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DEFENSE MANAGEMENT

Key Challenges Should be Addressed When Considering Changes to Missile Defense Agency's Roles and Missions

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Defense Capabilities and Management

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Highlights

Highlights of GAO-09-466T, a testimony before the Subcommittee on Strategic Forces, Committee on Armed Services, House of Representatives

Why GAO Did This Study

To more quickly field ballistic missile defenses, the Missile Defense Agency (MDA) has been exempted from traditional Department of Defense (DOD) requirements development, acquisition, and oversight processes since its creation in 2002. Instead, MDA has unique roles and missions to develop and field weapon systems that address a variety of ballistic missile threats. To date, MDA has spent about $56 billion and plans to spend about $50 billion more through 2013 to develop an integrated Ballistic Missile Defense System. The system consists of a layered network of capabilities that includes defensive components such as sensors, radars, interceptors, and command and control. In reviews of DOD's approach to acquire, operate, and maintain ballistic missile defense systems, GAO has previously reported on several challenges that have stemmed from the broad flexibilities provided to MDA.

This testimony summarizes the challenges facing DOD in acquiring and operating its ballistic missile defense systems and describes DOD's efforts to improve transparency and accountability. This statement is based primarily on previously issued GAO reports and testimonies. GAO also reviewed documents and interviewed key officials to update past work and identify DOD and MDA efforts to address previous recommendations.

View GAO-09-466T or key components. For more information, contact John H. Pendleton at (202) 512-3489 or pendletonj@gao.gov.

What GAO Found

While MDA's exemption from traditional DOD processes allowed it to quickly develop and field an initial ballistic missile defense capability, this approach has led to several challenges. DOD now has an opportunity to better balance the flexibility inherent in MDA's unique roles with the need for effective management and oversight of ballistic missile defense programs. Furthermore, the start of a new administration and the appointment of a new MDA Director offer DOD the chance to more fully address the challenges identified in GAO's prior work. These include the following:

- Incorporating Combatant Command Priorities: While DOD established a process in 2005 to address the combatant commands' needs for ballistic missile defense capabilities, GAO reported in 2008 that the process was evolving and had yet to overcome key limitations to its effectiveness, including the need for more effective methodologies to clearly identify and prioritize the combatant commands' needs. Additionally, when developing ballistic missile defenses, MDA lacked a departmentwide perspective on which of the commands' needs were most significant.

- Establishing Adequate Baselines to Measure Progress: MDA's flexible acquisition approach has limited the ability for DOD and congressional decision makers to measure MDA's progress on cost, schedule, and testing. Specifically, as GAO reported in March 2009, MDA's baselines have been inadequate to measure progress and hold MDA accountable. However, GAO also reported that new MDA initiatives to improve baselines could help improve acquisition accountability.

- Planning for Long-Term Operations and Support: DOD has taken initial steps to plan for ballistic missile defense support, but efforts to date are incomplete as difficulties in transitioning responsibilities from MDA to the services have complicated long-term planning. Additionally, although operation and support costs are typically 70 percent of a weapon system's life cycle costs, DOD has not required that full cost estimates for ballistic missile defense operations and support be developed and validated, and DOD's 6-year spending plan does not fully reflect these costs.

DOD has recently taken some steps to improve transparency and accountability of ballistic missile defense programs, such as the creation of a Missile Defense Executive Board to provide top level oversight and a life cycle management process that established defensewide funding accounts. Although these are positive steps, they do not yet provide comprehensive information for acquisition oversight; and have not yet clearly defined the roles and responsibilities of MDA and the services, including how the defensewide account will be used to fund the ballistic missile defense program over the long term. As DOD seeks to improve transparency and accountability, sustained top leadership will be needed to build upon this recent progress.

Madam Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the challenges facing the Department of Defense (DOD) regarding its process for acquiring, developing, and fielding ballistic missile defenses. Funded at $8 billion to nearly $10 billion per year, the effort to develop and field ballistic missile defenses is the largest research and development program in DOD. Since its creation in 2002, the Missile Defense Agency (MDA) has expended almost $56 billion to develop and field an initial ballistic missile defense capability, and plans to spend about $50 billion more through 2013, while being exempt from traditional DOD requirements development, acquisition, and oversight processes. This exemption provided MDA with flexibility to quickly develop and deliver an initial capability to defend the United States, deployed U.S. forces, friends, and allies from the threats posed by ballistic missiles. However, the new administration and Congress are now reconsidering the approach with which DOD acquires, operates, and maintains ballistic missile defense weapon systems. Such reconsiderations are occurring against the backdrop of other efforts to more broadly reform DOD's traditional acquisition processes.

