



## OFFICE OF INSPECTOR GENERAL

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# AUDIT OF THE MILLENNIUM CHALLENGE CORPORATION'S IMPLEMENTATION OF SELECTED KEY PROJECT CONTROLS FOR THE MCC INTEGRATED DATA ANALYSIS SYSTEM

AUDIT REPORT NO. M-000-11-002-P  
January 31, 2011

WASHINGTON, D.C.



***Office of Inspector General  
for the Millennium Challenge Corporation***

January 31, 2011

The Honorable Daniel W. Yohannes  
Chief Executive Officer  
Millennium Challenge Corporation  
875 Fifteenth Street, NW  
Washington, DC 20005

Dear Mr. Yohannes:

This letter transmits the Office of Inspector General's final report on the *Audit of the Millennium Challenge Corporation's Implementation of Selected Key Project Controls for the MCC Integrated Data Analysis System*. In finalizing the report, we considered your written comments on our draft report and included those comments in their entirety in Appendix II of this report.

The report contains nine recommendations to strengthen the Millennium Challenge Corporation's project management capabilities for information technology projects. We have reviewed your comments and determined that management decisions have been reached on all nine recommendations in the audit report.

I appreciate the cooperation and courtesy extended to my staff during this audit.

Sincerely,

Alvin A. Brown /s/  
Assistant Inspector General  
Millennium Challenge Corporation

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# SUMMARY OF RESULTS

On September 27, 2007, the Millennium Challenge Corporation (MCC) awarded a contract to develop the Business Intelligence and Data Storage system (page 17). The system would enable MCC to meet its strategic goals by enabling it to link financial management and performance data, which would improve MCC's programmatic effectiveness, operational efficiency, and ability to show results. By March 2008, MCC realized that the system did not function as intended and halted the project. In September 2008, MCC modified the contract to refine the requirements. In addition, MCC renamed the project MCC Integrated Data Analysis System (MIDAS). In March 2009, MCC began using MIDAS in some countries. To date, MCC has spent more than \$6.9 million<sup>1</sup> against the contract. Appendix III provides additional background information.

The objective of the audit was to determine if MCC implemented selected key project controls to meet cost, schedule, and performance goals for the MIDAS project. For this audit, selected key project controls were (1) risk management, (2) earned value management, and (3) requirements management.

MCC did not implement three key project controls to meet cost, schedule, and performance goals (page 3). Specifically, MCC did not:

- Manage MIDAS project risks (pages 3–4).
- Use earned value management, which is a project management control tool allowing visibility into technical, cost, and schedule planning; performance; and progress for major information technology (IT) projects, as required (page 4).
- Effectively manage the MIDAS requirements, which specify system capabilities as well as its physical and performance limitations (pages 4–5).

The aforementioned problems occurred because MCC did not (1) consistently involve qualified staff and maintain appropriate staffing levels to manage the project (pages 5–6); (2) develop comprehensive policies and procedures for systems and service acquisition (pages 6–7); and (3) establish what project documentation should be prepared, updated, and maintained for IT projects (pages 7–8). As a result, MCC spent more than \$6.9 million for a system that only partially met its needs (page 8).

The report recommends that MCC:

1. Develop a detailed, written plan to establish strong project management capabilities for IT projects (page 9).
2. Develop written earned value management policies and procedures for IT projects, as required (page 10).
3. Develop written policies and procedures to plan for, mitigate, monitor, and report on risks to IT projects (page 10).

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<sup>1</sup> Unaudited.

4. Update the *Contracts Operating Manual* to include procedures for including risk management and earned value management in contracting actions, when required (page 10).
5. Develop written policies and procedures to obtain written approval for relying on a contractor's systems development life cycle methodology (page 10).
6. Develop written policies and procedures to address key decision points for IT projects (page 10).
7. Establish in writing what documentation must be prepared, updated, and maintained for IT projects (page 10).
8. Implement risk management, earned value management, and requirements management for the MIDAS project before proceeding to the development phase to build additional functionality for the system (pages 10–11).
9. Review MCC's IT project management capabilities and determine whether its weaknesses should be reported, tracked, and monitored as a material weakness pursuant to the Federal Managers Financial Integrity Act of 1982 (page 11).

