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|---|---------|---------|---|---------|-----------------------|---------|---------|
| MDA Exhibit R-2 RDT&E Budget Item Justification | | | | | Date February 2004 | | |
| 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 (\$ in Thousands) | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Total PE Cost | 0 | 633,782 | 713,658 | 665,854 | 648,563 | 646,213 | 680,089 |
| 0304 Test & Evaluation | 0 | 340,666 | 202,131 | 196,969 | 192,398 | 188,673 | 203,757 |
| 0704 Test & Evaluation Block 2004 | 0 | 36,976 | 38,920 | 0 | 0 | 0 | 0 |
| 0804 Test & Evaluation Block 2006 | 0 | 2,357 | 69,070 | 40,331 | 39,196 | 0 | 0 |
| 0904 Test & Evaluation Block 2008 | 0 | 951 | 72,514 | 144,707 | 120,937 | 84,611 | 86,269 |
| 0004 Test & Evaluation Block 2010 | 0 | 0 | 0 | 0 | 61,709 | 139,315 | 141,898 |
| 0305 Targets & Countermeasures Core | 0 | 22,585 | 23,314 | 23,790 | 22,190 | 22,444 | 22,714 |
| 0705 Targets & Countermeasures - Block 2004 | 0 | 223,671 | 233,027 | 0 | 0 | 0 | 0 |
| 0805 Targets & Countermeasures - Block 2006 | 0 | 0 | 50,865 | 201,336 | 175,914 | 0 | 0 |
| 0905 Targets & Countermeasures - Block 2008 | 0 | 0 | 17,578 | 52,178 | 29,307 | 203,995 | 217,961 |
| 0602 Program-Wide Support | 0 | 6,576 | 6,239 | 6,543 | 6,912 | 7,175 | 7,490 |
| Note: Funding for this effort was previously held under the Ballistic Missile Defense System Segment (BMDS) Program Element (PE 0603880C). | | | | | | | |
| A. Mission Description and Budget Item Justification | | | | | | | |
| Our goal is to defend the United States and our allies, friends, and deployed forces from ballistic missiles of all ranges in all phases of flight. By the beginning of FY 2005, we will put the BMDS on alert and, for the first time, we will have a capability to defeat a ballistic missile threatening the United States. In FY 2005 and the remainder of the FYDP, we will increase the breadth and depth of our defense by adding forward-deployed, networked sensors, by adding interceptors at sea and on land, and by adding layers of increasingly capable weapons and sensors. Throughout this documentation, therefore, every activity can be tied to one of our four objectives: complete, verify and test the Initial Defensive Capability; put the Ballistic Missile Defense System on alert; develop procedures and logistics to perform and sustain concurrent testing and operations; and enhance the BMDS capability. | | | | | | | |
| The flow down of BMDS capability specifications resulting from Missile Defense National Team efforts in C2BMC and Systems Engineering & Integration will guide the integration of Targets and Countermeasures, Test and Evaluation, and Program-Wide Support into the BMD System, the BMDS C2BMC architecture, and the BMD Test Bed. | | | | | | | |
| MDA has taken an aggressive approach towards ensuring that the Director, Operational Test and Evaluation (DOT&E) and the Operational Test Agencies (OTAs) are involved in the BMDS developmental test activities. This approach allows early involvement of operational testers in the test program thereby building their understanding of the BMDS development and operations. | | | | | | | |
| The BMD Test & Targets Program Element (PE) provides the resources to test and evaluate the multi-layered BMDS capability, as well as develop targets and countermeasures for use in BMDS testing. This PE is comprised of nine primary projects: Test & Evaluation (T&E); Targets & Countermeasures Core; T&E Block 2004; Targets & Countermeasures Block 2004; T&E Block 2006; Targets & Countermeasures Block 2006; T&E Block 2008; Targets & Countermeasures Block 2008; and Program-Wide Support to include personnel, related support costs and fiscal requirements. Test and Evaluation and Targets and Countermeasures Core (Projects 0304 and 0305, respectively) provide for the implementation of Block functions across test and targets programs. These projects also assist in expanding the capabilities of the BMDS in future Blocks, and develops capabilities not yet foreseen as part of a current or future Block. Block functions (i.e., Project 0704 T&E Block 2004 and Project 0705 Targets and Countermeasures Block 2004) facilitate the management and development of key infrastructure, hardware items, and long-lead material components necessary for fielding and testing a multi-layered, evolutionary BMDS capability. | | | | | | | |

MDA Exhibit R-2 (PE 0603888C)

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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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The T&E project provides consolidated MDA-wide capabilities and resources to support the management and execution of BMDS System-and Element-level testing. T&E efforts include the development, operation, maintenance, and modernization of the T&E infrastructure supporting both BMDS System- and Element-level testing. The project funds the BMDS System Test and Assessment program that includes System-level tests, critical measurements testing and the associated assessments to characterize BMDS performance. For System Test Planning, evaluation of Engagement Sequence Groups (ESGs) supports the development of ground and flight test objectives. T&E activities are grouped in terms of System Test and Assessment, Test Resources development and maintenance; and Facilities, Siting, and Environmental management. T&E activities associated with specific BMDS Elements are captured in the respective BMDS Element.</p> <p>The Targets and Countermeasures Program is a supporting BMDS program that provides targets to test the integrated, layered BMDS, including targets to support testing prior to initial defensive operational capability. This program funds new target and countermeasure development, risk reduction flights (tests of target prototypes), subsystem characterization, and the acquisition and maintenance of long lead target material items. Specifically, the Targets and Countermeasures program provides capability-based ballistic missile target systems to include missile subsystems and common target components, such as boosters, re-entry vehicles (RVs), countermeasures, guidance and control components, data and instrumentation packages, and launch support systems. Additionally, the Targets and Countermeasure program supports aging surveillance, refurbishment, and reuse of existing government furnished equipment such as Minuteman II and Lance missile hardware. Utilizing existing government inventories and the development of common target components, a BMDS target system is integrated and tested, thus reducing the cost and cycle time of developing and acquiring new target system hardware. To assist the government in this endeavor, a ten year prime contract will be awarded in FY04 to design, develop, and test all BMDS targets (see R-2a's for Projects 0705, 0805, 0905, Section D - Acquisition Strategy for prime contract. Funding for the acquisition and testing of Targets and Countermeasures activities associated with specific BMDS Elements are captured in the respective BMDS Element.</p> <p>Program-Wide Support under this project covers personnel and related support costs, statutory and fiscal requirements. Includes funding for government civilians performing program-wide oversight functions such as contracting, program integration, safety, quality and mission assurance at MDA; cost estimating; audit; technology integration across all MDA projects; and assessment of schedule, cost and performance, documentation of related programmatic issues and, foreign currency fluctuations on limited number of foreign contracts. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 5px;">B. Program Change Summary</th> <th style="text-align: center; padding: 5px;">FY 2003</th> <th style="text-align: center; padding: 5px;">FY 2004</th> <th style="text-align: center; padding: 5px;">FY 2005</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Previous President's Budget (FY 2004 PB)</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">611,522</td> <td style="text-align: center; padding: 5px;">711,181</td> </tr> <tr> <td style="padding: 5px;">Current President's Budget (FY 2005 PB)</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">633,782</td> <td style="text-align: center; padding: 5px;">713,658</td> </tr> <tr> <td style="padding: 5px;">Total Adjustments</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">22,260</td> <td style="text-align: center; padding: 5px;">2,477</td> </tr> <tr> <td style="padding: 5px;">Congressional Specific Program Adjustments</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">29,450</td> <td style="text-align: center; padding: 5px;">0</td> </tr> <tr> <td style="padding: 5px;">Congressional Undistributed Adjustments</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">-7,190</td> <td style="text-align: center; padding: 5px;">0</td> </tr> <tr> <td style="padding: 5px;">Reprogrammings</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">2,477</td> </tr> <tr> <td style="padding: 5px;">SBIR/STTR Transfer</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">0</td> </tr> </tbody> </table> | | | B. Program Change Summary | FY 2003 | FY 2004 | FY 2005 | Previous President's Budget (FY 2004 PB) | 0 | 611,522 | 711,181 | Current President's Budget (FY 2005 PB) | 0 | 633,782 | 713,658 | Total Adjustments | 0 | 22,260 | 2,477 | Congressional Specific Program Adjustments | 0 | 29,450 | 0 | Congressional Undistributed Adjustments | 0 | -7,190 | 0 | Reprogrammings | 0 | 0 | 2,477 | SBIR/STTR Transfer | 0 | 0 | 0 |
| B. Program Change Summary | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Previous President's Budget (FY 2004 PB) | 0 | 611,522 | 711,181 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current President's Budget (FY 2005 PB) | 0 | 633,782 | 713,658 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Adjustments | 0 | 22,260 | 2,477 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Congressional Specific Program Adjustments | 0 | 29,450 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Congressional Undistributed Adjustments | 0 | -7,190 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reprogrammings | 0 | 0 | 2,477 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SBIR/STTR Transfer | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | Date February 2004 | | | |
| 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 (\$ in Thousands) | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| 0304 Test & Evaluation | 0 | 340,666 | 202,131 | 196,969 | 192,398 | 188,673 | 203,757 |
| RDT&E Articles Qty | 0 | 3 | 2 | 0 | 1 | 0 | 0 |
| Note: Funding for these Test & Evaluation efforts was previously funded in the Ballistic Missile Defense System Segment Program Element (PE 0603880C), Project 1060. The Modeling & Simulation (M&S) efforts are funded in the Ballistic Missile Defense System Core Program Element (PE 0603890C) in FY 2004 and beyond. | | | | | | | |
| A. Mission Description and Budget Item Justification In FY 2004 and beyond the Test & Evaluation (T&E) Project consolidates all System-wide T&E resources. This allows for the more cohesive integration, management and execution of test activities for a single BMD System. This activity provides the resources needed for the test infrastructure and analytical tools needed by the Missile Defense Agency (MDA) to execute a System-Wide Test Program. Element-unique costs are captured in the respective BMDS element. MDA's testing needs continue to expand beyond those of the individual BMDS elements. To address this issue, the Responsible Test Organization and the Combined Test Force (RTO and CTF) have been established to provide a single point of responsibility, authority, and accountability for BMD System testing. The RTO draws together test planning and reporting, corporate range infrastructure, environmental planning, resourcing and mission assurance. It also establishes common, repeatable processes and procedures for test planning. The CTF serves as the execution arm of the RTO focusing on the execution of system-level tests. The CTF is responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and Measurements testing. The System Test & Assessment Program continues to provide for the test planning, management, and execution of the BMDS Test Program and the BMDS Measurements Program. The BMDS Test Program provides for a cohesive program of testing to include: System Integrated Flight Tests (SIFTs); Critical Measurements/Countermeasure (CM/CM) Tests and associated vehicles (NOTE: Funding for FY04 is included in Project 0304, however, starting in FY05 funding for these tests will be in the T&E Block Projects); the Missile Defense Integrated Exercises (MDIEs), and the Missile Defense Wargames. The mission description, planned program, and funding for these tests is included in the T&E Block documentation. Funding for all SETA and SMDC support personnel is included in this project as most personnel support multiple blocks. The BMDS Measurements Program is an integrated test program defined and established to ensure a coherent, complete, cost effective, and disciplined approach to collecting data/measurements to support characterization of the BMDS mission space. Under the Measurements Program, all MDA measurement requirements which support Block Development, Threat Characterization, M&S Validation, Phenomenology, Advanced Concepts, Lethality, Kill Assessment, and Special Tests are collected, prioritized and validated by the Measurements Program Assessment Team (MPAT). Once validated, requirements are allocated to Tests of Opportunity (either Auxiliary Sensor Participation or Piggyback Operations) or used to design the dedicated flight tests which have been designated CM/CM flight tests. All Measurements Requirements will be documented in the Measurements Master Test Plan. The Lethality and Kill Assessment Test Programs leverage BMD intercept tests of opportunity to characterize post-intercept remnants. This characterization is essential to maintain and improve the core lethality models: PEELS, KIDD, and PEGEM and to identify successful intercepts, perform ground effects analysis, support systems engineering assessments, and facilitate development of real time decision tools to support tactics and engagement doctrines. To support the Measurements and BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the Data Collection, Analysis, and Exploitation activities of the Optical Data Analysis (ODA), and Radar Data Analysis (RDA) groups. These groups perform various functions which support BMDS data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMDS systems and new mission areas, and provide characterization and assessment for Measurements and BMDS testing. Funds also support the MDA Data Centers for Legacy Data identification and archive, as well as Disaster Recovery preparation. | | | | | | | |

