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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0304 Test & Evaluation	214,907	212,144	209,273	210,239	207,883	212,970	232,624	236,202
RDT&E Articles Qty	2	2	0	0	0	0	0	0

Note: RDT&E Articles: FY06 - Delivery of Two (2) Transportable Telemetry Systems (delivered in FY07). FY08 - X-Band Transportable Radar (XTR-1).

A. Mission Description and Budget Item Justification

The T&E projects provide consolidated MDA-wide capabilities and resources to support the management and execution of BMDS System 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 engagement sequences that rely on multiple BMDS elements. MDA's Responsible Test Organization (RTO) structure centralizes all authority and responsibility for all BMDS testing. The RTO relies on the BMD System Engineering to provide the system test objectives to test and assess BMDS capability. The RTO makes use of a BMDS Combined Test Force to plan, execute, analyze, and report BMD system test events. The RTO also develops the necessary test policy, test plans, and test infrastructure to conduct an effective test program. RTO activities are grouped into five functional areas; Test Policy and Strategy, BMDS Combined Test Force (CTF), Test Resources, Facilities, Siting, and Environmental management and Test Assurance.

The Test Policy and Strategy 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. Mission Assurance is integrated into the entire MDA test program through the identification and application of T&E best practices into test processes and procedures for flight, software and ground testing. The Test Policy and Strategy program also develops strategic plans and International policy for the RTO. Target certification reports are developed to ensure that targets are suitable to meet test objectives. The Test Policy and Strategy 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 RTO inputs into the overall BMDS Program Plans. The Test Policy and Strategy program supports two major assessments of the BMDS: The BMDS Capability Assessment (BCA) team and System-Level Operational test Assessments. The BCA team will provide 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 RTO so they can provide operational assessments of the BMDS. The OTAs will maintain their assessments in the OTA database which will reflect a living document of the BMDS assessment.

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>The BMDS Combined Test Force (CTF) plans, executes, analyzes, and reports Ballistic Missile Defense System (BMDS) test events. Government personnel plan and execute test events with the assistance of contractor support. CTF core activities consist of:</p> <ul style="list-style-type: none"> • Test planning and design (campaign-level test planning and design) • Test Operations (detailed system level test planning and execution processes) • Test Analysis and Reporting (system test event data collection, analysis and reporting and associated tool development) for flight tests (to include CMC FT and Lethality), ground tests, and BMDS Exercises - formerly Wargames, and d. CTF support. <p>Test Planning and Design funds campaign-level planning and design functions for the BMDS Test Program to include the collection and adjudication of test objectives from MDA System Engineering, the OTAs and the Warfighters; validation of test venues and test scenarios; definition of test resource requirements, the establish a baseline test campaign timeline, and the interface with co-located OTA and Advanced Systems representatives. Theses efforts culminate in the development and publication the Integrated Master Test Plan (IMTP). The IMTP is the overarching document that describes the BMDS test environment, supporting test organizations, developmental and operational test programs, and management of MDA test resources.</p> <p>Test Operations funds the execution teams for both BMDS flight and ground tests to include detailed test planning, pre-test field integration and execution of all BMDS test program events, the staffing, management and execution of BMDS Task Forces, ensuring the fulfillment of all Executive Test Review requirements, and the interface with co-located OTA representatives. Under the BMDS Task Force construct, Test Operations currently consists of five distinct Task Forces (TFs): TF A (GBI ESG Flight Testing), TF B (SM-3 & THAAD ESG Flight Testing), TF C (Special Flight Testing), TF D (System Ground Testing), and TF E (Emerging Technologies). Test Operation products include detailed test planning and execution documentation, Operations Requirements (ORs), Test Directives, Executive Test Reviews, and Pre/Post-Test Notifications.</p> <p>The CTF Test Analysis and Reporting (TA&R) funds the flight and ground test Joint Analysis Teams (JAT). For each BMD System level test event, the CTF JAT participates in pre-mission analysis planning and coordinates and integrates BMD System-level, Element-level, and warfighter test analysis results into single, integrated, and standardized reporting products. Each JAT is tailored to the specific MDA test based on the BMDS test objectives and test event participants. JAT products include quick-look reports and briefings, Executive Data Reviews, final Test Analysis Reports, inputs to the BMD System Characterization Database and Report and Truth Data Packages (TDP). In addition, the CTF JATs lead and execute in the development of Integrated Data Analysis Plans (IDAP), Integrated Data Management Plans (IDMP), and also provide inputs to National Ranges Universal Documentation System (UDS). Test and Analysis develops the tools and infrastructure to automate and enable the timely distribution of critical TA&R post-mission products.</p>		

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>CTF Support funds the business of the CTF through performance of CTF integration and organization management functions. Specifically, CTF Support assists the Test Configuration Working Group (TCWG), which maintains BMDS system test configuration, conducts the Test Integration Council (TIC), executes CTF operations (action management, War Room management, test information management, organization security), performs CTF financial planning, management and manpower functions, and interfaces with co-located OTA Representatives.</p> <p>Also, part of the CTF is the Lethality program, which seeks to characterize the effectiveness of BMDS engagements (i.e., determining the fate of threat targets post-engagement) and assure 10 USC 2366 requirements for BMDS lethality Live Fire Test and Evaluation (LFT&E) are achieved, and to investigate how successful a given BMDS engagement will be in destroying the incoming warhead. Laboratory, ground and flight tests are defined and executed in response to the MDA System Engineer's requirement for data on the resultant space, atmosphere and ground effects of engaging high explosive and weapon of mass destruction (WMD) payloads. Flight test data requirements are achieved by leveraging planned BMDS intercept or Measurements Program with alternative targets, supplemental payloads and ancillary sensor coverage. The CTF integrates lethality LFT&E testing across MDA and coordinates with related programs (e.g., PAC-3) to establish an efficient requirements driven approach to BMDS lethality characterization</p> <p>The Test Resources Program develops, sustains, and modernizes the core T&E facilities of the BMDS test bed to support system and element-level testing and assessment. This includes development, maintenance 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 three (3) test aircraft equipped with optical sensors, mobile telemetry systems, the Kwajalein Mobile Range Safety System, the Mobile Launch Platform (MLP), and the Pacific Collector Mobile Instrumentation Ship. These assets are required to collect the spatial data needed to safely execute the tests and 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 (MRTFB) activities including the NP-3D improvement program with the Navy. All of these assets provide program risk reduction and test implementation capability in support of BMDS test activities. Because this core test capability is corporately sustained, the individual BMDS elements pay only the direct costs associated with their specific test efforts. The Test Resources Program uses the engagement sequences as the basis to evaluate the future resource needs of the BMDS. A continuous analysis pitting data collection requirements and test scenarios against existing and planned test assets identifies the test infrastructure needed to test the BMDS, BMDS elements, and element components as part of the engagement sequences. The Test Resources Program also includes the Pacific Range Support Team (PRST) to support the BMDS CTF 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.</p>		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

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The Facilities, Siting and Environmental program provides guidance, environmental analyses and documentation, real property facility siting, acquisition, and facility operational support for the BMDS. This program oversees facility acquisition of the Military Construction (MILCON) and RDT&E construction programs. This program also provides guidance and supports the Environmental Assessment and Environmental Impact Statement process, environmental compliance, pollution prevention, and other environmental efforts. This program ensures environmental compliance of all BMDS activities with federal, state, local, DOD and international law, treaties and regulations.

The Test Assurance program is responsible for improving the quality, design, execution and efficiency of the BMDS test, integration and fielding programs. The Test Assurance program is responsible for assuring test readiness, ensuring test realism, assessing test adequacy, and tracking test risk. The Test Assurance program will assess readiness processes and metrics for these programs and evaluate the outcomes. Test Assurance increases the efficiency and effectiveness of the BMDS test program by integrating key strategies and objectives into the Responsible Test Organization (RTO) test program by identifying and improving test processes. Test Assurance assesses test adequacy by conducting: Test assessments to provide input on data voids for assessment 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

	FY 2006	FY 2007	FY 2008	FY 2009
Test Resources	134,455	116,538	125,672	121,819
RDT&E Articles (Quantity)	2	2	0	0

The Test Resources program will provide for operations, sustainment, and modernization of the core corporate test and evaluation infrastructure components of the BMDS Test Bed. This includes ranges and instrumentation, airborne sensors, mobile launch platform and ground test facilities to support element- and system-level testing. This program will continue to improve test infrastructure in terms of capability and quantity, as recommended from continuing MDA studies. These improvements build on the existing core test infrastructure to support element and system-level testing.

FY06 Accomplishments:

- Provided level-of-effort funding to ranges (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), Kodiak Launch Complex (KLC)) to maintain MDA-unique test facilities and instrumentation for MDA tests.
- Continued to operate, maintain and improve airborne sensors instrumentation platforms HALO-I, HALO-II and WASP to support IR measurement data collection for BMDS testing and development activities.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> • Maintained the MDA-unique ground test facilities, including wind tunnels, space-environment chambers, light gas gun, lidar performance lab, rocket-plume sensor capabilities, and hardware-in-the-loop simulation facility to support component level Hardware in the Loop risk reduction testing. • 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. • Completed development of the PRST Flight Safety Guide for Range Users that provides a standard process for MDA elements to use when testing at various MDA ranges. • Recommended innovative solutions to mitigate Range Safety Officer shortfalls through the PRST's Range Safety Augmentation Program (RSAP). • Continued software development of the Range Safety Modeling Toolkit (RSMT) to provide common safety analysis tools. • Continued coordination with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges. • Maintained the MDA Data Centers Program to provide efficient data archiving, access, distribution and furnish relevant expertise for MDA Mission oriented data. • Awarded follow-on task order to Alaska Aerospace Development Corporation (AADC) to provide for operation and sustainment of the KLC to support MDA target launches. • Activated a reserve fleet ship to support MDA as the "Pacific Collector." The ship will serve as a mobile instrumentation ship to support off-range BMDS testing and increasingly complex test scenarios. • Continued support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ. • Completed development of the Transportable Telemetry Systems (TTS) to provide ultra high band width telemetry collection, processing, and real time test data transmission capability thereby supporting the data collection requirements of future BMDS missions. • Validated performance of the TTS in both a land- and sea-based deployment on FT-04-1 and FTG-2. • Continued development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios. • Continued upgrade of the Kwajalein Mobile Range Safety System (KMRSS). • Coordinated with OSD test resources community/programs (DTRMC, CTEIP, etc.). Developed agreement on the NP-3D upgrade program to provide three (3) aircraft that will have the capability to support MDA operations. • Maintained and operated the KTF to enable the launch of target systems supporting BMD Test Activities. 		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">Continued Upgrades to PMRF Sensors, Command and Control Systems, Data Analysis Tools, and Range Safety Systems to support BMDS testing.Characterized advanced technology in the terrestrial neutron environments which allows simulation of unique BMD Environments at the Indiana University Cyclotron Facility. <p>FY07 Planned Program: RDT&E Articles: Delivery of Two (2) Transportable Telemetry Systems</p> <ul style="list-style-type: none">Develop, maintain, integrate and upgrade MDA unique range facilities and instrumentation at the following ranges in accordance with 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), and the Kodiak Launch Complex (KLC).Operate High Altitude Observatory II (HALO-II), WASP, High Altitude Observatory (HALO-I) for data collection services and services of BMD Flight Test.Maintain and upgrade MDA unique Ground Test Facilities to support all the BMDS developmental program hardware and software testing. These facilities provide hardware in the loop capability, threat signature measurement capability, and sensor calibration standards.Complete upgrade of the Hypervelocity Ballistic Range G Light Gas Gun at AEDC to provide higher fidelity projectiles in support of BMDS Live Fire Test & Evaluation (LFT&E).Use 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.Continue development and independent verification and validation (IV&V) of the Range Safety Modeling Toolkit (RSMT) to provide common safety analysis tools.Continue coordinating with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges.Provide centralized data management, archival and distribution services to reduce the risks and cost of BMDS Block Development and Operational Deployment. The Data Centers comprise MDA's official archive for all MDA mission related scientific and technical data. These centers include: Advanced Missile Signature Center, Missile Defense Data Center, and Naval Surface Warfare Center.Continue support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ.Operate two Transportable Telemetry Systems (TTS) which provides long range missile telemetry acquisition, processing and archiving capability.		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> • Continue development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios. • Complete upgrade of the Kwajalein Mobile Range Safety System (KMRSS). • Sustain the Mobile Range Safety System (MRSS) at PMRF. • Coordinate with OSD test resources community/programs (DTRMC, CTEIP, etc.) • Continue the NP-3 Upgrades in conjunction with OSD/CTEIP and the Navy to support off-range BMDS testing and increasingly complex test scenarios. • Develop and Upgrade PMRF Sensors, Command and Control Systems, Data Analysis Tools, and Range Safety Systems. • Maintain and operate the KTF to enable the launch of target systems supporting BMD Test Activities. • Characterize advanced technology in the terrestrial neutron environments which allows simulation of unique BMD Environments at the Indiana University Cyclotron Facility. <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> • Develop, maintain, integrate and upgrade MDA unique range facilities and instrumentation at the following ranges in accordance with 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), and the Kodiak Launch Complex (KLC). • Operate High Altitude Observatory II (HALO-II), Wide Body Airborne Sensor Platform (WASP), High Altitude Observatory (HALO-I) for data collection services and services of BMD Flight Test. • Maintain and upgrade MDA unique Ground Test Facilities to support all the BMDS developmental program hardware and software testing. These facilities provide hardware in the loop capability, threat signature measurement capability, and sensor calibration standards. • Use 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. • Continue coordinating with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges. • Provide centralized data management, archival and distribution services to reduce the risks and cost of BMDS Block Development and Operational Deployment. The Data Centers comprise MDA's official archive for all MDA mission related scientific and technical data. These centers include: Advanced Missile Signature Center, Ballistic Missile Defense System Integration Data Center, Missile Defense Data Center, and Navy Surface Warfare Center. • Sustain the Pacific Collector to support off-range BMDS testing and increasingly complex test scenarios. 		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Operate two Transportable Telemetry Systems (TTS) which provides long range missile telemetry acquisition, processing and archiving capability.
- Continue support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ.
- Continue development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios.
- Coordinate with OSD test resources community/programs (DTRMC, CTEIP, etc.).
- Continue the NP-3D Upgrades in conjunction with OSD/CTEIP and the Navy to support off-range BMDS testing and increasingly complex test scenarios.
- Sustain the Kwajalein Mobile Range Safety System (KMRSS).
- Sustain the Mobile Range Safety System (MRSS) at PMRF.
- Maintain and operate the Kauai Test Facility (KTF) to enable the launch of target systems supporting BMD Test Activities.

