Solutions, Inc. Various	0.000	0.000		1.467	Jul 2011	0.000		1.467	Continuing	Continuing	Continuing
Target Development (NRE) Target Development (NRE) - new RFP MD05	C/TBD	TBD TBD	0.000	0.000		99.164	Jul 2011	0.000		99.164	Continuing	Continuing	Continuing
Target Development (NRE) Development (NRE) - 4 MD05	C/CPAF	Lockheed Martin Space Systems United Kingdom	0.000	0.000		3.958		0.000		3.958	Continuing	Continuing	Continuing
Target Development (NRE) Development (NRE) - 5 MD05	TBD/TBD	MIT Lincoln Labs Lexington, MA	0.000	0.000		1.745		0.000		1.745	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - 1 MD05	TBD/TBD	Johns Hopkins University Applied Physics Lab Laurel, MD	0.000	0.000		1.560	Jul 2011	0.000		1.560	Continuing	Continuing	Continuing
	C/FFP		0.000	0.000		4.178	Jul 2011	0.000		4.178	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering/ Program Management System Engineering - 2 MD05		Teledyne Solutions, Inc. Huntsville, AL											
System Engineering/ Program Management System Engineering - 3 MD05	C/FFP	Raytheon Huntsville, AL	0.000	0.000		0.138	Jul 2011	0.000		0.138	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - 4 MD05	C/FFP	Boeing Huntsville, AL	0.000	0.000		0.113	Jul 2011	0.000		0.113	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - 5 MD05	C/FFP	Cobham Huntsville, AL	0.000	0.000		0.568	Jul 2011	0.000		0.568	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - new RFP MD05	C/TBD	TBD TBD	0.000	0.000		3.037	Jul 2011	0.000		3.037	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - 6 MD05	C/CPAF	Lockheed Martin Space Systems Courtland, AL	0.000	0.000		33.779		0.000		33.779	Continuing	Continuing	Continuing
System Engineering/ Program Management System Engineering - 7 MD05	TBD/TBD	SMC US Air Force Space and Missile Systems Center	0.000	0.000		0.574		0.000		0.574	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Kirtland AFB, NM											
Logistics Logistics - 1 MD05	C/CPAF	Lockheed Martin Courtland, AL	0.000	0.000		11.898	Jul 2011	0.000		11.898	Continuing	Continuing	Continuing
Logistics Logistics - 2 MD05	TBD/TBD	Redstone Arsenal Garrison Huntsville, AL	0.000	0.000		1.751	Jul 2011	0.000		1.751	Continuing	Continuing	Continuing
Logistics Logistics - 3 MD05	C/CPFF	Alliant Techsystems Magna, UT	0.000	0.000		4.387	Jul 2011	0.000		4.387	Continuing	Continuing	Continuing
Logistics Logistics - 4 MD05	C/FFP	United States Property & Fiscal Office for Arizona Phoenix, AZ	0.000	0.000		2.298	Jul 2011	0.000		2.298	Continuing	Continuing	Continuing
Logistics Logistics - 5 MD05	C/FFP	New Mexico State University Physical Sciences Lab Las Cruces, NM	0.000	0.000		0.689	Jul 2011	0.000		0.689	Continuing	Continuing	Continuing
Logistics Logistics - 6 MD05	TBD/TBD	Defense Munitions Center Anniston, AL	0.000	0.000		0.034	Jul 2011	0.000		0.034	Continuing	Continuing	Continuing
Logistics Logistics - 7 MD05	TBD/TBD	Defense Finance and Accounting Services Indianapolis, IN	0.000	0.000		0.593	Jul 2011	0.000		0.593	Continuing	Continuing	Continuing
Logistics Logistics - 8 MD05	TBD/TBD	Naval Surface Warfare Center	0.000	0.000		5.837	Jul 2011	0.000		5.837	Continuing	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Crane, IN											
Logistics Logistics - 9 MD05	TBD/TBD	Army Aviation and Missile Command White Sands, NM	0.000	0.000		0.163	Jul 2011	0.000		0.163	Continuing	Continuing	Continuing
Logistics Logistics - 10 MD05	C/FFP	Aerojet Albuquerque, NM	0.000	0.000		0.439	Jul 2011	0.000		0.439	Continuing	Continuing	Continuing
Logistics Logistics - 11 MD05	C/FFP	SAIC Huntsville, AL	0.000	0.000		0.176	Jul 2011	0.000		0.176	Continuing	Continuing	Continuing
Logistics Logistics - 12 MD05	TBD/TBD	AMRDEC Huntsville, AL	0.000	0.000		0.195	Jul 2011	0.000		0.195	Continuing	Continuing	Continuing
Logistics Logistics - 13 MD05	TBD/TBD	Army Communications Electronics Command Eglin AFB, FL	0.000	0.000		0.065	Jul 2011	0.000		0.065	Continuing	Continuing	Continuing
Logistics Logistics - 14 MD05	TBD/TBD	Defense Energy Support Center San Antonio, TX	0.000	0.000		0.141	Jul 2011	0.000		0.141	Continuing	Continuing	Continuing
Logistics Logistics - 15 MD05	TBD/TBD	Defense Information Systems Agency Scott AFB, IL	0.000	0.000		0.042	Jul 2011	0.000		0.042	Continuing	Continuing	Continuing
Logistics Logistics - 16 MD05	C/FFP	Gray Research Huntsville, AL	0.000	0.000		0.086	Jul 2011	0.000		0.086	Continuing	Continuing	Continuing