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| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | 0603888C Ballistic Missile Defense Test and Targets | |
| <p>The Test Resources Program provides the resources for the development, sustainment, and modernization of core corporate T&E infrastructure facilities of the BMDS test bed to support system and element-level testing. This includes support at BMD-unique ground test facilities and MDA Data Centers:</p> <ul style="list-style-type: none"> - Kinetic Kill Vehicle Hardware in the Loop Simulator (KHILS) at Eglin AFB in Fort Walton Beach, FL - Arnold Engineering and Development Center (AEDC) Hypervelocity Wind Tunnel Number 9 (Tunnel 9) at White Oak, MD - Infrared and Blackbody Standards at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD - Hypervelocity Ballistic Range G Light Gas Gun Von Karman Facilities (VKF) at AEDC in Arnold AFB, TN - 7V and 10V Space Chambers at AEDC, Arnold AFB, TN - National Hover Test Facility (NHTF) at Edwards AFB, CA - Army Missile Optical Range (AMOR) at Redstone Arsenal, AL - Aero-Optic Evaluation Center (AOEC) at Calspan-University of Buffalo Research Center (CUBRC), NY - Holloman High Speed Test Track (HHSTT) at Holloman AFB, NM - Innovative Science & Technology Experimentations Facility (ISTEF) at Patrick AFB, FL <p>MDA Data Centers:</p> <ul style="list-style-type: none"> - Advanced Missile Signature Center (AMSC) Arnold AFB - Ballistic Missile Defense System Integration Data Center (BMDS IDC) JNIC - Schriever AFB, CO - Missile Defense Data Center (MDDC) Huntsville, Alabama - Navy Surface Warfare Center (NSWC) Corona, CA <p>BMD-unique range assets at various DoD test ranges and Commercial Space Port Facilities:</p> <ul style="list-style-type: none"> - White Sands Missile Range (WSMR) in Las Cruces, NM including Ft. Wingate Launch Complex near Gallup, NM - Reagan Test Site (RTS) at the United States Army Kwajalein Atoll - Pacific Missile Range Facility (PMRF) and Kauai Test Facility (KTF) at Kauai, HI - Wake Island Air Station Launch Complex - Naval Air Warfare Center, Weapons Division, Pt Mugu, CA - Kodiak Launch Complex (KLC) - Vandenberg AFB, FL <p>Airborne sensors, data collection assets, and special test equipment:</p> <ul style="list-style-type: none"> - High Altitude Observatory II (HALO-II) - Wide-body Airborne Sensor Platform (WASP) - High Altitude Observatory I (HALO-I) - NP-3D Remote Area Surveillance Aircraft <p>All of these assets provide valuable program risk reduction and test implementation capability in support of BMDS activities. Individual BMDS elements pay only the direct costs associated with their specific test efforts. The Test Resources effort also supports the development of target requirements and the certification that targets satisfy test objectives.</p> | | |

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| <p>The Test Resource Program uses the engagement sequences to evaluate how the BMDS elements and components might test in future Blocks. This analysis is used to identify the test infrastructure needed to test the BMDS elements and components as part of the engagement sequences.</p> <p>The Facilities, Siting and Environmental program provides guidance, environmental impact analyses and documentation, real property facility siting, acquisition, and facility operational support for the BMD systems. This project plans, programs, budgets, and oversees facility acquisition through the Military Construction (MILCON) and RDT&E construction programs. This project provides guidance and supports the Environmental Assessment and Environmental Impact Statement process, environmental compliance, pollution prevention, and other environmental efforts. This project provides leadership and consultation to facilities environmental stewardship and compliance of all BMDS activities with federal, state, local, DOD and international law, treaties and regulations.</p> | | | |
| <u>B. Accomplishments/Planned Program</u> | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| Test Resources | | 184,320 | 147,858 |
| RDT&E Articles (Quantity) | | 1 | 2 |
| <p>FY 2004 RDT&E Article: Completion of WASP IOC FY 2005 RDT&E Articles: Delivery of Two (2) Transportable Telemetry Systems</p> <p>FY 2004 Planned Programs</p> <ul style="list-style-type: none"> - 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. - Provide level-of-effort funding to ranges/instrumentation to maintain MDA-unique test facilities and instrumentation for MDA tests. (i.e. Meck Island at RTS for GMD Testing) - Procure airborne sensor platforms HALO-I and HALO-II. - Continue to operate, maintain and improve airborne sensors instrumentation platforms HALO-I , HALO-II and WASP to support BMDS testing and development activities. - Provide level-of-effort funding to maintain MDA-unique ground test facilities, including wind tunnels, space-environment chambers, light gas gun, ladar performance lab, hardware-in-the-loop simulation facility, rocket-plume sensor capabilities and the hover test facility - Support BMDS test ranges transition to a common test management and execution process as well as provide upgrades and improvements to test range hardware and software based planning and execution tools. - Continue to improve test infrastructure in terms of capability and quantity, as recommended from continuing MDA studies. These improvements will build on the existing core test infrastructure to support element- and system-level testing. - At RTS, improve Meck Island test infrastructure including the power grid to support GMD testing. - At RTS, initiate cost-sharing arrangements with SMDC to support GMD, CMP, and Targets & Countermeasures testing. - At PMRF, upgrade telemetry capability to support long-range engagements. - Standardize flight safety procedures, analysis tools, flight hardware, and safety officer training through a three-phase program. - Provide Level of Effort funding to maintain the MDA Data Centers Program to provide efficient data archiving, access, distribution and furnish relevant expertise for MDA Mission oriented data. - Develop and award contract with Alaska Aerospace Development Corporation (AADC) to provide for operation and sustainment of the KLC to support MDA test launches. -Participate in DOT&E's six-month Defense Science Board study to assess national needs for nuclear-weapon-effect simulation facilities - Develop the Transportable Telemetry System (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. | | | |

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| <p>- The BMD Sensors Directorate will execute \$5.495 million of FY04 Test & Evaluation funds to operate and sustain the TPS-X as a Test Bed Asset. The TPS-X is being maintained to support the BMDS Radar program in the development and validation of the algorithms and C2BMC. This test asset will enhance the risk management by providing a Test bed environment to mature algorithms prior to the availability of the BMDS radar.</p> <p>FY05 Planned Programs</p> <p>-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.</p> <p>- Provide level-of-effort funding to ranges/instrumentation to maintain MDA-unique test facilities and instrumentation for MDA tests.</p> <p>- Continue to operate, maintain and improve airborne sensors instrumentation platforms HALO-I , HALO-II and WASP to support BMDS testing and development activities.</p> <p>- Continue to provide high fidelity infrared and visible data to improve and develop BMD programs through airborne sensor platforms.</p> <p>- Provide level-of-effort funding to maintain MDA-unique ground test facilities, including wind tunnels, space-environment chambers, light gas gun, ladar performance lab, hardware-in-the-loop simulation facility, rocket-plume sensor capabilities.</p> <p>- Support BMDS test ranges transition to a common test management and execution process as well as provide upgrades and improvements to test range hardware and software based planning and execution tools.</p> <p>- Continue to improve test infrastructure in terms of capability and quantity, as recommended from continuing MDA studies. These improvements will build on the existing core test infrastructure to support element- and system-level testing.</p> <p>- Procure transportable range safety/telemetry collection systems to provide depth and flexibility for emerging flight test scenarios and support MDA testing at remote locations.</p> <p>- At the RTS, continue improvement to Meck Island test infrastructure including the power grid to support GMD testing.</p> <p>- Standardize flight safety procedures, analysis tools, flight hardware, and safety officer training through a three-phase program.</p> <p>- Provide Level of Effort funding to maintain the MDA Data Centers Program to provide efficient data archiving, access, distribution and furnish relevant expertise for MDA Mission oriented data.</p> <p>- Continue contract with AADC to provide for operation and sustainment of the KLC to support MDA test launches.</p> <p>- Continue development of Transportable Telemetry System (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.</p> | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| System Test & Assessment | | 150,888 | 48,737 |
| RDT&E Articles (Quantity) | | 2 | |
| FY 2004 RDT&E Articles two (2) Castor IVB boosters with threat-like RVs for FY04 Measurements Testing | | | |
| FY 2004 Planned Program: | | | |
| <p>- Conduct test planning and test execution for LRALT Target Characterization for LRALT Risk Reduction Flight.</p> <p>- Conduct test planning, sensor planning, range integration efforts, and design reviews in support of dedicated flight tests - CMCM-1&2. CMCM-1 and CMCM-2 will be designed to support: CM/CC/CM characterization, M&S validation, Spiral development of Block 2006 BMD system architecture/algorithms/technologies/CONOPS, and to address MDA National Team and System Engineering CM/CC/CM focus areas (concepts classified).</p> | | | |

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| <ul style="list-style-type: none"> - Complete development of 2 payload suites for CMCM-1a and 1b in 2Q/05. - Continue payload design and development for two CMCM-2a and -2b tests. Initiate payload design and development for the two CMCM-3a and 3-b flight tests in 3Q/06. - Collect, prioritize, validate, and document requirements for MDA Measurements Program. - The Lethality Test Program will continue monitoring of the lethality Ground and Live Fire Test and Evaluation activities associated with various program elements, and designing flight test experiments leveraging BMD intercepts for the collection of lethality ground effect data to improve the System Lethality Models. - The Kill Assessment Test Program will extend the analysis activities to examine data collected on the BMDS events, optimize sensors based on the present data and analyses, develop engineering models, exercise and evaluate data-driven modeling together with impact data in real time to test a draft Kill Assessment decision tool and begin the process of insertion of the KA decision capabilities into the BMDS Block 2006 C2BMC suite. - The Data Collection, Analysis, and Exploitation Groups (Optical Data Analysis (ODA) and Radar Data Analysis (RDA)) will continue to support BMDS data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMDS systems and new mission areas, and provide characterization and assessment for Measurements and BMDS flight test programs. <p style="margin-top: 20px;">FY 2005 Planned Program:</p> <ul style="list-style-type: none"> - Conduct test planning, sensor planning, material development, range integration efforts, and design reviews in support of Tests of Opportunity (TOOs). - Continue to collect, prioritize, validate, and document requirements for MDA Measurements Program. - The Lethality Test Program will continue monitoring of the lethality Ground and Live Fire Test and Evaluation activities associated with various program elements, and designing flight test experiments leveraging BMD intercepts for the collection of lethality ground effect data to improve the System Lethality Models. - The Kill Assessment Test Program will extend the analysis activities to examine data collected on the BMDS events, optimize sensors based on the present data and analyses, develop engineering models, exercise and evaluate data-driven modeling together with impact data in real time to test a draft Kill Assessment decision tool and begin the process of insertion of the KA decision capabilities into the BMDS Block 2006 C2BMC suite. - The Data Collection, Analysis, and Exploitation Groups (Optical Data Analysis (ODA) and Radar Data Analysis (RDA)) will continue to support BMDS data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMDS systems and new mission areas, and provide characterization and assessment for Measurements and BMDS flight test programs. <p style="margin-top: 20px;">(CMCM content moved to Block Projects in FY05 and beyond.)</p> | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| Facilities, Siting & Environmental | | 5,458 | 5,536 |
| RDT&E Articles (Quantity) | | | |
| <p>FY04 Planned Program</p> <ul style="list-style-type: none"> - Provide for environmental program guidance, compliance, planning and NEPA support, real property facility, acquisition, facility operations, and maintenance/repair support for the BMDS. - Facilities & Siting efforts will focus on ensuring the MILCON, Minor MILCON, and RDT&E design and construction activities are executed in time to support BMD programs' facility requirements and ensure compliance with all applicable laws and regulations. | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| 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 Environmental Management Office within the Civil Engineering and Environmental Management Division provides leadership and consultation to facilitate environmental stewardship and compliance of all BMDS activities with federal, state, local and international laws, treaties, and regulations. Specific activities planned for FY 2004 includes:</p> <ul style="list-style-type: none">-Planning, programming, and budgeting for the execution of MDA's environmental management program and compliance activities;-Providing scientific analysis, technical assistance, and guidance to ensure environmental quality and mission assurance;-Completion of MDA's Programmatic Environmental Impact Statement for the BMDS, eight Environmental Assessments, and 12 Records of Environmental Consideration for proposed construction and testing activities supporting the BMDS;-Complying with Executive Order 12114 for proposed activities OCONUS;-Developing and facilitating implementation of MDA's Environmental Management System, to include policies, processes, and planning to ensure effective and efficient environmental compliance management program;-Coordinating environmental information and documents across MDA offices and program elements to ensure integrated, reconvicted, and timely actions;-Identifying opportunities for integration of pollution prevention initiatives into the MDA mission;-Revision of MDA's Environmental Compliance Awareness Training course to include modules on pollution prevention and hazardous materials management; and-Maintenance of system currency and expansion of MDA's Library of Environmental Analysis Documents (LEADs), an access-based knowledge management system that houses previous environmental assessments, environmental impact statements, and other NEPA documents for automated analysis of proposed activities for existing NEPA coverage. | | |
| 2005 Planned Programs | | |
| <ul style="list-style-type: none">- Provide for environmental program guidance, compliance, planning and NEPA support, real property facility, acquisition, facility operations, and maintenance/repair support for the BMDS.- Facilities & Siting efforts will focus on ensuring the MILCON, Minor MILCON, and RDT&E design and construction activities are executed in time to support BMD programs' facility requirements and ensure compliance with all applicable laws and regulations. <p>The Environmental Management Office within the Civil Engineering and Environmental Management Division provides leadership and consultation to facilitate environmental stewardship and compliance of all BMDS activities with federal, state, local and international laws, treaties, and regulations. Specific activities planned for FY 2005 includes:</p> <ul style="list-style-type: none">-Planning, programming, and budgeting for the execution of MDA's environmental management program and compliance activities;-Providing scientific analysis, technical assistance, and guidance to ensure environmental quality and mission assurance;-Completion of one Environmental Impact Statement, six Environmental Assessments, and 12 Records of Environmental Consideration for proposed construction and testing activities supporting the BMDS;-Complying with Executive Order 12114 for proposed activities OCONUS;-Developing and facilitating implementation of MDA's Environmental Management System, to include policies, processes, and planning to ensure effective and efficient environmental compliance management program;-Coordinating environmental information and documents across MDA offices and program elements to ensure integrated, reconvicted, and timely actions;-Identifying opportunities for integration of pollution prevention initiatives into the MDA mission;-Providing ESOH awareness training; and-Maintaining system currency and expansion of MDA's Library of Environmental Analysis Documents (LEADs), an access-based knowledge management system that houses previous environmental assessments, environmental impact statements, and other NEPA documents for automated analysis of proposed activities for existing NEPA coverage. | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|---|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| | | | | | | | | | |

