

January 23, 2004



Acquisition

Implementation of the DoD
Management Control Program for
Army Category II and III
Programs
(D-2004-047)

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Acronyms

APB	Acquisition Program Baseline
C4I	Command, Control, Communications, Computers, and Intelligence
MDA	Milestone Decision Authority
OMB	Office of Management and Budget
ORD	Operational Requirements Document
TEMP	Test and Evaluation Master Plan



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

January 23, 2004

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs (Report No. D-2004-047)

We are providing this report for review and comment. The Army Acquisition Executive did not respond to the draft report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. We request that the Army Acquisition Executive respond to Recommendation 1., 2.a., and 2.b. by February 23, 2004.

If possible, please send management comments in electronic format (Adobe Acrobat file only) to Audam@dodig.osd.mil. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Ms. Susan J. Lippolis at (703) 604-9081 (DSN 664-9081) or Ms. Amy L. Mathews at (703) 604-8964 (DSN 664-8964). See Appendix E for the report distribution. The team members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

A handwritten signature in black ink, appearing to read "Mary L. Ugone".

Mary L. Ugone
Director
Acquisition Management Directorate

Office of the Inspector General of the Department of Defense

Report No. D-2004-047
(Project No. D2003AE-0051)

January 23, 2004

Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs

Executive Summary

Who Should Read This Report and Why? Civil service and uniformed officers who are involved in the Army acquisition decision making process should read this report because it provides an assessment of how the Army can improve its management control program for oversight of Army weapon system programs.

Background. This audit is the first in a series of audits that will evaluate the effectiveness of the Military Departments' management control programs in timely identifying to the milestone decision authority deviations in cost, schedule, and performance requirements in acquisition program baselines for Acquisition Category II and III programs and in identifying whether program managers are reporting their status on preparing and obtaining approval of required program documentation to milestone decision authorities before milestone decision reviews. Subsequent audits will assess the Navy and Air Force management control programs for oversight of Acquisition Category II and III programs.

Results. The Army did not effectively integrate the requirements of the DoD Management Control Program into its management assessment and reporting process for 10 Acquisition Category II and III programs that had an estimated life-cycle cost of \$10.6 billion. As a result, program managers did not provide milestone decision authorities with timely and documented information that would have enabled them to assist program managers who were experiencing cost overruns, schedule delays, and performance problems. Further, Army milestone decision authorities made important program decisions at milestone decision points with incomplete information on the readiness of the systems for the next phase of the acquisition process. To ensure that Army milestone decision authorities make informed investment decisions, the Army needs to establish a reporting requirement for Acquisition Category II and III program managers to report, at least quarterly, their progress toward attaining cost, schedule, and performance requirements in acquisition program baselines and preparing and obtaining required program documentation before milestone decision reviews. Implementation of this reporting requirement will enable Army milestone decision authorities to ensure that program managers are on schedule toward satisfying program requirements, submitting program deviation reports when required, and reporting deviations from acquisition program baselines as material management control weaknesses. (See the Finding section for details.)

Management Comments. A draft of this report was issued on October 17, 2003. The Army Acquisition Executive did not provide comments on the draft report. We request that the Army Acquisition Executive comment on this report by February 23, 2004.

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Background

This audit is the first in a series of audits that will evaluate the effectiveness of the Military Departments' management control programs in timely identifying deviations in cost, schedule and performance requirements in acquisition program baselines (APB) for Acquisition Category II and III programs¹ to the milestone decision authority (MDA) and in identifying whether program managers are preparing and obtaining required program documentation before milestone decision reviews. DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, defines Acquisition Category II programs as major systems with an estimated total expenditure for research, development, test, and evaluation of less than \$365 million but more than \$140 million, or for procurement, of less than \$2.19 billion but more than \$660 million in FY 2000 constant dollars. DoD Instruction 5000.2 defines an Acquisition Category III program as any program that does not meet the minimum requirements for an Acquisition Category II program. Subsequent audits will assess the Navy and Air Force management control programs for oversight of Acquisition Category II and III programs.

Secretary of the Army Emphasizes Management Control Process. The Secretary of the Army stressed the importance of management controls in a February 25, 2002, memorandum on stewardship and the Army management control process. The Secretary emphasized that the Army management controls promote the wise use of resources and deter fraud, waste, and abuse. The Secretary stated that to obtain the resources that are necessary to maintain a world-class army, the Army must convince the Congress that it is a good steward of the public's tax dollars and that effective management controls are essential to gaining that trust. The Secretary went on to say that commanders and managers at all levels must understand the importance of evaluating controls objectively and sharing the results. The Secretary asked the Army leadership to stress the importance of effective management controls to their mission, ensure that their staffs understand their responsibilities in the process, and demand integrity in reporting management control problems and the actions taken to resolve them.

Management Control Policy. Management controls are the organization, policies, and procedures that agencies use to ensure that programs achieve their intended results; resources are used consistent with an organization's mission; programs and resources are protected from fraud, waste, and mismanagement; laws and regulations are followed; and reliable data are obtained, maintained, reported, and used for program decision making. Many statutes and executive documents either explicitly or implicitly address the importance of management controls. Further, the DoD and the Army issued guidance to implement the requirements of Office of Management and Budget (OMB) Circular A-123, "Management Accountability and Control," June 21, 1995.

¹ An acquisition category determines an acquisition program's level of review, decision authority, and applicable procedures. The acquisition categories consist of I, major Defense acquisition programs; IA, major automated information systems; II, major systems; and III, programs not meeting the criteria for acquisition categories I, IA, or II.

