
October 12, 2006



Acquisition

Army Acquisition Executive's
Management Oversight and
Procurement Authority for
Acquisition Category I and II
Programs
(D-2007-005)

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Acronyms

| | |
|----------|---|
| AAA | Army Audit Agency |
| ACAT | Acquisition Category |
| ACTF | Army Constructive Training Federation |
| AFATDS | Advanced Field Artillery Tactical Data System |
| CCTT | Close Combat Tactical Trainer |
| ERMP UAV | Extended Range Multi-Purpose Unmanned Aerial Vehicle |
| FAADC2I | Forward Area Air Defense Command, Control, and Intelligence |
| FMTV | Family of Medium Tactical Vehicles |
| GAO | Government Accountability Office |
| IG | Inspector General |
| JVAP | Joint Vaccine Acquisition Program |
| MCS | Maneuver Control System |
| MRM | Mid Range Munition |
| PAC-3 | Patriot Advanced Capability-3 |
| PEO | Program Executive Office |
| SLAMRAAM | Surface-Launched Advanced Medium Range Air-to-Air Missile |
| SMART-T | Secure Mobile Anti-Jam Reliable Tactical Terminal |



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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October 12, 2006

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on Army Acquisition Executive's Management Oversight and Procurement Authority for Acquisition Category I and II Programs (Report No. D-2007-005)

We are providing this report for review and comment. This report is the first of a series of reports and discusses the adequacy of Army milestone decision authorities' management oversight of Acquisition Category IC and II programs. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) did not respond to the draft report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Therefore, we request that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) provide comments on recommendations A.1., A.2., A.3. and B. by November 13, 2006.

If possible, please send management comments in electronic format (Adobe Acrobat file only) to Audacm@dodig.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).

Management comments should indicate concurrence or nonconcurrence with the findings and each applicable recommendation. Comments should describe actions taken or planned in response to agreed-upon recommendations and provide the completion dates of the actions. State specific reasons for any nonconcurrence and propose alternative actions, if appropriate. Management should also comment on the material management control weaknesses discussed in the section "Review of Internal Controls."

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Rodney D. Britt at (703) 604-9096 (DSN 664-9096) or Ms. Celia J. Harrigan at (703) 604-9092 (DSN 664-9092). For the report distribution, see Appendix G. 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 "Richard B. Jolliffe".

Richard B. Jolliffe
Assistant Inspector General
Acquisition and Contract Management

Department of Defense Office of Inspector General

Report No. D-2007-005

October 12, 2006

(Project No. D2005-D000AE-0224.000)

Army Acquisition Executive's Management Oversight and Procurement Authority for Acquisition Category I and II Programs

Executive Summary

Who Should Read This Report and Why? Civil service and military personnel involved in the management oversight and procurement of Army acquisition programs should read this report. This report discusses issues in the area of program documentation that the Army must address to improve how acquisition officials manage and acquire weapon systems. It also discusses program oversight during the production phase.

Background. This report is the first in a series of audit reports that will discuss the Service Acquisition Executive's management oversight and procurement authority for Acquisition Category IC and II programs. This report discusses the management oversight and procurement authority provided within the Army. Two other reports will discuss the management oversight and procurement authority provided within the Navy and Air Force. We initiated this audit because of congressional and DoD interest in whether Service milestone decision authorities and procurement officials were complying with statutory and regulatory requirements for acquisitions.

The Army relies on its acquisition executives (the Army Acquisition Executive for Acquisition Category IC programs and Program Executive Officers in most cases for Acquisition Category II programs) to be program milestone decision authorities. Milestone decision authorities oversee the development and procurement of systems to meet Army mission requirements. From FY 2006 through FY 2011, the Army acquisition officials will oversee \$2 billion in research, development, test, and evaluation funding and \$37 billion in procurement funding.

To evaluate the adequacy of Army milestone decision authority management oversight and procurement authority, we selected for review 21 Acquisition Category IC and II programs with development and production costs totaling \$39 billion.