	FY 2006	FY 2007	FY 2008	FY 2009
BMDS CTF Core	44,511	55,985	36,871	39,219
RDT&E Articles (Quantity)	0	0	0	0

The BMDS Combined Test Force (CTF) plans, executes, analyzes, and reports Ballistic Missile Defense System (BMDS) test events. Government personnel plan and execute test events with the assistance of contractor support. The CTF Core support effort provides funding for the core Government and Contractor personnel in the CTF originations/divisions to support the Block test program contained in exhibits 0804, 0904, 0004, R104, and R204. The CTF organization consists of four divisions located in Huntsville, Alabama and a National Capitol Region (NCR) Coordination Team as follows:

- Test Planning and Design Division: performs campaign-level test planning and design.
- Test Operations Division: performs detailed test planning and execution processes.
- Test Analysis and Reporting Division: performs test event data collection, analysis and reporting and associated tool development.
- CTF Support Division: performs Test Configuration Working Group (TCWG) secretariat functions, and CTF integration and business operations functions.
- NCR Coordination Team: performs CTF liaison activities at MDA Headquarters.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>FY06 Accomplishments:</p> <p>Note: During 2006, the Combined Test Force (CTF) was created through an intensive reengineering effort from legacy organizations, funding, manpower, and processes. The purpose of this re-engineering was to consolidate BMD System Level testing efforts into a single center of excellence in Huntsville, AL. Since this was a new mission, the legacy pieces had to be reengineered to align with the new requirements. Limited Initial Operation Capability (IOC) for the CTF occurred on 1 October 2005 with Full Operational Capability (FOC) occurring on 1 October 2006. The strategic vision for the CTF set the direction for the reengineering effort of: 1) Relocation of a hundred of positions to Huntsville, Al, 2) Re-definition/re-engineering of government and contractor positions to re-align to new BMDS mission, establishment of a small Coordination/liaison team in the NCR, and Reduction of the number of contract vehicles.</p> <p>In addition to the re-engineering process the CTF Core Support effort continued to support BMDS testing in FY06 by:</p> <ul style="list-style-type: none"> • Continuing to coordinate, revise and fully coordinate the BMDS Integrated Master Test Plan (IMTP). • Providing BMDS Strategic Test Planning (transferred to the Test Policy and Strategy Program late in FY 06) • Continue to provide the Core Government and contractor support/test teams that execute the BMDS Block testing efforts described in exhibits 0804. • Continuing to operate and improve the Test Configuration Control Board (TCCB) (re-engineered into the TCWG) process to control the content and schedule of BMDS system test events. • Continuing to provide the CTF with the Executing Agents (EA) Government and SETA support necessary to plan and execute BMDS system test events. • As part of re-engineering during FY 06 EAs have been transferred and consolidate under the CTF from various agencies • Provided initial funding and personnel to establish the Test Assurance organization (described later) within the RTO to improve test mission success. • Continued Lethality Program efforts by: <ul style="list-style-type: none"> ○ Continued interface with BMDS element and corporate lethality programs, but with increased authority and responsibility for assuring BMDS lethality testing and assessments are accomplished in accordance with the BMDS Combined Test Force Concept of Operations. ○ Supported tasks to update lethality LFT&E requirements and execute strategy for GMD, Aegis BMD, KEI, ABL and MKV. • Continued the Advanced Data Analysis Center (Optical Data Analysis (ODA), Radar Data Analysis (RDA), and Radar Exploitation (RDE) groups) efforts to support BMDS data collection objectives, conducted mission planning, performed data analysis BMDS test conducted during FY 06, explored phenomenology to improve future BMD systems and new mission areas, and provided characterization and assessment for Measurements and BMDS flight test programs. 		

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">Supported the BMDS Kill Assessment (KA) Test Program by:<ul style="list-style-type: none">Developing testing and validating techniques that are designed to declare the Degree of Kill on BMDS Engagements. This included developing engineering models and decision tools to support KA decision capability insertion into the BMDS Block 2006 C2BMC suite. <p>FY07 Planned Program:</p> <ul style="list-style-type: none">Having achieved FOC on 1 October 2006, the CTF Core focus in FY 07 will be to implement core processes and standardization across both the CTF and BMDS system tests:Continue to coordinate, revise and fully coordinate the BMDS Integrated Master Test Plan (IMTP).Continue to operate and improve the Test Configuration Working Group (TCWG) process to control the content and schedule of BMDS system test events.Continue to provide the Core Government and contractor support/test teams that execute the BMDS Block testing efforts described in exhibits 0804 and 0904.Continue to provide the CTF with the SETA support necessary to plan and execute BMDS system test events.Continue to provide innovative tools and capabilities to plan, execute, analyze, report and integrate BMDS system test events.Continue to provide data management/collection/distribution, truth and analysis reporting for BMDS system test events.Continued Optical Data Analysis (ODA) and Radar Data Analysis (RDA) support. <p>FY08 Planned Program:</p> <ul style="list-style-type: none">Continue to coordinate, revise and fully coordinate the BMDS Integrated Master Test Plan (IMTP).Continue to operate and improve the Test Configuration Working Group (TCWG) process to control the content and schedule of BMDS system test events.Continue to provide the Core Government and contractor support/test teams that execute the BMDS Block testing efforts described in exhibits 0904 and 0004.Continue to provide the CTF with the SETA support necessary to plan and execute BMDS system test events.Continue to provide innovative tools and capabilities to plan and integrate BMDS system test events.Continue to provide data management/collection/distribution, truth and analysis reporting for BMDS system test events. <p>FY09 Planned Program:</p> <ul style="list-style-type: none">Continue to coordinate, revise and fully coordinate the BMDS Integrated Master Test Plan (IMTP).		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
---	---

- Continue to operate and improve the Test Configuration Working Group (TCWG) process to control the content and schedule of BMDS system test events.
- Continue to provide the Core Government and contractor support/test teams that execute the BMDS Block testing efforts described in exhibits 0904 and 0004.
- Continue to provide the CTF with the SETA support necessary to plan and execute BMDS system test events.
- Continue to provide innovative tools and capabilities to plan and integrate BMDS system test events.
- Continue to provide data management/collection/distribution, truth and analysis reporting for BMDS test events.

	FY 2006	FY 2007	FY 2008	FY 2009
Facilities, Siting & Environmental	3,407	3,557	3,557	3,678
RDT&E Articles (Quantity)	0	0	0	0

The Facilities, Siting and Environmental (FS&E) Program is comprised of two areas: the Civil Engineering Division and the Environmental Management Division. The Civil Engineering Division is the functional area for facility siting, real property acquisition, and facility sustainment and support for the BMDS. The Civil Engineering Division also oversees facility acquisition through the Military Construction (MILCON) and RDT&E construction programs. The Environmental Management Division is the functional area for BMDS environmental planning and compliance, pollution prevention, National Environmental Policy Act process support, and other environmental efforts. The Environmental Management Division ensures environmental compliance of all BMDS activities with Federal, state, local, DOD and international law, treaties and regulations.

FY06 Accomplishments:

The Civil Engineering Division:

- Provided oversight for real property acquisition of the Military Construction (MILCON) and RDT&E construction programs.
- Managed the design and construction of the Von Braun Complex II MILCON project on Redstone Arsenal, AL.
- Supported the MDA facility requirements and programming in the 2005 BRAC.
- Supported facility development for the FBX-T Radar at Shariki, Japan.
- Supported actions related to completing the THAAD MILCON project at PMRF, HI.
- Supported actions related to the completion of the Missile Defense System Test Bed construction program in Alaska and California.
- Supported actions related to the Targets Program facilities siting, design, construction, and caretaker operations and maintenance activities, especially the Flexible Targets Family, Vandenberg target launch bed down, Reagan Test Site launch modifications, and Kodiak Launch Complex launch facilities requirements.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">• Assumed oversight for operations and maintenance of MDA-assigned facilities at U.S. Army Kwajalein Atoll.• Supported Wake Island activities including Super Typhoon Ioke storm damage repairs and PACAF Intent to Excess staff planning.• Supported activities related to facility acquisition and siting for the KI program at Vandenberg AFB, CA, Hill AFB, UT and Redstone Arsenal, AL.• Oversaw the programming and design of the FY07 facility MILCON Life Safety Upgrades, Launch Control Center on Meck Island.• Monitored the final construction phases of multiple projects to include the Telemetry Building Addition, PMRF, HI; Range G Addition, AEDC, TN, and the Hangar 151 Wall Demolition, Edwards AFB, CA.• Oversaw the design and construction award of the FY06 facility MILCON Emergency Services Facility on Meck Island. <p>The Environmental Management Division:</p> <ul style="list-style-type: none">• Ensured all MDA activities were conducted in compliance with all applicable Federal, state, local, Department of Defense (DoD), and international laws, treaties and regulations concerning environmental compliance.• Provided technical oversight for MDA's compliance with the National Environmental Policy Act, applicable Executive Orders, Council on Environmental Quality and DoD implementing instructions, and other environmental compliance requirements.• Prepared and/or coordinated Records of Environmental Consideration (REC), Air Force Form 813s (AF 813), and Memoranda for the Record (MFR) for the following activities:<ul style="list-style-type: none">○ AF 813 for Building 151 Hanger Improvements at Edwards AFB, for GMD Building 980 at VAFB Flight Test Interceptors, Small Missile Launch Site EA, Space Tracking and Surveillance System (STSS) Launch, Temporary Setup and Communications Testing of FBX-T at Misawa, Japan, Use of Big Crow Aircraft for ABL Testing.○ REC for GMD FT04-1, GMD FTG-02, -03, & -04., PATRIOT GEM+ ATM-46, Permanent Sensors Site at Cordova, AK, Runway Cratering Munition/Dual Purpose Improved Conventional Munition, THAAD Intercept Debris Measurement Program (IDMP), THAAD Radar Definition Characterization Mission 1A & 1B, THAAD Radar Pad Extension at PMRF, Wake Island Storage Pads, Aegis FTM 04-2 TRACKEX, Aegis FTM-10 Record of Categorical Exclusion (RCE), and Aegis FTM-11 RCE.• Prepared Environmental Assessments (EA) for:<ul style="list-style-type: none">○ AN/TPY-2 (Forward Based (FB)) OCONUS Deployment, Ground-Based Midcourse Defense Sea-Based X-Band (SBX) Radar Placement and Operation at Adak, Alaska, Missile Defense Agency Mobile Sensors, Orbital/Sub-Orbital Program, and Wake Island Facility Upgrades.• Prepared the MDA Ballistic Missile Defense System Programmatic Environmental Impact Statement and the Record of Decision and Environmental Liability Reports.• Developed an Environmental GIS for the Alaska Region to support test planning.		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> • Conducted MDA Green Procurement Program audit of items purchased by MDA. • Developed Action Plans to implement MDAs Strategic Plan for Environmental Management and the Environmental Management System. • Prepared MDAs Presidential Budget Special Exhibit 28 “Funds Budgeted for Environmental Quality.” <p>FY07 Planned Program: The Civil Engineering Division will:</p> <ul style="list-style-type: none"> • Oversee the construction execution of the Von Braun Complex II MILCON project on Redstone Arsenal, AL. • Oversee the construction phase of the FY07 facility MILCON Emergency Services Facility on Meck Island. • Support obtaining OSD approval and Congressional notification for establishment of a Flexible Target Family Single Integration Facility Complex. • Oversee completion of facilities required for AN/TPY-2 (FB) Radar at Shariki, Japan. • Program facilities requirements for a second OCONUS AN/TPY-2 (FB). • Support facility construction at Dahlgren related to MDA 2005 BRAC moves. • Support bed down actions at Hanscom AFB, MA related to MDA 2005 BRAC and MDA reengineering. • Complete siting and design of Targets Program facilities at RTS and Vandenberg, initiate construction at those sites, and monitor AADC contract for facilities support to Kodiak Launch Complex. • Oversee operations and maintenance of MDA-assigned facilities at USAKA. • Support Wake Island activities including Super Typhoon Ioke storm damage repairs, PACAF Intent to Excess staff planning, and the scheduled test campaign. • Support bed down actions and facility project design activities related to the KI test facilities at Hill AFB, UT and Redstone Arsenal, AL. • Support the MDA facility requirements in the 2005 BRAC process including new facilities on Redstone Arsenal, AL and Fort Belvoir, VA. • Monitor the construction phase of the FY07 facility MILCON Life Safety Upgrades, Launch Control Center on Meck Island. <p>The Environmental Management Division will:</p> <ul style="list-style-type: none"> • Complete the Record of Decision for the BMDS Programmatic Environmental Impact Statement. • Prepare / provide technical oversight and interagency coordination on the following EAs: <ul style="list-style-type: none"> ○ Flexible Target Family Single Integration Facility EA, Flexible Target Family EA, Small Targets Launch Site EA, ABL Debris Management EA, and AN/TPY-2 (FB) Radar #2 OCONUS Deployment Environmental Review. 		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Complete and staff RECs, AF 813s, and MRFs for MDA activities including: KEI, Aegis FTM events, GMD FTG events, FTF Targets, THAAD events, NFIRE, STSS, MKV, Micro Satellites, Meck Island, CMCM-4, PATRIOT ATM-48, and FTX-03.
- Support environmental planning and compliance for MDAs Space Program.
- Support site activation activities for MDAs Third Site.
- Complete an Environmental Baseline Survey for Courtland Target Assembly Facility.
- Participate as a Cooperating Agency on the U.S. Navy Hawaii Range Complex Environmental Impact Statement.
- Expand the Environmental GIS to include the Pacific Ocean Region.
- Implement MDA's Environmental Management System.
- Prepare quarterly Environmental Liabilities Reports.
- Implement MDAs Corrective Action Plan for environmental liabilities.
- Prepare MDAs Presidential Budget Special Exhibit 28 "Funds Budgeted for Environmental Quality."
- Monitor and report results of the MDAs Green Procurement Program.