Federal Policy. OMB Circular A-123 requires DoD to provide an overall annual statement to the President and Congress explaining the state of DoD management controls, any control weaknesses, and noncompliant accounting systems. The Secretary of Defense is required to state whether DoD management controls provide reasonable assurance that resources are being protected from fraud, waste, and mismanagement. Circular A-123 provides guidance for establishing, evaluating, improving, and reporting on management controls in programs and administrative organizations, and requires that all management levels be involved in ensuring that management controls are adequate. Further, it directs that executive organizations establish cost-effective management control systems to provide reasonable assurance that resources are protected against fraud, waste, and mismanagement and that program activities be effectively and efficiently managed to achieve the goals of the organization. Circular A-123 also states that Federal managers must carefully consider the appropriate balance of controls in their programs and operations. Appropriate management controls should be established and integrated into each system to direct and guide operations. However, Circular A-123 notes that a separate management control process need not be instituted, particularly if its sole purpose is to satisfy management control reporting requirements.

DoD Policy. To satisfy the OMB requirement, DoD Directive 5010.38, “Management Control (MC) Program,” August 26, 1996, requires that the Military Departments, the Defense agencies, and the major joint commands submit annual statements on their management controls to the Secretary of Defense. There are no exemptions for acquisition programs. DoD Directive 5010.38 also provides policy, prescribes procedures, and assigns responsibilities for management control systems. DoD Directive 5000.1, “The Defense Acquisition System,” May 12, 2003, requires program managers to establish program goals for cost, schedule, and performance parameters that describe the program over its life cycle. Directive 5000.1 further states that approved program baseline parameters will serve as control objectives, and that the program manager is required to identify deviations from approved program baseline parameters and exit criteria. Further, the DoD Interim Defense Acquisition Guidebook states that the program manager should identify deviations from the approved program baseline parameters and exit criteria as material weaknesses.

Army Policy. Army Regulation 11-2, “Army Programs Management Control,” August 1, 1994, implements public law and OMB and DoD guidance for a management control process, and requires Army commanders and managers to establish and maintain effective management controls and to keep their superiors informed of identified risks and weaknesses in those controls.

Scope of Army Programs Surveyed. To perform the audit, we requested that seven Army Program Executive Offices identify for our review one Acquisition Category II and one Acquisition Category III system that were beyond the concept and technology development phase, but that had not received approval for full-rate production. The Acquisition Category II systems identified included the Advanced Precision Kill Weapon System, the Firefinder/Phoenix, the Line-of-Sight Anti-tank, and the Tactical Unmanned Aerial Vehicle. The Acquisition Category III systems identified included the Containerized Batch Laundry

System, the Improved Position and Azimuth Determining System, the Mobile Tower System, the Multi-Temperature Refrigerated Container System, the Prophet System, and the Tactical Internet Management System.

Objectives

The overall audit objective was to evaluate the effectiveness of the management control program that the Army Acquisition Executive, or his designees, used for Army Acquisition Category II and III weapon systems. We also assessed the process for recognizing and correcting material management control weaknesses. See Appendix A for a discussion of the scope and methodology and the review of the management control program. See Appendix B for prior coverage related to the objectives. Appendix C defines management control objectives and techniques. Appendix D summarizes the status of certain program documentation prepared for the 10 programs reviewed.

Army Management Control Program for Acquisition Category II and III Programs

The Army did not effectively integrate the requirements of the DoD Management Control Program into its management assessment and reporting process for 10 Acquisition Category II and III programs that had an estimated life-cycle cost of \$10.6 billion. This condition occurred, in part, because the Army did not have a reporting mechanism in place for program managers to inform MDAs, at least quarterly, of their progress toward:

- satisfying cost, schedule, and performance requirements in APBs; and
- obtaining, preparing, updating, and issuing approved program documentation before and at planned milestone decision reviews.

The program managers need that documented information to effectively manage their programs. However, program managers contributed to this condition by not reporting program deviations and not requesting revisions to APBs when cost, schedule, and performance breaches occurred. As a result, program managers did not provide MDAs with timely and documented information so they could assist program managers who were experiencing cost overruns, schedule delays, and performance problems. Further, MDAs made important program decisions at milestone decision points with incomplete information on the readiness of the systems for the next phase of the acquisition process.

Army Management Control Programs

The Army did not effectively integrate the requirements of the DoD Management Control Program into its management assessment and reporting process for 10 Acquisition Category II and III programs that had an estimated life-cycle cost of \$10.6 billion. Effective October 1, 1994, the Office of the Assistant Secretary of the Army (Financial Management and Comptroller) restructured the Army management control process from a heavily centralized program to a decentralized program. The Assistant Secretary intended the restructured process to reduce workload and promote ownership and accountability for effective management controls by:

- limiting required evaluations to key management controls,
- providing maximum flexibility to commanders and managers on how they conduct those evaluations, and
- raising the level of responsibility for certifying those evaluations.

The Army's senior functional proponents determine and identify in their governing policy directives the management controls that the Army managers must evaluate. Commanders and managers develop management control plans to cover the required evaluations as well as the additional areas that they choose to evaluate over a 5-year period. The processes used to evaluate the key management controls may include checklists, audits, inspections, or other reviews deemed appropriate by the commanders and managers. Also, commanders and managers designate which senior officials, generally colonels, civilian equivalents, or above, will act as the assessable unit managers responsible for certifying those evaluations. The Army identified management control assessable units as Program Executive Offices, Program Management Offices, or Project Management Offices for Acquisition Category II and III programs.

Army Regulation 70-1, "Army Acquisition Policy," December 15, 1997, identifies milestone documentation requirements as the key management control for acquisition programs and the milestone decision review process as the evaluation of that control. Therefore, the Army relied on the milestone review process for assurance that management controls were in place. The Army's process to evaluate management controls for acquisition programs did not, however, keep MDAs informed of program managers' progress toward satisfying program requirements before milestone decision reviews. Accordingly, the Army's management control program for acquisition programs did not ensure that program managers took the necessary actions to satisfy program cost, schedule, and performance requirements in the APBs before milestone reviews. The Army's management control program also did not ensure that program managers reported deviations from APB cost, schedule, and performance parameters, or that those breaches were reported as material management control weaknesses to the Assistant Secretary of the Army (Financial Management and Comptroller).