Project: 0304 Test & Evaluation

MDA Exhibit R-2A (PE 0603888C)

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| 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>The Deputy for Test and Assessment will acquire and execute a BMD System Level test and assessment program to support the Missile Defense Agency's layered defense concept. This layered defense concept (to defeat threats in boost, midcourse, and terminal phases) is achieved by land-based, sea-based, air-based, and space-based capabilities. The development of the BMDS includes the fielding of a BMDS Test Bed in September 2004. The Test Bed not only provides for continued development and testing of the BMDS, but also provides inherent Initial Defensive Capability (IDC) that enables Initial Defensive Operations (IDO) on 1 October 2004. The BMDS capabilities are developed in an evolutionary, capabilities-based, spiral development acquisition approach in two-year Blocks that build, verify and offer for deployment specific capabilities every two years starting in 2004.</p> <p>Beginning in FY04, the MDA Deputy for Test and Assessment is executing the BMDS test and assessment program under a Responsible Test Organization (RTO) and a Combined Test Force (CTF) structure.</p> <p>The Deputy, TE, as the Director of the RTO, is functioning as the single point of responsibility, authority, and accountability for BMD System-Level testing. The RTO is performing planning, provisioning, test execution, analysis, and reporting for all BMD System-Level and Measurements Tests. The RTO has the responsibility to produce a fully integrated MDA test plan, as well as the responsibility to characterize the BMDS Capability based on test results and data. The RTO is collaborating with the elements to achieve a system-level focus in the testing and assessment of the BMDS, and focus the BMDS components towards demonstrating system-level, integrated, layered defense capability.</p> <p>The CTF is an embedded execution organization within the RTO. The CTF is focused on the execution of system-level tests. The CTF is also responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and all Measurements testing. Included are exercises/wargames, Hardware-in-the-Loop (HWIL)/Integrated Ground Tests (IGT), Initial Defensive Operations (IDO) testing, Block 06 system test planning and Block 08 system test planning.</p> <p>Test and Infrastructure programs are executed utilizing a diverse acquisition strategy to take advantage of existing DoD agencies and laboratories, FFRDCs, and private industry. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.</p> | | |

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|---|------------------------|---------------------------------------|----------------|--------------|---|--------------|------------------------------|------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| System Test & Assessment | | | | | | | | | | |
| Special Program Tests | Various | USASMDC / Hunstville, AL | | 1,598 | 1Q | 1,783 | 1Q | CONT. | 3,381 | |
| Optical Data Analysis | Various | Various | | 9,197 | 1Q | 9,514 | 1Q | CONT. | 18,711 | |
| RCS Data Analysis | Various | Various | | 6,840 | 1Q | 7,067 | 1Q | CONT. | 13,907 | |
| Lethality | Various | Various | | 2,827 | 1Q | 2,858 | 1Q | CONT. | 5,685 | |
| Kill Assessment | Various | USASMDC / Hunstville, AL | | 3,303 | 1Q | 3,501 | 1Q | CONT. | 6,804 | |
| International Programs | Various | Various | | 1,048 | 1Q | 1,070 | 1Q | CONT. | 2,118 | |
| Corp Data Collect and Analysis | Various | Redstone Arsenal, AL/ Quantico, VA | | 6,026 | 1Q | 7,205 | | | 13,231 | |
| CMCM-1 | Various | Various | | 49,523 | 1Q | | | | 49,523 | |
| CMCM-2 | Various | Various | | 38,713 | 1Q | | | | 38,713 | |
| CMCM-3 | Various | Various | | 16,502 | 1Q | | | | 16,502 | |
| | | | | | | | | | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
|--|------------------------|---|----------------|--------------|---|--------------|--------------------|-----------------------|------------|--------------------------|
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Facilities, Siting & Environmental | | | | | | | | | | |
| Facilities & Siting | Various | Various | | 169 | 1Q | 136 | 1Q | CONT. | 305 | |
| Environmental Compliance | Various | Various | | 270 | 1Q | 186 | 1Q | CONT. | 456 | |
| Test Resources | | | | | | | | | | |
| Ground Test Facilities | Various | Army, Air Force/ NY, AL, FL, MD, TN, CA, NM | | 19,136 | 1Q | 19,735 | 1Q | CONT. | 38,871 | |
| Ranges and Implementation | Various | Various/ HI, NM, Marshall Is, Alaska | | 61,313 | 1Q | 73,359 | 1Q | CONT. | 134,672 | |
| Airborne Sensors | C/Various | Raytheon, Aeromet, Boeing/ CA, OK, WA | | 46,734 | 1Q | 23,676 | 1Q | CONT. | 70,410 | |
| Targets Cert & Reqts | Various | USASMDC, POET/ Huntsville AL, Wash DC | | 431 | 1Q | 1,386 | 1Q | CONT. | 1,817 | |
| TPS-X | Various | MIT LL / Lexington, MA | | 5,495 | 1Q | | 1Q | CONT. | 5,495 | |
| PMRF Upgrades | Various | Various, HI | | 28,450 | 1Q | | | | 28,450 | |
| Proton Neutron Pulse Capability | Various | Indiana U, Bloomington, IN | | 1,000 | 1Q | | | | 1,000 | |
| Data Centers | Various | Various, TN, CO, AL, CA | | 3,195 | | 13,378 | 1Q | | 16,573 | |
| Subtotal Test and Evaluation | | | 0 | 301,770 | | 164,854 | | 0 | 466624 | |
| Remarks | | | | | | | | | | |
| CMCM Funding is located in the Test & Evaluation Block Projects (2006, 2008, and 2010) in FY05 and beyond. | | | | | | | | | | |

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|--|------------------------|--------------------------------|----------------|--------------|---|--------------|------------------------------|------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| System Test & Assessment | | | | | | | | | | |
| Gov't Project Personnel | Various | USASMDC/ Huntsville, AL | | 3,333 | 1Q | 3,403 | 1Q | CONT. | 6,736 | |
| Support Contracts | C/Various | Various/ Arlington, VA | | 11,457 | 1Q | 11,805 | 1Q | CONT. | 23,262 | |
| T&E Travel | | | | 521 | 1Q | 531 | 1Q | CONT. | 1,052 | |
| Facilities, Siting & Environmental | | | | | | | | | | |
| Support Contracts | C/Various | Various/ VA & MD | | 5,019 | 1Q | 5,214 | 1Q | CONT. | 10,233 | |
| Test Resources | | | | | | | | | | |
| SMDC Support | | USASMDC/ Huntsville, AL | | 2,505 | 1Q | 2,666 | 1Q | CONT. | 5,171 | |
| Support Contracts | C/Various | Various/ Arlington, VA | | 9,571 | 1Q | 8,854 | 1Q | CONT. | 18,425 | |
| TE Govt Salaries | | | | 6,490 | 1Q | 4,804 | 1Q | | 11,294 | |
| Subtotal Management Services | | | 0 | 38,896 | | 37,277 | | 0 | 76173 | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| Project Total Cost | | | 0 | 340,666 | | 202,131 | | | 542,797 | |
| Remarks | | | | | | | | | | |
| The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified. | | | | | | | | | | |

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MDA Exhibit R-4 Schedule Profile

Date _____

February 2004

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

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

0603888C Ballistic Missile Defense Test and Targets

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|---|---------|---------|---------|--|---------|------------------------------|---------|
| MDA Exhibit R-4A Schedule Detail | | | | | | Date February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | |
| Schedule Profile | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Testing Milestones | | | | | | | |
| LRALT Characterization | | 1Q-3Q | | | | | |
| Test Asset Upgrades | | | | | | | |
| WASP Upgrade | | 1Q-4Q | | | | | |
| TTS Development | | 1Q-4Q | 1Q-4Q | 1Q | | | |
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|--|---------|---------|---------|--|------------------------------|---------|---------|--|---------|---------|---------|--------------|--|--------|--------|---------------------------|--|---|---|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | | | | | | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | |
| 0704 Test & Evaluation Block 2004 | 0 | 36,976 | 38,920 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| <p><i>Note: Funding for this effort was previously held in the Test & Evaluation portion of the BMD System Segment Program Element (PE 0603880C).</i></p> <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The BMDS Test Block 2004 program provides a cohesive program of flight and ground testing to include: System Integration Flight Tests (SIFTs); Missile Defense Integrated Exercises (MDIEs), and Integrated Missile Defense (IMD) Wargames. Integrated flight and ground tests are planned and executed to provide the data necessary for analysis of BMDS capability, including Engagement Sequence Groups (ESGs) and engagement sequences.</p> <p>The BMDS Test Program provides characterization of BMDS performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlays on other test exercises. SIFTs are designed to: measure BMDS interoperability, assess BMDS capabilities, and provide truth data and validation data for models and simulations. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMDS capability and development of BMDS operating concepts. To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE) and Test Planning. This activity supports data planning, collection and analysis of radar for missions supported by observation Island and Gray Star.</p> <p><u>B. Accomplishments/Planned Program</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Ground Tests</td> <td></td> <td style="text-align: center;">15,740</td> <td style="text-align: center;">17,833</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table> <p>FY 2004 Planned Program</p> <ul style="list-style-type: none"> - Conduct two MDIEs to measure BMDS interoperability and initial integration. - Conduct one IMD Wargame (04-1) to develop CONOPs and Tactics, Techniques and Procedures. <p>FY 2005 Planned Program</p> <ul style="list-style-type: none"> - Conduct two Missile Defense Integration Exercise to measure BMDS interoperability and initial integration. - Conduct two IMD Wargames (05-1, 05-2) to develop CONOPs and Tactics, Techniques and Procedures. | | | | | | | | | FY 2003 | FY 2004 | FY 2005 | Ground Tests | | 15,740 | 17,833 | RDT&E Articles (Quantity) | | 0 | 0 |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | |
| Ground Tests | | 15,740 | 17,833 | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | 0 | 0 | | | | | | | | | | | | | | | | |

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|---|-----------|---------|---------|---|---------|-----------------------|---------|-------------|------------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | | Date February 2004 | | | |
| 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 2003 | | FY 2004 | | FY 2005 | | | | |
| Flight Tests | | | 21,236 | | 21,087 | | | | |
| RDT&E Articles (Quantity) | | | | | 0 | | | | |
| FY 2004 Planned Program | | | | | | | | | |
| <ul style="list-style-type: none">- Conduct test planning, sensor planning, range integration efforts, and design reviews in support of dedicated flight tests - CMCM-1&2. CMCM-1 and CMCM-2 will be designed to: support Block 2004 BMDS Capability Assessment, CM/CC/CM characterization, M&S validation, Spiral development of Block 2006 BMD system architecture/algorithms/technologies/CONOPS, and to address MDA National Team and System Engineering CM/CC/CM focus areas (concepts classified).- Complete development of 2 payload suites for CMCM-1a and 1b in 2Q/05.- Continue payload design and development for two CMCM-2a and -2b tests. Initiate payload design and development for the two CMCM-3a and 3-b flight tests in 3Q/06.- Collect, prioritize, validate, and document requirements for MDA Measurements Program.- Support all BMDS T&E efforts to deliver an Initial Deployment capability (IDC).- Conduct System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMDS integration, support system capability assessments and provide validation data for models and simulations. SIFTs overlay BMD System test objectives onto planned element flight tests. | | | | | | | | | |
| Two major SIFTs planned in FY 2004: | | | | | | | | | |
| <ul style="list-style-type: none">- SIFT 1 will be a GMD overlay with Aegis BMD participation and is planned to test components of the BMDS C2BMC architecture.- SIFT 2 is planned to be a GMD overlay with Aegis BMD and PATRIOT participation and will test more components of the BMDS C2BMC architecture. | | | | | | | | | |
| FY 2005 Planned Program | | | | | | | | | |
| <ul style="list-style-type: none">- Conduct System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMDS integration, support system capability assessments and provide validation data for models and simulations. SIFTs overlay BMD System test objectives onto planned element flight tests.- Continue SIFT 2.- Conduct SIFT 3. This is the culminating Block 2004 test event which will consist of four BMDS events occurring simultaneously at multiple BMDS ranges and facilities. | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|---|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| <p>The Deputy for Test and Assessment will acquire and execute a BMD System Level test and assessment program to support the Missile Defense Agency's layered defense concept. This layered defense concept (to defeat threats in boost, midcourse, and terminal phases) is achieved by land-based, sea-based, air-based, and space-based capabilities. The development of the BMDS includes the fielding of a BMDS Test Bed in September 2004. The Test Bed not only provides for continued development and testing of the BMDS, but also provides inherent Initial Defensive Capability (IDC) that enables Initial Defensive Operations (IDO) on 1 October 2004. The BMDS capabilities are developed in an evolutionary, capabilities-based, spiral development acquisition approach in two-year Blocks that build, verify and offer for deployment specific capabilities every two years starting in 2004.</p> | | | | | | | | | |
| <p>Beginning in FY04, the MDA Deputy for Test and Assessment is executing the BMDS test and assessment program under a Responsible Test Organization (RTO) and a Combined Test Force (CTF) structure.</p> | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| 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 Deputy, TE, as the Director of the RTO, is functioning as the single point of responsibility, authority, and accountability for BMD System-Level testing. The RTO is performing planning, provisioning, test execution, analysis, and reporting for all BMD System-Level and Measurements Tests. The RTO has the responsibility to produce a fully integrated MDA test plan, as well as the responsibility to characterize the BMDS Capability based on test results and data. The RTO is collaborating with the elements to achieve a system-level focus in the testing and assessment of the BMDS, and focus the BMDS components towards demonstrating system-level, integrated, layered defense capability.</p> <p>The CTF is an embedded execution organization within the RTO. The CTF is focused on the execution of system-level tests. The CTF is also responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and all Measurements testing. Included are exercises/wargames, Hardware-in-the-Loop (HWIL)/Integrated Ground Tests (IGT), Initial Defensive Operations (IDO) testing, Block 06 system test planning and Block 08 system test planning.</p> <p>Test and Infrastructure programs are executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.</p> | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Ground Tests | | | | | | | | | | |
| MDIE | Various | Various | | 11,177 | 1Q | 11,625 | 1Q | CONT. | 22,802 | |
| Arrow-MDIE | Various | Various | | 3,000 | 1Q | 3,100 | 1Q | CONT. | 6,100 | |
| IMD Wargames | Various | JNIC, Colorado Springs, CO | | 1,563 | 1Q | 3,108 | 1Q | CONT. | 4,671 | |
| Flight Tests | | | | | | | | | | |
| System Wide Tests | Various | Various including USASMDC | | 11,138 | 1Q | 10,939 | 1Q | CONT. | 22,077 | |
| Test Planning | Various | Various, NJ, Wash DC, TN | | 7,348 | 1Q | 7,435 | 1Q | CONT. | 14,783 | |
| Radar Data Exploitation | Various | USASMDC, Huntsville, AL | | 2,750 | 1Q | 2,713 | 1Q | CONT. | 5,463 | |
| Subtotal Test and Evaluation | | | 0 | 36,976 | | 38,920 | | 0 | 75896 | |
| Remarks | | | | | | | | | | |