FY08 Planned Program:

- The Facilities, Siting and Environmental Programs will continue to provide facility siting and environmental compliance support for the BMDS.

	FY 2006	FY 2007	FY 2008	FY 2009
Test Policy and Strategy	29,564	32,638	39,654	41,901
RDT&E Articles (Quantity)	0	0	0	0

The Test Policy and Strategy program supports the development and implementation of test policy, standards, directives, and procedures for creating unified BMDS test processes. Efforts to achieve this mission include: applying best practices of existing Element processes for flight, ground and software testing; establishing standardized documentation for test planning, test reporting and data archiving; providing non-advocate, independent assessment of the BMDS throughout its life-cycle via the BMDS Capability Assessment team; providing for operational assessments of the BMDS via Operational Test Agency participation; developing target accreditation reports to ensure targets meet test objectives; providing for test mission assurance; and developing strategic Planning and strategy for the RTO. Budget is increased in FY07 and FY08 due to the consolidation of funding which supports the OTA activities.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>FY06 Accomplishments:</p> <ul style="list-style-type: none"> • Completed MDA Directive 5000.2, "Target Planning Process Directive," November 8, 2005, to establish long-term planning of target capabilities required for BMDS testing. • Completed Mission Assurance Implementation Plan, November 2005 to outline the steps by which the MDA Assurance Provision are managed and implemented by the Test Directorate. • BMDS Capability Assessment (BCA) team updated the non-advocate assessment of the BMDS readiness, investigated BMDS performance issues, proposed mitigation plans, contributed to BMDS test activity planning, and planned for operational system characterization. • Completed Target Accreditation Reports for MRTF FT-2, FTM-04-1, FTM-04-2, FTC-02a, FTC-02b, FTX-01, THAAD FT-3, and THAAD FT-4 to ensure target satisfied mission objectives. • Initiated Target Accreditation Reports for FTM-11 to ensure target satisfied mission objectives. • Continued to integrate mission assurance, best practices and lessons learned into test policy, process, and procedures. • Continued communications and coordination with the Service operational test communities as established by the MOA. Funded BMDS Operational Assessment Efforts by the OTA. • Prepared draft of International Test policy. • Issued RTO Test Directives for 21 flight and ground tests. <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Completed MDA Directive 3100.01, "International Test and Exercise Policy" dated 13 November 2006, to assign responsibilities and actions needed to conduct BMDS testing. • BMDS Capability Assessment (BCA) team will continue to update the non-advocate assessment of the BMDS readiness and investigate BMDS performance issues and propose mitigation plans. • Prepare Target Accreditation Reports to include but not limited to: FTM-12, FTG-03, FTT-06, FTT-07, FTT-08, FTX-02, FTM-11a, FTM-11b, FTG-04, FTT-05, and FTX-03. • Continue to integrate mission assurance and best practices and lessons learned into test policy, processes and procedures. • Continue communications and interaction between the BMDS development community and Operational Test Agencies (OTA). Continue funding BMDS Operational Assessment Efforts. • Continue the development and implementation of test policy, standards, and procedures for creating unified BMD test processes. • Complete MDA Test Review Directive Guidelines. • Continue to issue RTO Test Directives for flight and ground tests. 		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Complete MDA Test Event Viewing and Notification Directive.

FY08 Planned Program:

- Prepare Target Accreditation Reports to include but not limited to: FTM-13, FTM-14, JFTM-01, FTT-09, FTT-10, FTS-01, FTS-03, FTX-04, FTG-05, FTG-06 (1Q FY09), JFTM-02 (1Q FY09), and FTT-11 (1Q FY09).
- Continue to integrate mission assurance and best practices and lessons learned into test policy, processes and procedures.
- Continue communications and interaction between the BMDS development community and Operational Test Agencies (OTA). Continue funding BMDS Operational Assessment Efforts.
- Continue the development and implementation of test policy, standards, directives, and procedures for creating unified BMD test processes.
- Continue to issue RTO Test Directives for flight and ground tests.

	FY 2006	FY 2007	FY 2008	FY 2009
Test Assurance	2,970	3,426	3,519	3,622
RDT&E Articles (Quantity)	0	0	0	0

The Test Assurance program is responsible for improving the quality, design, execution and efficiency of the BMDS test, integration and fielding programs. The Test Assurance program is responsible for assuring test readiness, ensuring test realism, assessing test adequacy, and tracking test risk. The Test Assurance program will assess readiness processes and metrics for these programs and evaluate the outcomes. Test Assurance increases the efficiency and effectiveness of the BMDS test program by integrating key strategies and objectives into the Responsible Test Organization (RTO) test program by identifying and improving test processes. Test Assurance assesses test adequacy by conducting: Test assessments to provide input on data voids for assessment 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.

FY06 Accomplishments:

- Initiated development of the BMDS Evaluation Strategy.
- Initiated Lean Six Sigma/Continuous Process Improvement training within the test organization.
- Assessed adequacy of range preparations and developed a Range Review plan.
- Assessed the Test Observation Report process and provided recommendations for improvement.

FY07 Planned Program:

- Complete transition to a BMDS Readiness organization.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Assess processes and metrics that support readiness to test, integrate and field.
- Identify options for processes that are missing or deficient.
- Track issues to ensure processes are developed and implemented where needed.
- Complete development and implementation of a Risk Management Program.

FY08 Planned Program:

- Assess processes and metrics that support readiness to test, integrate and field.
- Identify options for processes that are missing or deficient.
- Track issues to ensure processes are developed and implemented where needed.
- Complete development and implementation of a Risk Management Program.

FY09 Planned Program:

- Assess processes and metrics that support readiness to test, integrate and field.
- Identify options for processes that are missing or deficient.
- Track issues to ensure processes are developed and implemented where needed.
- Complete development and implementation of a Risk Management Program.

C. Other Program Funding Summary

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

D. Acquisition Strategy

The Responsible Test Organization (RTO) acquisition strategy is consistent with the Missile Defense Agency's (MDA) capabilities based acquisition strategy that emphasizes testing, spiral development, evolutionary acquisition, and knowledge based funding thought the use of two year blocks. The RTO directs a team of various internal staff (Government and System Engineering and Technical Assistance (SETA)), executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, Federally Funded Research and Development Centers (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 conform to their respective headquarters regulations are utilized. This combination of organizations forms an integrated team to accomplish the necessary testing for BMDS.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Product Development										

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Support Costs										

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Test Resources										
Ground Test Facilities	Various	Army, Air Force/ AL, FL, MD, TN,	39,184	7,578	1Q	11,473	1Q	9,840	1Q	68,075
Ranges and Instrumentation	Various	Various/ CA, HI, NM, Marshall Is, Alaska	200,859	63,994	1Q	72,302	1Q	69,490	1Q	406,645
Airborne Sensors	C/CPAF	L3 Communications/ CA, OK, NM	79,030	25,857	1Q	27,096	1Q	26,893	1Q	158,876
Congressional Adds	Various	Various / HI	50,989	4,800	1Q	0	1Q	0	N/A	55,789

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Data Centers	Various	Various, TN, CO, AL, CA	12,469	7,382	1Q	7,576	1Q	8,003	1Q	35,430
BMDS CTF Core										
Optical Data Analysis	Various	USASMDC, HANSCOM AFB & NAVSEA/ Huntsville, AL, MA & Crystal City, VA	14,083	5,242	N/A	0	N/A	0	N/A	19,325
Radar Data Analysis	Various	USASMDC, NAVSEA & HANSCOM AFB/ Huntsville, AL, Crystal City, VA & MA	13,333	4,253	4Q	0	4Q	0	N/A	17,586
Lethality	Various	USASMDC / Huntsville, AL	11,046	2,786	4Q	0	N/A	0	N/A	13,832
Kill Assessment	Various	USASMDC / Huntsville, AL	10,479	3,733	1Q	3,819	1Q	3,929	1Q	21,960
International Programs	Various	USASMDC, HANSCOM AFB, WRIGHT PATTERSON AFB & NAVSEA/ Huntsville, AL, MA, OH & Crystal City, VA	3,173	1,161	1Q	0	N/A	0	N/A	4,334
Special Programs Tests	Various	MDA/ Washington, D.C.	5,212	842	1Q	0	N/A	0	N/A	6,054

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Radar Exploitation	Various	USASMDC/ Huntsville, AL	8,257	2,947	1Q	0	N/A	0	N/A	11,204
BMDs Strategic Planning	Various	USASMDC & MDA / Huntsville, AL & Washington, D.C.	5,236	6,188	1Q	0	N/A	0	N/A	11,424
Test Configuration Control Board	Various	MDA/ Washington, D.C.	2,742	3,000	1Q	2,884	1Q	3,253	1Q	11,879
Test Assurance Directorate	Various	MDA/ Washington, D.C.	2,970	3,498	1Q	3,000	1Q	3,200	1Q	12,668
Test Policy and Strategy										
BCA	Various	Various/ NJ, CA, MD, MA	27,559	9,492	1Q	9,503	1Q	9,685	1Q	56,239
Operational Test Agency Participation in System Test	Various	OTAs/ Various	18,251	11,351	1Q	11,231	1Q	12,481	1Q	53,314
Target Certification	Various	USASMDC/ Huntsville, AL	1,771	613	1Q	636	1Q	664	1Q	3,684
Test Assurance										
Continuous Test Improvement	Various	Various	2,256	1,974	1Q	2,034	1Q	2,094	1Q	8,358
Subtotal Test and Evaluation			508,899	166,691		151,554		149,532		976,676

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 Army Missile Optical Range (AMOR) in AL, the Kinetic Hardware in-the-loop (HITL) 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) issues MDA funds for the Mobile Launch Platform (MLP) and 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

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603888C Ballistic Missile Defense Test and Targets

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, Flexible Target Family support, and XTR-1 development), NRL (BMDS Test Communications and NP-3D upgrades), and DOT/Maritime Administration (Texas Clipper Activation). Funds are placed directly on an MDA contract with the Alaska Aerospace Development Corporation (AADC) for Kodiak Launch Complex Operations and Sustainment.

- PMRF Upgrades is a Congressional Add. Funds are issue from MDA to the Navy. The Navy provides funding to various contractors providing support to PMRF.
- Environmental Radiation Effects Simulation is a Congressional Add.
- Data Center Funding is issued from MDA to the Army, Air Force, Navy, and the Joint National Integration Center (JNIC). 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.

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Test Resources										
SMDC Government Salaries	TM	USASMDC/ Huntsville, AL	2,595	919	1Q	925	1Q	953	1Q	5,392
Support Contracts	C/FFP	Northrop Grumman/ Arlington, VA	17,264	6,008	1Q	6,300	1Q	6,640	1Q	36,212
BMDS CTF Core										
SMDC Government Salaries	TM	USASMDC/ Huntsville, AL	12,839	5,254	1Q	656	1Q	659	1Q	19,408
Support Contracts	C/FFP	Various/ TASC, SPARTA, RNB Arlington, VA	42,269	17,081	1Q	26,512	1Q	28,178	1Q	114,040
Facilities, Siting & Environmental										

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Support Contracts	C/FFP	ICF & SciComm/ VA & MD	9,978	3,557	1Q	3,557	N/A	3,678	N/A	20,770
Test Policy and Strategy										
TE Government Salaries	TM	Wash, DC	17,432	5,871	1Q	11,028	1Q	11,510	1Q	45,841
Support Contracts	C/FFP	TASC, SPARTA/ Arlington, VA	13,529	4,753	1Q	6,000	1Q	6,244	1Q	30,526
TE Travel	TM		2,158	558	1Q	562	1Q	593	1Q	3,871
International Programs	TM	Wash, DC	526	0	N/A	694	4Q	724	4Q	1,944
Test Assurance										
Support Contracts	C/FFP	Various/TASC, SPARTA Arlington, VA	706	1,452	1Q	1,485	1Q	1,528	1Q	5,171
Subtotal Management Services			119,296	45,453		57,719		60,707		283,175
Remarks										
Project Total Cost			628,195	212,144		209,273		210,239		1,259,851
Remarks										

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Ground Tests																																
PACOM Tier 1 CPX					▽																											
Vigilant Shield 07					▽																											
BMDS Overlay 07 - Juniper Cobra 07						△																										
GTG 04-3						◇																										
GTG 04-4.a						◇																										
GTX-02a						▽																										
GTG 04-4.b										◇																						
GTI-02										▽																						
CENTCOM US/UK 08 Exercise Set														△	△																	
GTD-02										▽																						
GTG 06-3										▽																						
BMDS Overlay 08 - System Engineering Simulation														△																		
BMDS Overlay 08 - Joint Project Optic Windmill														△																		

Legend

<ul style="list-style-type: none"> Significant Event (complete) Milestone Decision (complete) Element Test (complete) System Level Test (complete) Complete Activity 	<ul style="list-style-type: none"> Significant Event (planned) Milestone Decision (planned) Element Test (planned) System Level Test (planned) Planned Activity
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UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2007