My remarks will discuss several key challenges that DOD has yet to overcome as it has acquired ballistic missile defense capabilities outside traditional DOD requirements and acquisition processes. Specifically, my statement will address challenges in incorporating combatant command priorities, providing information needed for acquisition accountability, and planning for long-term operations and support, as well as describing the department's efforts to date to establish greater oversight. My statement is based primarily on findings and recommendations from our previously issued reports and testimonies in these areas. We also interviewed DOD and MDA officials and reviewed documents to update our past work and identify DOD and MDA efforts to address our previous recommendations. A selected list of our previously issued reports and testimonies on these issues is provided at the end of this statement. We conducted our work in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

MDA's mission is to develop an integrated and layered Ballistic Missile Defense System to defend the United States, its deployed forces, friends, and allies against ballistic missile attacks. This mission requires complex coordination and the integration of many and varied defensive components—space-based sensors; ground- and sea-based surveillance and tracking radars; advanced ground- and sea-based interceptors; and battle management, command, control, and communications. Prior to MDA's establishment in 2002, the services, along with the support and coordination of the Ballistic Missile Defense Organization, separately managed the development and acquisition of ballistic missile defense weapon systems as major defense acquisition programs.[1]

In 2002, the President established ballistic missile defense as a national priority and directed DOD to proceed with plans to develop and put in place an initial capability beginning in 2004. To expedite the delivery of an operationally capable Ballistic Missile Defense System, in 2002 the Secretary of Defense re-chartered the Ballistic Missile Defense Organization as MDA and directed MDA to manage all ballistic missile defense systems then under development and transferred those systems controlled by the military services to the agency.[2] The systems transferred from the services and the new systems whose development MDA initiates are all considered to be "elements" of the Ballistic Missile Defense System.[3] The Secretary also directed MDA to manage the Ballistic Missile Defense System as an evolutionary program, and to develop and field increasingly effective ballistic missile defense capabilities. To do so, he directed that systems developed by MDA would not be subject to DOD's traditional joint requirements determination and acquisition processes until a mature ballistic missile defense capability had been developed and

[1]The Ballistic Missile Defense Organization was established in 1993 to manage and direct DOD ballistic missile defense acquisition programs with the services playing major roles in system development.

[2]When this organization was re-chartered as MDA, its responsibilities were reoriented around a concept for a globally integrated, layered ballistic missile defense.

[3]Ballistic missile defense elements include: Ground-based Midcourse Defense; Aegis Ballistic Missile Defense; Upgraded Early Warning Radar; AN/TPY-2 Forward-based Radar; Cobra Dane Radar Upgrade; Sea-Based X-Band Radar; Terminal High-Altitude Area Defense; Command, Control, Battle Management, and Communications; European Interceptor Site; European Midcourse Radar; and Adjunct Sensor.

was ready to be handed over to a military service for production and operation.[4]

MDA's mission is to develop and field ballistic missile defenses against threats posed by adversaries from all regions, at all ranges, and in all phases of flight. At the direction of the Secretary of Defense and in order to meet a presidential directive, the MDA began fielding in 2004 a limited capability to defend the United States against long-range ballistic missile attacks. This Ground-based Midcourse Defense system, which is intended to protect the U.S. homeland against incoming long-range ballistic missiles launched from Northeast Asia and the Middle East, was first made operational in 2006. MDA has added to this limited capability since it was first fielded by upgrading additional Air Force early warning radars, developing and fielding land- and sea-based radars, and fielding an initial capability for command and control, battle management, and communications. Additionally, to provide sea-based defenses against regional threats for deployed U.S. forces, friends, and allies, MDA has upgraded software and radar systems on 18 Aegis destroyers and cruisers, and delivered interceptors for use on these vessels, to defend against short- and medium-range threats. Early in the next decade, MDA plans to field an additional radar in the Czech Republic and ground-based interceptors in Poland to defend Europe and North America from ballistic missile threats originating in the Middle East. Over the long term, MDA also is developing interceptor payloads that would be capable of defeating more advanced threats—such as the use of multiple warheads or decoys—and "boost-phase" capabilities to enable DOD to shoot down ballistic missiles shortly after liftoff.