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|--|------------------------|--------------------------------|----------------|--------------|--|--------------|--------------------|------------------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 NOMENCLATURE | | | | | |
| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| Project Total Cost | | | 0 | 36,976 | | 38,920 | | | 75,896 | |
| Remarks The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified. | | | | | | | | | | |

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| MDA Exhibit R-4 Schedule Profile | | | | | | | | | | | | | | | | | Date February 2004 | | | | | | | | | | | |
|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|-----------------------|---|---|---|------|---|---|---|------|---|---|---|
| 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 | 2003 | | | | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | |
| | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GMD Integrated Flight Tests | | | | | | Δ | | | | | | | | Δ | | | | | | | | | | | | | | |
| AEGIS Flight Missions | | | | | ▲ | | | | | Δ | Δ | Δ | | | | | | | | | | | | | | | | |
| THAAD Flight Tests | | | | | | | | | Δ | Δ | Δ | Δ | Δ | | | | | | | | | | | | | | | |
| Ground Tests | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MDIE 04a | | | | | | Δ | | | | | | | | | | | | | | | | | | | | | | |
| MDIE 04b | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | | |
| MDIE 05a | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | |
| MDIE 05b | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | |
| Wargames | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMD 04-1 | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | | |
| IMD 05-1 | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | |
| IMD 05-2 | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | |
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| MDA Exhibit R-4A Schedule Detail | | | | | Date February 2004 | | |
|---|---------|---------|-------------|---|-----------------------|---------|---------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| System Flight Tests | | | | | | | |
| GMD Integrated Flight Tests | | 2Q-4Q | 1Q-4Q | 1Q | | | |
| AEGIS Flight Missions | | 1Q | 2Q,3Q,4Q | | | | |
| THAAD Flight Tests | | | 1Q,2Q,3Q,4Q | 1Q | | | |
| Ground Tests | | | | | | | |
| MDIE 04a | | 2Q | | | | | |
| MDIE 04b | | 3Q | | | | | |
| MDIE 05a | | | 2Q | | | | |
| MDIE 05b | | | 3Q | | | | |
| Wargames | | | | | | | |
| IMD 04-1 | | 3Q | | | | | |
| IMD 05-1 | | | 2Q | | | | |
| IMD 05-2 | | | 4Q | | | | |
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|--|---------|---------|---------|--|------------------------------|---------|---------|--|---------|---------|---------|--------------|--|-----|-------|---------------------------|--|--|--|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | | | | | | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | |
| 0804 Test & Evaluation Block 2006 | 0 | 2,357 | 69,070 | 40,331 | 39,196 | 0 | 0 | | | | | | | | | | | | |
| RDT&E Articles Qty | 0 | 0 | 4 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| <p><i>Note: Funding for this effort was previously held in the Test & Evaluation portion of the BMD System Segment Program Element (PE 0603880C).</i></p> | | | | | | | | | | | | | | | | | | | |
| <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The BMDS Test Block 2006 program provides a cohesive program of testing to include: System Integration Flight Tests (SIFTs); Critical Measurements/Countermeasure (CM/CM) tests and associated Measurement Vehicles; Missile Defense Integrated Exercises (MDIEs), and Missile Defense Wargames. Integrated flight and ground tests are planned and executed to provide the data necessary for analysis of BMDS capability, including Engagement Sequence Groups (ESGs) and engagement sequences.</p> <p>The BMDS Test Program provides characterization of BMDS performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlays on other test exercises. SIFTs are designed to: measure BMDS interoperability, assess BMDS capabilities, and provide truth data and validation data for models and simulations by establishing engagement sequence groups. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMDS capability and development of BMDS operating concepts. CM/CM tests characterize current and future adversary and BMD technology possibilities for algorithm and model development prior to system testing. Therefore, these tests are developed to support future block assessments (i.e. tests executed in FY04/FY05 support Block 2006 BMDS). To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE), Test Planning, and Corporate Data Collection groups. These groups perform various functions which support BMDS data collection objectives (mission planning, sensor execution, data analysis).</p> | | | | | | | | | | | | | | | | | | | |
| <p><u>B. Accomplishments/Planned Program</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Ground Tests</td> <td></td> <td style="text-align: center;">933</td> <td style="text-align: center;">5,128</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td></td> <td></td> </tr> </table> <p>FY 2004-2005 Planned Program</p> <ul style="list-style-type: none"> - Conduct two Missile Defense Integration Exercises (MDIEs) to measure BMDS interoperability and initial integration. - Conduct BMDS Wargames to develop CONOPs and Tactics, Techniques and Procedures. - Conduct Integrated Ground Tests to provide BMD System readiness testing, measure integration, and support system capability assessments. | | | | | | | | | FY 2003 | FY 2004 | FY 2005 | Ground Tests | | 933 | 5,128 | RDT&E Articles (Quantity) | | | |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | |
| Ground Tests | | 933 | 5,128 | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | Date February 2004 | | | |
| 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 2003 | | FY 2004 | | FY 2005 | | | | |
| Flight Tests | | | 1,424 | | 63,942 | | | | |
| RDT&E Articles (Quantity) | | | | | 4 | | | | |
| FY 2004 RDT&E Articles four (4) medium test range test vehicles for CMCM Flight Test Program. (2 Castor IVB Boosters for CMCM-1 and 2 Castor IVB Boosters for CMCM-2) | | | | | | | | | |
| FY 2004 Planned Program: | | | | | | | | | |
| - Conduct test planning for System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMDS integration, support system capability assessments and provide validation data for models and simulations. SIFTs overlay BMD System test objectives onto planned element flight tests. Test Planning will consist of conducting scenario designs, creating the BMDS Block 2006 Master Plan, and establishing MDIE support for Block 2006. | | | | | | | | | |
| FY 2005 Planned Program: | | | | | | | | | |
| - Execute dedicated flight tests CMCM-1&2. CMCM-1&2 will be designed to support: CM/CC/CM characterization, M&S validation, Spiral development of Block 2006 BMD system architecture/algorithms/technologies/CONOPS, and to address other MDA National Team and System Engineering CM/CC/CM focus areas. | | | | | | | | | |
| - Conduct test planning for System Integration Flight Tests (SIFTs) to provide highest degree of realism using authentic engagement sequences, measure BMDS integration, support system capability assessments and provide validation data for models and simulations. SIFTs overlay BMD System test objectives onto planned element flight tests. Test Planning will consist of conducting scenario designs, creating the BMDS Block 2006 Master Plan, and establishing ground test/wargames, MDIE, and IGT support for Block 2006. | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|---|---------|---------|---------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| <p>The Deputy for Test and Assessment will acquire and execute a BMD System Level test and assessment program to support the Missile Defense Agency's layered defense concept. This layered defense concept (to defeat threats in boost, midcourse, and terminal phases) is achieved by land-based, sea-based, air-based, and space-based capabilities. The development of the BMDS includes the fielding of a BMDS Test Bed in September 2004. The Test Bed not only provides for continued development and testing of the BMDS, but also provides inherent Initial Defensive Capability (IDC) that enables Initial Defensive Operations (IDO) on 1 October 2004. The BMDS capabilities are developed in an evolutionary, capabilities-based, spiral development acquisition approach in two-year Blocks that build, verify and offer for deployment specific capabilities every two years starting in 2004.</p> <p>Beginning in FY04, the MDA Deputy for Test and Assessment will execute the BMDS test and assessment program under a Responsible Test Organization (RTO) and a Combined Test Force (CTF) structure.</p> <p>The Deputy, TE, as the Director of the RTO, will function as the single point of responsibility, authority, and accountability for BMD System-Level testing. The RTO will perform planning, provisioning, test execution, analysis, and reporting for all BMD System-Level and Measurements Tests. The RTO will have the responsibility to produce a fully integrated MDA test plan, as well as the responsibility to characterize the BMDS Capability based on test results and data. The RTO will collaborate with the elements to achieve a system-level focus in the testing and assessment of the BMDS, and focus the BMDS components towards demonstrating system-level, integrated, layered defense capability.</p> <p>The CTF is an embedded execution organization within the RTO. The CTF will focus on the execution of system-level tests. The CTF will also be responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and all Measurements testing. Included are exercises/wargames, Hardware-in-the-Loop (HWIL)/Integrated Ground Tests (IGT), Initial Defensive Operations (IDO) testing, Block 06 system test planning and Block 08 system test planning.</p> | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| 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>Test and Infrastructure programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.</p> | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Ground Tests | | | | | | | | | | |
| MDIE | Various | Various | | | | 4,090 | 1Q | CONT. | 4,090 | |
| IMD Wargames | Various | JNIC, Colorado Springs, CO | | 933 | 1Q | 1,038 | 1Q | CONT. | 1,971 | |
| Flight Tests | | | | | | | | | | |
| System Wide Tests | Various | Various including USASMDC | | 1,424 | 1Q | 2,413 | 1Q | CONT. | 3,837 | |
| CMCM | Various | Various | | | | 61,529 | 1Q | CONT. | 61,529 | |
| Subtotal Test and Evaluation | | | 0 | 2,357 | | 69,070 | | 0 | 71427 | |
| Remarks | | | | | | | | | | |

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|--|------------------------|--------------------------------|----------------|--------------|--|--------------|--------------------|------------------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 NOMENCLATURE | | | | | |
| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| Project Total Cost | | | 0 | 2,357 | | 69,070 | | | 71,427 | |
| Remarks The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified. | | | | | | | | | | |

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| MDA Exhibit R-4 Schedule Profile | | | | | | | | | | | | | | | | | | | Date February 2004 | | | | | | | | | | | | | | | |
|---|------|---|---|---|------|---|---|---|------|---|---|---|---|---|---|---|------|---|-----------------------|---|------|---|---|---|------|---|---|---|--|--|--|--|--|--|
| 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 | 2003 | | | | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | | | | | | | |
| | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GMD Integrated Flight Tests | | | | | | | | | | | | | | | Δ | | | | | | | | Δ | | | | | | | | | | | |
| AEGIS Flight Missions | | | | | | | | | | | | | | | Δ | | Δ | | Δ | | Δ | | | | | | | | | | | | | |
| THAAD Flight Tests | | | | | | | | | | | | | | | | Δ | Δ | | | Δ | Δ | Δ | | | | | | | | | | | | |
| Ground Tests | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MDIE 06a | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | |
| MDIE 06b | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | |
| MDIE 07a | | | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | |
| MDIE 07b | | | | | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | |
| Wargames | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IMD 06-1 | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | |
| IMD 06-2 | | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | |
| IMD 07-1 | | | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | |
| IMD 07-2 | | | | | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | |
| Measurement Tests | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMCM - 1 | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | |
| CMCM - 2 | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-4A Schedule Detail | | | | | Date February 2004 | | |
|---|---------|---------|---------|---|-----------------------|---------|---------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| System Flight Tests | | | | | | | |
| GMD Integrated Flight Tests | | | | 2Q-4Q | 1Q-4Q | 1Q | |
| AEGIS Flight Missions | | | | 2Q,4Q | 2Q,4Q | | |
| THAAD Flight Tests | | | | 3Q,4Q | 3Q,4Q | 1Q | |
| Ground Tests | | | | | | | |
| MDIE 06a | | | | 2Q | | | |
| MDIE 06b | | | | 3Q | | | |
| MDIE 07a | | | | | 1Q | | |
| MDIE 07b | | | | | 3Q | | |
| Wargames | | | | | | | |
| IMD 06-1 | | | | 2Q | | | |
| IMD 06-2 | | | | 4Q | | | |
| IMD 07-1 | | | | | 1Q | | |
| IMD 07-2 | | | | | 3Q | | |
| Measurement Tests | | | | | | | |
| CMCM - 1 | | | | 2Q | | | |
| CMCM - 2 | | | 4Q | | | | |
| | | | | | | | |