	TBD/TBD		0.000	0.000		1.008	Jul 2011	0.000		1.008	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Logistics - 17 MD05		Hill Air Force Base Ogden, UT											
Logistics Logistics - 18 MD05	C/FFP	Interstate Battery System Albuquerque, NM	0.000	0.000		0.023	Jul 2011	0.000		0.023	Continuing	Continuing	Continuing
Logistics Logistics - 19 MD05	TBD/TBD	Naval Strategic Systems Program Arlington, VA	0.000	0.000		0.121	Jul 2011	0.000		0.121	Continuing	Continuing	Continuing
Logistics Logistics - 20 MD05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	0.000		0.709	Jul 2011	0.000		0.709	Continuing	Continuing	Continuing
Logistics Logistics - 21 MD05	TBD/TBD	National Security Agency Albuquerque, NM	0.000	0.000		0.066	Jul 2011	0.000		0.066	Continuing	Continuing	Continuing
Logistics Logistics - 22 MD05	TBD/TBD	Edwards Air Force Base Albuquerque, NM	0.000	0.000		0.643	Jul 2011	0.000		0.643	Continuing	Continuing	Continuing
Logistics Logistics - 23 MD05	TBD/TBD	NSWC Port Hueneme (Detachment) White Sands, NM	0.000	0.000		0.132	Jul 2011	0.000		0.132	Continuing	Continuing	Continuing
Logistics Logistics - 24 MD05	TBD/TBD	Redstone Technical Test Center Huntsville, AL	0.000	0.000		0.704	Jul 2011	0.000		0.704	Continuing	Continuing	Continuing
	TBD/TBD		0.000	0.000		0.113	Jul 2011	0.000		0.113	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics Logistics - 25 MD05		Army Joint Munitions Command Hawthorne AFB, NV											
Logistics Logistics - 26 MD05	Various/ Various	Various Various	0.000	0.000		0.277	Jul 2011	0.000		0.277	Continuing	Continuing	Continuing
Logistics Logistics - new RFP MD05	C/TBD	TBD TBD	0.000	0.000		4.695	Jul 2011	0.000		4.695	Continuing	Continuing	Continuing
Logistics Logistics - 27 MD05	TBD/TBD	Naval Air Warfare Center Weapons Division China Lake, CA	0.000	0.000		1.725		0.000		1.725	Continuing	Continuing	Continuing
Support Equipment Support Equipment - 1 MD05	C/CPAF	Lockheed Martin Courtland, AL	0.000	0.000		3.116	Jul 2011	0.000		3.116	Continuing	Continuing	Continuing
Support Equipment Support Equipment - 2 MD05	TBD/TBD	Ronald Reagan Ballistic Missile Defense Test Site Kwajalein, Marshall Islands	0.000	0.000		1.131	Jul 2011	0.000		1.131	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 1 MD05	TBD/TBD	Sandia National Labs Albuquerque, NM	0.000	0.000		0.811	Jul 2011	0.000		0.811	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM)	C/CPAF	Lockheed Martin Courtland, AL	0.000	0.000		51.709	Jul 2011	0.000		51.709	Continuing	Continuing	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Missions IRBM Missions - 2 MD05													
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 3 MD05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	0.000		1.091	Jul 2011	0.000		1.091	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 4 MD05	TBD/TBD	MIT Lincoln Labs Lexington, MA	0.000	0.000		4.929	Jul 2011	0.000		4.929	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 5 MD05	TBD/TBD	Defense Finance & Accounting Service Indianapolis, IN	0.000	0.000		2.451	Jul 2011	0.000		2.451	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 6 MD05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	0.000	0.000		1.290	Jul 2011	0.000		1.290	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 7 MD05	C/FFP	Teledyne Solutions, Inc. Huntsville, AL	0.000	0.000		0.857	Jul 2011	0.000		0.857	Continuing	Continuing	Continuing
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - 8 MD05	C/FFP	US Army Kwajalein Atoll Test Facility Kwajalein Atoll, Marshall Islands	0.000	0.000		5.374	Jul 2011	0.000		5.374	Continuing	Continuing	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intermediate Range Ballistic Missile (IRBM) Missions IRBM Missions - new RFP MD05	C/TBD	TBD TBD	0.000	0.000		6.182	Jul 2011	0.000		6.182	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 1 MD05	C/FFP	Coleman Aerospace Orlando, FL	0.000	0.000		21.704	Jul 2011	0.000		21.704	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 2 MD05	C/CPAF	Lockheed Martin Courtland, AL	0.000	0.000		16.148	Jul 2011	0.000		16.148	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 3 MD05	C/CPAF	Northrop Grumman Albuquerque, NM	0.000	0.000		1.120	Jul 2011	0.000		1.120	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 4 MD05	TBD/TBD	Defense Finance and Accounting Service Indianapolis, IN	0.000	0.000		3.702	Jul 2011	0.000		3.702	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 5 MD05	TBD/TBD	Naval Surface Warfare Center Port Hueneme White