Army Reporting Process

Program managers for approximately 500 Army Acquisition Category II and III programs did not have a reporting mechanism to inform the MDA, at least quarterly, of their progress towards satisfying cost, schedule, and performance requirements in approved APBs and exit criteria requirements for the next phase of the acquisition process. Without a reporting mechanism in place, the Army cannot provide appropriate oversight for those programs. Although Acquisition Category II and III programs are valued lower than Acquisition Category I programs, the sheer number of Acquisition Category II and III programs contributes to a large aggregate total. The Army cannot calculate an aggregate value for all Acquisition Category II and III programs because that information is not captured by any of the Army systems, but the 10 programs reviewed had an estimated life-cycle cost of \$10.6 billion. In an era of funding constraints, the Army needs to manage its investment dollars more wisely than ever and cannot afford to overlook the oversight of the Acquisition Category II and III programs.

The reporting process used by the Program Executive Officers did not require the program managers to report on their efforts to obtain, prepare, and update approved program documentation before planned milestone decision reviews. The program documentation is to be prepared and approved before milestone decision points, kept up-to-date between milestone decision reviews, and provide the MDA with the management control information required in DoD Directive 5000.1 to timely identify program deviations from approved program baseline parameters and exit criteria. As implemented, the Army's management assessment and reporting processes did not provide MDAs with that management control information. To be effective, the Army's management control program should integrate those management control requirements in its management assessment and reporting processes.

Reporting on Cost, Schedule, and Performance Requirements. Program managers for major Defense acquisition programs are required to report quarterly on their progress towards satisfying cost, schedule, and performance requirements, including approved program baseline parameters and exit criteria requirements in the Defense Acquisition Executive Summary. However, the Army did not extend a similar reporting requirement to other acquisition programs until recently. In October 2002, the Army Acquisition Executive began requiring program managers for Acquisition Category II programs to submit monthly program status reports, but did not require program managers for Acquisition Category III programs to report periodically on their progress.

Reporting for Acquisition Category II Programs Reviewed. Program managers for the four Acquisition Category II programs reviewed prepared SmartCharts² and three of the four program managers prepared monthly acquisition reports and monthly acquisition program review reports. One program manager had not yet prepared monthly acquisition reports and monthly acquisition program review reports because the project office personnel stated that the Department of Army had not tasked them to develop the reports.

Reporting for Acquisition Category III programs Reviewed. Program managers for three of the six Acquisition Category III programs reviewed provided SmartCharts, but the remaining program managers did not submit standardized monthly reports containing cost, schedule, and performance data to the MDAs.

Adequacy of Reported Information. The monthly acquisition reports, monthly acquisition program review reports, and SmartCharts that the program offices prepared provided the MDA with up-to-date APB cost, schedule, and performance data, but did not, in most cases, provide the APB threshold values for the MDA to compare against. Without listing the APB thresholds together with the current program status, the MDA may not realize that the program is over budget or behind schedule. Additionally, the program office reports did not provide the MDA with information on whether the program would achieve the exit criteria established at the last milestone decision review. As a result, program managers did not provide the MDAs with management control

²A key element of the Acquisition Information Management client-server information and reporting system.

information required in DoD Directive 5000.1 to timely identify program deviations from approved program baseline parameters and exit criteria.

Reporting on the Preparation and Completion of Required Program Documentation. Program managers are not required to advise the MDA on their progress towards completing and obtaining key program documentation, such as the Operational Requirements Document (ORD), the APB, the Test and Evaluation Master Plan (TEMP), and the Command, Control, Communications, Computers, and Intelligence (C4I) support plan, before program initiation, which is usually declared when a program enters the system development and demonstration acquisition phase. Before program initiation and before subsequent milestone reviews are approved, however, program managers are required to provide those key program documents for the MDA to review.

Program managers for all 10 programs held milestone reviews with MDAs for entry into the system development and demonstration or production and deployment phase of the acquisition process before preparing, updating, or obtaining all required documentation. For example, the Assistant Secretary of the Army (Acquisition, Technology, and Logistics) approved the Tactical Unmanned Aerial Vehicle to enter the full rate production and deployment phase of the acquisition process in October 2002, even though the program manager did not have an approved C4I support plan, although the APB identified C4I interoperability as a key performance parameter, and had not obtained a statement of operational effectiveness, an affordability assessment, and a system evaluation report. The C4I support plan was subsequently approved on May 13, 2003. Because the program manager did not have an approved C4I support plan, contract requirements defining all the key system interfaces with other systems may not have been identified and provided to the system contractor.

Documentation that was not available to MDAs at milestone reviews varied significantly among the programs reviewed. For instance, program managers for two programs did not have an approved ORD, program managers for five programs did not have an approved TEMP, and program managers for three programs did not have an approved C4I support plan available at their previous milestone review. Without an approved ORD that contains validated system performance requirements, the program manager and contractor cannot be sure that the system design will meet warfighter-required capabilities, and the test community does not have validated performance parameters for developmental and operational testing. An approved TEMP is an essential tool for the program manager and operational testers to identify resources needed to perform necessary tests to test all key performance parameters and resolve problem areas. The C4I support plan is critical not only for system design, but for test organizations to identify system integration issues that need to be addressed during testing. Although acquisition regulations encourage management to streamline and tailor acquisition documentation requirements, the ORD, the TEMP, and the C4I support plan must be prepared and completed to provide the MDA with information needed to assess how well a program is progressing toward the next milestone review in the acquisition process.