The detailed findings are discussed in the next section of the report. Appendix I describes the audit's scope and methodology. MCC provided comments on the draft report, which are included in their entirety in Appendix II. Management decisions have been reached on all nine recommendations (page 12).

# AUDIT FINDING

## **Key Project Controls Not Incorporated Into the MIDAS Project**

MCC did not implement risk management, earned value management (EVM), and requirements management for MIDAS—three key project controls to meet cost, schedule, and performance goals.

**Risk Management Not Performed** – Part 39 of the Federal Acquisition Regulation (FAR) requires risk management be performed for IT contracts. Specifically:

- Section 102(a) requires an agency to analyze risks, benefits, and costs before entering into IT contracts. It further states that the contracting and program office officials are both responsible for assessing, monitoring, and controlling risk when selecting projects for investment and during program implementation.
- Section 102(c) requires an agency to apply the appropriate techniques, such as prudent project management, to manage and mitigate risk during the acquisition of IT.

Furthermore, a best practice for managing an IT project is to maintain a risk-monitoring tool. Specifically, the risk-monitoring tool should:

- Identify project risks, such as schedule risk, cost risk, and program management risk.
- Apply a methodology for prioritizing risks based on probability of occurrence and impact.
- Include plans, such as a risk mitigation plan, to respond to risks.
- Assign an individual to be responsible for each of the risks.

MCC prepared a risk management plan dated September 2008 that included most of the information needed for managing risks, such as the methodology for performing risk management for the project and risk categories. In addition, the risk management plan included an initial risk-monitoring tool for the project, which identified and evaluated risks and included plans to respond to risks.

Although a prior project manager was aware that the plan and risk-monitoring tool existed, no evidence was provided that the plan was ever used. Moreover, the current project team was not aware of the plan, and therefore the plan was not updated and used to actively manage risks. For example, MCC did not identify and manage the following risks:

- Use of Rapid Application Development – The MIDAS contractor used rapid application development by prototyping, which is a system development life cycle methodology. (A system development life cycle methodology is the process of developing information systems through investigation, analysis, design, implementation, and maintenance.) However, MCC officials acknowledged that

rapid application development was not an appropriate methodology to develop MIDAS, as it is intended for small, low-risk projects with well-understood requirements.

- Use of Time-and-Materials Contract – MCC used a time-and-materials contract for a substantial portion of the original MIDAS contract. However, time-and-materials contracts do not encourage effective cost control and require almost constant government surveillance. MCC officials acknowledged that there were concerns with this contract type and later modified it.
- Immaturity of MCC's IT Processes – The maturity of an organization's IT processes is measured by how well those processes are developed, including capability and control. MCC officials acknowledged that MCC was not mature enough as an organization to handle a large, complex project such as MIDAS.

**EVM Not Used** – EVM is a project management control tool that allows visibility into technical, cost, and schedule planning; performance; and progress for major IT projects. EVM not only encourages contractors to use effective internal cost and schedule management control systems but also provides the manager with timely and consistent cost, schedule, and progress data.

The Office of Management and Budget (OMB) has issued guidance to (1) assist in monitoring and improving project planning and execution and (2) fully implement EVM systems for IT projects. In an August 2005 memorandum,<sup>2</sup> OMB requires agencies to:

- Include EVM requirements in contracts.
- Perform reviews to ensure that EVM systems meet established requirements.
- Ensure that project performance goals are appropriate.

In addition, OMB requires EVM systems for developmental portions of investments and further requires EVM systems to be applied regardless of contract type (OMB Circular No. A-11, Part 7, "Planning, Budgeting, Acquisition, And Management of Capital Assets").

Finally, the FAR identifies contracting requirements for EVM systems for major IT investments. The FAR states that, at a minimum, contracting officers must require contractors to submit EVM system monthly reports for those contracts for which an EVM system applies (FAR Subpart 34.2, "Earned Value Management System").