Sands, NM	0.000	0.000		17.395	Jul 2011	0.000		17.395	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 6 MD05	C/FFP	Teledyne Solutions Huntsville, AL	0.000	0.000		3.908	Jul 2011	0.000		3.908	Continuing	Continuing	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 7 MD05	TBD/TBD	Aerospace Corp. El Segundo, CA	0.000	0.000		0.799	Jul 2011	0.000		0.799	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - new RFP (MRBM T1) MD05	C/TBD	TBD TBD	0.000	0.000		18.948	Jul 2011	0.000		18.948	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 8 MD05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.000	0.000		0.039		0.000		0.039	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 9 MD05	TBD/TBD	Naval Air Warfare Center Patuxent River Pax River, MD	0.000	0.000		10.031		0.000		10.031	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 10 MD05	TBD/TBD	Naval Air Warfare Center Weapons Division China Lake, CA	0.000	0.000		0.790		0.000		0.790	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 11 MD05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	0.000	0.000		0.020		0.000		0.020	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions	TBD/TBD	Naval Air Warfare Center	0.000	0.000		10.161		0.000		10.161	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SRBM Missions - 12 MD05		Port Hueneme, CA											
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 13 MD05	TBD/TBD	Ronald Reagan Test Site Kwajalein Atoll, Marshall Islands	0.000	0.000		0.479		0.000		0.479	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 14 MD05	TBD/TBD	Redstone Technical Test Center Redstone Arsenal, AL	0.000	0.000		0.132		0.000		0.132	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 15 MD05	TBD/TBD	Sandia National Laboratories Albuquerque, NM	0.000	0.000		0.017		0.000		0.017	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 16 MD05	TBD/TBD	US Air Force Air Mobility Command Scott AFB, IL	0.000	0.000		0.484		0.000		0.484	Continuing	Continuing	Continuing
Short Range Ballistic Missile (SRBM) Missions SRBM Missions - 17 MD05	TBD/TBD	US Army White Sands Missile Range White Sands, NM	0.000	0.000		1.933		0.000		1.933	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 1 MD05	TBD/TBD	US Air Force Air Mobility Command Scott AFB, IL	0.000	0.000		3.613	Jul 2011	0.000		3.613	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 2 MD05	C/CPAF	Coleman Aerospace Orlando, FL	0.000	0.000		44.583	Jul 2011	0.000		44.583	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 3 MD05	TBD/TBD	Missile Defense Integration & Operations Center Schriever AFB, CO	0.000	0.000		0.290	Jul 2011	0.000		0.290	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 4 MD05	TBD/TBD	Aerospace Corp. El Segundo, CA	0.000	0.000		0.650	Jul 2011	0.000		0.650	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 5 MD05	TBD/TBD	Ronald Reagan Ballistic Missile Defense Test Site Kwajalein, Marshall Islands	0.000	0.000		1.630	Jul 2011	0.000		1.630	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 6 MD05	TBD/TBD	Defense Finance & Accounting Service Indianapolis, IN	0.000	0.000		1.747	Jul 2011	0.000		1.747	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 7 MD05	TBD/TBD	Naval Air Warfare Center Weapons Division China Lake, AZ	0.000	0.000		1.570		0.000		1.570	Continuing	Continuing	Continuing
	C/CPAF		0.000	0.000		7.575		0.000		7.575	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 8 MD05		Northrop Grumman Albuquerque, NM											
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 9 MD05	C/CPFF	Orbital Sciences Corp. Chandler, AZ	0.000	0.000		3.658		0.000		3.658	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 10 MD05	TBD/TBD	Pacific Missile Range Facility Barking Sands, HI	0.000	0.000		0.846		0.000		0.846	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 11 MD05	TBD/TBD	Sandia National Laboratories Albuquerque, NM	0.000	0.000		0.317		0.000		0.317	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 12 MD05	C/CPFF	Teledyne Solutions, Inc. Huntsville, AL	0.000	0.000		1.514		0.000		1.514	Continuing	Continuing	Continuing
Medium Range Ballistic Missile (MRBM) Missions MRBM Missions - 13 MD05	TBD/TBD	US Army Kwajalein Test Center Kwajalein Atoll, Marshall Islands	0.000	0.000		0.015		0.000		0.015	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		517.065		0.000		517.065			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
All Project MD05 funds support BMD5-Level Testing.