Updating Program Documentation Between Milestone Decision Reviews. Additionally, program managers did not provide MDAs with updated program

documentation between milestone decision reviews when significant changes affected programs because they believed that updating program documentation added no value to the process if MDAs were made aware of the changes through other means. For example, the Mobile Tower System experienced significant cost and schedule deviations, but the program manager did not submit a program deviation report to document the effect on the program and to request the approval of a revised APB. Instead, the program manager verbally communicated the information concerning the cost and schedule breaches to the MDA. Program managers need to document significant changes to program direction in cost, schedule, and performance requirements so that all parties affected by the changes, including the intended user of the system and the test community, can plan and react accordingly. Updating formal program documentation is essential to ensure that the program manager evaluates the effect of the changes on all aspects of the program.

Appendix D describes the completeness of program documentation available at milestone decision reviews for the 10 programs reviewed. Without having all required program documentation, the program manager and MDA may not be aware of potential or actual cost, schedule, and performance problems affecting the program at the time of the milestone decision review. For example, the Mobile Tower System experienced schedule delays and cost overruns after the milestone decision review because the test community required more system testing than originally planned. Because the TEMP was not completed and fully reviewed within the test community, the program manager's estimates on the time and resources needed for testing at the milestone decision review were unrealistic.

If program managers had formally reported delays in the completion or approval process for key program documents, such as the ORD and the TEMP, to the MDAs, the MDAs could have initiated actions to make sure that the documentation was prepared, updated, and approved before the milestone decision reviews, or they could have rescheduled the milestone decision reviews pending the completion of required program documentation. Because program managers were not periodically reporting their status toward completing or obtaining required program documentation, MDAs did not have information needed to take appropriate actions before the milestone decision reviews for the 10 programs reviewed. However, MDAs also were not requesting information on the status of program documentation from program managers before program milestone reviews. MDAs interviewed identified extenuating circumstances why they approved acquisition programs for which they were responsible to continue to the next phase of the acquisition process without having the necessary program documentation available. The pervasiveness of this condition, that is, the MDAs for all 10 acquisition programs reviewed had extenuating circumstances for approving the programs to continue into the next phase of the acquisition process, reinforces the need for program managers to periodically report to MDAs on their status toward having the completed program information available for upcoming milestone decision reviews.

Program Deviation Reporting Requirements. In addition to not routinely reporting on program status towards satisfying program cost, schedule, and performance parameters in APBs, program managers for four acquisition programs did not submit revised APBs to the MDA within 90 days of when a

breach of APB parameters occurred. Reporting program deviations is an essential communication between the program managers and MDAs because it serves as an early warning of impending program complications and allows the MDA to help with a program solution. If program managers do not submit revised APBs, the program deviations can go unnoticed by the MDA while the program manager attempts to bring the program back into control.

Also, program managers were not reporting breaches of APB parameters as material management control weaknesses as required in DoD Directive 5000.1 and the DoD Interim Guidebook. In one instance, the product manager for the Tactical Internet Management System did prepare a program deviation report and requested a revision of the APB parameters; however, the program manager did not report the breach as a material management control weakness as required. As a result, the FY 2002 statements of assurance prepared by the Assistant Secretary of the Army (Acquisition, Technology, and Logistics) and the Program Executive Offices did not identify material management control weaknesses for five of the Army acquisition programs reviewed.

Effect of Management Control Techniques on Program Documentation

Program documentation is the primary means for providing the MDA, as well as other key managers, with information needed for decision making. Without accurate and updated program documents, such as the APB, the ORD, the TEMP, and the C4I support plan, and the program manager's periodic reporting on progress made toward satisfying those requirements, the program manager cannot provide assurance to the MDA that cost, schedule, and performance thresholds in the APB are being achieved and that the program is affordable. Without this information, program managers and MDAs did not have documented information needed for program management and oversight, and MDAs did not have information needed to assist program managers who were experiencing program cost overruns, schedule delays, and performance problems. Further, MDAs did not have the information they needed at milestone decision points to make informed program decisions on the readiness of the systems to continue into the next phase of the acquisition process.

Ongoing Management Action

The Army is developing a new database called the Acquisition Information Enterprise System. The system will encompass the following initiatives:

- a virtual Army Systems Acquisition Review Council to standardize the process of preparing, coordinating, and staffing program documentation;
- an APB module to provide a centralized holding place for all unclassified APBs;

-
- acquisition program portfolios to facilitate decision making by providing program information tailored to the user's needs;
 - monthly acquisition reports, monthly acquisition program review reports, and SmartCharts to provide monthly information on program status;
 - Defense Contract Management Agency assessments to evaluate the overall health of the program; and
 - a probability-of-success metric to indicate how well a program is delivering the required capability within approved cost and schedule parameters.

The system will predominantly be used for Acquisition Category I and II programs. Although the system will provide a single location to obtain information on the status of program documentation and currently approved APB parameters, it will not provide the MDA with a comparison of current cost, schedule, and performance parameters to approved APB parameters in a single document. As indicated in the finding paragraph, the Army also needs a reporting system for program managers of Acquisition Category III programs to report on their progress toward satisfying the APB parameters.

Conclusion

The management control program for Army Acquisition Category II and III programs varied depending upon the commitment of the program management. However, even in those instances in which the Army management had well-defined systems for reporting on assessable units, assessments concerning various aspects of the system acquisition process for programs were issued only once every 5 years. Those assessments did not provide useful and timely management control information to MDAs on the program manager's progress toward satisfying cost, schedule, and performance parameters in APBs, which are the control objectives for acquisition programs established in DoD Directive 5000.1.