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|---|---------|---------|---------|--|------------------------------|---------|---------|--|---------|---------|---------|--------------|--|-----|-------|---------------------------|--|--|--|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | | | | | | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | |
| 0904 Test & Evaluation Block 2008 | 0 | 951 | 72,514 | 144,707 | 120,937 | 84,611 | 86,269 | | | | | | | | | | | | |
| RDT&E Articles Qty | 0 | 0 | 0 | 2 | 4 | 0 | 0 | | | | | | | | | | | | |
| <p><i>Note: Funding for this effort was previously held in the Test & Evaluation portion of the BMD System Segment Program Element (PE 0603880C).</i></p> <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The BMDS Test Block 2008 program provides a cohesive program of testing to include: System Integration Flight Tests (SIFTs); Critical Measurements/Countermeasure (CM/CM) tests and associated Measurement Vehicles; Missile Defense Integrated Exercises (MDIEs), and Missile Defense Wargames. The BMDS Test Program provides characterization of BMDS performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlays on other test exercises. SIFTs are designed to: measure BMDS interoperability, assess BMDS capabilities, and provide truth data and validation data for models and simulations. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMDS capability and development of BMDS operating concepts. CM/CM tests characterize current and future adversary and BMD technology possibilities for algorithm and model development prior to system testing. Therefore, these tests are developed to support future block assessments (i.e. tests executed in FY06/FY07 support Block 08 BMDS). To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE), Test Planning, and Corporate Data Collection groups. These groups perform various functions which support BMDS data collection objectives (mission planning, sensor execution, data analysis).</p> <p><u>B. Accomplishments/Planned Program</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Ground Tests</td> <td></td> <td style="text-align: center;">951</td> <td style="text-align: center;">1,025</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td></td> <td></td> </tr> </table> <p>FY 2004 Planned Program:</p> <ul style="list-style-type: none"> - Conduct two Missile Defense Integration Exercises (MDIEs) to measure BMDS interoperability and initial integration. - Conduct BMDS Wargames to develop CONOPs and Tactics, Techniques and Procedures. - Conduct Integrated Ground Tests to provide BMD System readiness testing, measure integration, and support system capability assessments. <p>FY 2005 Planned Program:</p> <ul style="list-style-type: none"> - Conduct BMDS Wargames to develop CONOPs and Tactics, Techniques and Procedures. | | | | | | | | | FY 2003 | FY 2004 | FY 2005 | Ground Tests | | 951 | 1,025 | RDT&E Articles (Quantity) | | | |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | |
| Ground Tests | | 951 | 1,025 | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|--|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | | FY 2004 | | FY 2005 | | | | |
| Flight Tests | | | | | 71,489 | | | | |
| RDT&E Articles (Quantity) | | | | | | | | | |
| FY 2005 Planned Program: | | | | | | | | | |
| - Conduct test planning, sensor planning, range integration efforts, and design reviews in support of dedicated flight test - CMCM-3 | | | | | | | | | |
| - Complete design of 2 payload suites for CMCM-3a and 3b scheduled for 3Q/06. | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |

Project: 0904 Test & Evaluation Block 2008

MDA Exhibit R-2A (PE 0603888C)

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|---|---------|---------|---------|-----------|---|-----------|-----------------------|-------------|------------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| <p>The Deputy for Test and Assessment will acquire and execute a BMD System Level test and assessment program to support the Missile Defense Agency's layered defense concept. This layered defense concept (to defeat threats in boost, midcourse, and terminal phases) is achieved by land-based, sea-based, air-based, and space-based capabilities. The development of the BMDS includes the fielding of a BMDS Test Bed in September 2004. The Test Bed not only provides for continued development and testing of the BMDS, but also provides inherent Initial Defensive Capability (IDC) that enables Initial Defensive Operations (IDO) on 1 October 2004. The BMDS capabilities are developed in an evolutionary, capabilities-based, spiral development acquisition approach in two-year Blocks that build, verify and offer for deployment specific capabilities every two years starting in 2004.</p> | | | | | | | | | |
| <p>Beginning in FY04, the MDA Deputy for Test and Assessment will execute the BMDS test and assessment program under a Responsible Test Organization (RTO) and a Combined Test Force (CTF) structure.</p> | | | | | | | | | |
| <p>The Deputy, TE, as the Director of the RTO, will function as the single point of responsibility, authority, and accountability for BMD System-Level testing. The RTO will perform planning, provisioning, test execution, analysis, and reporting for all BMD System-Level and Measurements Tests. The RTO will have the responsibility to produce a fully integrated MDA test plan, as well as the responsibility to characterize the BMDS Capability based on test results and data. The RTO will collaborate with the elements to achieve a system-level focus in the testing and assessment of the BMDS, and focus the BMDS components towards demonstrating system-level, integrated, layered defense capability.</p> | | | | | | | | | |
| <p>The CTF is an embedded execution organization within the RTO. The CTF will focus on the execution of system-level tests. The CTF will also be responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and all Measurements testing. Included are exercises/wargames, Hardware-in-the-Loop (HWIL)/Integrated Ground Tests (IGT), Initial Defensive Operations (IDO) testing, Block 06 system test planning and Block 08 system test planning.</p> | | | | | | | | | |
| <p>Test and Infrastructure programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.</p> | | | | | | | | | |

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|---|------------------------|--------------------------------|----------------|--------------|---|--------------|------------------------------|------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Ground Tests | | | | | | | | | | |
| IMD Wargames | Various | JNIC, Colorado Springs, CO | | 951 | 1Q | 1,025 | 1Q | CONT. | 1,976 | |
| Flight Tests | | | | | | | | | | |
| CMCM | Various | Various | | | | 71,489 | 1Q | | 71,489 | |
| Subtotal Test and Evaluation | | | 0 | 951 | | 72,514 | | 0 | 73465 | |
| Remarks | | | | | | | | | | |

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|--|------------------------|--------------------------------|----------------|--------------|--|--------------|--------------------|------------------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 NOMENCLATURE | | | | | |
| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| Project Total Cost | | | 0 | 951 | | 72,514 | | | 73,465 | |
| Remarks The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified. | | | | | | | | | | |

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MDA Exhibit R-4 Schedule Profile

Date _____

February 2004

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

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

0603888C Ballistic Missile Defense Test and Targets

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|---|---------|---------|---------|---|---------|-----------------------|---------|
| MDA Exhibit R-4A Schedule Detail | | | | | | Date February 2004 | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| System Flight Tests | | | | | | | |
| GMD Integrated Flight Tests | | | | | | 2Q-4Q | 1Q-4Q |
| AEGIS Flight Missions | | | | | | 2Q,3Q | 2Q,3Q |
| THAAD Flight Tests | | | | | | 2Q,3Q | 1Q,2Q |
| Measurement Tests | | | | | | | |
| CMCM-3 | | | | 3Q | | | |
| CMCM-4 | | | | | 2Q | | |
| CMCM-5 | | | | | 3Q | | |
| | | | | | | | |

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|--|-----------|-----------|-----------|--|-----------|------------------------------|-----------|-------------|------------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | | Date February 2004 | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | |
| 0004 Test & Evaluation Block 2010 | 0 | 0 | 0 | 0 | 61,709 | 139,315 | 141,898 | | |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 4 | 4 | | |
| <p><u>A. Mission Description and Budget Item Justification</u> The BMDS Test Block 2010 program includes: Critical Measurements/Countermeasure (CM/CM) tests and associated Measurement Vehicles. CM/CM tests characterize current and future adversary and BMD technology possibilities for algorithm and model development prior to system testing. Therefore, these tests are developed to support future block assessments (i.e. tests executed in FY08/FY09 support Block 2010 BMDS).</p> | | | | | | | | | |
| <u>B. Accomplishments/Planned Program</u> | | | | | | | | | |
| | FY 2003 | | FY 2004 | | FY 2005 | | | | |
| Flight Tests | | | | | | | | | |
| RDT&E Articles (Quantity) | | | | | | | | | |
| Funding in this Project is not programmed until FY07. | | | | | | | | | |
| <u>C. Other Program Funding Summary</u> | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|---|---------|---------|---------|---------|---|---------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| <p>The Deputy for Test and Assessment will acquire and execute a BMD System Level test and assessment program to support the Missile Defense Agency's layered defense concept. This layered defense concept (to defeat threats in boost, midcourse, and terminal phases) is achieved by land-based, sea-based, air-based, and space-based capabilities. The development of the BMDS includes the fielding of a BMDS Test Bed in September 2004. The Test Bed not only provides for continued development and testing of the BMDS, but also provides inherent Initial Defensive Capability (IDC) that enables Initial Defensive Operations (IDO) on 1 October 2004. The BMDS capabilities are developed in an evolutionary, capabilities-based, spiral development acquisition approach in two-year Blocks that build, verify and offer for deployment specific capabilities every two years starting in 2004.</p> <p>Beginning in FY04, the MDA Deputy for Test and Assessment will execute the BMDS test and assessment program under a Responsible Test Organization (RTO) and a Combined Test Force (CTF) structure.</p> <p>The Deputy, TE, as the Director of the RTO, will function as the single point of responsibility, authority, and accountability for BMD System-Level testing. The RTO will perform planning, provisioning, test execution, analysis, and reporting for all BMD System-Level and Measurements Tests. The RTO will have the responsibility to produce a fully integrated MDA test plan, as well as the responsibility to characterize the BMDS Capability based on test results and data. The RTO will collaborate with the elements to achieve a system-level focus in the testing and assessment of the BMDS, and focus the BMDS components towards demonstrating system-level, integrated, layered defense capability.</p> <p>The CTF is an embedded execution organization within the RTO. The CTF will focus on the execution of system-level tests. The CTF will also be responsible for the long range planning, detailed planning, and reporting of all system-level testing that verifies BMDS capabilities and all Measurements testing. Included are exercises/wargames, Hardware-in-the-Loop (HWIL)/Integrated Ground Tests (IGT), Initial Defensive Operations (IDO) testing, Block 06 system test planning and Block 08 system test planning.</p> | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| 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>Test and Infrastructure programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.</p> | | |

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MDA Exhibit R-4 Schedule Profile

Date _____

February 2004

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

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

0603888C Ballistic Missile Defense Test and Targets

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| MDA Exhibit R-4A Schedule Detail | | | | | | Date February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY RD&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | |
| | | | | | | | |
| Schedule Profile | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Measurement Tests | | | | | | | |
| CMCM-6 | | | | | | 2Q | |
| CMCM-7 | | | | | | 3Q | |
| CMCM-8 | | | | | | | 2Q |
| CMCM-9 | | | | | | | 3Q |