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Ground Tests																																
GTG 06-4									▽																							
GTX-03a									▽																							
GTX-03b									▽																							
BMDA Overlay 08 - Blue Flag Exercise											△	△																				
BMDS Overlay 08 - Eagle Resolve 2008											△	△																				
BMDS Overlay 08 - PACOM Exercise Set											△	△																				
GTI-03									▽																							
BMDS Overlay 08 - BMDS Exercise												△																				
GTD-03												▽																				
GTX-03c												▽																				
CENTCOM US/UK 09 Exercise Set															△	△																
BMDS Overlay 09 - System Engineering Simulation															△																	
GTX-04a															▽																	

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Ground Tests																																
GTX-04b														▽																		
BMDS Overlay 09 - Blue Flag Exercise															△	△																
BMDS Overlay 09 - Eagle Resolve 2009															△	△																
GTI-04														▽																		
PACOM Exercise Set 2009															△	△																
BMDS Overlay 09 - BMDS Exercise																△																
GTD-04																▽																
GTX-04c																▽																
BMDS Overlay 10-1																			△													
GTX-05a																			▽													
GTX-05b																			▽													
BMDS Overlay 10 - Eagle Resolve 2010																					△	△										
BMDS Overlay 10-2																					△	△										

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◆	Element Test (planned)
▽	System Level Test (complete)	▽	System Level Test (planned)
△	Complete Activity	△	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Ground Tests																																
GTI-05																			▽													
PACOM Exercise Set 2010																			△	△												
BMDS Overlay 10 - BMDS Exercise																			△													
GTD-05																			▽													
GTX-05c																			▽													
BMDS Overlay 11-1																					△											
GTX-06a																				▽												
GTX-06b																					▽											
BMDS Overlay 11-2																						△	△									
BMDS Overlay 11 - Eagle Resolve 2011																						△	△									
GTI-06																					▽											
PACOM Exercise Set 2011																						△	△									
BMDS Overlay 11 - BMDS Exercise																							△									

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◆	Element Test (planned)
▽	System Level Test (complete)	▽	System Level Test (planned)
△	Complete Activity	△	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Flight Tests																																
P6-4				◆																												
PAC PDB-6 LUT				◆																												
RDC-01a/b				▼																												
FTM-11								▼																								
P6L-1				◆																												
P6L-2				◆																												
P6L-3				◆																												
AST-11								◇																								
AST-12								◇																								
FTT-05								◇																								
FTT-06								◇																								
FTX-02								▽																								
RDC-01c								◇																								

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◇	Element Test (planned)
▼	System Level Test (complete)	▽	System Level Test (planned)
▲	Complete Activity	▲	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2007

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Flight Tests																																
FTS-03																																
FTT-10																																
FTX-04																																
FTG-07																																
FTS-04																																
FTT-11																																
JFTM-02																																
FTT-12																																
FTX-05																																
FTG-08																																
FTM-15																																
PAC-09																																
FTL-01																																

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Flight Tests																																
FTT-21																															▽	
FTX-10																															▽	
GBI Readiness Test 13																															▽	
Measurement Tests																																
FTC-02a/b			▽																													
FTC-04a/b															△																	
FTC-05																			△													
FTC-06																																
FTC-07																																
Glory Trips (USAF Operational)/Potential BMDS Tests																																
GT-189	▽																															
SERV-3		▲																														
GT-190			▲																													

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◆	Element Test (planned)
▽	System Level Test (complete)	▽	System Level Test (planned)
▲	Complete Activity	▲	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
Glory Trips (USAF Operational)/Potential BMDS Tests																																
GT-191			▲																													
GT-192				▲																												
GT-193							△																									
GT-194								△																								
GT-195											△																					
GT-196												△																				
GT-197												△																				
GT-199															△																	
GT-198																△																
Environmental Planning																																
PEIS Completion			▲																													
Test Asset Upgrades																																

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
◊	System Level Test (complete)
▲▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
◊	System Level Test (planned)
▲▲	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2007

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
Test Asset Upgrades																																
TTS IOC	▲	▲	▲																													
NP3 Upgrades					▲	—	—	—	—	—	—	—	—	—	—	▲																
X-Band Trans Radar (XTR-1) Complete											▲																					

Legend

▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◆	Element Test (planned)
▼	System Level Test (complete)	▼	System Level Test (planned)
▲—▲	Complete Activity	▲—▲	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
System Ground Tests								
DGT 04-2a Phase 1	1Q							
GT 04-1a	1Q							
GT 04-2a.1	1Q							
WG 04-5	1Q							
GTX-01a	2Q							
Amalgam Phantom 06	3Q							
GT 04-2a.2	3Q							
GT 04-2a.3	3Q							
GTX-01b	3Q							
GT 04-2a.4	4Q							
GTI-01	4Q							
BMDS Overlay 07 - Terminal Fury 07		1Q						
BMDS Overlay 07 - Vigilant Shield 07		1Q						
GTD-01		1Q						
PACOM Tier 1 CPX		1Q						
Vigilant Shield 07		1Q						
BMDS Overlay 07 - Juniper Cobra 07		2Q						
GTG 04-3		2Q						
GTG 04-4.a		2Q						
GTX-02a		2Q						
GTG 04-4.b		4Q						
GTI-02		4Q						
CENTCOM US/UK 08 Exercise Set			1Q-4Q					
GTD-02			1Q					
GTG 06-3			1Q					
BMDS Overlay 08 - System Engineering Simulation			2Q					
BMDS Overlay 08 - Joint Project Optic Windmill			2Q					
GTG 06-4			2Q					
GTX-03a			2Q					
GTX-03b			2Q					

Project: 0304 Test & Evaluation

Line Item 78 -

MDA Exhibit R-4A (PE 0603888C)

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BMDA Overlay 08 - Blue Flag Exercise			3Q-4Q					
BMDS Overlay 08 - Eagle Resolve 2008			3Q-4Q					
BMDS Overlay 08 - PACOM Exercise Set			3Q-4Q					
GTI-03			3Q					
BMDS Overlay 08 - BMDS Exercise			4Q					
GTD-03			4Q					
GTX-03c			4Q					
CENTCOM US/UK 09 Exercise Set				1Q-4Q				
BMDS Overlay 09 - Juniper Cobra				2Q				
BMDS Overlay 09 - System Engineering Simulation				2Q				
GTX-04a				2Q				
GTX-04b				2Q				
BMDS Overlay 09 - Blue Flag Exercise				3Q-4Q				
BMDS Overlay 09 - Eagle Resolve 2009				3Q-4Q				
GTI-04				3Q				
PACOM Exercise Set 2009				3Q-4Q				
BMDS Overlay 09 - BMDS Exercise				4Q				
GTD-04				4Q				
GTX-04c				4Q				
BMDS Overlay 10-1					2Q			
GTX-05a					2Q			
GTX-05b					2Q			
BMDS Overlay 10 - Eagle Resolve 2010					3Q-4Q			
BMDS Overlay 10-2					3Q-4Q			
GTI-05					3Q			
PACOM Exercise Set 2010					3Q-4Q			
BMDS Overlay 10 - BMDS Exercise					4Q			
GTD-05					4Q			
GTX-05c					4Q			
BMDS Overlay 11-1						2Q		
GTX-06a						2Q		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
GTX-06b						2Q		
BMDS Overlay 11-2						3Q-4Q		
BMDS Overlay 11 - Eagle Resolve 2011						3Q-4Q		
BMDS Overlay 11-2						3Q,4Q		
GTI-06						3Q		
PACOM Exercise Set 2011						3Q-4Q		
BMDS Overlay 11 - BMDS Exercise						4Q		
GTD-06						4Q		
GTX-06c						4Q		
BMDS Overlay 12-1							2Q	
GTX-07a							2Q	
GTX-07b							2Q	
BMDS Overlay 12 - Eagle Resolve 2012							3Q-4Q	
BMDS Overlay 12-2							3Q-4Q	
GTI-07							3Q	
PACOM Exercise Set 2012							3Q-4Q	
BMDS Overlay 12 - BMDS Exercise							4Q	
GTD-07							4Q	
GTX-07c							4Q	
BMDS Overlay 13-1								2Q
GTX-08a								2Q
GTX-08b								2Q
BMDS Overlay 13 - Eagle Resolve 2013								3Q-4Q
BMDS Overlay 13-2								3Q-4Q
GTI-08								3Q
PACOM Exercise Set 2013								3Q-4Q
BMDS Overlay 13 - BMDS Exercise								4Q
GTD-08								4Q
GTX-08c								4Q
System Flight Tests								
(PAC) 2-3	1Q							

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
AST-10	1Q							
ATM-46	1Q							
FT 04-5	1Q							
FT-1	1Q							
FTM 04-2	1Q							
FTT-01	1Q							
FTX-01	2Q							
JCTV-1	2Q							
FTM-10	3Q							
FTT-02	3Q							
P6-2	3Q							
Pacific Phoenix	3Q							
FTG-02	4Q							
FTT-03	4Q							
FTT-04	4Q							
P6-4	4Q							
PAC PDB-6 LUT	4Q							
RDC-01a/b	4Q							
FTM-11		1Q						
P6L-1		1Q						
P6L-2		1Q						
P6L-3		1Q						
AST-11		2Q						
AST-12		2Q						
FTT-05		2Q						
FTT-06		2Q						
FTX-02		2Q						
RDC-01c		2Q						
ATM-48		3Q						
FTG-03		3Q						
FTM 11b		3Q						

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FTM-12		3Q						
FTT-07		3Q						
PAC3 7-1		3Q						
RDC-01d		3Q						
FTG-04		4Q						
FTM-11a		4Q						
FTT-08		4Q						
FTX-03		4Q						
N FIRE-2A		4Q						
FTG-05			1Q					
FTM-13			1Q					
JFTM-01			1Q					
N-FIRE 2b			1Q					
(PAC) 7-2			2Q					
FTT-09			2Q					
AST-13			3Q					
FTG-06			3Q					
FTM-14			3Q					
FTS-01			3Q					
FTS-02			3Q					
PAC3 7-3			3Q					
AST-14			4Q					
FTK-01			4Q					
FTS-03			4Q					
FTT-10			4Q					
FTX-04			4Q					
FTG-07				1Q				
FTS-04				1Q				
FTT-11				1Q				
JFTM-02				1Q				
FTT-12				2Q				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FTX-05				2Q				
FTG 08-4				3Q				
FTG-08				3Q				
FTM-15				3Q				
PAC-09				3Q				
FTL-01				4Q				
FTM-16				4Q				
FTS-05				4Q				
FTT-13				4Q				
FTX-06				4Q				
GBI Readiness Test 09				4Q				
GT-XX				4Q				
FTG-09					1Q			
FTT-14					1Q			
FTM-17					2Q			
FTS-06					2Q			
FTG-10					3Q			
FTL-02					3Q			
PAC-10					3Q			
FTL-03					4Q			
FTM-18					4Q			
FTT-15					4Q			
FTX-07					4Q			
FTG-11						1Q		
FTL-04						1Q		
FTK-02						2Q		
FTM-19						2Q		
FTS-07						2Q		
FTT-16						2Q		
FTG-12						3Q		
FTL-05						3Q		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PAC-11						3Q		
FTM-20						4Q		
FTT-17						4Q		
FTX-08						4Q		
GBI Readiness Test 11						4Q		
FTG-13							1Q	
FTK-03							1Q	
FTM-21							2Q	
FTS-08							2Q	
FTT-18							2Q	
FTG-14							3Q	
FTL-06							3Q	
PAC-12							3Q	
FTL-07							4Q	
FTM-22							4Q	
FTT-19							4Q	
FTX-09							4Q	
FTG-15								1Q
FTK-04								1Q
FTL-08								2Q
FTM-23								2Q
FTS-09								2Q
FTT-20								2Q
FTG-16								3Q
FTL-09								3Q
PAC-13								3Q
FTM-24								4Q
FTT-21								4Q
FTX-10								4Q
GBI Readiness Test 13								4Q
Measurement Tests								

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FTC-02a/b	3Q							
FTC-04			3Q					
FTC-04a/b					2Q			
FTC-05						2Q		
FTC-06							2Q	
FTC-07								2Q
Glory Trips (USAF Operational)/Potential BMDS Tests								
GT-189	1Q							
SERV-3	2Q							
GT-190	3Q							
GT-191	3Q							
GT-192	4Q							
GT-193		2Q						
GT-194		3Q						
GT-195		4Q						
GT-196			2Q					
GT-197			2Q					
GT-199			3Q					
GT-198			4Q					
Environmental Planning								
PEIS Completion	3Q							
Test Asset Upgrades								
TTS IOC	1Q-3Q							
NP3 Upgrades		1Q-4Q	1Q-4Q	1Q-4Q				
X-Band Trans Radar (XTR-1) Complete			2Q					
<p>Element participation in system test events is funded within the respective element budget.</p>								

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0305 Targets & Countermeasures Core	20,654	20,062	21,135	21,582	21,383	21,673	21,673	21,673
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Targets & Countermeasures Core Support includes program office and field activity support. This includes the management of design, prototyping, development, product improvement, and qualification testing of Ballistic Missile Defense System (BMDS) targets in order to complete, verify, and test targets for the Initial Defensive Capability, and enhance the targets to test the BMDS capability. Since this project is comprised of entirely Program Management costs associated with Targets and Countermeasures Block development, no article quantities are reported.