However, MCC did not incorporate EVM into the MIDAS project. Specifically, MCC did not (1) have an EVM system to use for the project or (2) incorporate EVM into MIDAS contracting actions. Although the contractor may have used aspects of EVM for some project tasks, MCC did not provide evidence that MCC used EVM as a project management tool.

**Ineffective Management of Requirements** – Best practices indicate that effective requirements management plays a vital role in producing a successful project. Requirements management includes:

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<sup>2</sup> OMB M-05-23, *Improving Information Technology Project Planning and Execution*, August 4, 2005.

- Conducting sessions with key stakeholders to determine the initial requirements.
- Revising and organizing requirements and negotiating priorities.
- Having the requirements team detect areas that require more detail.
- Ensuring that requirements documentation is clear and concise.
- Evaluating requirements documentation to determine whether it satisfies the business needs and is complete enough for design and construction to begin.

The two major types of requirements are functional and nonfunctional. Functional requirements specify capabilities that the system will be able to perform in terms of behaviors and operations. Nonfunctional requirements specify the physical and performance limitations of the system, and serve as constraints on functional requirements.

MCC did not effectively manage the requirements for MIDAS. At the time MCC awarded the original contract, MCC did not develop detailed functional requirements. However, as part of a September 2008 contract modification, MCC prepared reporting and data requirements. Yet, requirements for compact development and budget formulation were not developed, and therefore those functionalities were not included in the system as MCC planned in MCC's OMB Exhibit 300. In addition, although the original contract mentioned some high-level nonfunctional requirements, MCC did not prepare detailed requirements for MIDAS. According to an MCC official, MCC initially planned to outsource the system, and nonfunctional requirements would have been the responsibility of the contractor. However, at some point, MCC decided to host the system internally, but did not prepare nonfunctional requirements.

Moreover, a requirements traceability matrix was not maintained to ensure that all requirements, including changes, were documented and incorporated into MIDAS.

**Reasons Key Project Controls Were Not Implemented** – The aforementioned problems occurred because MCC did not establish a disciplined approach to manage IT projects. Specifically, as discussed below, MCC did not:

- Consistently involve qualified staff and maintain appropriate staffing levels to manage the project.
- Develop comprehensive policies and procedures for systems and service acquisition.
- Establish what project documentation should be prepared, updated, and maintained for IT projects.

**Qualified Staff and Appropriate Staffing Levels Not Consistently Involved With Managing MIDAS Project** – OMB has recognized that qualified IT project managers are the first line of defense against cost overruns, schedule slippages, and poor performance.<sup>3</sup> In an April 2007 memorandum, OMB requires that project managers assigned to major acquisitions be acquisition certified. It further requires that project managers assigned to IT investments meet the technical requirements of the *Federal IT Project Manager Guidance Matrix* (OMB Memorandum, *The Federal*

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<sup>3</sup> OMB Memorandum M-04-19, *Information Technology (IT) Project Manager (PM) Qualification Guidance* (July 24, 2004).

*Acquisition Certification for Program and Project Managers*, April 25, 2007). That matrix establishes minimum competencies based on project complexity and risk.

However, MCC did not have people with the right skills managing the MIDAS project. Although MCC began the MIDAS project with certified project managers, they were subsequently reassigned, and for almost a year and a half MCC did not have a certified project manager responsible for managing the project. In addition, neither MCC's Chief Information Officer (CIO) nor any other staff with an IT background was involved with the project for approximately 2 years. Because MCC's CIO is not positioned properly within MCC's organizational structure, he (1) does not have the authority to effectively implement controls over MCC's IT projects and (2) can be overridden by upper management since he is not a senior official. In a July 2010 audit report, OIG recommended that MCC's Chief Executive Officer realign the CIO position to report directly to the Chief Executive Officer, as required.<sup>4</sup> However, MCC did not agree to implement that recommendation.<sup>5</sup>

Equally important to having people with the right skills is assigning an appropriately sized project management team. Best practices show that, for smaller projects, responsibility can be assigned solely to a project manager, but for larger projects, responsibility should be shared by a project management team. The contractor staffing level increased from 7 to more than 20, at which point MCC officials admitted that it became virtually impossible for the project manager to provide adequate project oversight. Moreover, the project manager had difficulty determining whether the contractor's billings were correct.