Techniques to achieve control objectives also exist in the preparation and presentation of key documents such as the APB agreement, earned value management data, and operational test reports. Accordingly, establishing an Army reporting requirement for Acquisition Category II and III programs that is patterned after the Defense Acquisition Executive Summary would provide Army MDAs with management control information to implement the requirements in DoD Directive 5000.1 and would satisfy the management control reporting requirements in DoD Directive 5010.38.

Although the new Acquisition Information Enterprise System will correct some of the conditions identified in the finding paragraph, the Army Acquisition Executive should consider implementing the following recommendations when developing or modifying existing Army automated reporting systems.

Recommendations

1. We recommend that the Army Acquisition Executive establish a reporting requirement for program managers of Acquisition Category II and III programs to report to the milestone decision authority, at least quarterly, on their progress towards satisfying cost, schedule, and performance parameters in approved program baselines, satisfying exit criteria for the next phase in the acquisition process, and obtaining and preparing key program documentation, such as the operational requirements document; the test and evaluation master plan; and the command, control, communication, computers, and intelligence support plan between and for milestone decision reviews.

2. We recommend that Army Program Executive Officers:

a. Use information in the program manager's progress report discussed in Recommendation 1. to require that program managers prepare program deviation reports when breaches of acquisition program baseline parameters occur.

b. Report breaches of acquisition program baseline parameters and unattained program exit criteria as material management control weaknesses in the Army annual statements of assurance as required in DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003, and DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996.

Management Comments. The Army Acquisition Executive did not comment on the recommendations. We request that he provide comments in response to the final report.

Appendix A. Scope and Methodology

To perform the audit, we selected the seven Program Executive Offices based on there being more than one Program Executive Office located at a geographic site, such as Redstone Arsenal. The remaining five Program Executive Offices were not co-located at geographic sites with other Program Executive Offices. We requested that each select for our review one Acquisition Category II system and one Acquisition Category III system that were beyond the concept and technology development phase, but had not entered the production and deployment phase of the acquisition process. Because some Program Executive Offices did not have programs that met our criteria, we reviewed the following 10 Army acquisition programs that the Program Executive Offices identified:

Program Executive Office Aviation

- Tactical Unmanned Aerial Vehicle¹
- Mobile Tower System²

Program Executive Office Air and Missile Defense

- No programs met our criteria

Program Executive Office Combat Support and Combat Service Support

- Multi-Temperature Refrigerated Container System²
- Containerized Batch Laundry System²

Program Executive Office Command, Control, and Communications Tactical

- Tactical Internet Management System²

Program Executive Office Ground Combat Systems

- Improved Position and Azimuth Determining System²

Program Executive Office Intelligence, Electronic Warfare and Sensors

- Firefinder/Phoenix¹
- Prophet²

Program Executive Office Tactical Missile

- Advanced Precision Kill Weapon System¹
- Line-of-Sight Anti-tank¹

¹ Acquisition Category II.

² Acquisition Category III.

In reviewing the management control process used by the Army for Acquisition Category II and III programs, we examined FY 2002 management control documentation. That documentation included management control-related taskings from the Assistant Secretary of the Army (Financial Management and Comptroller), the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Army Program Executive Offices; Army annual statements of assurance; and supporting documentation. We reviewed those documents to identify whether a standardized procedure was in place to complete and submit the required documentation and to determine whether the Army had identified any material management control weaknesses for Army Acquisition Category II and III programs.

To evaluate the reporting process used by the Army to support its management control of acquisition programs, we reviewed documentation dated from August 1994 through August 2003. The documentation included acquisition decision memorandums; APBs; acquisition strategy reports; affordability assessments; analyses of alternatives; C4I support plans; programmatic environmental safety and health evaluations; ORDs; and TEMPs for the 10 Army programs selected for review. We reviewed those documents to ensure that the required program documentation for each program was complete, accurate, and up-to-date.

We performed this audit from January through October 2003 in accordance with generally accepted government auditing standards.

Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the DoD Weapons Systems Acquisition high-risk area.

Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of the Review of the Management Control Program. In accordance with DoD policy, acquisition managers are to use program cost, schedule, and performance parameters as control objectives in APBs to implement the requirements of DoD Directive 5010.38. Accordingly, we limited our review to management controls directly related to program cost, schedule, and performance in APBs. We also reviewed the adequacy of management's self-evaluation of those controls.

Adequacy of Management Controls. We identified material management control weaknesses for the Army, as defined in DoD Instruction 5010.40. The

Army Acquisition Executive and the Program Executive Officers did not ensure that controls for obtaining, preparing, updating, and approving program documentation and preparing program deviation reports were sufficient to ensure that program managers timely provided MDAs with acquisition program documentation needed to effectively oversee a program's cost, schedule, and performance data at and between milestone decision reviews. Recommendations 1. and 2., if implemented, will improve the quality and timeliness of program information provided to Army MDAs so that they can make fully informed investment decisions. A copy of the report will be provided to the senior official responsible for management controls in the Army.

Adequacy of Management's Self-Evaluation. The seven Program Executive Offices visited identified Program Executive Offices and project or program offices as assessable units; however, none of the Program Executive Offices, project offices, or program offices reviewed identified a material management control weakness related to preparing and updating required acquisition program documentation used for program oversight and decision making. The Program Executive Officers and project or program managers did not report those weaknesses because they did not recognize the lack of up-to-date documentation as a material management control weakness.

Appendix B. Prior Coverage

During the last 5 years, the Inspector General of the Department of Defense (IG DoD) and the Army Audit Agency issued seven reports that discussed material management control weaknesses in the acquisition programs selected for this audit or that discussed the Army management control process for Acquisition Category II and III programs.