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks
NA

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		0.000		0.000		0.000			

Remarks

NA

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	0.000		517.065		0.000		517.065			

Remarks

NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: *Research, Development, Test & Evaluation, Defense-Wide*
 BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE

PE 0603888C: *Ballistic Missile Defense Test and Targets*

PROJECT

MD05: *Targets Program*

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Intermediate Range Ballistic Missile (IRBM) Development/NRE									■	■	■	■	■	■	■	■												
Intercontinental Ballistic Missile (ICBM) Development/NRE									■	■	■	■	■	■	■	■	■	■										
ICBM Type 3 Development/NRE									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Family 2D/2 AO Development/NRE									■	■	■	■																
UK Project Agreement									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Medium Range Ballistic Missile (MRBM) Development/NRE																	■	■	■	■	■							

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD05: <i>Targets Program</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Intermediate Range Ballistic Missile (IRBM) Development/NRE	1	2011	4	2012
Intercontinental Ballistic Missile (ICBM) Development/NRE	1	2011	2	2013
ICBM Type 3 Development/NRE	1	2011	4	2014
Family 2D/2 AO Development/NRE	1	2011	4	2011
UK Project Agreement	1	2011	4	2015
Medium Range Ballistic Missile (MRBM) Development/NRE	1	2013	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT ZX40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
ZX40: <i>Program-Wide Support</i>	23.161	22.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	45.902
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Other costs included provide facility capabilities for MDA Executing Agent locations (with the exception of Federal Office Building 2), such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuations on a limited number of foreign contracts.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Civilian Salaries and Support See Description Below <i>FY 2009 Accomplishments:</i> See Section A: Mission Description and Budget Item Justification <i>FY 2010 Plans:</i> NA	23.161	22.741	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT ZX40: <i>Program-Wide Support</i>					
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
<i>FY 2011 Base Plans:</i> NA												
<i>FY 2011 OCO Plans:</i> NA												
Accomplishments/Planned Programs Subtotals						23.161	22.741	0.000	0.000	0.000		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost	
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769	
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314	
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922	
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682	
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483	
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869	
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384	
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT ZX40: <i>Program-Wide Support</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT ZX40: <i>Program-Wide Support</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603913C: <i>ISRAELI COOPERATIVE</i>											
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