**Comprehensive Policies and Procedures for System and Services Acquisition Needed** – The National Institute of Standards and Technology requires organizations to develop, disseminate, and periodically review and update the following formal documents:

- System and services acquisition policy that (among other things) addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance.
- Procedures to implement the system and services acquisition policy and associated system and services acquisition controls (Special Publication 800-53, Revision 3, *Recommended Security Controls for Federal Information Systems and Organizations*, August 2009).

In addition, recognizing the value of good project management, OMB required agencies to prepare EVM policies and procedures by December 31, 2005 (OMB M-05-23, *Improving Information Technology Project Planning and Execution*, August 4, 2005).

MCC has prepared some policies and procedures that address system and service acquisition, particularly in its policies for information systems security<sup>6</sup> and *Contracts*

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<sup>4</sup> OIG Audit Report No. M-000-10-003-P, *Audit of the Millennium Challenge Corporation's Implementation of Key Components of a Privacy Program for Its Information Technology Systems* (July 9, 2010).

<sup>5</sup> The OIG takes the position that no management decision was reached on the CIO realignment. MCC management disagrees.

<sup>6</sup> MCC's *Information Systems Security Policy Millennium Challenge Corporation* (May 4, 2010).

*Operating Manual*.<sup>7</sup> However, MCC did not develop comprehensive policies and procedures for system and services acquisition, including EVM and risk management, which are imperative for the success of IT projects. Such policies and procedures should address in-house systems development projects as well as acquisitions from external sources. Further, MCC needs policies and procedures for relying on a contractor's EVM system, which include:

- Performing surveillance and compliance of reviews of the EVM system to demonstrate that the EVM system meets and continues to meet standards.
- Establishing a performance baseline for the project and performing an integrated baseline review. The review will provide a mutual understanding of risks inherent in contractors' performance plans and underlying management control systems.

In addition, MCC's policies and procedures need to address the use of an appropriate systems development life cycle methodology. An August 2010 OIG contractor audit report<sup>8</sup> recommended that MCC document a systems development life cycle methodology. However, MCC also did not develop policies and procedures to ensure that an appropriate methodology is applied when MCC relies on a contractor. MCC officials agreed that the CIO should approve of a contractor's proposed methodology.

Finally, MCC did not develop policies and procedures to identify the required inputs or outputs (e.g., project risk reports and EVM reports) to move to the next phase of the project. Such policies and procedures should also address which senior managers are responsible for making such decisions and at what point those decisions should be made.

**Required Project Documentation Not Established** – MCC did not establish what documentation should be prepared, updated, and maintained for IT projects. MCC's application of the documentation may vary by project depending on predetermined criteria, such as the importance of the system to the mission costs or complexity of the system, or visibility of the project.

For example, MCC did not consistently prepare an OMB Exhibit 300. OMB's policy for planning, budgeting, acquisition, and management of major IT investments requires an Exhibit 300. It is used to manage the investment phase of the performance improvement life cycle, which provides the foundation for sound IT management practices. OMB's guidance for Exhibit 300s specifically calls for a detailed risk management plan as well as the use of EVM for IT projects. Although MCC prepared an Exhibit 300 in 2008 for MIDAS, it did not prepare an Exhibit 300 in 2007 for the initial investment or in 2009 for the continuation of the project.

Also, MCC did not prepare a project charter for MIDAS. The project sponsor formally authorizes the project by issuing a project charter that (1) establishes the requirements to satisfy needs, wants, and expectations and (2) assigns a project manager and authority level.<sup>9</sup> Because MCC did not prepare a project charter, the project suffered from confusion regarding requirements as well as the responsibilities of the project

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<sup>7</sup> MCC's *Contracts Operating Manual*, Chapter 7, "Acquisition Planning" (April 2008).

<sup>8</sup> Report No. M-000-10-004-P, *Audit of the Millennium Challenge Corporation's Compliance with the Federal Information Security Management Act of 2002 – Fiscal Year 2010* (August 31, 2010).