The Accomplishments and Planned Program efforts identified below are on-going level of effort activities, which are cyclical and occur every year.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Program Operations	20,654	20,062	21,135	21,582
RDT&E Articles (Quantity)	0	0	0	0

FY06 Accomplishments:

- Funded government personnel salaries for program management, project support, project costs and travel
- Supported activities for on-site Targets and Countermeasures field activity personnel to include rent, equipment, travel, security and base infrastructure necessary to conduct daily operations

FY07 to FY09 Planned Program:

- Funds government personnel salaries for program management, project support, project costs and travel
- Support activities for on-site Targets and Countermeasures field activity personnel to include rent, equipment, travel, security and base infrastructure necessary to conduct daily operations

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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C. Other Program Funding Summary									
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p><u>D. Acquisition Strategy</u></p> <p>Because the majority of the activities funded in this Project 0305 are considered direct government costs necessary to maintain and sustain Targets and Countermeasures personnel in the field, a particular acquisition strategy is not applicable. Funds are sent directly to government Targets and Countermeasures activities receiving entities in the field and executed accordingly. A minimal amount of Firm Fixed Price and Cost Plus Award Fee contracts are in place for administrative, computer, logistics, program management, and systems engineering support activities.</p>		

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
I. Product Development Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Product Development										
Remarks										
II. Support Costs Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Support Costs										
Remarks										
III. Test and Evaluation Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation										
Remarks										
IV. Management Services Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Program Operations										
Government Personnel		Wash., DC	8,232	2,935	1/4Q	2,997	1/4Q	3,060	1/4Q	17,224
Government Travel		Wash., DC	810	475	1/4Q	485	1/4Q	495	1/4Q	2,265

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Government Support	C/FFP	SPARTA/Wash., DC	12,030	4,378	1Q	4,449	1/4Q	4,521	1/4Q	25,378
Field Activity Support	C/Various	Various/Kirtland AFB, NM	11,640	2,533	1/4Q	3,332	1/4Q	3,426	1/4Q	20,931
Field Activity Support	C/Various	Various/Huntsville, AL	23,972	9,741	1/4Q	9,872	1/4Q	10,080	1/4Q	53,665
Subtotal Management Services			56,684	20,062		21,135		21,582		119,463
Remarks										
Project Total Cost			56,684	20,062		21,135		21,582		119,463
Remarks										

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2007		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets				

COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0805 Targets & Countermeasures Block 2006	265,949	159,066	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2006 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will enhance the BMDS capability by providing short, medium, and long range capability-based targets with enhanced payloads. Based on the Systems Engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target. Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2006 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components.

The targets prime contractor, Lockheed Martin Space Systems Company (LMSSC) will develop all future target configurations with an emphasis on developing product lines of common target components, rather than unique individual target systems. LMSSC will maximize the use of existing government furnished equipment, to include the use of Foreign Material Acquisitions (FMA's) when appropriate, while minimizing the number of new developments. LMSSC will optimize the use of existing designs, provide capability-based and common component upgrades, and pursue target portfolio commonality in booster stages, inter stages, avionics, launch support equipment, counter-measures, and re-entry vehicles. It is anticipated this product line approach and target component commonality will reduce both cycle time (e.g., concept definition to launch) and cost.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Systems Engineering	148,497	101,209	0	0
RDT&E Articles (Quantity)	0	0	0	0

This effort provides the Missile Defense Agency (MDA) with Target Program Technical Direction and analyzes of target requirements cost, schedule, and technical performance of target systems development. This effort utilizes the spiral development process for long-range plans initiating new developments. Conducts functional allocation to product lines, product line specifications/interfaces and establishes guidelines for the conductibility of design reviews. Performs target system analysis with new concepts to verify system performance. Defines target program baseline,

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>controls flight test configuration, and conducts pre and post-flight analysis and documentation. Identifies treaty and environmental issues and develops plans for issue resolution. Development of the Flexible Target Family (FTF) is an initiative that emphasize commonality and modularity of components that span across target system representations within the family of target sets that can be rapidly integrated to support MDA flight tests. Accordingly, FTF will be composed of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System (BMDS) capabilities.</p> <p>FY06 Accomplishments: Spiral I:</p> <ul style="list-style-type: none">• Continued development of the Spiral I Flexible Target Family (FTF) Systems specifications• Completed Spiral I development of Enhanced Capabilities products, including the following:<ul style="list-style-type: none">○ Launch Vehicle-2 Two-stage Strategic Target System○ Common Avionics System○ Common Support Equipment○ Common Transporter Erector○ Universal Payload Deployment Module○ New suite of countermeasures○ Environmental analysis for Spiral I FTF target vehicles○ C-17 Aircraft feasibility study for Spiral I FTF target vehicles○ Completed development of the FTF Spiral I Functional Allocation and Interface Definition○ Completed FTF Spiral I Critical Design Review (CDR)○ Continued development of the FTF Long Range Strategic Air-Launch Target System <p>Spiral II</p> <ul style="list-style-type: none">• Completed development of Spiral II FTF system specifications• Initiated Spiral II development of enhanced capability products, including the following:<ul style="list-style-type: none">○ Development of a modular dynamic control system and multi-band Re-Entry Vehicle (RV) antenna system with radar cross section signature reduction to be employed on a Modified Ballistic RV.○ Design a Launch Vehicle second stage thrust termination system○ Development of a Cold Gas Attitude Control System○ 52” Preliminary Design Review (PDR) SR19 Long Range Air Launch Target (LRALT)		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">○ Completed FTF Spiral II functional allocation and interface definition II○ Completed FTF Spiral II PDR● Completed CDR for Countermeasures 1A and 1B● Developed Technology Transfer Plan from Sandia National Laboratory to Industry for sensor platform and countermeasure design● Defined target configuration for Theater High Altitude Aerial Defense (THAAD), Space Tracking and Surveillance System (STSS), AEGIS Ballistic Missile Defense (BMD) and Ground-Based Midcourse Defense (GMD)● Completed Rolling Wave II Integrated Baseline Review (IBR)● Completed Integrated Baseline Review (IBR) for ATM-48/PAC-3● Completed IBR for STARS Castor IV-B Hybrid (SC4H)● Provided Target Systems Analysis of flight test for the following target missions:<ul style="list-style-type: none">●<ul style="list-style-type: none">○ AEGIS (FTM-04-2, FTM-10)○ GMD (FTG-02, FT-04-1)○ THAAD (FTT-03, FTT-04, RDC-1a, RDC-1b)○ Airborne Laser Sensor Test (three targets)○ Space and Missile Defense Command (SMDC) Infrasonud (two targets)○ Pacific Phoenix Risk Reduction Flight (three Lances)○ Critical Measurements and Countermeasures Program-2 (CMCM-2) (FTC-02a, FTC-02b)		
FY07 Planned Program: Spiral I <ul style="list-style-type: none">● Update development to Spiral I FTF system specifications● Complete Spiral I Development of Enhanced Capability Products, including the following:<ul style="list-style-type: none">○ Final Loads Cycle analysis for FTF I (Closure)○ Break-up Analysis of Spiral I FTF○ Upgrades to Payload Deployment Module, final design to accommodate instrumented countermeasures design○ Re-Entry Vehicle Adaptor with High Delta - Velocity Separation System Design○ FTF Strategic Air-Launched Target System		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Spiral II

- Continue Spiral II Development of Enhanced Capability Products, including the following:
 - LV-2 Two-stage Strategic Target System
 - Common Avionics System
 - Common Support Equipment
 - Common Transporter Erector
 - Universal Payload Deployment Module
 - New suite of countermeasures
 - FTF Strategic Air-Launched Target System
- Conduct Rolling Wave I
- Conduct IBRs on effort placed on contract in FY07, including the following:
 - Modified Ballistic Re-Entry Vehicle-2 (MBRV-2)
 - AEGIS FTM-12 Flight Mission
 - FTF LV-2 Effort
 - Modified Ballistic Re-Entry Vehicle-3 (MBRV-3)
- Continued development of advanced instrumentation and telemetry concepts including:
 - Sensor Pointing Platform (SPP)
 - Spatial Distribution Sensor
 - Wireless Local Area Network (LAN) system

	FY 2006	FY 2007	FY 2008	FY 2009
Launch Vehicles	33,609	5,467	0	0
RDT&E Articles (Quantity)	0	0	0	0

This effort provides MDA with all launch delivery vehicles including boosters, interstages and avionics (guidance and flight computers). This task includes conducting decomposition for booster, interstage and avionics requirements, characterizing and qualifying boosters, interstages, and avionics. Conduct necessary design reviews. Ensures boosters, interstages and avionics adhere to interface specifications.

FY06 Accomplishments:

- Refurbished two SR 73 boosters for BMDS flight mission NFIRE2a/b
- Performed studies/analysis and future capabilities designs

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets		
<ul style="list-style-type: none"> Supported Ground Based Midcourse (GMD) FY06 flight test and future test vehicles <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> Procure two (2) SR19 Flexseals for future BMDS flight missions Perform studies/analysis and future LV capabilities designs 				
	FY 2006	FY 2007	FY 2008	FY 2009
Data and Instrumentation	4,985	0	0	0
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides funding for program management and development of: 1) unique target instrumentation as well as optical on-target data collection instrumentation used for algorithm development/evaluation, intercept viewing and payload characterization; 2) development of Midcourse Fly Along Sensor Package (M-FASP) flight units for BMDS testing; and 3) development of advanced instrumentation systems/techniques to include data collection and transmission techniques.</p> <p>FY06 Accomplishments:</p> <ul style="list-style-type: none"> Flew early prototype Wireless LAN system on CMCM-2 for operational testing Analyzed miniaturized guidance navigation control technologies for size and weight reduction needs Continued development of direct to satellite telemetry Standardized instrumentation across Product Lines for Telemetry, avionics, Flight Termination/Command Destruct Systems, and GPS Initiated development of the Spatial Diverse Sensor platform 				
	FY 2006	FY 2007	FY 2008	FY 2009
Countermeasures	6,789	1,600	0	0
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides program management and development of prototype countermeasure systems used to test the capability space of the BMDS; Integration of countermeasure systems on BMDS flight tests; and Characterization and ground testing of countermeasure systems. Support requirements decomposition and analysis as applicable for the countermeasures activities. Program reviews and technical interchange meetings are held regularly to ensure mission success. Also, the funding supports pre- and post-mission data analysis.</p>				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY06 Accomplishments:

- Initiated design and development of Family 1C, 2D-2 and 1E countermeasures
- Characterized countermeasure objects for BMDS flight tests
- Developed techniques, materials and processes for new prototype countermeasures
- Conducted design studies that progressed countermeasures designs toward Preliminary Design Review

FY07 Planned Program:

- Solve interface issues to insure new countermeasure designs from National Labs will be compatible with the Prime Contractor Flexible Target Family vehicles
- Develop techniques, materials, and processes for new prototype countermeasures, then characterize those objects that will fly on Block 06 Flight Tests
- Evolve countermeasures engineering designs toward Critical Design Review

	FY 2006	FY 2007	FY 2008	FY 2009
Logistics	30,914	24,326	0	0
RDT&E Articles (Quantity)	0	0	0	0

This effort provides MDA with inventory, launch support equipment, and transportation of targets and countermeasures hardware in support of BMDS testing. These efforts are essential in providing a dependable and accurate target system that BMDS has come to and continues to rely on for the success of their interceptor program. This task includes integrated logistics support for all targets and countermeasure material, including facilities, inventory maintenance, spare parts, aging and surveillance, as well as special testing for 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 Military Assets fuel calibration and storage.

FY06 Accomplishments:

- Stored, maintained and conducted aging and surveillance program for 84 Pershing II Reentry Vehicles and other components, 91 Lance Missiles, 17 Polaris A-3 motors, 10 Orbus motors, Minuteman motors, 14 FMA's, 72 Terrier motors, 6 MLRS motors, 1 MBRV warhead and 5 Castor IVB motors
- Maintained existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, and Pacific Missile Range Facility
- Initiated custody of Trident C-4 motors for future use as targets: (144) 1st stage; (72) 2nd stage; (36) 3rd stage

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">• Initiated storage of Trident C-4 motor hardware for future target use.• Transported the following for various test flights:<ul style="list-style-type: none">○ Two (2) SR-19 motors and associated equipment supporting the CMCM-2 mission○ Three (3) Castor IVB motors and associated equipment supporting FTM-04-2, FTM-09, and FTM-10 missions○ Two (2) Hera targets and associated equipment supporting FTT-03 and FTT-04 missions○ Five (5) Lance Missiles and associated equipment supporting of ABL Ground Sensor tests and Navy Sea-Based Terminal Demonstration○ Three (3) FMA Missiles and associated equipment .• Refurbished, assembled and delivered three (3) Strategic Target System (STARS) targets and associated equipment for GMD flight test• Procured domestic Inhibited Red Fuming Nitric Acid (IRFNA) for the FMA target program• Took custody of six (6) ORBUS 1A rocket motors from BV+ Program for future test events <p>FY07 Planned Program:</p> <ul style="list-style-type: none">• Store, maintain and conduct aging and surveillance program for 84 Pershing II Reentry Vehicles and other components, 94 Lance Missiles, 14 Polaris A-3 motors, 6 Orbus motors, Minuteman motors, 11 FMA's, 72 Terrier motors, 2 MLRS motors, 1 MBRV warhead and 4 Castor IVB motors• Maintain existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex and Pacific Missile Range Facility• Store and maintain Trident C-4 motor hardware for future target use• Transported the following for various test flights:<ul style="list-style-type: none">○ Two (2) TLV motor sets and associated equipment and delivery supporting FTX-02 and NFIRE-2a missions.○ Two (2) Castor IVB motors and associated equipment supporting FTM-12 missions○ Two (2) Hera targets and associated equipment supporting ATM-48 and FT 7-2 missions○ Two (2) FMA Missiles and associated equipment supporting FTT-07 and FTT-08 missions.• Refurbish, assemble and deliver three (3) STARS targets and associated equipment supporting FTG-03 and FTG-04• Take custody of eight (8) GEM 40 rocket motors from BV+ Program for future flight test• Take custody of sixteen (16) ORBUS 1A rocket motors from BV+ Program for future flight test		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets		
	FY 2006	FY 2007	FY 2008	FY 2009
Integration	15,312	12,088	0	0
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with all target configuration, integration, launch services and mission assurance supporting BMDS testing. This task includes developing of flight safety documentation, conducting trajectory flyout analysis, supporting environmental studies and reviews. Integrates product line components into designated target configuration and tests systems. Provides schedule status, final target checkout, target launch services for mission assurance.</p> <p>FY06 Accomplishments:</p> <ul style="list-style-type: none"> • Provided mission assurance for hardware integration for BMDS element targets in support of FY06 tests • Integrated product line components into designated target configuration and tests systems to support FY06 tests • Managed target development on legacy contracts • Managed integration services of the Prime contract, Lockheed Martin Space Systems Company (LMSSC) • Provided development efforts on the Single Integration Capability <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Provide mission assurance for hardware integration for all BMDS element targets in support of FY07 tests • Manage integration services of Prime contract with LMSSC • Provide support for the Single Integration Capability, located at Courtland, AL • Manage target integration services on legacy contracts • Provide target studies and analysis support and launch vehicle components 				
	FY 2006	FY 2007	FY 2008	FY 2009
Mission Management	18,943	8,619	0	0
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with target mission management and execution for overall mission assurance. Conducts mission planning , documentation, development of scenario plans in accordance with mission requirements. Controls target management (scheduling, configuration modifications) in support of BMDS and Element testing. Conduct safety operations specific to the mission and in conjunction with ranges. Plans and conducts target Mission readiness reviews and monitors environmental execution.</p>				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY06 Accomplishments:

- Prepared, conducted and analyzed:
 - ABL sensor test (3) three Lance missions
 - AEGIS BMD target missions (FTM-04-2, Three (3) Pacific Phoenix Lance series, and FTM-10.)
 - GMD target missions (FT04-1, FTG-02)
 - THAAD target missions (FTT-03, RDC-1a/b (2 LCAT), FTT-04)
 - BMDS Sensor Countermeasures missions (FTC-02a/b)
- Prepared for and analyzed pre-mission activities for numerous missions defined in FY07 Planned Program.

FY07 Planned Program:

- Conduct any remaining retrograde or analysis activities associated with the FTT-04.
- Prepare for, conduct, and analyze:
 - Aegis-BMD target mission (FTM-11)
 - Lower Tier Program Office (LTPO) target missions (ATM-48 , FT-7-2)
 - GMD target missions (FTX-02 , FTG-3 , FTG-4)
 - STSS missions (NFIRE-2a , NFIRE-2b)
 - THAAD target missions (FTT-06, RDC-1c, FTT-07, FTT-08, RDC-1d)

	FY 2006	FY 2007	FY 2008	FY 2009
Re-entry Vehicles	6,900	5,757	0	0
RDT&E Articles (Quantity)	0	0	0	0

This effort includes Re-Entry (RV) and Payload Deployment Module (PDM) requirements decomposition and analysis; RV and PDM characterization, qualification, and performance measurements; mission support; and pre-and post-mission data analysis. Provides interface standardization and ensures product adherence to interface specifications for successful integration and launch of RV and PDM products. Conducts RV and PDM design reviews and supports other product design reviews to provide product and mission assurance.

FY06 Accomplishments:

- Coordinated buildup and delivery of:
 - One (1) MBRV-1 for ATM-48 flight test with one (1) Bulk Chemical Experiment (BCE)

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Seven (7) MBRV-2s for JFTM-1, FTM-12, JFTM-2, FTS-03 and CMCM-1a/b flight tests, including thee (3) with Bulk Chemical Lethality Front Section (BCLFS) and four (4) GROW RVs with four (4) Payload Deployment Modules (PDM) for FTG-02, FTG-03 and CMCM-2a/b supporting Block 06 BMDS testing
- Exercised contractual actions for two (2) new-build MBRV-3 supporting Lower Tier Program Office (LPTO) testing and one (1) new-build MBRV-3 supporting future BMDS testing
- Initiated contractual action for three (3) new-build MBRV-1s supporting THAAD testing

FY07 Planned Program:

- Coordinate buildup and delivery of:
 - Four (4) MBRV-3s for FT-7-02, FTT-06, FTT-07 and FTT-08
- Execute contractual action for procurement of three (3) MBRV-1s supporting THAAD testing
- Initiate contractual actions for ten (10) new-design MBRV-2s for ABL, Aegis BMD, KEI, STSS and THAAD testing
- Support Spiral Development activities with Lockheed Martin Space Systems

C. Other Program Funding Summary

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to emphasize target product lines that develop target components such as booster stages, avionics, countermeasures, etc. As target developments and existing contracts are completed under Project 0705 (Block 2004), the prime contractor will optimize target designs and developments completed for Block 2004 and incorporate them as necessary to support Block 2006 development. The prime contractor will also continue to provide capability-based and commonality target upgrades, as well as pursue target portfolio commonality in order to reduce cycle time and cost of BMDS target systems. Under this Project (0805), the four year base period of performance will expire. The government will either exercise the first option to continue with the prime, or re-compete the effort. As with Project 0705 (Block 2004), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
I. Product Development Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Systems Engineering										
System Engineering	C/CPAF	Lockheed Martin/ Denver, CO	149,031	93,131	1/4Q	0	N/A	0	N/A	242,162
System Engineering Support	C/FFRDC	John Hopkins Applied Research Lab/ Maryland	2,200	2,322	1/4Q	0	N/A	0	N/A	4,522
System Engineering Support	C/Various	Various/ Various	19,000	1,000	1/4Q	0	N/A	0	N/A	20,000
System Engineering	C/MIPR	DoD/WHS/ Washington, DC	0	227	1/4Q	0	N/A	0	N/A	227
System Engineering	C/MIPR	National Security Agency/ Ft. Meade, MD	0	529	1/4Q	0	N/A	0	N/A	529
System Engineering	C/FFRDC	Sandia National Lab/Albuquerque, NM	0	4,000	1/4Q	0	N/A	0	N/A	4,000
Launch Vehicles										
Launch Vehicles	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	2,375	0	N/A	0	N/A	0	N/A	2,375
Launch Vehicles	C/CPAF	Northrop Grumman/ Albuquerque, NM	2,500	2,575	1/4Q	0	N/A	0	N/A	5,075
Launch Vehicles	C/CPAF	Northrop Grumman/ Ogden, UT	1,000	0	N/A	0	N/A	0	N/A	1,000
Launch Vehicles	C/FFP	Aerojet/ Sacramento, CA	0	2,892	1/4Q	0	N/A	0	N/A	2,892

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Data and Instrumentation										
Data & Instrumentation	C/CPFF	Fibertek/ Herndon, VA	242	0	N/A	0	N/A	0	N/A	242
Data & Instrumentation	C/MIPR	DoD/WHS/ Washington, DC	200	0	N/A	0	N/A	0	N/A	200
Data & Instrumentation	C/CPFF	SRA/ Huntsville, AL	800	0	N/A	0	N/A	0	N/A	800
Data & Instrumentation	C	Colorado Springs, CO	85	0	N/A	0	N/A	0	N/A	85
Data & Instrumentation	C/FFRDC	Sandia National Lab/ Albuquerque, NM	7,472	0	N/A	0	N/A	0	N/A	7,472
Countermeasures										
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	650	0	N/A	0	N/A	0	N/A	650
Countermeasures Development	C/FFRDC	Sandia National Lab/ Albuquerque, NM	6,275	850	1/4Q	0	N/A	0	N/A	7,125
Countermeasures Development	C/Variou	Various/ Various	5,275	0	N/A	0	N/A	0	N/A	5,275
Countermeasures Development	C/CPFF	Signature Research Associates/ Huntsville, AL	0	750	1/4Q	0	N/A	0	N/A	750
Logistics										
Logistics	C/CPFF	Battelle/ Kennesaw, GA	1,950	2,005	1Q	0	N/A	0	N/A	3,955
Logistics	SS/CPFF	Alliant Techsystems/ Magna, UT	300	317	1Q	0	N/A	0	N/A	617

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Logistics	SS/CPFF	Physical Science Laboratory/ Las Cruces, NM	438	670	1Q	0	N/A	0	N/A	1,108
Logistics	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	2,682	2,552	1/2Q	0	N/A	0	N/A	5,234
Logistics	C/MIPR	Various/ Various	1,781	418	1/3Q	0	N/A	0	N/A	2,199
Logistics	C/Various	Various/ Albuquerque, NM	4,000	2,893	1/2Q	0	N/A	0	N/A	6,893
Logistics	C/CPAF	Lockheed Martin/ Denver, CO	6,850	14,231	1/4Q	0	N/A	0	N/A	21,081
Logistics	C/MIPR	SWFPAC/ Bangor, WA	610	0	N/A	0	N/A	0	N/A	610
Logistics	C/MIPR	AMCOM/ Huntsville, AL	0	1,240	1/4Q	0	N/A	0	N/A	1,240
Integration										
Integration	C/CPAF	Northrop Grumman/ Albuquerque, NM	11,500	9,000	1/4Q	0	N/A	0	N/A	20,500
Integration	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	0	2,088	1/4Q	0	N/A	0	N/A	2,088
Integration	C/Various	Various/Various	0	1,000	2/4Q	0	N/A	0	N/A	1,000
Mission Management										
Mission Management	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	9,703	8,619	1/4Q	0	N/A	0	N/A	18,322

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Re-entry Vehicles										
Re-Entry Vehicles	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	2,150	1,229	1/4Q	0	N/A	0	N/A	3,379
Re-Entry Vehicles	C/FFRDC	Sandia National Lab/ Albuquerque, NM	2,500	0	N/A	0	N/A	0	N/A	2,500
Re-Entry Vehicles	C/CPAF	Lockheed Martin/ Denver, CO	7,208	4,000	1/4Q	0	N/A	0	N/A	11,208
Re-Entry Vehicles	C/CPFF	Signature Research Associates/ Huntsville, AL	0	528	1/4Q	0	N/A	0	N/A	528
Subtotal Product Development			248,777	159,066		0		0		407,843

Remarks

Within Logistics and Re-Entry Vehicles, the Teledyne Solutions, Inc., contract is a Command-wide SETA contract.

Within Integration, the Program Office intends to award the Low Cost Assessment Targets Prime Contractor in FY07.

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Support Costs										

Remarks

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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III. Test and Evaluation Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation										

Remarks

IV. Management Services Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Management Services										

Remarks

Project Total Cost			248,777	159,066		0		0		407,843
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Remarks

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013							
	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	1	2	3	4				
System Flight Tests																																				
FTM-11					▼																															
FTT-06						◇																														
FTX-02						▽																														
RDC-01c						◇																														
ATM-48								▽																												
FTG-03								▽																												
FTM-12								▽																												
FTT-07								▽																												
RDC-01d								◇																												
(PAC) 7-2								◇																												
N FIRE-2A												◇																								
N-FIRE 2b												◇																								
FTM-11a												◇																								

Legend			
▲	Significant Event (complete)	▲	Significant Event (planned)
★	Milestone Decision (complete)	★	Milestone Decision (planned)
◆	Element Test (complete)	◆	Element Test (planned)
▼	System Level Test (complete)	▽	System Level Test (planned)
▲	Complete Activity	▲	Planned Activity

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4
System Flight Tests																																
FTT-08								◇																								
FTG-04								▽																								
Measurement Tests																																
FTC-02a/b		▽																														
FT 04-4 (CMCM-2)			▲																													
				</																												

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development Milestones								
Preliminary Design Review 52 in. SR19 FTF	2Q							
Critical Design Review	2Q	2Q						
Integrated Baseline Review		2Q						
System Flight Tests								
FT 04-1	1Q							
FT 04-5	1Q							
FTM 04-2	1Q							
Pacific Phoenix	3Q							
FTM-10	3Q							
FTG-2	4Q							
FTT-03	4Q							
RDC-01a/b	4Q							
FTT-04	4Q							
FTM-11		1Q						
FTT-06		2Q						
FTX-02		2Q						
RDC-01c		2Q						
ATM-48		3Q						
FTG-03		3Q						
FTM-12		3Q						
FTT-07		3Q						
RDC-01d		3Q						
(PAC) 7-2		3Q						
N FIRE-2A		4Q						
N-FIRE 2b		4Q						
FTM-11a		4Q						
FTT-08		4Q						
FTG-04			1Q					
Measurement Tests								
FTC-02a/b	2Q							

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
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APPROPRIATION/BUDGET ACTIVITY RD&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
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Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FT 04-4 (CMCM-2)	3Q							

Targets used in system test events are funded by the Elements.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0905 Targets & Countermeasures Block 2008	3,250	19,231	160,794	139,676	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

Note: Many of Target & Countermeasures accomplishments were previously funded under Project 0805 Block 2006 and are continued into Block 2008, Project 0905.