NA

E. Performance Metrics

NA

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD40: <i>Program-Wide Support</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>MD40: Program-Wide Support</i>	0.000	0.000	37.227	0.000	37.227	40.431	30.923	27.337	29.092	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In accordance with the Missile Defense Agency revised budget structure, the content previously planned in Project ZX40 is now captured in Project MD40 beginning in FY11

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Other costs included provide facility capabilities for MDA Executing Agent locations (with the exception of Federal Office Building 2), such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuations on a limited number of foreign contracts.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Civilian Salaries and Support See Description Below <i>FY 2009 Accomplishments:</i> NA <i>FY 2010 Plans:</i> NA	0.000	0.000	37.227	0.000	37.227

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>				PROJECT MD40: <i>Program-Wide Support</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> NA											
<i>FY 2011 OCO Plans:</i> NA											
Accomplishments/Planned Programs Subtotals						0.000	0.000	37.227	0.000	37.227	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603175C: <i>Ballistic Missile Defense Technology</i>	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
• 0603881C: <i>Ballistic Missile Defense Terminal Defense Segment</i>	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
• 0603882C: <i>Ballistic Missile Defense Mid-Course Segment</i>	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.922
• 0603883C: <i>Ballistic Missile Defense Boost Defense Segment</i>	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.682
• 0603884C: <i>Ballistic Missile Defense Sensors</i>	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.483
• 0603886C: <i>Ballistic Missile Defense System Interceptor</i>	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.869
• 0603890C: <i>Ballistic Missile Defense Enabling Programs</i>	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.384
• 0603891C: <i>SPECIAL PROGRAMS - MDA</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.858

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD40: <i>Program-Wide Support</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.919
• 0603893C: <i>SPACE TRACKING & SURVEILLANCE SYSTEM</i>	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.631
• 0603894C: <i>MULTIPLE KILL VEHICLE</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.027
• 0603895C: <i>BMD SYSTEM SPACE PROGRAM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.117
• 0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.254
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.561
• 0603898C: <i>BMD JOINT WARFIGHTER SUPPORT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
• 0603901C: <i>DIRECTED ENERGY RESEARCH</i>	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
• 0603904C: <i>MISSILE DEFENSE INTEGRATION & OPERATIONS CENTER (MDIOC)</i>	102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
• 0603906C: <i>REGARDING TRENCH</i>	3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
• 0603907C: <i>SEA BASED X-BAND RADAR (SBX)</i>	143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
• 0603908C: <i>BMD EUROPEAN INTERCEPTOR SITE</i>	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
• 0603909C: <i>BMD EUROPEAN MIDCOURSE RADAR</i>	73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
• 0603911C: <i>BMD EUROPEAN CAPABILITY</i>	0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
• 0603912C: <i>BMD European Comm Support</i>	26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
	0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603888C: <i>Ballistic Missile Defense Test and Targets</i>	PROJECT MD40: <i>Program-Wide Support</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0603913C: <i>ISRAELI COOPERATIVE</i>											
• 0604880C: <i>LAND-BASED SM-3</i>	0.000	0.000	281.378	0.000	281.378	345.937	187.062	93.456	139.595	0	1,047.428
• 0604881C: <i>Aegis SM-3 BLOCK IIA CO-DEVELOPMENT</i>	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
• 0604883C: <i>PRECISION TRACKING SPACE SYSTEM</i>	0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
• 0604884C: <i>AIRBORNE INFRARED (ABIR)</i>	0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
• 0605502C: <i>Small Business Innovative Research BMDO</i>	124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	124.788
• 0901585C: <i>Pentagon Reservation</i>	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	0	60.337
• 0901598C: <i>Management Headquarters-MDA</i>	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441

D. Acquisition Strategy

MDA will transition from the existing legacy, project-oriented Systems Engineering and Technical Assistance (SETA) contractor construct to an enterprise-wide Advisory and Assistance Services (A&AS) approach to support the Ballistic Missile Defense System (BMDS) mission. The objectives are to implement national engineering and support services for the BMDS mission across the enterprise, enhance the sharing of ballistic missile defense expertise and knowledge across the agency, centralize the acquisition of support services manpower in a more efficient manner and reduce agency overhead costs enterprise-wide. A&AS support includes engineering and technical services; studies, analyses, and evaluation; and management and professional services.

E. Performance Metrics

NA

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