<sup>9</sup> Alternatively, a project charter may refer to other documents that include these items.

manager. MCC officials explained that a senior manager was too involved with the project and held meetings with and directed the MIDAS contractor without the knowledge and involvement of the project manager at that time. Those meetings resulted in constant changes in system requirements with little documentation and a drastic increase in contractor staff. A project charter would have helped MCC avoid this confusion.

In addition, MCC did not establish what templates, including the required frequency, should be used for reporting to senior management on the project's status, risks, and progress toward meeting its goals. Such reports could have provided information needed to make informed decisions regarding whether to continue spending MCC's resources on the MIDAS project.

**Impact of Not Implementing Key Project Controls** – As a result of not using EVM, risk management, and requirements management, MCC spent more than \$6.9 million<sup>10</sup>—\$0.2 million more than planned in the OMB Exhibit 300—for a system that only partially met its needs. Further, MCC did not meet its original, overly ambitious plan to have the system fully tested and operational by March 2008.

If MCC had managed project risks, some of the problems that have had a serious impact on its ability to meet project cost, schedule, and performance goals could have been mitigated or avoided. For example, MCC wanted to allow Millennium Challenge Account staff access to MIDAS via MCC's network. However, that access would have caused a security threat. Therefore, MCC had to redesign the system's architecture, which caused delays in project implementation. If MCC had used EVM, it could have made informed decisions regarding whether to continue investing resources into the MIDAS project. If MCC had managed requirements properly, it could have had better assurance of meeting business needs.

In addition, according to MCC management, MCC is scheduled to close out eight of its compacts over the next year. However, without MIDAS, MCC may have difficulty tying the results of those compacts to the money spent.

In an October 2010 assessment of MIDAS,<sup>11</sup> an MCC contractor determined that the MIDAS data collection process was very manual and labor intensive, and that users spent more time entering and validating data than performing data analyses. Further, reporting functions were limited, so users were unable to perform the data analyses required to perform their jobs. Therefore, many end users continued to use their own manual processes to report on data. The assessment provided six options for MCC to consider in moving forward with MIDAS.

**Conclusion** – As MCC considers its options for MIDAS, it is important to have a disciplined project management process in place to meet cost, schedule, and performance goals. An August 2007 MCC plan<sup>12</sup> recognized that a “project management structure and discipline does not exist within MCC,” as MCC was only minimally successful in its previous attempt to implement a project management initiative. It further recognized that large initiatives “will require a robust project management environment to successfully

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<sup>10</sup> Unaudited.

<sup>11</sup> MCC, *MIDAS Independent Verification & Validation Assessment Report* (October 12, 2010).

<sup>12</sup> MCC, *Enterprise Architecture IT Transition Plan Version 1* (August 2007).

manage the project portfolio through completion.” Therefore, the report recommended that MCC reintroduce the project management program with the structure, discipline, training, and executive sponsorship to ensure success. However, according to MCC officials, that recommendation was not implemented because MCC executives did not believe it was necessary. Nonetheless, because MCC has already exceeded the amount it planned to spend on a system that only partially met its needs, it is imperative that MCC implement a rigorous project management process before making new IT investments.

To address the extensive weaknesses in MCC’s IT project management capabilities, MCC needs to take prompt corrective actions to address the recommendations in this audit report. Moreover, MCC needs to determine whether the IT project management capabilities should be considered a material weakness, pursuant to the Federal Managers’ Financial Integrity Act of 1982. Considering the program a material weakness will draw attention to the program, as progress in correcting the weaknesses will be tracked and reported to OMB and Congress.

Note that in response to a prior recommendation,<sup>13</sup> MCC added a dotted line from its CIO to the Chief Executive Officer in its organizational chart of the senior management team. However, OIG does not believe that action is responsive to the intent of the recommendation to have the CIO report directly to the Chief Executive Officer. For example, the external website does not list MCC’s CIO as a member of its senior staff. Moreover, OMB requires the CIO to report directly to the agency head:

While the organizational placement of the CIO is to be determined by the agency head, the person selected should report to the agency head directly, and not through another official. The CIO must actively participate, with the agency head and other senior agency officials, in planning and budgeting deliberations, support of work process redesign in areas being considered for IT investment, and the development of information technology program performance measures (OMB M-96-20, *Implementation of the Information Technology Management Reform Act of 1996*, April 4, 1996).