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2008 integrated and layered Ballistic Missile Defense Systems (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on system engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target. Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2008 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This program also provides the technical support of mission management for Element flight tests. Similar to Project 0805 (Block 06), this Project (0905) will continue to rely upon the targets prime contractor, Lockheed Martin Space Systems Company (LMSSC) to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Systems Engineering	0	9,661	100,690	88,196
RDT&E Articles (Quantity)	0	0	0	0

This effort provides the Missile Defense Agency with Target Program Technical Direction and analyze of target requirements cost, schedule, technical performance of target systems development. This effort utilizes the spiral development process for long-range plans initiating new developments. Conducts functional allocation to product lines, product line specifications/interfaces and establishes guidelines for conductibility of design reviews. Performs target system analysis with new concepts to verify system performance. Defines target program baseline, control flight test configuration, and conduct pre and post-flight analysis and documentation. Identifies treaty and environmental issues and develops plans for issue

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>resolution. The Flexible Targets Family (FTF) will be composed of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System capabilities.</p> <p>FY07 Planned Program: Spiral II</p> <ul style="list-style-type: none">• Conduct Integrated Baseline Reviews (IBR) on effort placed on contract in FY07 including the following:<ul style="list-style-type: none">○ AEGIS Ballistic Missile Defense (BMD) (JFTM-1)○ Theater High Altitude Air Defense (THAAD) (FTT-09, FTT-10, FTT-11) <p>Spiral III - FTF Enhanced Studies (Development of Enhanced Capability Products)</p> <ul style="list-style-type: none">• Develop modification of Infrared and Radar Cross Section for Re-Entry Vehicles (RV) in endo and last stage• Develop technology transfer of countermeasures, sensors, and advanced instrumentation <p>FY08 Planned Program: Spiral III</p> <ul style="list-style-type: none">• Complete Spiral III Development and Enhanced Capability Products<ul style="list-style-type: none">○ Modification of Infrared and Radar Cross Section for Re-entry Vehicle endo and last stage.○ Technology transfer of countermeasures, sensors and advanced instrumentation• Complete Spiral III Critical Design Review (CDR) <p>Spiral IV</p> <ul style="list-style-type: none">• Initiate development of Spiral IV Flexible Target Family System Specification<ul style="list-style-type: none">○ The Flexible Target Family composes of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System capabilities.○ The Flexible Target Family contains components that emphasize commonality and modularity across target system representations within the family of target sets that can rapidly integrate into supporting MDA flight tests.• Initiate Spiral IV Development of Enhanced Capability Products<ul style="list-style-type: none">○ Castor IV B Thrust Termination○ Last Stage Booster IR Signature Tailorability		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">○ Attitude Control Module and Payload Deployment Module Tailorability○ Direct Satcom Telemetry Link○ Payload Deployment Module Payload Accommodations○ Countermeasure Radar Cross Section Compatibility● Complete Spiral IV System Requirement Review● Complete Spiral IV Functional Allocation and Interface Definition IV● Complete Rolling Wave Integrated Baseline Review● Provide Target System Analysis of flight test for the following target missions:<ul style="list-style-type: none">○ Critical Measurements Countermeasures (CMCM) (FTC-04a/b)○ GMD (FTG-05)○ Aegis-BMD (FTM-13, JFTM-1, FTM-14)○ PAC-3 (FT 7-3)○ THAAD (FTT-09, FTT-10, FTT-11, FTT-12)○ Space Tracking and Surveillance System (STSS) (FTS-01, FTS-02, FTS-03) <p>FY09 Planned Program:</p> <ul style="list-style-type: none">● Complete Development of the Spiral IV Flexible Target Family System Specification● Continue Spiral IV Development of Enhanced Capability Products<ul style="list-style-type: none">○ Castor IV B Thrust Termination○ Last Stage Booster IR Signature Tailorability○ Attitude Control Module and Payload Deployment Module Tailorability○ Direct Satcom Telemetry Link○ Payload Deployment Module Payload Accommodations○ Countermeasure Radar Cross Section Compatibility● Complete Spiral IV Preliminary Design Review● Complete Rolling Wave Integrated Baseline Review● Provide Target System Analysis of flight test for the following target missions:<ul style="list-style-type: none">○ CMCM (FTC-05)○ GMD (FTG-06, FTG-07)○ Aegis BMD (JFTM-2, FTM-15, FTM-16)		

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets		
<ul style="list-style-type: none"> ○ PAC-3 (FT 16-2) ○ THAAD (FTT-13, FTT-14, FTT-15) ○ STSS (FTS-04) ○ Airborne Laser (ABL) (FTL-01, FTL-02, FTL-03) 				
	FY 2006	FY 2007	FY 2008	FY 2009
Launch Vehicles	0	0	4,444	3,951
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with all launch delivery vehicles including boosters, interstages and avionics (guidance and flight computers). This task includes conducting decomposition for booster, interstage and avionics requirements, characterizing and qualifying boosters, interstages and avionics. Conducts necessary design reviews. Ensures boosters, interstages and avionics adhere to interface specifications.</p> <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> ● Provide acquisition support , mission management of the prime contract (LMMSC) and legacy contracts ● Provide continued management of target development, integration and launch services of the prime contract (LMMSC) and legacy contracts ● Perform studies/analysis for future Launch vehicle (LV) capabilities designs ● Procure two (2) SR19 Flexseals for future BMDS flight missions ● Procure rocket motors and hardware as needed or required to support future Medium Range Target (MRT) missions <p>FY09 Planned Program:</p> <ul style="list-style-type: none"> ● Provide acquisition support, mission management of the prime contract (LMMSC) and legacy contracts ● Provide continued management of target development, integration, and launch services of the prime contract, (LMMSC) and legacy contracts ● Perform studies/analysis for future LV capabilities designs ● Procure two (2) SR19 Flexseals for future BMDS flight missions ● Procure rocket motors and hardware as needed or required to support future Medium Range Target (MRT) missions 				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets		
	FY 2006	FY 2007	FY 2008	FY 2009
Countermeasures	3,250	6,900	12,000	2,000
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides program management and development of various countermeasure systems for BMDS flight testing, including characterization and ground testing of those countermeasure systems.</p> <p>FY06 Accomplishments:</p> <ul style="list-style-type: none"> • Conducted studies on legacy countermeasures to down-select designs for maturation and limited production by the National Labs • Initiated design and development of Family 1C and 2D-2 countermeasures for Block 08 test objectives, which required developing new materials, processes and techniques • Characterized countermeasures for BMDS Flight tests <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Work interface issues so that new countermeasure designs from National Labs will be compatible with the Prime Contractor Flexible Target Family vehicles • Continue developing materials and processes for new prototype countermeasures supporting BMDS Block 08 system testing • Conduct design studies to bring countermeasures designs to Critical Design Review <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> • Continue developing advanced techniques for prototyping new countermeasures • Evolve countermeasures prototypes towards flight qualifications based upon considerable flight qualification test activities (based on FTF environments) • Build variety of engineering countermeasures prototypes supporting BMDS system testing <p>FY 09 Planned Program:</p> <ul style="list-style-type: none"> • Continue developing advanced techniques for prototyping new countermeasures • Evolve countermeasures prototypes towards flight qualifications based upon considerable flight qualification test activities (based upon FTF environments) • Build variety of engineering countermeasures prototypes supporting BMDS system testing 				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets		
	FY 2006	FY 2007	FY 2008	FY 2009
Logistics	0	420	10,170	10,420
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with all required inventory, launch support equipment and transportation of targets and countermeasures hardware in support of BMDS testing. These efforts are essential in providing a dependable and accurate target system that BMDS has come to, and continues to rely on for the success of their interceptor program. This task includes integrated logistics support for all targets and countermeasures material, including facilities, inventory, maintenance, spare parts, aging and surveillance as well as special testing for target rocket motor propellants and other hazardous material handling. This task provides for the 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 Military Assets (FMA) fuel calibration and storage.</p> <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Refurbish, assemble and deliver the following: <ul style="list-style-type: none"> ○ One (1) Hera target and associated equipment supporting FT 7-3 mission ○ One (1) Strategic Target System (STARS) target and associated equipment supporting FTG-05 mission <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> • Continue inventory, storage, maintenance, aging and surveillance program for MDA's rocket motors, ground/launch support equipment and associated hardware • Continue Government Furnished Equipment tracking, administration and property management • Continue maintenance of existing support equipment and facilities located at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, Courtland and Pacific Missile Range Facility • Continue to support equipment for target launches from Reagan Test Site (Meck Island) • Continue to store and maintain Trident C-4 motor hardware and handling equipment for future use as targets • Refurbish, assemble, and delivery of target systems for fiscal year requirements <p>FY09 Planned Program:</p> <ul style="list-style-type: none"> • Continue inventory, storage, maintenance, aging and surveillance program for MDA's rocket motors, ground/launch support equipment and associated hardware • Continue Government Furnished Equipment tracking, administration and property management 				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets		
<ul style="list-style-type: none"> Continue maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, Courtland and Pacific Missile Range Facility 				
	FY 2006	FY 2007	FY 2008	FY 2009
Integration	0	0	12,277	12,503
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with all target configuration, integration, launch services and mission assurance in support of Ballistic Missile Defense Systems (BMDS) testing. Task includes developing flight safety documentation, conducting trajectory flyout analysis, supporting environmental studies and reviews. Integrates product line components into designated target configuration and test systems. Provides schedule status, final target checkout. and target launch services for mission assurance.</p> <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> Provide mission assurance for hardware integration for all BMDS element targets in support of FY08 scheduled tests Manage integration services of the prime contract, (LMMSC), and target integration services on legacy contracts Provide target studies and analysis support and launch components Prepare for, conduct and analyze the following: <ul style="list-style-type: none"> Airborne Laser (ABL) High Powered systems test and MARTI launches (HPSI Lance (up to 6) missions in 2-3; 2 HPSI MARTI missions in 3-4) Aegis BMD target missions (FTM-13, FTM-14, JFTM-1) Lower Tier Program Office (LTPO) target missions (FT 7-3) GMD target mission (FTG-05) THAAD target missions (FTT-09, FTT-10, FTT-11, FTT-12) STSS target missions (FTS-01, FTS-02, FTS-03) Systems test and countermeasures missions (FTC-04, FTC-05) <p>FY09 Planned Program:</p> <ul style="list-style-type: none"> Prepare for and conduct pre and post mission analysis for the following: <ul style="list-style-type: none"> ABL flight test (FTL-01 MRT; Envelope Expansion missions (up to 4) MARTI's) Aegis BMD target mission (FTM-15, FTM-16, JFTM-2) LTPO target mission (FT 16-2) 				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets		
<ul style="list-style-type: none"> ○ GMD target mission (FTG-06, FTG-07, FTG-08) ○ THAAD target mission (RDC-2, FTT-13, FTT-14, FTT-15) ○ STSS target mission (FTS-04) ● Provide mission assurance for hardware integration for all BMDS element targets in support of FY08 tests ● Manage target integration services of the prime contract (LMMSC) and legacy contracts 				
	FY 2006	FY 2007	FY 2008	FY 2009
Mission Management	0	2,000	10,665	10,636
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides MDA with target mission management and execution for overall mission assurance. Conducts mission planning, documentation, development of scenario plans in accordance with mission requirements. Controls target management (scheduling, configuration modifications) in support of BMDS and Element testing. Conduct safety operations specific to the mission and in conjunction with ranges. Plans and conducts target mission readiness reviews and monitors environmental execution.</p> <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> ● Prepare for conduct and analyze Aegis-BMD target missions (FTM-12, FTM-13) ● Prepare for and analyze pre-mission activities: <ul style="list-style-type: none"> ○ Aegis-BMD target missions (FTM-13, JFTM-1) ○ LTPO target mission (FT 7-3) ○ GMD target mission (FTG-05) ○ STSS target mission (FTS-1, FTS-2, FTS-3, FTS-4) <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> ● Prepare for, conduct and analyze the following: <ul style="list-style-type: none"> ○ ABL High Powered system tests and MARTI launches (HPSI Lance (up to 6) missions, 2 HPSI MARTI missions) ○ Aegis BMD target missions (FTM-13, FTM-14) ○ LTPO target mission (FT7-3) ○ GMD target missions (FTG-05, FTG-06) ○ THAAD target missions (FTT-09, FTT-10, FTT-11, FTT-12) ○ STSS target missions (FTS-01, FTS-02, FTS-03) 				

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Systems test and countermeasures missions (FTC-04 and FTC-05)
 - Prepare for, and conduct pre-mission analysis for the following:
 - ABL flight tests, FTL-01 MRT: Envelope Expansion missions (up to 4) MARTI's
 - Aegis BMD target mission (FTM-15)
 - LTPO target mission (FT 16-2)
 - GMD target mission (FTG-08)
 - THAAD target missions (RDC-2, FTT-13)
 - STSS target mission (FTS-04)
- FY09 Planned Program:
- Prepare for, conduct and analyze for the following:
 - ABL flight tests, FTL-01 MRT, Envelope Expansion missions (up to 4) MARTI's
 - Aegis BMD target missions (FTM-15, FTM-16)
 - LTPO target mission (FT 16-2)
 - GMD target missions (FTG-07, FTG-08)
 - THAAD target missions (RDC-2, FTT-14, FTT-14, FTT-15, FTT-16)
 - STSS target mission (FTS-04)

	FY 2006	FY 2007	FY 2008	FY 2009
Re-Entry Vehicles	0	250	10,548	11,970
RDT&E Articles (Quantity)	0	0	0	0

This effort includes Re-Entry (RV) and Payload Deployment Module (PDM) requirements decomposition and analysis; RV and PDM characterization, qualification, and performance measurements; mission support; and pre-and post-mission data analysis. Provides interface standardization and ensures product adherence to interface specifications for successful integration and launch of RV and PDM products. Conducts RV and PDM design reviews and supports other product design reviews to provide product and mission assurance.

- FY07 Planned Program:
- Coordinate the completion of:
 - One (1) MBRV-1 for FTT-09
 - One (1) MBRV-3 for FT 7-03

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603888C Ballistic Missile Defense Test and Targets	

FY08 Planned Program:

- Coordinate the completion of:
 - Five (5) MBRV-2s for FTM-14 , FTT-14a, FTS-04 and CMCM-5 flight tests.
 - Two (2) MBRV-3's for FT-16-2 and FT-16-3 flight test.
 - Three (3) MBRV-1's for FTT-12, FTT-13 and FTT-15 flight tests.
 - One (1) GROW RV with PDM supporting future BMDS testing.

FY09 Program Plan:

- Coordinate the completion of:
 - Five (5) MBRV-2's to support future BMDS testing.
 - Two (2) MBRV-1's to support future BMDS testing.