IG DoD

IG DoD Report No. D-2003-051, "Development Testing of Prophet Mission-Critical Software," January 22, 2003

IG DoD Report No. D-2002-012, "Acquisition of the Firefinder (AN/TPQ-47) Radar," October 31, 2001

Army Audit Agency

Report No. A-2003-0054-FFG, "Review of The Army Management Control Process (Fiscal Year 2002), An Assessment for the Secretary of the Army," November 13, 2002

Report No. AA 02-123, "Review of the Army Management Control Process (Fiscal Year 2001), An Assessment for the Secretary of the Army," January 8, 2002

Report No. AA 01-56, "Review of the Army Management Control Process (Fiscal Year 2000), An Assessment for the Secretary of the Army," November 6, 2000

Report No. AA 00-58, "Review of the Army Management Control Process (Fiscal Year 1999), An Assessment for the Secretary of the Army," November 4, 1999

Report No. AA 99-44, "Review of the Army Management Control Process (Fiscal Year 1998), An Assessment for the Secretary of the Army," November 5, 1998

Appendix C. Management Control Objectives and Techniques

Control Objectives. Control objectives are the specific goals, conditions, or levels of control that a manager establishes for an assessable unit to provide reasonable assurance that the resources assigned to that organization are adequately safeguarded against waste, fraud, and mismanagement.

Control objectives must be identified for each organization and should be logical, applicable, reasonably complete, and tailored to an agency's operations, which means that the control objectives should be the positive effects that management tries to attain or the negative effects it seeks to avoid through adherence to established management controls.

For Army acquisition programs, basic control objectives involve the program office's ability to adhere to a weapon system's cost, schedule, and performance baseline parameters that are embodied in APBs. The program manager updates and the MDA approves the APB at milestone reviews. As weapon systems progress through the acquisition process, baseline parameters are refined and the level of detail evolves at succeeding milestone reviews. The program manager identifies minimum acceptable requirements for each baseline parameter, known as thresholds. Values for APB parameters show the system's cost and performance characteristics as they are expected to be produced and fielded, as well as critical acquisition schedule events. If those minimum acceptable levels or thresholds are not met, the MDA may require a reevaluation of alternative concepts or design approaches.

Program exit criteria are also control objectives for Army acquisition programs. Exit criteria are the specific minimum requirements that a system must satisfactorily demonstrate before the MDA will consider approving the system for transitioning to the next acquisition phase.

Control Techniques. Control techniques are mechanisms by which control objectives are achieved. A control technique is any form of organization, procedure, or document flow that is relied on to accomplish a control objective and help safeguard or protect an organization from fraud, waste, and mismanagement. Control techniques include, but are not limited to, specific policies, procedures, plans of organization (including separation of duties), and physical arrangements (such as locks and fire alarms). Management control techniques are to continually provide a high degree of assurance that the management control objectives are being achieved.

For Army acquisition programs, the milestone review documentation specified in DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, provides control techniques to achieve the control objectives. The management control techniques in the Instruction include the documents in the following table.

Management Control Techniques

<u>Control Technique</u>	<u>Objective(s) Controlled</u>	<u>Prepared By</u>	<u>Submitted To</u>
APB Agreements	Cost, schedule, and performance baselines	Program Manager	MDA
C4I Support Plan	C4I support requirements to satisfy the development, testing, training, and operational employment of the system	DoD Component	MDA
Earned Value Management Data	Reports the progress of the program in meeting cost parameters	Contractor	Program Manager
ORD	Translates mission needs into detailed performance capabilities and characteristics	DoD Component	Service
Operational Test Reports	Reports on the progress of the program in meeting performance parameters	Independent Test Agency	Program Manager
TEMP	Major elements and objectives of the test and evaluation program	Program Manager	Director, Operational Test and Evaluation ¹ and MDA

DoD Directive 5010.40, “Management Control (MC) Program Procedures,” August 28, 1996, requires system documentation to be maintained for management control programs. System documentation includes the policies and procedures, organizational charts, manuals, flow charts, and related written and graphic materials necessary to describe organizational structure, operating procedures, and administrative practices to communicate responsibility and authority for accomplishing programs and activities. This type of management control documentation is in DoD Instruction 5010.40.

¹ The Director, Operational Test, and Evaluation approves the TEMP for all test and evaluation oversight programs in the Office of the Secretary of Defense.

Appendix D. Program Documentation Status

DoD Instruction 5000.2 identifies mandatory program documents that program managers must provide at program milestone reviews. The DoD Interim Defense Acquisition Guidebook explains the importance of the acquisition program documents. The following table shows for five mandatory acquisition program documents whether the program managers for the 10 programs reviewed provided the MDA with the completed and approved documents at the acquisition program's last milestone decision review.

Mandatory Program Documentation Provided					
<u>Program</u>	<u>APB</u>	<u>C4I Support Plan</u>	<u>ORD</u>	<u>Programmatic Environmental Safety and Health Evaluation</u>	<u>TEMP</u>
APKWS ¹	Yes	Waiver	No	Yes	Yes
CBL ²	Yes	N/A ³	Yes	No	Yes
IPADS ⁴	Yes	N/A	Yes	No	No
MTRCS ⁵	Yes	N/A	Yes	No	Yes
MOTS ⁶	Yes	No	Yes	Yes	No
LOSAT ⁷	Yes	Yes	Yes	N/A	No
Phoenix	Yes	No	Yes	N/A	No
Prophet	No	Yes	Yes	No	Yes
TIMS ⁸	Yes	Yes	No	N/A	No
TUAV ⁹	Yes	No	Yes	Yes	Yes

¹Advanced Precision Kill Weapon System

²Containerized Batch Laundry

³Not Applicable

⁴Improved Position and Azimuth Determining System

⁵Multi-Temperature Refrigerated Container System

⁶Mobile Tower System

⁷Line-of-Sight Anti-tank

⁸Tactical Internet Management System

⁹Tactical Unmanned Aerial Vehicle

Importance of Milestone Documents

Acquisition Program Baseline. Every acquisition program must have an APB at program initiation. The program manager prepares the APB in coordination with the user to document the most important cost, schedule, and performance parameters (both threshold and objective) for the program. The program manager bases the APB on user performance requirements, schedule requirements, and an estimate of total program cost. The program manager, in coordination with the user, should obtain approval for a revised APB if the program is restructured or if there is an unrecoverable program deviation.