The OIG is not making a recommendation in this report to address the fact that the CIO is not reporting directly to the Chief Executive Officer. This recommendation remains open from the prior audit work. Recommendations 1 through 7 are directed to MCC’s Chief Executive Officer because the current placement of MCC’s CIO within the organizational structure results in the CIO not having the authority to implement the recommendations.

***Recommendation 1.*** *We recommend that the Millennium Challenge Corporation’s Chief Executive Officer develop a detailed, written plan to establish strong project management capabilities for information technology projects, with sufficient responsibility, authority, and resources to apply disciplined practices. The plan must include assigning a certified project manager to information technology projects with the required minimum competencies based on project risk and complexity.*

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<sup>13</sup> Recommendation 1 in OIG Audit Report No. M-000-10-003-P, *Audit of the Millennium Challenge Corporation’s Implementation of Key Components of a Privacy Program for Its Information Technology Systems* (July 9, 2010).

**Recommendation 2.** We recommend that the Millennium Challenge Corporation's Chief Executive Officer develop written earned value management policies and procedures for information technology projects, as required by Office of Management and Budget memorandum M-05-23. At a minimum, this must include:

- Performing surveillance reviews of the earned value management system.
- Performing periodic compliance reviews of the earned value management system.
- Establishing a performance baseline.
- Conducting an integrated baseline review.

**Recommendation 3.** We recommend that the Millennium Challenge Corporation's Chief Executive Officer develop written policies and procedures to plan for, mitigate, monitor, and report on risks to information technology projects.

**Recommendation 4.** We recommend that the Millennium Challenge Corporation's Director of Contracts and Grants Management, in collaboration with the Chief Executive Officer, update the Contracts Operating Manual to include procedures for including risk management and earned value management in contracting actions, when required.

**Recommendation 5.** We recommend that the Millennium Challenge Corporation's Chief Executive Officer develop written policies and procedures to obtain written approval for relying on a contractor's systems development life cycle methodology.

**Recommendation 6.** We recommend that the Millennium Challenge Corporation's Chief Executive Officer develop written policies and procedures to address key decision points for information technology projects, including who is responsible for making those decisions and what information should be used as the basis for making those decisions.

**Recommendation 7.** We recommend that the Millennium Challenge Corporation's Chief Executive Officer, establish in writing what documentation must be prepared, updated, and maintained for information technology projects based on size and complexity of the project. At a minimum, this must include:

- Office of Management and Budget Exhibit 300s
- Project charters
- Earned value management reports
- Risk management plans and reports
- Requirements documents
- Reports to senior management

**Recommendation 8.** We recommend that the Millennium Challenge Corporation's Vice President for Compact Operations implement the following

*controls for the MCC Integrated Data Analysis System project before proceeding to the development phase to build additional functionality for the MCC Integrated Data Analysis System:*

- *Risk management*
- *Earned value management*
- *Requirements management*

***Recommendation 9.*** *We recommend that the Millennium Challenge Corporation's Senior Assessment Board review the Corporation's information technology project management capabilities and prepare a written determination regarding whether its weaknesses should be reported, tracked, and monitored as a material weakness pursuant to the Federal Managers' Financial Integrity Act of 1982.*

# EVALUATION OF MANAGEMENT COMMENTS

The Millennium Challenge Corporation (MCC) provided written comments to the draft report that are included in their entirety in Appendix II. MCC agreed to take corrective action on all nine recommendations in the draft report.

For Recommendation 1, MCC agreed to develop a plan to establish project management capabilities for IT projects by March 25, 2011. OIG considers that a management decision has been reached.

For Recommendation 2, MCC agreed to develop a compliant earned value management policy by May 20, 2011. OIG considers that a management decision has been reached.

For Recommendation 3, MCC agreed to develop an IT project risk management policy by April 8, 2011. OIG considers that a management decision has been reached.

For Recommendation 4, MCC agreed to update the *Contracts Operating Manual* to include procedures for incorporating risk management and earned value management in contracting actions, when required. MCC plans to take final corrective action by March 31, 2011. OIG considers that a management decision has been reached.