To incorporate the views of the combatant commands—which is critical in determining and prioritizing needed capabilities—the President made the U.S. Strategic Command responsible in 2003 for advocating for desirable missile defense characteristics and capabilities on behalf of all combatant commands to MDA. To fulfill this responsibility, U.S. Strategic Command and the MDA created the Warfighter Involvement Process in 2005. A key output of this process is the Prioritized Capabilities List, which is intended

[4]DOD's traditional requirements process is described in Chairman, Joint Chiefs of Staff Instruction 3170.01F, *Joint Capabilities Integration and Development System*, May 1, 2007. DOD's traditional acquisition process is described in DOD Directive 5000.01, *The Defense Acquisition System*, May 12, 2003, and DOD Instruction 5000.02, *Operation of the Defense Acquisition System*, Dec. 8, 2008.

to specify how the combatant commands collectively prioritize the full range of capabilities needed to perform ballistic missile defense missions.

To operate and support ballistic missile defense elements over the long term, DOD plans to transition the responsibility for supporting ballistic missile defense elements from MDA to the services. Transitioning involves designating lead military service responsibilities for providing personnel, force protection, operations and support, and for developing doctrine, organization, and facilities requirements for its respective element. The transition process may culminate in a transfer—which is the reassignment of the MDA program office responsibilities to the lead service.

Oversight of MDA is executed by the Under Secretary of Defense for Acquisition, Technology, and Logistics. Because MDA is not subject to DOD's traditional joint requirements determination and acquisition processes, DOD developed alternative oversight mechanisms. For example, in 2007 the Deputy Secretary of Defense established the Missile Defense Executive Board,[5] which is to provide the Under Secretary of Defense for Acquisition, Technology, and Logistics, or Deputy Secretary of Defense, as necessary, with a recommended ballistic missile defense strategic program plan and feasible funding strategy for approval. In September 2008, the Deputy Secretary of Defense also established a life cycle management process for the Ballistic Missile Defense System. The Deputy Secretary of Defense directed the Board to use the process to oversee the annual preparation of a required capabilities portfolio and develop a program plan to meet the requirements with Research, Development, Test, and Evaluation; procurement; operations and maintenance; and military construction in defensewide accounts.

[5]The Missile Defense Executive Board is chaired by the Under Secretary of Defense for Acquisition, Technology, and Logistics. The Board's members are: Director, Defense Research and Engineering, Under Secretary of Defense for Policy; Director, Program Analysis and Evaluation; Assistant Secretary of the Army for Acquisition, Logistics, and Technology; Deputy Under Secretary of Air Force Space Programs; Under Secretary of Defense for Intelligence; Commander, U.S. Strategic Command; Assistant Secretary of State for International Security and Nonproliferation; Director, Operational Test and Evaluation; Vice Chief for Naval Operations; Director, Missile Defense Agency; and Vice Chairman, Joint Chiefs of Staff.

Key Management Challenges Have Not Been Fully Addressed

MDA's exemption from traditional DOD processes allowed it the flexibility to quickly develop and field an initial ballistic missile defense capability; however, we have previously reported that DOD's implementation of this approach has resulted in several management challenges that have not been fully addressed. These challenges include immature processes for incorporating combatant command priorities, inadequate baselines to measure progress, and incomplete planning for long-term operations and support. With the start of a new administration and the appointment of a new MDA Director, DOD now has an opportunity to better balance the flexibility inherent in MDA's unique roles and missions with the need for effective management and oversight of ballistic missile defense programs, and to more fully address the challenges that affect its ability to plan and resource ballistic missile defenses.

Warfighter Involvement Process Has Helped MDA Address Some Combatant Command Capability Needs, but the Process Faces Limitations

DOD has taken some steps to address combatant command capability needs through the Warfighter Involvement Process, but this process faces key limitations to its effectiveness. For example, based on combatant command inputs received through the Warfighter Involvement Process, MDA initiated new programs in fiscal year 2008 to develop and deploy sea-based defenses against short-range missiles. However, when the Secretary of Defense created MDA in 2002, the agency initially lacked a mechanism for obtaining and considering the combatant commands' priorities as it developed ballistic missile defenses. The lack of such a mechanism made it difficult for MDA and the combatant commands to be sure that MDA was addressing the commands' highest priority capability needs.