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|---|---------|---------|---------|--|------------------------------|---------|---------|--|---------|---------|---------|-----------------|--|--------|--------|---------------------------|--|---|---|--|---------|---------|---------|-------------------|--|-------|-------|---------------------------|--|---|---|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0305 Targets & Countermeasures Core | 0 | 22,585 | 23,314 | 23,790 | 22,190 | 22,444 | 22,714 | | | | | | | | | | | | | | | | | | | | | | | | |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| <p><i>Note: Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS) Program Element (PE 0603880C, Project 1030).</i></p> <p><u>A. Mission Description and Budget Item Justification</u></p> <p>Targets & Countermeasures Core Support includes primary, mission and field activity support. This includes the management of design, prototyping, development, product improvement, and qualification testing of 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.</p> <p><u>B. Accomplishments/Planned Program</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Targets Support</td> <td></td> <td style="text-align: center;">15,570</td> <td style="text-align: center;">15,399</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table> <p>FY 2004 Planned Accomplishments: - Supports activities for on-site Targets and Countermeasures field activity personnel, such as rent, office equipment, travel, security, and base infrastructure necessary to conduct daily operations and execute missions.</p> <p>FY 2005 Planned Accomplishments: - Continues to support activities for on-site Targets and Countermeasures field activity personnel, such as rent, office equipment, travel, security, and base infrastructure necessary to conduct daily operations and execute missions.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Personnel Support</td> <td></td> <td style="text-align: center;">7,015</td> <td style="text-align: center;">7,915</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </table> <p>FY 2004 Planned Accomplishments: -This effort funds government personnel salaries for program management, project support, project costs, and travel.</p> <p>FY 2005 Planned Accomplishments: -Continues to fund government personnel salaries for program management, project support, project costs, and travel.</p> | | | | | | | | | FY 2003 | FY 2004 | FY 2005 | Targets Support | | 15,570 | 15,399 | RDT&E Articles (Quantity) | | 0 | 0 | | FY 2003 | FY 2004 | FY 2005 | Personnel Support | | 7,015 | 7,915 | RDT&E Articles (Quantity) | | 0 | 0 |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Targets Support | | 15,570 | 15,399 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Personnel Support | | 7,015 | 7,915 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|---|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 |
| APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets |
| <u>D. Acquisition Strategy</u> 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. | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Targets Support | | | | | | | | | | |
| Field Activity Support | C/Various | Various/ Kirtland, NM | 0 | 7,150 | 1Q | 7,110 | 1Q | CONT. | 14,260 | TBD |
| Field Activity Support | C/Various | Various/ Huntsville, AL | 0 | 8,420 | 1Q | 8,289 | 1Q | CONT. | 16,709 | TBD |
| Subtotal Support Costs | | | 0 | 15,570 | | 15,399 | | 0 | 30969 | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Test and Evaluation | | | | | | | | | | |
| Remarks | | | | | | | | | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Personnel Support | | | | | | | | | | |
| Government Personnel | | Wash., DC | 0 | 2,640 | 1Q | 2,693 | 1Q | CONT. | 5,333 | TBD |
| Government Travel | | Wash., DC | 0 | 160 | 1/4Q | 200 | 1/4Q | CONT. | 360 | TBD |
| Government Support | | Wash., DC | 0 | 4,215 | 1Q | 5,022 | 1Q | CONT. | 9,237 | TBD |
| Subtotal Management Services | | | 0 | 7,015 | | 7,915 | | 0 | 14930 | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| Project Total Cost | | | 0 | 22,585 | | 23,314 | | | 45,899 | |
| Remarks | | | | | | | | | | |
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| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| 0705 Targets & Countermeasures - Block 2004 | | | | 0 | 223,671 | 233,027 | 0 | 0 | 0 | 0 |
| RDT&E Articles Qty | | | | 0 | 14 | 12 | 0 | 0 | 0 | 0 |
| <p><i>Note: Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS), Program Element 0603880C, Project 1030.</i></p> | | | | | | | | | | |
| <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The Targets and Countermeasures program provides capability-based targets to support Block 2004 integrated and layered BMDS testing. Targets developed under this project will test and verify the Initial Defensive Capability as well as enhance the BMDS capability by providing capability-based targets of all types with an assortment of payloads and payload objects. Based on Missile Defense National Team (MDNT) 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.</p> <p>Funding for this program supports the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2004 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 and medium range target components. The following is a summary of targets and payloads that will be developed, tested and available to support Block 2004 testing:</p> <p>Long Range Air Launch Target (LRALT) - Utilizing two SR-19 Minuteman boosters and a threat-like payload package, this target will be dropped from a C-17 aircraft during a risk reduction flight. The purpose is to demonstrate a mobile, medium-range target capability that allows flexibility in launch location and trajectory when tested against the integrated, layered BMDS. Due to the imposition of last minute range safety requirements, the risk reduction flight test has been rescheduled to accommodate necessary flight trajectory changes. Furthermore, during routine integration testing a cracked engine flexseal was discovered, resulting in further delays to the risk reduction flight test. To date, the technical anomalies and range issues have been resolved. The current risk reduction flight test is scheduled for 3Q/04, and is reflected in the R-4 and R-4a forms of this project.</p> <p>Short Range Air Launch Target (SRALT) - Utilizing a single SR-19 Minuteman booster and a threat-like payload package, this target will be dropped from a C-17 aircraft during a risk reduction flight test. The purpose is to demonstrate a mobile, short-range target capability that allows flexibility in launch location and trajectory when tested against the integrated, layered BMDS. Due to a change in aircraft required to support this program (changed from a C-130 to a C-17), the risk reduction flight test has been rescheduled to 2Q/04. This change is reflected in the R-4 and R-4a forms of this project.</p> <p>Mobile Launch Platform (MLP) Target - A target will be launched from the sea-based Mobile Launch Platform during a risk reduction flight test in 4Q/04. The purpose is to demonstrate a mobile, short-range target capability that allows flexibility in launch location and trajectory when tested against the integrated, layered BMDS.</p> <p>Medium Range Target (MRT) - During the Preliminary Design Review for this effort in FY03, it was decided to proceed with the development of this target using an air launch configuration. This target will utilize Castor IVB boosters, and a threat-like payload package. The risk reduction flight is currently scheduled for 2Q/05. The purpose is to demonstrate a mobile, medium-range target capability that allows flexibility in launch mode/location and trajectory when tested against the integrated, layered BMDS.</p> | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY | | R-1 NOMENCLATURE | |
| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | 0603888C Ballistic Missile Defense Test and Targets | |
| <p>Short Range Liquid Fuel Target Booster (SR-LFTB) - This program will continue engine testing in the first half of 2004, culminating in a Critical Design Review (CDR) in June 2004. At that time, the contract will be cancelled and evaluated for potential future transition to the targets prime contractor. FY04 funding for this program will be re-allocated to develop Ground-Based Missile Defense targets (see description below).</p> <p>Ground-Based Midcourse Defense (GMD) target - GMD Targets will be used to test the Initial Defensive Capability in GMD Integrated Flight Tests (IFT's) 13c, 14, 15, and FT-04-1 (see Program Element 0603882C, Projects 0708 and 0808 for details on BMDS Flight Test). Also, the Targets and Countermeasures Program will fund a portion of the targets for GMD IFT's FTG-04-4a, FTG-06-1, and FTG-04-4b.</p> <p>Small Low Observable (SLO) - SLO is a capabilities-based payload with tunable signatures. The SLO payload will be flown and demonstrated on a long range target booster during GMD Flight Test FTG-06-1. Starting with GMD Flight Test FTG-06-1a/b, the SLO payload will be used in subsequent GMD targets with various countermeasure configurations to test the integrated and layered BMDS.</p> <p>Also funded in this project is the utilization of a targets prime contractor. Lockheed Martin Space Systems Company (LMSSC), based in Denver, Colorado, was selected as the targets prime contractor. LMSSC will be central to the development and acquisition of new target systems to support integrated and layered BMDS Block testing by providing program management and systems engineering functions across the Missile Defense Agency targets portfolio. Additionally, LMSSC will develop all future target configurations, including advanced targets, design and development of target payloads (to include instrumentation, re-entry vehicles, and countermeasures), and procurement of all long lead target material components. By emphasizing the use of product lines (i.e. development of common target components and parts), it is anticipated that both cycle time and cost will be reduced (see Section D, Acquisition Strategy for more details on the targets prime contract).</p> | | | |
| <u>B. Accomplishments/Planned Program</u> | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| Target Support | | 55,026 | 98,550 |
| RDT&E Articles (Quantity) | | 0 | 0 |
| <p>This effort comprises a significant portion of the targets and countermeasures prime contract costs, as well as funding for Federally Funded Research and Development Centers (FFRDCs) and National Lab activities that directly support the Targets and Countermeasures program. There are no quantities of articles reported under this task since the scope of work is primarily program management, systems engineering, functional requirements analysis, and target systems design work through the Critical Design Review (CDR) systems engineering process. The requested increase in FY05 funding reflects a full years worth of prime contract core costs vice the pro-rata FY04 cost that account for three quarters worth of funding and a late 1Q/04 contract award. Additionally, this effort will program and plan for award fee for the entire targets prime contract, including element target delivery orders that are funded in separate Missile Defense Agency Program Elements (PE's). The acquisition and presentation of targets used in integrated and layered BMDS testing will continue to be funded by the Missile Defense Agency Elements (e.g., THAAD, Aegis, etc.) in separate Program Elements utilizing the targets prime contract vehicle.</p> <p>FY 2004 Planned Accomplishments:</p> <ul style="list-style-type: none"> - Award targets prime contract (1Q/04). - Conduct System Requirements Reviews (SRR's). - Conduct Preliminary Design Reviews (PDR's). - Conduct Critical Design Reviews (CDR's). - Conduct early concept definition analyses. - Initiate advanced target system and sub-system prototype design work. | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | Date February 2004 | |
| 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"> - Begin target product line development. - FFRDCs and National Labs to perform unique target requirements, certification, and instrumentation analyses - Conduct initial program management reviews. <p>FY 2005 Planned Accomplishments:</p> <ul style="list-style-type: none"> - Continue to prepare for and conduct SRR's. - Continue to prepare for and conduct PDR's. - Continue to conduct and finalize CDR's. - Continue to conduct early concept definition analyses. - Continue to develop advanced target systems and sub-systems prototype design work. - Continue the target product line development. - FFRDCs and National Labs to continue unique target requirements, certification, and instrumentation analyses. - Continue to manage and conduct program management reviews. | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| Target Development | | 97,415 | 83,969 |
| RDT&E Articles (Quantity) | | 10 | 5 |
| <p>This effort develops, integrates, and tests short, medium, and long-range BMDS targets. The decrease in funding between FY 2004 and FY 2005 represents current contract target development efforts completing and transitioning to a prime contractor. It is anticipated the prime contractor will initiate the development and testing of targets in Block 06 (Targets and Countermeasures Project 0805).</p> <p>FY 2004 Planned Accomplishments</p> <p>RDT&E Test Articles: 5 SRALT's; 3 GMD Targets; 1 LRALT; 1 MLP Target;</p> <ul style="list-style-type: none"> - Complete SRALT development and conduct a risk reduction flight. - Complete GMD Targets development to support GMD IFT's 13c, 14, and 15. - Complete LRALT development and conduct a risk reduction flight. - Complete the MLP target and conduct a risk reduction flight. - Continue MRT development and complete a Critical Design Review (CDR). - Continue Short Range Liquid Fuel Target Booster development, engine testing, and a CDR Terminate program after CDR completion. <p>FY 2005 Planned Accomplishments</p> <p>RDT&E Test Articles: 4 GMD targets; 1 MRT;</p> <ul style="list-style-type: none"> - Complete 3 GMD targets and launch to support FTG-04-4a, FT-06-1, and FTG-04-4b. - Complete MRT development and conduct a risk reduction flight. | | | |

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| | FY 2003 | FY 2004 | FY 2005 |
| Payload Development | | 44,408 | 27,905 |
| RDT&E Articles (Quantity) | | 4 | 7 |
| <p>This effort provides funding for program management and development of: 1) unique target payload components (re-entry vehicles (RV's), countermeasures, instrumentation, adaptor sections, and deployment mechanisms), as well as optical on-target data collection instrumentation used for algorithm development/evaluation and payload characterization; 2) development of Fly Along Sensor Package (FASP) flight units for BMDS testing; 3) development of advanced instrumentation systems/techniques to include data collection and transmission techniques/methods; 4) development of advanced countermeasures to support BMDS flight testing and special systems engineering studies, and; 5) development of advanced RV concepts to support BMDS testing. The decrease in funding between FY 2004 and FY 2005 represents Critical Measurement and Countermeasure (CMCM) funding transfer within this Program Element (PE) to Project 0304.</p> <p>FY 2004 Planned Accomplishments RDT&E Test Articles: 3 FASP flight units and 1 FASP qualification unit - Complete 3 FASP flight units and 1 qualification unit. - Begin development of advanced sensors for integration into FASPs. - Begin development of next generation FASP flight units. - Begin development of next generation countermeasures and associated preliminary design engineering packages. - Continue development of instrumentation, advanced measurements, avionics, and flight safety systems. - Continue development of countermeasures for the BMDS flight test programs. - Continue development of Small Low Observable payload to support GMD Flight Test FT-06-1.</p> <p>FY 2005 Planned Accomplishments RDT&E Test Articles: 1 SLO payload; 6 FASP flight units (each configured with a advanced sensors) - Continue development of advanced sensors for integration into FASPs. - Continue development of next generation FASP flight units. - Continue development and test of instrumentation, advanced measurements, avionics, and flight safety systems. - Continue development of countermeasures for the BMDS flight test programs. - Complete development of a Small Low Observable payload. - Complete 6 FASP demonstration units for Ground Based Midcourse Defense (GMD) and CMCM targets each configured with advanced sensors.</p> <p>Note: A payload includes components such as countermeasures, re-entry vehicles, instrumentation, adaptor sections, and deployment mechanisms.</p> | | | |
| | FY 2003 | FY 2004 | FY 2005 |
| Asset Management | | 26,822 | 22,603 |
| RDT&E Articles (Quantity) | | 0 | 0 |
| <p>This effort provides funding for the maintenance, storage, aging surveillance, modification, documentation, material handling, delivery of assets, refurbishment, and routine testing of government furnished equipment (Minuteman II, Peacekeeper, Lance, Pershing II, Polaris A-3, Trident C-4, Caster IVB, FMA assets) related to target boosters, payloads, instrumentation, launch support equipment, and unique target hardware components. There are no article quantities reported under this task since the hardware quantities under this task are existing government furnished equipment components and not new hardware items.</p> | | | |

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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 | | | | |
| FY 2004 Planned Accomplishments RDT&E Test Articles: N/A - Continue refurbishment and assembly of 2 SR 19 motors and associated equipment and deliver for LRALT RRF. - Continue refurbishment and assembly of 1 SR 19 motor and associated equipment and deliver for SRALT RRF. - Continue the storage, maintenance and aging and surveillance program for, 84 Pershing II Reentry Vehicles and other components, 104 Lance Missiles, 19 Polaris A-3 motors, 9 Orbus Motors, Minuteman motors, 14 FMAs, and 9 Castor IVBs. - Continue the maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak, and Pacific Missile Range Facility. - Continue the procurement of assembled Castor IV motors using GFE cases to support future MRT missions. - Begin the procurement of Trident C-4 motors for future use as targets. Quantity TBD based upon negotiations with the Navy. - Continue refurbishment and assembly of 1 Castor IVB motor and associated support equipment for the MRT RRF. | | | | | | | | | |
| FY 2005 Planned Accomplishments RDT&E Test Articles: N/A - Complete refurbishment and assembly of 1 Castor IVB motor and associated support equipment and deliver as the launch vehicle for the MRT RRF. - Continue the storage, maintenance, and aging and surveillance program for 84 Pershing II Reentry Vehicles and other components, 99 Lance Missiles, 16 Polaris A-3 motors, 6 Orbus motors, Minuteman motors, 13 Scuds and 7 Castor IVB motors. - Continue the maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak, and Pacific Missile Range Facility. - Continue the procurement of assembled Castor IV motors using GFE cases to support future MRT missions. - Continue the procurement of Trident motors for future use as targets. Quantity TBD based upon negotiations with the Navy. - Begin procurement of additional FMA Assets to support future target flight tests. - Continue refurbishment and assembly of 3 Castor IVB motors and associated support equipment for FY 2006 Aegis flight tests. | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |

Project: 0705 Targets & Countermeasures - Block 2004

MDA Exhibit R-2A (PE 0603888C)