For Recommendation 5, MCC agreed to develop a corporate systems development life cycle (SDLC) policy by April 22, 2011. OIG considers that a management decision has been reached.

For Recommendation 6, MCC agreed to develop SDLC procedures to address key decision points for IT projects by April 22, 2011. OIG considers that a management decision has been reached.

For Recommendation 7, MCC agreed to develop SDLC procedures to address what documentation must be prepared, updated, and maintained for IT projects by April 22, 2011. OIG considers that a management decision has been reached.

For Recommendation 8, MCC agreed to implement (1) risk management, (2) earned value management, and (3) requirements management for the MIDAS project before proceeding to the develop additional functionality for MIDAS. MCC plans to take final corrective action by June 3, 2011. OIG considers that a management decision has been reached.

For Recommendation 9, MCC agreed to have its Senior Assessment Board make a determination of whether IT project management capabilities should be reported, tracked, and monitored as a material weakness pursuant to the Federal Managers' Financial Integrity Act of 1982. MCC plans to take final corrective action by May 20, 2011. OIG considers that a management decision has been reached.

# SCOPE AND METHODOLOGY

## Scope

The Office of Inspector General (OIG) conducted this performance audit of the Millennium Challenge Corporation's (MCC) Integrated Data Analysis System (MIDAS) 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. To date, MCC has obligated almost \$7.4 million against the contract and paid the contractor more than \$6.9 million. However, we did not audit these amounts, but instead focused on key project controls for the MIDAS project.

We conducted our audit at MCC headquarters in Washington, DC, from August 12 to October 27, 2010. To answer the audit objective, we interviewed MCC staff and reviewed documentation related to MIDAS [formerly the Business Intelligence and Data Storage System (BIDS)]. Such documentation included the BIDS and MIDAS technical proposals, contract modifications, obligations spreadsheets, Office of Management and Budget (OMB) Exhibit 300 for MIDAS, a list of project management-certified employees, contracting officer's technical representative designation, project monitor designation, and requirement specifications. We also observed MIDAS. We reviewed laws, regulations, OMB circulars and memorandums, and other guidance related to the audit objective. The objective of this audit was to determine if MCC implemented selected key project controls to meet MIDAS projects cost, schedule, and performance goals. Thus, we focused on the following three significant controls: (1) risk management, (2) earned value management, and (3) requirements management.

## Methodology

To answer the audit objective, we reviewed key MIDAS project controls, which included (1) the risk management plan, (2) earned value management system, and (3) requirements management.

With regard to risk management, we used best practices to assess whether, for the MIDAS project, MCC performed (1) management planning, (2) monitoring, and (3) reporting. With regard to earned value management, we used OMB M-05-23, *Improving Information Technology (IT) Project Planning and Execution* (August 4, 2005) to assess whether, for the MIDAS project, MCC (1) performed earned value management systems compliance and surveillance reviews, (2) incorporated earned value management system into contracts, and (3) conducted an integrated baseline review. We also assessed MCC senior management's use of earned value management system for MIDAS in accordance with OMB A-11, Part 7, *Planning, Budgeting, Acquisition, and Management of Capital Assets*. With regard to requirements management, we considered the business needs identified in the MIDAS contract and OMB Exhibit 300 in assessing the MIDAS functional and nonfunctional requirements documents. However, we did not perform requirements gathering and analyses.

# MANAGEMENT COMMENTS



January 14, 2011

**MEMORANDUM TO:** Alvin A. Brown  
Assistant Inspector General for the Millennium  
Challenge Corporation

**FROM:** Dennis Lauer /s/  
Chief Information Officer  
Millennium Challenge Corporation

**SUBJECT:** MCC Comments on the Audit of the Millennium Challenge  
Corporation's Implementation of Selected Key Project  
Controls for the MCC Integrated Data Analysis System.

The Millennium Challenge Corporation (MCC) appreciates the opportunity to comment on the audit of the MCC's Implementation of Selected Key Project Controls for the MCC Integrated Data Analysis System. We acknowledge and consider your role vital in helping to strengthen MCC's project management capabilities for information technology projects.