Although U.S. Strategic Command and MDA established the Warfighter Involvement Process in 2005, we reported in July 2008 that this process is still evolving and had not yet yielded a clear and effective approach for MDA to follow when making investment decisions.[6] Our report identified several shortcomings that inhibited the process' effectiveness. For example:

- U.S. Strategic Command's and MDA's roles and responsibilities for implementing the process were not fully documented, which left the combatant commands without an agreed-upon method for influencing MDA investments and for holding MDA accountable. U.S. Strategic

[6]GAO, *Ballistic Missile Defense: Actions Needed to Improve the Process for Identifying and Addressing Combatant Command Priorities*, GAO-08-740 (Washington, D.C.: July 31, 2008).

Command has since issued guidance that documents how the process operates, but this guidance is not binding on MDA and will require updating as the process evolves. As of March 2009 MDA had drafted but not yet issued similar guidance. As a result, the combatant commands continue to lack both transparency into the agency's decision-making process and assurance that MDA will implement the process in a manner that addresses their needs.

- The process has not yet resulted in effective methodologies for the combatant commands to clearly identify and consistently prioritize their capability needs. For example, in preparing the 2007 Prioritized Capabilities List—intended to give combatant commanders input into development priorities—combatant commands used differing criteria for assessing capabilities, and not all commands clearly distinguished among their top priorities. As a result, the list did not provide MDA with clear information about how to best address the combatant commands' needs. DOD agreed with our recommendation that U.S. Strategic Command improve the methodologies for identifying and prioritizing capabilities, but has not yet completed the 2009 Prioritized Capabilities List.

- Senior civilian DOD leadership has not been involved in the Warfighter Involvement Process to adjudicate potential differences among the combatant commands' priorities and provide perspective on how to invest resources against priorities as the leadership would under traditional DOD processes. Lacking such senior-level involvement, MDA has not benefited from receiving a broader perspective on which of the commands' needs is the most significant. To address this shortcoming, we recommended that senior civilian leadership review the commands' priorities before they are sent to MDA. DOD partially agreed with our recommendation, but it did not clearly identify the steps it would take to implement the recommendation.

A congressionally mandated independent review, released in August 2008,[7] of MDA's roles, missions, and structure also identified the need to improve the Warfighter Involvement Process. Although the independent review found that the Warfighter Involvement Process provided a potential mechanism for the combatant commands to influence Ballistic Missile Defense System developments, the review made several recommendations

[7]Institute for Defense Analyses, *Study on the Mission, Roles, and Structure of the Missile Defense Agency (MDA)*, IDA P-4374 (Alexandria, VA: Aug. 2008).

to make the process more effective. In particular, as our July 2008 report recommended, the independent review recommended that DOD improve the methodologies used to develop and prioritize the combatant commands' capability needs so that the Prioritized Capabilities List provides more adequate guidance to MDA.

Since our July 2008 report was issued, U.S. Strategic Command has responded to our recommendation that the combatant commands compare their priorities with MDA's long-term funding plans and provide an assessment—called the Capability Assessment Report—to MDA. U.S. Strategic Command expects the first assessment to be completed by the end of April 2009. The assessment represents the combatant commands' official assessment of MDA's response to the 2007 Prioritized Capabilities List, and is also intended to provide a basis for MDA to make capability trade-offs and programmatic adjustments to ensure acquisition of the warfighters' desired capabilities. U.S. Strategic Command provided MDA with a preliminary overview of the assessment in June 2008 so that MDA and the Missile Defense Executive Board could use the information during the formulation of the fiscal year 2010 budget. However, until the MDA's fiscal year 2010 budget is presented to Congress, we are unable to assess the extent to which the agency's investments are reflective of the commands' priorities.

MDA's Approach Limits Decision Makers' Ability to Measure Progress on Cost, Schedule, and Testing, but New Initiatives Could Improve Acquisition Accountability

MDA's approach to establishing baselines has limited the ability for DOD and congressional decision makers to measure MDA's progress on cost, schedule, and testing; however, new DOD initiatives could help improve acquisition accountability. Baselines are starting points that are used to measure progress on cost, schedule, and testing. Tracking progress against a baseline can signal when a program is diverting from its planned budget and schedule. Overall, the Ballistic Missile Defense System does not have baselines that are useful for oversight. Specifically, cost baselines have not been established, test baselines remain relatively unstable, and production and fielding are outpacing testing and modeling.