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|--|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| Targets and Countermeasures Program 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. To support this strategy, the Targets and Countermeasures Program awarded a ten year prime contract (four year base plus three 2-year option periods) to Lockheed Martin Space Systems Company (LMSSC) who will provide the targets to test against the layered and integrated BMDS. The Targets prime contract will also add a new capability for Targets and Countermeasures systems engineering and provide single system management for the Targets and Countermeasures Program. Overall objectives of this procurement are to deliver reliable target system performance, to provide system level engineering and management through an integrated prime contractor, to reduce target acquisition cycle time, to control target program costs and stimulate creative cost reduction initiatives, and to focus on components and capability-based product lines through integration and launch of target systems. The contract will be a combination of Cost Plus Award Fee and Firm Fixed Price Delivery Orders under two Contract Line Items (CLIN's). This structure allows for maximum flexibility to produce either full blown up targets to test new concepts and ideas, or product lines under which common target components will be developed, integrated, and tested. By emphasizing common target components, it is anticipated that a reduction in both cycle time and cost will be achieved. As the targets prime contract begins its first four year base period, current on-going target development contracts will generally be completed under the terms of their existing contracts. This includes a variety of individual and Task Order Cost Plus Fixed Fee and Cost Plus Award Fee contracts. Some on-going target developments, however, may transition to the prime contractor depending on the status of the contract and maturity of the target system being developed. Under this Project (0705), a majority of the four year base period of the prime contract will be completed. The government will maintain system responsibility and will ensure successful management of BMDS targets execution. | | | | | | | | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
|---|------------------------|---|----------------|--------------|---|--------------|-----------------------|------------------|------------|--------------------------|
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Target Development | | | | | | | | | | |
| SRALT | C/CPFF | Orbital Sciences Corp./ Chandler, AZ | 0 | 4,307 | 1Q | 0 | | | 4,307 | |
| Short Range Liquid Fuel | C/CPFF | Orbital & Northrop Grumman/ Chandler, AZ / Huntsville, AL | 0 | 9,900 | 1Q | 0 | | | 9,900 | |
| Mobile Launch Platform | C/CPFF | Lockheed Martin/ Huntsville, AL | 0 | 569 | 1Q | 0 | | | 569 | |
| Medium Range Target | C/Various | Orbital Sciences/ Chandler, AZ | 0 | 6,695 | 1Q | 1,168 | 1Q | CONT. | 7,863 | TBD |
| Advanced Development | C/Various | TBD/ Various | 0 | 10,941 | 1/2Q | 37,883 | 1/2Q | CONT. | 48,824 | TBD |
| Mobile Launch Platform | C/CPFF | Coleman/ Orlando, FL | 0 | 1,185 | 1Q | 0 | | | 1,185 | |
| Mobile Launch Platform | C/Various | TBD | 0 | 4,772 | 1Q | 0 | | | 4,772 | |
| Short Range Liquid Fuel | C/Various | TBD | 0 | 3,593 | 1Q | 0 | | | 3,593 | |
| Medium Range Target | C/Various | TBD | 0 | 2,708 | 1Q | 1,475 | 1Q | CONT. | 4,183 | TBD |
| SRALT | C/Various | TBD | 0 | 3,662 | 1Q | 0 | | | 3,662 | |
| Mission Management | C/Various | TBD | 0 | 3,447 | 1/4Q | 3,443 | 1/2Q | CONT. | 6,890 | TBD |
| GMD Targets | C/Various | Sandia National Labs/ Albuquerque, NM | 0 | 41,499 | 1/2Q | 40,000 | 1/2Q | TBD | 81,499 | TBD |
| LRALT | C/CPAF | Coleman Aerospace/ Orlando, FL | 0 | 4,137 | 1Q | 0 | | | 4,137 | |
| Payload Development | | | | | | | | | | |
| Fly Along Sensor Package | C/Various | Various | 0 | 9,900 | 1Q | 6,500 | 1Q | CONT. | 16,400 | TBD |
| SLO Development | C/Various | TBD | 0 | 8,363 | 1Q | 6,000 | 1Q | CONT. | 14,363 | TBD |
| Payload Suite for CMCM-1 | C/Various | TBD | 0 | 21,690 | 1Q | 0 | | | 21,690 | |
| Various Payload Management | C/Various | Various | 0 | 4,455 | 1Q | 15,405 | 1Q | CONT. | 19,860 | TBD |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| 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 Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Product Development | | | 0 | 141,823 | | 111,874 | | 0 | 253697 | |
| Remarks | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Target Support | | | | | | | | | | |
| System Engineering | C/FFRDC | JHU/APL/ Laurel, MD | 0 | 2,100 | 1Q | 2,100 | 1Q | CONT. | 4,200 | TBD |
| Targets Prime Acq. Contract | C/Various | Lockheed Martin/ Denver, CO; | 0 | 52,926 | 1Q | 96,450 | 1Q | CONT. | 149,376 | TBD |
| Subtotal Support Costs | | | 0 | 55,026 | | 98,550 | | 0 | 153576 | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Asset Management | | | | | | | | | | |
| Short/Med/Long Range Targets | C/Various | Various | 0 | 16,222 | 1Q | 0 | | | 16,222 | |
| Various Booster Management | C/Various | Various | 0 | 10,600 | 1Q | 22,603 | 1Q | CONT. | 33,203 | TBD |
| Subtotal Test and Evaluation | | | 0 | 26,822 | | 22,603 | | 0 | 49425 | |
| Remarks | | | | | | | | | | |

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| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | | Date February 2004 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 NOMENCLATURE | | | | | |
| RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | 0603888C Ballistic Missile Defense Test and Targets | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| Project Total Cost | | | 0 | 223,671 | | 233,027 | | | 456,698 | |
| Remarks | | | | | | | | | | |

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| MDA Exhibit R-4 Schedule Profile | | | | | | | | | | | | | | | | | | Date February 2004 | | | | | | | | | | |
|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|------|-----------------------|---|---|------|---|---|---|------|---|---|---|
| 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 | 2003 | | | | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | |
| | 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 |
| Production Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GMD Target Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SLO Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Range Air Launch Target | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Long Range Air Launch Target | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mobile Launch Platform Target | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium Range Target | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Range Liquid Fuel Booster | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Range Liquid Fuel Booster - Integration | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mobile Launch Platform Equipment- OEM CDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium Range Target | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SLO Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Range Liquid Fuel Booster - Booster System | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mobile Launch Platform Equipment- OEM CDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| MDA Exhibit R-4 Schedule Profile | | | | | | | | | | | | | | | | | Date February 2004 | | | | | | | | | | | |
|---|------|---|---|---|------|---|---|-------|------|---|---|-------|------|---|---|---|-----------------------|---|---|---|------|---|---|---|------|---|---|---|
| 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 | 2003 | | | | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | |
| | 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 |
| CDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Range Liquid Fuel Booster - Integration | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | |
| Medium Range Target | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | | |
| SLO Development | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | |
| Testing Milestones | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Long Range Air Launch Target - RRF | | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | |
| Medium Range Target - RRF Air | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | | |
| Mobile Launch Platform Target - RRF | | | | | | | | | | | | Δ | | | | | | | | | | | | | | | | |
| Short Range Air Launch Target - RRF | | | | | | | Δ | | | | | | | | | | | | | | | | | | | | | |
| GMD Target (FTG-04-4b) | | | | | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | |
| SLO (GMD FT-06-1) | | | | | | | | | | | | | | | | Δ | | | | | | | | | | | | |
| STARS (GMD IFT-13c) | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | | | | | |
| STARS (GMD IFT-14) | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | | | | | |
| STARS (GMD IFT-15) | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | | | | | |
| STARS (GMD FT-04-1) | | | | | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | |
| STARS (GMD FTG-04-4a) | | | | | | | | | | | Δ | ===== | Δ | | | | | | | | | | | | | | | |
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| MDA Exhibit R-4A Schedule Detail | | | | | Date February 2004 | | |
|---|---------|---------|---------|---|-----------------------|---------|---------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Production Milestones | | | | | | | |
| GMD Target Development | | 2Q-4Q | 1Q-4Q | | | | |
| SLO Development | 1Q-4Q | 1Q-4Q | 1Q-3Q | | | | |
| Short Range Air Launch Target | 1Q-4Q | 1Q-2Q | | | | | |
| Long Range Air Launch Target | 1Q-4Q | 1Q-3Q | | | | | |
| Mobile Launch Platform Target | 1Q-4Q | 1Q-3Q | | | | | |
| Medium Range Target | 3Q-4Q | 1Q-4Q | 1Q | | | | |
| Short Range Liquid Fuel Booster | 1Q-4Q | 1Q-3Q | | | | | |
| PDR | | | | | | | |
| Short Range Liquid Fuel Booster - Integration | 3Q | | | | | | |
| Mobile Launch Platform Equipment- OEM CDR | 4Q | | | | | | |
| Medium Range Target | 4Q | | | | | | |
| SLO Development | | 1Q | | | | | |
| CDR | | | | | | | |
| Short Range Liquid Fuel Booster - Booster System | 4Q | | | | | | |
| Mobile Launch Platform Equipment- OEM CDR | | 1Q | | | | | |
| Short Range Liquid Fuel Booster - Integration | | 3Q | | | | | |
| Medium Range Target | | 2Q | | | | | |
| SLO Development | | 3Q | | | | | |
| Testing Milestones | | | | | | | |
| Long Range Air Launch Target - RRF | | 3Q | | | | | |
| Medium Range Target - RRF Air | | | 2Q | | | | |
| Mobile Launch Platform Target - RRF | | 4Q | | | | | |
| Short Range Air Launch Target - RRF | | 2Q | | | | | |
| GMD Target (FTG-04-4b) | | | 1Q-4Q | | | | |
| GMD Target (FT-06-1) | | | 3Q | | | | |
| SLO (GMD FT-06-1) | | | 4Q | | | | |
| GMD Target (IFT-13c) | | 1Q-4Q | | | | | |
| GMD Target (IFT-14) | | 1Q-4Q | | | | | |
| GMD Target (IFT-15) | | 1Q-4Q | | | | | |
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| MDA Exhibit R-4A Schedule Detail | | | | | | Date February 2004 | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| GMD Target (FT-06-1) | | | 1Q-4Q | | | | |
| GMD Target (FTG-04-4a) | | | 1Q-4Q | | | | |
| | | | | | | | |
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| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | |
| 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 (\$ in Thousands) | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| 0805 Targets & Countermeasures - Block 2006 | 0 | 0 | 50,865 | 201,336 | 175,914 | 0 | 0 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Note: Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS), Program Element 0603880C, Project 1030. | | | | | | | |
| <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The Targets and Countermeasures program provides capability-based targets to support Block 2006 integrated and layered 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 Missile Defense National Team (MDNT) 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.</p> <p>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 following is a summary of targets that will be developed and available to support Block 2006 testing:</p> <p>Enhanced Target Delivery System (ETDS) - ETDS is a conceptual target still in the design phase, which emulates a long-range strategic target used to test the integrated and layered BMDS. It is anticipated that the ETDS development will be initiated by the targets prime contractor in 1Q/05, with a ground-launch risk reduction flight test in 1Q/08. These dates for beginning and completing the ETDS reflect a delay of program start. Decision to delay start of this target, which would have heavier lift and longer range capacity, was based on the pace of testing for the Ground-Based Midcourse Defense and BMDS, and the need to rebalance based on current priorities. Start and end dates for this program are notional until the systems engineering requirements cycle is completed and detailed program content and schedule has been developed.</p> <p>Long Range Foreign Material Acquisition (LR-FMA) - Under this program, long range FMA's are to be procured and tested for potential use as a long-range strategic target against the integrated and layered BMDS. It is anticipated that the Long Range FMA program will be initiated by the targets prime contractor in 1Q/05, with a ground-launch risk reduction flight test in 1Q/07. Start and end dates for this program are notional until the systems engineering requirements cycle is completed and detailed program content and schedule has been developed.</p> <p>Ground-Based Midcourse Defense (GMD) Targets - The Targets and Countermeasures Program will continue to fund a portion of GMD FTG-06-1a/b.</p> <p>The drop-off in target systems in Project 0705 (Block 04) to Project 0805 (Block 06) is due to the following reasons. First, the targets prime contractor will develop all future target configurations with an emphasis on developing product lines of common target components, rather than full-blown individual target systems. Second, the prime contractor 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. Third, the prime contractor will optimize the use of existing designs, provide capability-based and common component upgrades, and pursue target portfolio commonality in booster stages, interstages, 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.</p> | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 NOMENCLATURE | | | | |
| RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | 0603888C Ballistic Missile Defense Test and Targets | | | | |
| B. Accomplishments/Planned Program | | | | | | | | | |
| | FY 2003 | | FY 2004 | | FY 2005 | | | | |
| Target Development | | | 0 | | 50,865 | | | | |
| RDT&E Articles (Quantity) | | | 0 | | 0 | | | | |
| <p>This effort develops, integrates, and tests short, medium, and long-range BMDS targets. It is expected the prime contractor will initiate development and testing of the targets in Block 2006. There are no articles of quantity to report under this task, since the target development and delivery dates task extend beyond FY05.</p> <p>FY 2004 Planned Accomplishments - RDT&E Planned Accomplishments: N/A</p> <p>FY 2005 Planned Accomplishments RDT&E Test Articles: N/A - Initiate task order for the prime contractor to begin ETDS development. - Initiate task order for the prime contractor to procure Long Range FMA's. - Conduct System Requirement Reviews (SRR's), Preliminary Design Reviews (PDR's), Critical Design Reviews (CDR's) and associated engineering trade studies. - Purchase long-lead hardware components.</p> | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|--|---------|---------|---------|-----------|---|-----------|-----------------------|-------------|------------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> | | | | | | | | | |
| 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 04), the prime contractor will optimize target designs and developments completed for Block 04 and incorporate them as necessary to support Block 06 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 04), the government will continue to maintain system responsibility and will ensure successful management of targets execution. | | | | | | | | | |