Our Management Response to your recommendations follows.

**Recommendation No. 1:** Develop a detailed, written plan to establish strong project management capabilities for IT projects.

**Management Response:** MCC will develop a plan to establish project management capabilities for IT projects by March 25, 2011.

**Recommendation No. 2:** Develop written earned value management policies and procedures for IT projects, as required.

**Management Response:** MCC will develop an Earned Value Management policy that is ANSI-EIA 748A compliant by May 20, 2011.

**Recommendation No. 3:** Develop written policies and procedures to plan for, mitigate, monitor, and report on risks to IT projects.

**Management Response:** MCC will develop an IT Project Risk Management policy by April 8, 2011.

**Recommendation No. 4:** Update the Contracts Operating Manual to include procedures for including risk management and earned value management in contracting actions, when required.

**Management Response:** MCC will update the Contracts Operating Manual to include procedures for including risk management and earned value management in contracting actions, when required, by March 31 2011.

**Recommendation No. 5:** Develop written policies and procedures to obtain written approval for relying on a contractor's systems development life cycle methodology.

**Management Response:** MCC will develop an MCC corporate SDLC policy by April 22, 2011.

**Recommendation No. 6:** Develop written policies and procedures to address key decision points for IT projects.

**Management Response:** MCC will develop SDLC procedures to address key decision points for IT projects by April 22, 2011.

**Recommendation No. 7:** Establish in writing what documentation must be prepared, updated, and maintained for IT projects.

**Management Response:** MCC will develop SDLC procedures to address what documentation must be prepared, updated and maintained for IT projects by April 22, 2011.

**Recommendation No. 8:** Implement risk management, earned value management, and requirements management for the MIDAS project before proceeding to the development phase to build additional functionality for the system.

**Management Response:** MCC will implement risk management, earned value management and requirements management for the MIDAS project before proceeding to the development phase to build additional functionality for the system by June 3, 2011. This is in accordance with Recommendations 1, 2, 3, and 5.

**Recommendation No. 9:** Review MCC's IT project management capabilities and determine whether its weaknesses should be reported, tracked, and monitored as a material weakness pursuant to the Federal Managers Financial Integrity Act of 1982.

**Management Response:** MCC will refer this to the Senior Assessment Board (SAB) for a determination of whether IT project management capabilities should be reported, tracked and monitored as a material weakness pursuant to the Federal Managers Financial Integrity Act of 1982, by May 20, 2011.

# ADDITIONAL BACKGROUND INFORMATION

The Millennium Challenge Corporation (MCC) fulfills its mission to reduce poverty and promote sustainable economic growth by awarding compacts to eligible countries, and in doing so it operates in a challenging business environment. Therefore, on September 27, 2007, MCC awarded a contract to develop the Business Intelligence and Data Storage (BIDS) system in an effort to effectively carry out its work in this environment. BIDS aligns with the *Millennium Challenge Corporation Strategic Plan 2006–2011*, Strategic Goal #4: “Build MCC’s capabilities to achieve its primary strategic goals.” It further supports the three primary strategic goals: (1) to develop its human resources and financial and administrative capacity; (2) to articulate clear processes, policies, and quality standards; and (3) to build strong support systems to enable MCC to achieve its mission. BIDS was supposed to enable MCC to meet these four strategic goals by providing the capability to link financial management and performance data, and in turn to improve MCC’s programmatic effectiveness, operational efficiency, and ability to show results. The contractor was required to deliver the system to meet MCC’s needs no later than March 27, 2008.

By March 2008, MCC realized that BIDS did not function as intended. At that time, MCC management made a decision to halt the project. In September 2008, MCC modified the contract to refine the requirements for three specific aspects: (1) data collection, (2) workflow and document management, and (3) reporting. In addition, MCC changed the name of BIDS to the MCC Integrated Data Analysis System (MIDAS). In March 2009, MCC began using MIDAS in some countries.

To date, MCC has obligated almost \$7.4 million against the contract and paid the contractor more than \$6.9 million.<sup>14</sup>

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<sup>14</sup> Unaudited.

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