C4I Support Plan. DoD Components must develop C4I support plans for all programs early in the acquisition process when the Components connect in any way to the communication and information infrastructure. Acquisition decision makers are required to review the C4I support plan at each program milestone decision; at decision reviews, as appropriate; and whenever support requirements change. A C4I support plan assists in identifying system integration issues that need to be addressed during testing. Additionally, a C4I support plan assists testers in identifying potential system integration issues that will need to be tested.

Operational Requirements Document. The ORD is a formatted statement containing performance parameters for the proposed concept or system that is prepared by the user or the user's representative. An ORD provides the developmental and operational testers with the ability to determine whether the system meets minimum required system capabilities.

Programmatic Environmental Safety and Health Evaluation. The program manager is to initiate the evaluation at the earliest possible time in support of a program initiation decision and maintain an updated evaluation throughout the life cycle of the program. When program managers perform the analyses for the programmatic environmental safety and health evaluation, they gain information on the potential environmental, safety, and health effects of developing, fielding, storing, demilitarizing, and disposing of their weapon systems. Information should be obtained before the program enters the system development and demonstration phase to prevent program delays and added program costs stemming from the violation of environmental, safety, or health laws.

Test and Evaluation Master Plan. The TEMP documents the overall structure and objectives of the test and evaluation program. It provides a framework within which to generate detailed test and evaluation plans and to document schedule and resource implications associated with the test and evaluation program. The TEMP identifies necessary developmental test and evaluation, operational test and evaluation, and live-fire test and evaluation activities. An approved TEMP is an essential tool for the program manager and operational testers to identify resources needed to perform necessary tests and to test all key performance parameters and resolve problem areas.

Program Documentation Status

Advanced Precision Kill Weapon System. The Program Executive Officer, Tactical Missiles approved Block I of the Advanced Precision Kill Weapon System to enter the system development and demonstration phase of the acquisition process on December 20, 2002. At program initiation, the program did not have an ORD. In August 2002, because of an immediate need for a low cost, air-to-ground capability, the Deputy Chief of Staff for Operations and Plans issued a memorandum that validated the Advanced Precision Kill Weapon System Block I requirements for rocket seeker development instead of preparing an ORD. In September 2003, the Director of Combat Developments, U.S. Army Aviation Center was developing an ORD for the Advanced Precision Kill Weapon System that addressed the performance requirements needed to achieve Blocks I, II, and III. The project office estimated the completion of the ORD by December 15, 2003.

Containerized Batch Laundry System. The Program Executive Officer, Combat Support and Combat Service Support approved the Containerized Batch Laundry System to enter the system development and demonstration phase of the acquisition process at program initiation on July 3, 2002. The August 7, 2000, ORD stated that the Containerized Batch Laundry System would meet industry and Government safety and health standards; however, the product office did not prepare a programmatic environmental safety and health evaluation to support the ORD assessment for the Containerized Batch Laundry System. A programmatic environmental safety and health evaluation was approved on August 29, 2003.

Improved Position and Azimuth Determining System. The Program Executive Officer, Ground Combat Systems approved the Improved Position and Azimuth Determining System to enter the system development and demonstration phase of the acquisition process at program initiation on December 30, 2002, subject to the completion of updates to the cost estimate, the program schedule, and the TEMP before the program office could award the development contract. The MDA approved updates to those documents on July 24, 2003, and awarded the contract on July 25, 2003. At the December 2002 milestone decision review, the program office also did not have a programmatic environmental safety and health evaluation for review. Instead of preparing a programmatic environmental safety and health evaluation at the time of the review, the product office included plans to implement system safety, health, and environmental compliance in various program documents. The product office plans to complete the programmatic environmental safety and health evaluation before the production and deployment milestone decision review in May 2004.

Multi-Temperature Refrigerated Container System. The Program Executive Officer, Combat Support and Combat Service Support approved the Multi-Temperature Refrigerated Container System to enter the system development and demonstration phase of the acquisition process at program initiation on January 31, 2003. A programmatic environmental safety and health evaluation had not been prepared at that time. The project office was unaware of the programmatic environmental safety and health evaluation requirement for the Multi-Temperature Refrigerated Container System until after the milestone

decision review package had already been staffed. Since related information was contained within other program documents, the environmental safety and health officer did not require the project office to go back and create a programmatic environmental safety and health evaluation. The project office did, however, develop a System Safety Program/Health Hazard Assessment Management Plan dated July 2002, but had not performed the planned assessment.

Mobile Tower System. The Deputy for Systems Acquisition, U.S. Army Aviation and Missile Command approved the Mobile Tower System to enter Phase I, program definition and risk reduction phase of the acquisition process on November 27, 2000. The Deputy later saw the opportunity to capitalize on the efforts of other Services to move the program more rapidly through the program definition and risk reduction phase. On November 14, 2001, the Deputy directed the project manager to procure a modified Air Force Tower Restoral Vehicle, perform and complete necessary developmental tests and limited user tests of the modified Tower Restoral Vehicle, and complete other requirements and documents needed to support a production decision. The Program Executive Officer for Aviation approved the TEMP on August 22, 2003, almost 2 years after the decision to proceed with the development of the modified Tower Restoral Vehicle. As of October 2003, no C4I support plan had been prepared. Additionally, in November 2002, the program manager prepared program cost and schedule estimates that showed that the APB parameters for cost and schedule had been breached. As of October 2003, the project manager had not prepared a program deviation report or proposed an APB update to the MDA. The project manager stated that he verbally notified the MDA of cost and schedule deviations, and he would brief the MDA of any changes to the APB after he determined the necessary revisions to technical cost and schedule parameters.