MDA has not yet established cost baselines that are useful to hold the agency accountable for how it expends resources, but has indicated that it is taking steps to do so. Baselined total costs and unit costs are fundamental markers most programs use to measure performance. However, MDA's unique roles and missions exempted the agency from a

requirement to establish baselines for total or unit costs.[8] As a result, in March 2009 we reported for the sixth consecutive year that we were unable to assess MDA's actual costs against baseline costs.[9] However, in response to recommendations in our March 2009 report, MDA agreed to provide total cost baselines for its block structure, which describes the agency's approach to acquiring and delivering new increments of ballistic missile defense capabilities to the services and combatant commands for operational use. While Block 1 capabilities (to defend the United States from a limited, long-range North Korean attack) will not be baselined, MDA has agreed to submit cost baselines for Block 2 capabilities (to defend U.S. forces and allies from short- to medium-range threats in one theater) and portions of Block 3 capabilities (to expand the defense of the United States to include limited threats from Iran) as part of its submission to the President's fiscal year 2010 budget, expected in Spring 2009. MDA also stated that it will submit total cost baselines for the rest of Block 3 and all of Block 5 capabilities (to expand the defense of U.S. forces and allies) by the spring of 2010.[10]

MDA also has made some progress with developing a schedule baseline for its blocks and their associated capabilities, but has faced challenges in meeting this baseline. MDA identifies its schedule baseline as the fiscal year dates for early, partial, and full capability deliveries of hardware and functionality for a block; as a result, schedule changes and their effects on the Ballistic Missile Defense System's development can be determined by comparing the changes with the original schedule. However, by trying to conform to the schedule baseline, production and fielding decisions have outpaced testing and modeling. Specifically, MDA determines the

[8]Section 2435 of Title 10 of the U.S. Code requires a baseline description for major defense acquisition programs and generally the baseline description must be approved before funds may be obligated to the program. The Ballistic Missile Defense System program meets the definition of a major defense acquisition program, which is defined at 10 U.S.C. § 2430; however, the requirement to establish a baseline is not triggered until entry into system development and demonstration. Under the Secretary of Defense's 2002 program guidance for ballistic missile defense, ballistic missile defense system elements do not return to standard acquisition processes until they transfer to the military services. As of March 2009, only the Patriot Advanced Capability-3 and Cobra Dane Radar Upgrade have transferred from MDA to the services.

[9]GAO, *Defense Acquisitions: Production and Fielding of Missile Defense Components Continue with Less Testing and Validation Than Planned*, GAO-09-338 (Washington, D.C.: Mar. 13, 2009).

[10]Block 4 capabilities are to defend allies and deployed forces in Europe from limited Iranian long-range threats and to enhance protection of the United States.

capability levels of individual elements through a formal declaration process that is based on a combination of models, simulations, and ground tests that are all anchored to flight test data. However, flight test cancellations and delays have resulted in MDA revising and reducing the basis it uses to declare when missile defense capabilities can be considered for operational use. As a result, recent fielding decisions have been made with a more limited understanding of system effectiveness than planned.

MDA's testing baselines also have not been effective for oversight, but a new MDA initiative to review its testing program could lead to improvements. In our March 2009 report, we found that MDA's officially approved test baseline, the Integrated Master Test Plan, changes frequently, often because MDA has changed the substance of a test, the timing of a test, or added new tests to the baseline. For example, based on its September 2006 plan, MDA had expected the Ground-based Midcourse Defense element to conduct seven interceptor flight tests from the start of fiscal year 2007 through the first quarter of 2009. However, MDA was only able to conduct two of these flight tests. As a result of these frequent changes, we concluded that MDA's test baseline is therefore not effective for oversight. Recognizing the challenges to the testing program, in February 2009, the Director, MDA testified before this Subcommittee that the agency is undertaking a review of its program. This review, according to MDA, will identify critical variables that have not been proven to date, determine what test scenarios are needed to collect the relevant test data, and develop an affordable and prioritized schedule of flight and ground tests. If MDA's review accomplishes its intended goals, then it could both improve oversight and help close the gaps that exist between testing, modeling, and simulation.

In our March 2009 report, we made several recommendations to MDA that would improve its preparation of cost, schedule, and testing baselines, which are needed to help decision makers in DOD and Congress to exercise oversight of MDA's acquisition approach. For example, in the area of cost we recommended that MDA complete total cost baselines before requesting additional funding for Blocks 2 and 3. Regarding schedule baselines, we recommended that MDA synchronize the development, manufacturing, and fielding schedules of Ballistic Missile Defense System assets with the testing and validation schedules to ensure that items are not fielded before their performance has been validated through testing. In the testing area, we recommended that MDA reassess its flight tests scheduled for the end of fiscal year 2009 to ensure that they

can be reasonably conducted. DOD generally concurred with all 11 of our recommendations.