C. Other Program Funding Summary

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to develop targets for use in MDA BMDS testing, with a continued emphasis on product line development and target component commonality. It is expected that the prime contractor will continue to refine and streamline the activities for which it is under contract, and as described in Section A of this Project. Under this Project (0905) the Prime Contractor's first two year option period will expire, and the government will either exercise a second two year option, or re-compete the effort. As with Project 0805 (Block 2006), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis							Date February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
I. Product Development Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Systems Engineering										
System Engineering	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	976	9,661	1/4Q	97,319	1/4Q	84,775	1/4Q	192,731
System Engineering	C/Variou	Various/Various	0	0	N/A	1,000	1/4Q	1,000	1/4Q	2,000
System Engineering	C/FFRDC	John Hopkins Applied Research Lab/Baltimore, MD	0	0	N/A	2,371	1/4Q	2,421	1/4Q	4,792
Launch Vehicles										
Launch Vehicles	C/CPAF	Northrop Grumman/ Albuquerque, NM	0	0	N/A	1,256	1/4Q	1,075	1/4Q	2,331
Launch Vehicles	C/FFP	Aerojet/ Sacramento, CA	0	0	N/A	3,188	1/4Q	2,876	1/4Q	6,064
Countermeasures										
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	0	0	N/A	0	N/A	0	N/A	
Countermeasures Development	C/FFRDC	Sandia National Lab/ Albuquerque, NM	3,250	6,900	1/4Q	10,000	1/4Q	0	N/A	20,150
Countermeasures Development	C/CPFF	Signature Research Associates/ Huntsville, AL	0	0	1/4Q	2,000	N/A	2,000	1/4Q	4,000
Logistics										

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Logistics	C/FP	Teledyne Solutions, Inc./Huntsville, AL	0	420	1/4Q	3,035	1/4Q	3,098	1/4Q	6,553
Logistics	C/CPFF	Battelle/ Kennesaw, GA	0	0	N/A	2,061	1/4Q	2,119	1/4Q	4,180
Logistics	C/MIPR	Various/Various	0	0	N/A	427	1/4Q	438	1/4Q	865
Logistics	SS/CPFF	Physical Science Laboratory/ Las Cruces, NM	0	0	N/A	689	1/4Q	708	1/4Q	1,397
Logistics	SS/CPFF	Alliant Tech Systems/ Magna, UT	0	0	N/A	323	1/4Q	330	1/4Q	653
Logistics	C/CPAF	Lockheed Martin/ Denver, CO	0	0	N/A	2,361	1/4Q	2,419	1/4Q	4,780
Logistics	C/MIPR	AMCOM/ Huntsville, AL	0	0	N/A	1,274	1/4Q	1,308	1/4Q	2,582
Integration										
Integration	C/CPAF	Northrop Grumman/ Albuquerque, NM	0	0	N/A	10,777	1/4Q	11,003	1/4Q	21,780
Integration	C/Various	Various/Various	0	0	N/A	1,500	1/4Q	1,500	1/4Q	3,000
Mission Management										
Mission Management	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	0	2,000	1/4Q	10,665	1/4Q	10,636	1/4Q	23,301

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Re-Entry Vehicles										
Re-Entry Vehicles	C/FP	Teledyne Solutions/Huntsville, AL	0	250	N/A	1,543	1/4Q	1,570	1/4Q	3,363
Re-Entry Vehicles	C/FFRDC	Sandia National Lab/Albuquerque, NM	0	0	N/A	3,966	1/4Q	3,970	1/4Q	7,936
Re-Entry Vehicles	C/CPAF	Lockheed Martin/Denver, CO	0	0	N/A	2,539	1/4Q	5,880	1/4Q	8,419
Re-Entry Vehicles	C/CPFF	Signature Research Associates/Huntsville, AL	0	0	N/A	2,500	1/4Q	550	1/4Q	3,050
Subtotal Product Development			4,226	19,231		160,794		139,676		323,927

Remarks

Integration Various - The Program Office intends to award the Low Cost Assessment Target efforts to a Prime Contractor in Fiscal Year 07.

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/Oblg Date	FY 2008 Cost	FY 2008 Award/Oblg Date	FY 2009 Cost	FY 2009 Award/Oblg Date	Total Cost
Subtotal Support Costs										

Remarks

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UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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III. Test and Evaluation Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation										

Remarks

IV. Management Services Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Management Services										

Remarks

Project Total Cost			4,226	19,231		160,794		139,676		323,927
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Remarks

UNCLASSIFIED

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013							
	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	1	2	3	4				
Development Milestones																																				
Critical Design Review						Δ				Δ																										
System Requirements Review										Δ																										
Preliminary Design Review												Δ																								
System Flight Tests																																				
FTM-13										◇																										
JFTM-01										◇																										
(PAC) 7-3											◇																									
FTT-09											◇																									
FTG-05												▽																								
FTM-14												▽																								
FTS-01												▽																								
FTS-02												◇																								
FTT-10												▽																								

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▼	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▼	System Level Test (planned)
▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development Milestones								
Critical Design Review		2Q	1Q					
System Requirements Review			2Q					
Preliminary Design Review			4Q					
System Flight Tests								
FTM-13			1Q					
JFTM-01			1Q					
(PAC) 7-3			2Q					
FTT-09			2Q					
FTG-05			3Q					
FTM-14			3Q					
FTS-01			3Q					
FTS-02			3Q					
FTT-10			3Q					
FTS-03			4Q					
FTT-11			4Q					
FTT-12			4Q					
FTG-06				1Q				
FTL-01				1Q				
FTS-04				1Q				
FTT-13				1Q				
JFTM-02				1Q				
FTT-14				2Q				
FTG-07				3Q				
FTL-02				3Q				
FTM-15				3Q				
FTL-03				4Q				
FTM-16				4Q				
FTT-15				4Q				

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Measurement Tests								
FTC-04a/b			3Q					
FTC-05				4Q				

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0005 Targets & Countermeasures Block 2010	500	2,989	1,663	39,035	189,422	156,980	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2010 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on systems engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target.

Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2010 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This effort provides funding for program management and the development of various countermeasures for BMDS flight testing, including characterization and ground testing of those countermeasure systems. This program also provides the technical support of mission management/mission assurance for all Element flight tests and advanced development for long range strategic targets. Similar to Project 0905 (Block 08), this Project (0005) will continue to rely upon the targets prime contractor to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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<u>B. Accomplishments/Planned Program</u>				
	FY 2006	FY 2007	FY 2008	FY 2009
System Engineering	0	0	500	27,491
RDT&E Articles (Quantity)	0	0	0	0

FY08 Planned Program:

Spiral V

- Initiate development of the Spiral V Flexible Target Family (FTF) System Specifications
- Provide Target System Analysis of flight test for the following target missions:
 - CMC (FTC-06)
 - Ground-Based Midcourse Defense (GMD) (FTG-08, FTG-09, FTG-10)
 - Aegis Ballistic Missile Defense (BMD) (FTM-17)
 - PAC-3 (FT 16-1)
 - Theater High Altitude Air Defense (THAAD) (FTT-16, FTT-17)
 - Arrow (USFT-3, USFT-4)
 - Airborne Laser (ABL) (FTL-04, FTL-05)

FY09 Planned Program:

- Complete Development of the Spiral V Flexible Target Family System Specification
- Continue Spiral V Development of Enhanced Capability Products
 - Castor IV B Thrust Termination
 - Last Stage Booster IR Signature Tailorability
 - Attitude Control Module and Payload Deployment Module Tailorability
 - Direct Satcom Telemetry Link
 - Payload Deployment Module Payload Accommodations
 - Countermeasure Radar Cross Section Compatibility
- Complete Spiral V Preliminary Design Review
- Complete Rolling Wave Integrated Baseline Review
- Provide Target System Analysis of flight test for the following target missions:
 - CMC (FTC-07)

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets		
<ul style="list-style-type: none"> ○ GMD (FTG-11) ○ Aegis BMD (FTM-19, FTM-20) ○ PAC-3 (FT 16-2) ○ THAAD (FTT-18, FTT-19) ○ ABL (FTL-06, FTL-07) 				
	FY 2006	FY 2007	FY 2008	FY 2009
Countermeasures	500	2,989	1,163	11,294
RDT&E Articles (Quantity)	0	0	0	0
<p>This effort provides funding for program management and development of countermeasure systems for BMDS flight testing, including characterization and ground testing of those countermeasure systems.</p> <p>FY06 Accomplishments:</p> <ul style="list-style-type: none"> • Developed Family 3 and 4 countermeasures supporting Block 10 BMDS system testing <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Develop techniques, materials and processes for new prototype countermeasures • Continue development of advanced countermeasure designs for Critical Design Review <p>FY08 Planned Program:</p> <ul style="list-style-type: none"> • Continue developing advanced techniques for prototyping new countermeasures • Evolve countermeasure prototypes towards flight qualification based on considerable flight qualification test activities (based upon FTF environments) • Build variety of engineering countermeasure prototypes supporting BMDS Block 10 system testing <p>FY09 Planned Program:</p> <ul style="list-style-type: none"> • Continue developing advanced techniques for prototyping new countermeasures • Evolve countermeasure prototypes towards flight qualification based on considerable flight qualification test activities (bases upon FTF environments) • Build variety of engineering countermeasure prototypes supporting BMDS Block 10 system testing 				

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification			Date February 2007	
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APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets		

	FY 2006	FY 2007	FY 2008	FY 2009
Mission Management	0	0	0	250
RDT&E Articles (Quantity)	0	0	0	0

This effort provides MDA with target mission management and execution for overall mission assurance. Conducts mission planning, documentation, development of scenario plans in accordance with mission requirements. Controls target management (scheduling, configuration modifications) in support of BMDS and Element testing. Conduct safety operations specific to the mission and in conjunction with ranges. Plans and conducts target mission readiness reviews and monitors environmental execution.

FY09 Planned Program:

- Prepare for, conduct and analyze THAAD target mission (FTT-16)

C. Other Program Funding Summary

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to develop targets for use in MDA BMDS testing, with a continued emphasis on product line development and target component commonality. It is expected that the prime contractor will continue to refine and streamline the activities for which it is under contract. Under this Project (0005), the second two year option period of performance, for the prime contractor will expire, and the government will either exercise a third two year option, or re-compete the effort. As with Projects 0805 (Block 2006) and 0905 (Block 2008), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis								Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets					
I. Product Development Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
System Engineering										
System Engineering	C/CPAF	Lockheed Martin/Denver, CO	0	0	N/A	500	4Q	27,491	1/4Q	27,991
Countermeasures										
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	500	0	N/A	0	N/A	0	N/A	500
Countermeasures Development	C/CPAF	Lockheed Martin/Denver, Co	0	2,250	1/4Q	0	N/A	0	N/A	2,250
Countermeasures Development	C/FFRDC	Sandia National Lab/Albuquerque, NM	0	739	1/4Q	1,163	1/4Q	11,294	1/4Q	13,196
Mission Management										
Mission Management	C/FP	Teledyne Solutions, Inc./Huntsville, AL	0	0	N/A	0	N/A	250	1/4Q	250
Subtotal Product Development			500	2,989		1,663		39,035		44,187
Remarks										
II. Support Costs Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Support Costs										
Remarks										

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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III. Test and Evaluation Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation										

Remarks

IV. Management Services Cost (\$ in Thousands)										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award/ Oblg Date	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Subtotal Management Services										

Remarks

Project Total Cost			500	2,989		1,663		39,035		44,187
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development Milestones								
Preliminary Design Review				2Q				
Critical Design Review				3Q				
Integrated Baseline Review				4Q				
System Flight Tests								
FTG-08					1Q			
FTM-17					2Q			
FTS-06					2Q			
FTT-16					2Q			
FTG-09					3Q			
FTL-04					3Q			
FTL-05					4Q			
FTT-17					4Q			
(PAC) 16-1					4Q			
FTG-10						1Q		
FTL-06						1Q		
FTM-19						2Q		
FTT-18						2Q		
FTG-11						3Q		
FTL-07						3Q		
FTM-20						4Q		
FTT-19						4Q		
(PAC) 16-2						4Q		
Measurement Tests								
FTC-06					3Q			
FTC-07						3Q		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2007		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets				

COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
R105 Targets & Countermeasures Block 2012	0	0	0	0	5,937	38,635	209,784	217,444
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2012 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on systems engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target.

Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2012 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This effort provides funding for program management and the development of various countermeasures for BMDS flight testing, including characterization and ground testing of those countermeasure systems. This program also provides the technical support of mission management/mission assurance for all Element flight tests and advanced development for long range strategic targets. Similar to Project 0005 (Block 2010), this Project (R105) will continue to rely upon the targets prime contractor to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification							Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
C. Other Program Funding Summary									
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0602 Program-Wide Support	9,251	7,533	8,136	9,477	13,466	10,041	10,159	10,179
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program such as strategic planning, program integration, business management, cost estimating, contracting, and financial management, to include preparation of financial statements, reimbursement of financial services provided by DFAS, internal review and audit, earned-value management, and program assessment. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Many of these costs reside within the Missile Defense Agency Executing Agents in the Services: Army Space and Missile Defense Command, Army PEO Space and Missile Defense, Office of Naval Research, and various Air Force laboratory and acquisition activities, although some functions and costs within this program element are performed by MDA employees assigned within the National Capital Region (NCR). Other costs included herein provide facility capabilities for MDA Executing Agent locations, 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 fluctuation on a limited number of foreign contracts.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Civilian Salaries and Support	9,251	7,533	8,136	9,477
RDT&E Articles (Quantity)	0	0	0	0

See Section A: Mission Description and Budget Item Justification

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification							Date February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
C. Other Program Funding Summary									
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603895C BMD System Space Program	0	0	27,666	35,093	46,849	56,183	133,617	157,117	456,525
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	

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