Line-of-Sight Anti-tank System. On September 29, 2000, the Program Executive Officer, Tactical Missiles delayed approval for the Line-of-Sight Anti-tank to enter the engineering manufacturing development/advanced concept technology demonstration plus phase until the ORD was completed and the entrance criteria were discussed and updated. The Army Training and Doctrine Command approved the ORD for the Line-of-Sight Anti-tank on January 8, 2001. On January 19, 2001, the Program Executive Officer approved the program to enter into the engineering manufacturing development and advanced concept technology demonstration plus phase of the acquisition process before the program manager submitted an approved TEMP. The Director, Operational Test and Evaluation approved the TEMP on July 2, 2003. The DoD Interim Guidebook states that within 90 days of a program deviation, the program should be within established APB parameters or a new APB should be approved. The project office was aware that the APB threshold date for the first unit equipped could not be achieved, but stated they would update the APB for the production milestone decision review that is scheduled for FY 2004.

Phoenix Battlefield Sensor System. The Phoenix system evolved from the Firefinder pre-planned product improvement effort. The Program Executive Officer, Intelligence, Electronic Warfare, and Sensors approved the Firefinder to enter the engineering and manufacturing development phase of the acquisition process on November 13, 1997, without a C4I support plan for MDA review. As of October 2003, the product office was still developing a TEMP and a C4I

support plan. In December 2002, the Firefinder was renamed the Phoenix and the program baseline was revised in January 2003. The MDA approved the revised APB on June 13, 2003. Even though the design requirements for the Phoenix had significantly changed since the ORD was approved in September 1996, the Army Deputy Chief of Staff for Operations and Plans did not update the ORD with the revised system performance, cost, and schedule requirements.

Prophet Signals Intelligence and Electronic Warfare System. The Program Executive Officer, Intelligence, Electronic Warfare, and Sensors approved the Prophet program to enter the system development and demonstration phase of the acquisition process at program initiation on February 10, 2003. At that time, the project office did not submit a programmatic environmental safety and health evaluation for MDA review. The MDA approved the APB on April 27, 2003. Project office personnel stated that the programmatic environmental safety and health evaluation would be completed before the production and deployment milestone review planned for January 2005.

Tactical Internet Management System. On June 18, 2001, the Acting Program Executive Officer, Communications, Control, and Communication Tactical approved the Tactical Internet Management System to enter the production and deployment phase of the acquisition process, which allowed the procurement and limited deployment of approximately 79 systems. At the milestone decision review, the product office did not have an approved ORD or an approved TEMP for MDA review. The Department of the Army approved the ORD on May 30, 2002. The product office was still awaiting TEMP approval from the Office of the Secretary of Defense in October 2003. Because the December 2001 initial operational test and evaluation was downgraded to a limited user test, the product manager submitted a program deviation report to the MDA in June 2002. A breach in the program schedule and program cost occurred because the initial operational test and evaluation was not conducted. Further, the conversion of the required operational capabilities document to an ORD in May 2002 caused a breach of program performance requirements and program costs in the APB.

The initial operational test and evaluation of the system, rescheduled for April through June 2003, was postponed because of the Iraq conflict. As of October 2003, the product office had not submitted a program deviation report or a revised APB for MDA review and approval. Additionally, the Tactical Internet Management System life-cycle cost estimate, dated May 31, 2001, which was prepared for the production and deployment milestone review, expired on May 30, 2002. The product office provided an updated life-cycle cost estimate dated July 2003.

Tactical Unmanned Aerial Vehicle. The Assistant Secretary of the Army (Acquisition, Technology, and Logistics) approved the Tactical Unmanned Aerial Vehicle to enter the full-rate production and deployment phase of the acquisition process in October 2002. At the full-rate production milestone decision review, the program manager did not have an approved C4I support plan, and had not obtained a statement of operational effectiveness, an affordability assessment, and a system evaluation report. The C4I support plan was approved on May 13, 2003.

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer
Deputy Chief Financial Officer
Deputy Comptroller (Program/Budget)

Department of the Army

Assistant Secretary of the Army (Acquisition, Technology, and Logistics)
Assistant Secretary of the Army (Financial Management and Comptroller)
Program Executive Officer, Aviation
Program Manager, Tactical Unmanned Aerial Vehicle
Product Manager, Mobile Tower System
Program Executive Officer, Air and Missile Defense
Program Executive Officer, Combat Support and Combat Service Support
Product Manager, Multi-Temperature Refrigerated Container System
Product Manager, Containerized Batch Laundry System
Program Executive Officer, Command, Control, and Communications Tactical
Product Manager, Tactical Internet Management System
Program Executive Officer, Ground Combat Systems
Product Manager, Improved Position and Azimuth Determining System
Program Executive Officer, Intelligence, Electronic Warfare and Sensors
Product Manager, Firefinder/Phoenix
Product Manager, Prophet
Program Executive Officer, Tactical Missile
Product Manager, Advanced Precision Kill Weapon System
Product Manager, Line-of-Sight Anti-tank
Auditor General, Department of the Army

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Efficiency and Financial Management, Committee on Government Reform
House Subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform
House Subcommittee on Technology, Information Policy, Intergovernmental Relations, and the Census, Committee on Government Reform

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