Planning for Long-Term Operations and Support Is Underway, But Efforts Are Incomplete

DOD has taken some initial steps to plan for long-term operations and support of ballistic missile defense operations, but planning efforts to date are incomplete because of difficulties in transitioning responsibilities from MDA to the services and in establishing operation and support cost estimates. Our prior work has shown that clear roles and responsibilities can improve outcomes by identifying who is accountable for various activities. However, in September 2008,[11] we reported that DOD had not identified clear roles and responsibilities among MDA and the services for long-term support planning.

In our September 2008 report we recommended that DOD establish a process for long-term support planning that adheres to key principles for life cycle management. This includes establishing timelines for planning that must be completed before each element is fielded, involving services in support and transition planning and deciding when support responsibilities will be transitioned to the services, specifying roles and responsibilities for MDA and the services for life cycle management, and identifying who is accountable for ensuring these actions are accomplished. Since our September 2008 report was issued, DOD has made some progress in planning for transition of some ballistic missile defense elements. For example, in January 2009 MDA and the Army agreed on the overarching terms and conditions for the transition and transfer of elements from MDA to the Army, including Ground-based Midcourse Defense, Terminal High Altitude Area Defense, and the AN/TPY-2 Forward-based Radar. However, the agreement neither identifies when these elements are expected to transfer to the Army, nor addresses the specific details on how operations and support costs will be funded following the transfer. Until DOD establishes a transition and transfer process that adheres to key principles for life cycle management, DOD will be unable to ensure that individual elements will be sustained in the long term, and DOD's long-term support planning will continue to face challenges.

[11]GAO, *Missile Defense: Actions Needed to Improve Planning and Cost Estimates for Long-Term Support of Ballistic Missile Defense*, GAO-08-1068 (Washington, D.C.: Sept. 25, 2008).

Moreover, DOD has established limited operation and support cost estimates for ballistic missile defense elements, and the estimates that have been developed are not transparent to DOD senior leadership and congressional decision makers. DOD has not required that full cost estimates for ballistic missile defense operations and support be developed, validated, and reviewed. As a result, the Future Years Defense Plan—DOD's 6-year spending plan—does not fully reflect these costs. Prior GAO work has shown that operations and support costs are typically 70 percent of a weapon's life cycle costs.[12] Specifically, our work found that DOD has not addressed ballistic missile defense operation and support costs in the following three ways:

- First, in our September 2008 report, we found that MDA and the services have jointly developed and agreed on cost estimates for only two of the seven elements we examined.[13] Joint cost estimates for the other five elements are not yet complete and are likely to change over time, perhaps significantly, because MDA and the services are still determining key assumptions, such as how support will be provided—by contractor, the service, or a combination of the two—and where some elements may be fielded and operated. These determinations will affect military construction and operation and support costs, such as maintenance, base operating support, and facilities.

- Second, in September 2008 we found that DOD did not plan to independently verify the operation and support cost estimates for all the ballistic missile defense elements we reviewed. Independently validated cost estimates are especially important to formulating budget submissions because, historically, cost estimates created by weapon system program offices are lower than those that are created independently. In January 2009, MDA and the Army agreed in principle that full, independently verified life cycle cost estimates may be among the criteria for transferring elements to the Army. However, as of February 2009, DOD had not developed plans to prepare these estimates. Table 1 shows whether, as of February 2009, the joint

[12]GAO-08-1068.

[13]The seven elements reviewed were Aegis Ballistic Missile Defense, Ground-based Midcourse Defense, Terminal High Altitude Area Defense, AN/TPY-2 Forward-based Radar, Sea-Based X-Band Radar, Upgraded Early Warning Radar, and European Midcourse Radar. Our criteria for selecting elements specified a sample of at least two elements from each of the services and that the elements already be fielded or planned for fielding between fiscal years 2008 and 2015. For more details about our scope, methodology, and selection criteria, see GAO-08-1068.

operation and support cost estimates have been completed, whether the cost estimates have been independently verified, and the status of the joint estimates.