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|---|------------------------|--------------------------------|----------------|--------------|---|--------------|------------------------------|------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Target Development | | | | | | | | | | |
| Enhanced Target Delivery Sys | C/Various | TBD | 0 | 0 | | 28,000 | 1Q | CONT. | 28,000 | TBD |
| Long Range FMA | C/Various | TBD | 0 | 0 | | 22,865 | 1Q | CONT. | 22,865 | TBD |
| GMD Target (SLO Payload) | C/Various | TBD | | | | | | | | |
| Subtotal Product Development | | | 0 | 0 | | 50,865 | | 0 | 50865 | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Test and Evaluation | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| Project Total Cost | | | 0 | 0 | | 50,865 | | | 50,865 | |
| Remarks | | | | | | | | | | |

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MDA Exhibit R-4 Schedule Profile

Date _____

February 2004

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

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

0603888C Ballistic Missile Defense Test and Targets

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| MDA Exhibit R-4A Schedule Detail | | | | | Date February 2004 | | |
|---|---------|---------|---------|---|-----------------------|---------|---------|
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Development Milestones | | | | | | | |
| GMD Target (with SLO payload) | | | 2Q-4Q | 1Q-3Q | | | |
| Long Range FMA | | | 1Q-4Q | 1Q-4Q | | | |
| ETDS Development | | | 1Q-4Q | 1Q-4Q | 1Q-4Q | | |
| Testing Milestones | | | | | | | |
| Long Range FMA Risk Reduction Flight | | | | | 1Q | | |
| ETDS Risk Reduction Flight | | | | | | 1Q | |
| GMD Payload (FTG-06-1a/b) | | | | 1Q-4Q | | | |
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|---|---------|---------|---------|--|------------------------------|---------|---------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| 0905 Targets & Countermeasures - Block 2008 | 0 | 0 | 17,578 | 52,178 | 29,307 | 203,995 | 217,961 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <p><i>Note: Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS), Program Element 0603880C, Project 1030.</i></p> | | | | | | | |
| <p><u>A. Mission Description and Budget Item Justification</u></p> <p>The Targets and Countermeasures program provides capability-based targets to support Block 2008 integrated and layered 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 Missile Defense National Team (MDNT) 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.</p> <p>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. The following is a summary of targets that will be developed and available to support Block 2008 testing:</p> <p>Strategic Range Air Launch Target - The Strategic Range Air Launch Target is a conceptual target still in the design phase. The purpose is to demonstrate a mobile, long-range target capability that allows flexibility in launch location and trajectory when tested against the integrated, layered BMDS. It is expected that the Strategic Range Air Launch Target will be initiated by the targets prime contractor in 1Q/05, with an air launch risk reduction flight test in 2Q/08. Start and end dates for this program are notional until the systems engineering requirements cycle is completed and detailed program content and schedule has been developed.</p> <p>Medium and Long Range Liquid Fuel Booster - While both systems are still conceptual targets, the medium and long-range liquid targets systems are planned to be of similar technology design to the Short Range Liquid Fuel Target Booster (Project 0705, Block 2004) currently under contract - but with enhanced ranges that emulate various threats. However, this Medium and Long Range Liquid Fuel Booster program will be cancelled and will not be pursued. Requested FY05 funding for this effort will be re-allocated to support development of targets for GMD Integrated Flight Tests as previously described in project 0705, Block 2004 and project 0805, Block 2006.</p> <p>Similar to Project 0805 (Block 06), this Project (0905) will continue to rely upon the targets prime contractor to develop new target systems (as describe above), 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.</p> | | | | | | | |
| <u>B. Accomplishments/Planned Program</u> | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | | | | |
| Target Development | | 0 | 17,578 | | | | |
| RDT&E Articles (Quantity) | | 0 | 0 | | | | |
| <p>This effort develops, integrates, and tests short, medium, and long-range BMDS targets. It is expected the prime contractor will initiate, develop, and test targets developed under this task. Since these target development activities under this task extend beyond FY05, no hardware articles are reported.</p> | | | | | | | |

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|---|-----------|-----------|-----------|-----------|---|-----------------------|-----------|-------------|------------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | | Date February 2004 | | | |
| 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 2004 Planned Accomplishments RDT&E Test Articles: N/A | | | | | | | | | |
| FY 2005 Planned Accomplishments RDT&E Test Articles: N/A - Initiate task order for the prime contractor to begin Strategic Range Air Launch Target development. - Conduct Systems Requirements Reviews (SRR's), Preliminary Design Reviews (PDR's), and associated engineering trade studies. - Purchase long-lead hardware components. | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts - Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |

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|---|---------|---------|---------|---------|---|---------|-----------------------|-------------|------------|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research - MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters - MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| <u>D. Acquisition Strategy</u> 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 first two year option period of performance, for the prime contractor will expire, and the government will either exercise a second two year option, or re-compete the effort. As with Project 0805 (Block 06), the government will continue to maintain system responsibility and will ensure successful management of targets execution. | | | | | | | | | |

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|---|------------------------|--------------------------------|----------------|--------------|---|--------------|------------------------------|------------------|------------|--------------------------|
| MDA Exhibit R-3 RDT&E Project Cost Analysis | | | | | | | Date February 2004 | | | |
| 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 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Target Development | | | | | | | | | | |
| Strategic Range Air Launch Target | C/Various | TBD | 0 | 0 | | 17,578 | 1/3Q | CONT. | 17,578 | TBD |
| Subtotal Product Development | | | 0 | 0 | | 17,578 | | 0 | 17578 | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| II. Support Costs Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Support Costs | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| III. Test and Evaluation Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Test and Evaluation | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| IV. Management Services Cost (\$ in Thousands) | | | | | | | | | | |
| Cost Categories: | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2004 Cost | FY 2004 Award Date | FY 2005 Cost | FY 2005 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Subtotal Management Services | | | | | | | | | | |
| Remarks | | | | | | | | | | |
| | | | | | | | | | | |
| Project Total Cost | | | 0 | 0 | | 17,578 | | | 17,578 | |
| Remarks | | | | | | | | | | |
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MDA Exhibit R-4 Schedule Profile

Date

February 2004

APPROPRIATION/BUDGET ACTIVITY

R-1 NOMENCLATURE

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

0603888C Ballistic Missile Defense Test and Targets

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|--|---------|---------|---------|--|---------|------------------------------|---------|
| MDA Exhibit R-4A Schedule Detail | | | | | | Date February 2004 | |
| APPROPRIATION/BUDGET ACTIVITY RDTE&, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | |
| | | | | | | | |
| Schedule Profile | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Development Milestones | | | | | | | |
| Strategic Range Air Launch Target | | | 1Q-4Q | 1Q-4Q | 1Q-4Q | 1Q | |
| Testing Milestones | | | | | | | |
| Strategic Range Air Launch RRF | | | | | | 2Q | |
| | | | | | | | |

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|--|---------|---------|---------|--|------------------------------|---------|---------|--|---------|---------|---------|-------------------------------|---|-------|-------|---------------------------|--|--|--|
| MDA Exhibit R-2A RDT&E Project Justification | | | | | Date February 2004 | | | | | | | | | | | | | | |
| 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 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | | | | | | | | | | | | |
| 0602 Program-Wide Support | 0 | 6,576 | 6,239 | 6,543 | 6,912 | 7,175 | 7,490 | | | | | | | | | | | | |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| <p><i>Note: Transferred in from the Ballistic Missile Defense System Segment Program Element 0603880C.</i></p> <p><u>A. Mission Description and Budget Item Justification</u></p> <p>This project covers personnel and related support costs, statutory and fiscal requirements.</p> <p>Personnel covers government civilians performing program-wide oversight functions such as contracting, program integration, safety, quality and mission assurance at Missile Defense Agency (MDA), Executing Agents within the US Army Space & Missile Defense Command, US Army PEO Air and Missile Defense, US Navy PEO for Theater Surface Combatants, Office of Naval Research, and US Air Force.</p> <p>Assistance required to support Missile Defense Agency program-wide management functions is also contained in this project. Typical efforts include cost estimating; audit; technology integration across MDA projects; and assessment of schedule, cost and performance, with attendant documentation of the many related programmatic issues. The requirements for this area are based on most economical and efficient utilization of contractors versus government personnel.</p> <p>Fiscal Requirements include reimbursable services acquired through the Defense Working Capital Fund (DWCF) such as accounting services provided by the Defense Finance and Accounting Services (DFAS); reserves for special termination costs on designated contracts; and provisions for terminating other programs as required. MDA has additional requirements to provide for foreign currency fluctuations on its limited number of foreign contracts. Also includes funding for charges to canceled appropriations in accordance with Public Law 101-510.</p> <p>Note that these funds are allocated across multiple Program Elements in accordance with the Fiscal Year 1996 Authorization Act, which directed these funds be allocated to the programs being supported rather than managed from a single source. This structure often makes it difficult to level-fund all PE's while maintaining an orderly fiscal structure for executing the individual Program-Wide Support efforts.</p> <p><u>B. Accomplishments/Planned Program</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center;">FY 2003</td> <td style="text-align: center;">FY 2004</td> <td style="text-align: center;">FY 2005</td> </tr> <tr> <td>Civilian Salaries and Support</td> <td style="text-align: center;">0</td> <td style="text-align: center;">6,576</td> <td style="text-align: center;">6,239</td> </tr> <tr> <td>RDT&E Articles (Quantity)</td> <td></td> <td></td> <td></td> </tr> </table> <p>Personnel: Provides funding for government salaries and benefits at the Missile Defense Agency that are associated with program-wide support.</p> <p>Management Support: Funds the contract SETA support costs directly associated with Missile Defense Agency program-wide support organizations. This effort provides the funding for the Missile Defense Agency's executing agents (Army Space and Missile Defense Command, Army PEO-AMD, Air Force, and Navy) including government salaries & benefits, SETA support, and various management/overhead costs.</p> <p>Fiscal Requirements: This effort funds various requirements at the Missile Defense Agency, to include accounting services, special termination costs foreign currency fluctuations, and charges from cancelled appropriations.</p> <p>IM/IT Operations:</p> | | | | | | | | | FY 2003 | FY 2004 | FY 2005 | Civilian Salaries and Support | 0 | 6,576 | 6,239 | RDT&E Articles (Quantity) | | | |
| | FY 2003 | FY 2004 | FY 2005 | | | | | | | | | | | | | | | | |
| Civilian Salaries and Support | 0 | 6,576 | 6,239 | | | | | | | | | | | | | | | | |
| RDT&E Articles (Quantity) | | | | | | | | | | | | | | | | | | | |

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| MDA Exhibit R-2A RDT&E Project Justification | | | | | | | Date February 2004 | | |
|--|-----------|-----------|-----------|-----------|---|-----------|-----------------------|-------------|------------|
| APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) | | | | | R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets | | | | |
| This effort pays for Information Management/Information Technology requirements within the Missile Defense Agency. These requirements are moved to the Management Headquarters Program Element in Fiscal Years 2004-2009 | | | | | | | | | |
| C. Other Program Funding Summary | | | | | | | | | |
| | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | To Complete | Total Cost |
| PE 0603175C Ballistic Missile Defense Technology | 151,217 | 225,268 | 204,320 | 199,468 | 246,291 | 286,286 | 305,365 | Continuing | Continuing |
| PE 0603869C Meads Concepts – Dem/Val | 101,754 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603879C Advanced Concepts, Evaluations and Systems | 0 | 149,993 | 256,159 | 229,512 | 232,463 | 231,583 | 224,626 | Continuing | Continuing |
| PE 0603880C Ballistic Missile Defense System Segment | 1,028,016 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0603881C Ballistic Missile Defense Terminal Defense Segment | 134,093 | 874,527 | 937,748 | 993,048 | 1,117,657 | 570,000 | 410,324 | Continuing | Continuing |
| PE 0603882C Ballistic Missile Defense Midcourse Defense Segment | 3,056,035 | 3,744,066 | 4,404,335 | 3,067,800 | 3,087,147 | 1,881,298 | 1,802,257 | Continuing | Continuing |
| PE 0603883C Ballistic Missile Defense Boost Defense Segment | 705,643 | 617,270 | 492,614 | 555,667 | 611,736 | 473,602 | 455,961 | Continuing | Continuing |
| PE 0603884C Ballistic Missile Defense Sensors | 327,013 | 425,421 | 591,957 | 790,265 | 1,453,679 | 1,122,189 | 1,232,893 | Continuing | Continuing |
| PE 0603886C Ballistic Missile Defense System Interceptors | 0 | 117,719 | 511,262 | 1,118,599 | 1,717,480 | 2,196,531 | 2,449,322 | Continuing | Continuing |
| PE 0603889C Ballistic Missile Defense Products | 0 | 305,309 | 418,608 | 421,049 | 445,971 | 456,339 | 469,621 | Continuing | Continuing |
| PE 0901585C Pentagon Reservation | 7,432 | 14,327 | 13,884 | 12,958 | 12,850 | 13,158 | 13,476 | Continuing | Continuing |
| PE 0901598C Management Headquarters – MDA | 35,331 | 92,449 | 141,923 | 146,099 | 145,112 | 151,727 | 154,583 | Continuing | Continuing |
| PE 0603890C Ballistic Missile Defense System Core | 0 | 445,356 | 479,764 | 492,988 | 527,541 | 539,210 | 568,365 | Continuing | Continuing |
| PE 0604861C Theater High-Altitude Area Defense System - TMD – EMD | 887,616 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition – EMD | 138,922 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |
| PE 0605502C Small Business Innovative Research – MDA | 138,791 | 0 | 0 | 0 | 0 | 0 | 0 | Continuing | Continuing |

Project: 0602 Program-Wide Support

MDA Exhibit R-2A (PE 0603888C)