- Third, we reported in September 2008 that decision makers' visibility of ballistic missile defense operation and support costs was further hindered because MDA and the services had agreed only on which organization is responsible for funding operation and support costs after fiscal year 2013 for two of the seven elements we reviewed—Aegis Ballistic Missile Defense and Upgraded Early Warning Radar. It is still unclear how DOD intends to fund long-term operations and support costs. Although the MDA and Navy agreed in January 2009 on how to fund operation and support costs for the Sea-Based X-Band Radar through 2013, the agreement does not specify whether these costs will be funded through the defensewide fund or through a transfer of MDA's appropriated funds to the Navy after that time. Additionally, in February 2009 Army and Air Force officials told us that the services had not reached agreements with MDA about how to fund operation and support costs beyond 2013 for four of the seven elements we reviewed. As a result of these limitations, DOD and the services would face unknown financial obligations for supporting ballistic missile defense fielding plans and that most of these costs would not be reflected in DOD's future years' spending plan for fiscal years 2010 through 2015.

Table 1: Status of Joint Cost Estimates and Plans for Independent Verification of Operation and Support Cost Estimates for Selected Ballistic Missile Defense Elements as of February 2009

Element	Status of joint operation and support cost estimate	Status of independent verification of the cost estimate by the Cost Analysis Improvement Group
Aegis Ballistic Missile Defense	Completed—MDA and the Navy agreed on the operation and support costs through a Memorandum of Agreement.	Completed
Ground-based Midcourse Defense	In Process—Joint MDA/Army estimate has not been reviewed and approved by the Army Cost Review Board.	No independent estimate
Terminal High Altitude Area Defense	In Process—Joint MDA/Army estimate has not been reviewed and approved by the Army Cost Review Board.	No independent estimate
AN/TPY-2 (Forward-based)	In Process—Joint MDA/Army estimate has not been reviewed and approved by the Army Cost Review Board.	No independent estimate
Sea-Based X-Band Radar	In Process—Joint MDA/Navy estimate is expected to be completed by March 31, 2009.	No independent estimate
Upgraded Early Warning Radar	Completed—MDA and the Air Force jointly agreed on cost estimates through the transition plan.	No independent estimate
European Midcourse Radar	In process—The Air Force and MDA began to develop a joint estimate for the European radar in August 2008.	In process

Source: GAO summary of DOD information.

Note: Our sample selection did not include Patriot Advanced Capability-3, which transferred to the Army in 2003, and the Cobra Dane Radar Upgrade, which was transferred to the Air Force in January 2009. See GAO, *Missile Defense: Actions Needed to Improve Planning and Cost Estimates for Long-Term Support of Ballistic Missile Defense*, GAO-08-1068 (Washington, D.C.: Sept. 25, 2008), for a more detailed discussion of our scope and methodology for identifying the elements covered in our review.

To address these cost transparency challenges, we recommended that DOD establish a requirement to estimate ballistic missile defense operation and support costs, including detailing when credible estimates are to be developed, updated, and reviewed, and requiring periodic independent validation of operation and support costs for each element. In its response to our recommendations, DOD stated that it has established a new ballistic missile defense life cycle management process to oversee the annual preparation of a required capabilities portfolio and a program plan to meet those requirements through defensewide accounts. This process is intended in part to provide decision makers with clear, credible, and transparent cost information.

DOD Is Taking Actions to Establish Greater Oversight, but Obstacles Remain

DOD has recently taken some steps to improve oversight of the development of the Ballistic Missile Defense System, such as the creation of both the Missile Defense Executive Board and its life cycle management process, but obstacles remain. For example, DOD's actions do not yet provide comprehensive information for acquisition oversight; and have not yet clearly defined the roles and responsibilities of MDA and the services, including how defensewide accounts will be used to fund the ballistic missile defense program over the long term. Additionally, as DOD seeks to improve transparency and accountability, sustained top leadership will be needed to build upon this recent progress.

Establishment of a new Missile Defense Executive Board in 2007 has been a step forward in improving transparency and accountability. The board is chartered to review and make recommendations on MDA's acquisition strategy, plans, and funding. One step the board has taken to improve transparency and accountability was its adoption of its life cycle management process, a process designed to clarify the ballistic missile defense roles of MDA, the services, combatant commands, and Office of the Secretary of Defense. Additionally, the Under Secretary of Defense for Acquisition, Technology, and Logistics has directed MDA to take actions based on Missile Defense Executive Board recommendations. For example, the Under Secretary directed MDA to incorporate into its budget proposal the interceptor inventory recommended by a Joint Staff study and endorsed by the Missile Defense Executive Board.

Although the establishment of the Missile Defense Executive Board represents progress, this new board does not yet provide comprehensive acquisition oversight of the ballistic missile defense program. As we reported in March 2009,[14] the Under Secretary of Defense for Acquisition, Technology, and Logistics plans to hold program reviews for several Ballistic Missile Defense System elements to further increase acquisition oversight of the Ballistic Missile Defense System. According to DOD officials, these reviews are designed to provide comprehensive information that will be used as the basis for Missile Defense Executive Board recommendations for the Ballistic Missile Defense System business case and baseline process—a process which, according to these officials, is similar to the traditional Defense Acquisition Board process for reviewing other major acquisition programs. However, it is unclear whether the information provided to the Missile Defense Executive Board

[14] GAO-09-338.

will be comparable to that produced for other major acquisition program reviews, as most of the information appears to be derived or presented by MDA as opposed to independent sources as required for traditional major defense acquisition programs.[15]

Additionally, the Missile Defense Executive Board's life cycle management process is intended to facilitate more detailed agreements between MDA and the services to clearly establish their respective roles and responsibilities; however, these efforts are still in their early stages. For example, although MDA is developing memorandums of agreement with the services, the annexes that would lay out the specific responsibilities for such things as planning, programming, budgeting, execution, and life cycle management for each ballistic missile defense element have yet to be completed. Further, the annexes are expected to provide details about the how the services and MDA will work more closely together to manage the elements through joint program offices. The MDA Director told us that these new program offices would provide the services greater influence in the design of ballistic missile defenses. We have previously reported that early involvement by the services is important, because weapons design influences long-term operations, support, and costs—responsibilities likely borne by the services, not MDA.

A potential area of concern between MDA and services could be centered around how DOD will use the defensewide accounts established in the life cycle management process to fund the ballistic missile defense program over the long term. The defensewide accounts are intended to pay for ballistic missile defense costs other than those already agreed to be paid by the services, including research and development, procurement, and operations and support costs. In September 2008,[16] we reported that the Missile Defense Executive Board's life cycle management process lacked

[15]Before a program can enter the system development and demonstration phase of the acquisition cycle, statute requires that certain information be developed. 10 U.S.C. § 2366b. In 2002, the Secretary of Defense deferred the application of some of DOD's acquisition processes to the Ballistic Missile Defense System. Therefore, MDA has not yet entered System Development and Demonstration, which would trigger the statutes requiring the development of information that the Defense Acquisition Board uses to inform its decisions. Most major defense acquisition programs are also required by statute to obtain an independent verification of program cost prior to beginning system development and demonstration, and/or production and deployment. 10 U.S.C. § 2434. Statute also requires an independent verification of a system's suitability for and effectiveness on the battlefield before a program can proceed beyond low-rate initial production. 10 U.S.C. § 2399.

[16]GAO-08-1068.

concrete details for implementation and was not well defined. In theory, the defensewide accounts would allow all costs to be clearly identified and would alleviate the pressure on the services' budgets to fund operation and support for ballistic missile defense programs. However, MDA and the services have not yet determined the amount and duration of funding for the individual ballistic missile defense elements that will come from the defensewide accounts.

While DOD has recently been taking positive steps to improve transparency and accountability for ballistic missile defense programs, long-term success will require sustained involvement by top DOD leadership. Leadership and oversight of missile defense has been sporadic in the past. DOD had a senior-level group, called the Missile Defense Support Group, dedicated to the oversight of MDA since the agency's founding that met many times initially; however, it did not meet after June 2005. This leadership vacuum was not filled until the Missile Defense Executive Board was established 2 years later. The Missile Defense Executive Board has a more robust charter than its predecessor, and an additional strength of the board is that its chair, the Under Secretary of Defense for Acquisition, Technology, and Logistics, used it as his primary oversight tool over the last year.

In sum, whether or not DOD continues to manage missile defense outside its customary acquisition processes, the management challenges we have found in our work will need to be addressed. Sustained DOD leadership will be required to ensure that the needs of combatant commands are considered, that acquisition is adequately managed and overseen, and that planning occurs for the long-term operations and support of these multi-billion dollar systems.

Madam Chairman and Members of the Subcommittee, this concludes my prepared remarks. I would be happy to answer any questions you or other Members of the Subcommittee may have.

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