Results. For the most part, the Army had effectively implemented management controls in the DoD 5000 series of guidance. We did not find management control problems like those identified in our previous reviews of the Boeing KC-767A tanker aircraft and the C-130J aircraft. Specifically, we found no evidence that Army milestone decision authorities used their positions to inappropriately influence the results of contractor selection and negotiations. Army milestone decision authorities fulfilled their management oversight responsibilities, except for the following instances.

- Since FY 2000, program managers for 10 of the 21 programs had not prepared, updated, or obtained all required documentation before they scheduled milestone

reviews with milestone decision authorities for entry into the system development and demonstration or production and deployment phase of the acquisition process. As a result, milestone decision authorities did not have information needed to make fully informed milestone decisions. Accelerating the development and establishing milestones for the new system (Future Business System) that will allow milestone decision authorities to oversee the status of the completion of program office documentation and milestone decision authorities holding program managers accountable for submitting required documentation at milestone decision reviews should help officials make informed milestone decisions (finding A). (This is a repeat finding that was discussed in DoD Inspector General Report No. D-2004-047, "Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs," January 23, 2004.)

- After the full-rate production decisions, Army milestone decision authorities for 6 of the 14 programs in production did not verify that program managers timely completed actions to resolve critical system operational and developmental deficiencies outstanding at the full-rate production decision. As a result, the milestone decision authorities allowed full-rate production to continue without assurance that program managers timely corrected the deficiencies in systems fielded to the warfighter. Requiring program managers to report their status toward resolving critical operational and developmental test issues outstanding at the full-rate production decision in quarterly SmartCharts submitted to milestone decision authorities should help the authorities exercise their management oversight responsibilities (finding B).

Management Comments. A draft of this report was issued on July 26, 2006. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) did not provide comments on the draft report. Therefore, we request that he comment on this final report by November 13, 2006.

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Background

This report is the first in a series of audit reports that will discuss the Service Acquisition Executive's management oversight and procurement authority for Acquisition Category (ACAT) IC and II programs. This report discusses the management oversight and procurement authority provided within the Army. Two other reports will discuss the management oversight and procurement authority provided within the Navy and Air Force. We initiated this audit because of congressional and DoD interest in whether Service milestone decision authorities and procurement officials were complying with the statutory and regulatory requirements in the acquisition process.

The Army relies on its acquisition executives (the Army Acquisition Executive for ACAT IC programs and Program Executive Officers in most cases for ACAT II programs) to be program milestone decision authorities. Milestone decision authorities oversee the development and procurement of systems to meet Army mission requirements. From FY 2006 through FY 2011, the Army acquisition officials will oversee \$2 billion in research, development, test, and evaluation funding and \$37 billion in procurement funding. Appendix B is a glossary of technical terms used in this report.

DoD Directive 5000.1, "Defense Acquisition System," May 12, 2003, states that acquisition programs are directed, funded efforts providing new and improved weapons in response to an approved need. The Directive also states that the Under Secretary of Defense for Acquisition, Technology, and Logistics is responsible for supervising the entire Defense Acquisition System. Within the Defense Acquisition System, the milestone decision authority is the designated individual with overall responsibility for a program, including approval of entry and continuation of programs in the acquisition process.

DoD Instruction 5000.2, "Operations of the Defense Acquisition System," May 12, 2003, defines acquisition programs by category. ACAT I programs are major Defense acquisition programs with an estimated total expense for research, development, test, and evaluation of more than \$365 million in FY 2000 constant dollars or, for procurement, of more than \$2.19 billion in FY 2000 constant dollars. The Under Secretary of Defense for Acquisition, Technology, and Logistics is the milestone decision authority for ACAT I programs, but usually delegates those responsibilities to the Service acquisition executives when programs are approved for low-rate initial production. Those major Defense acquisition programs delegated to Service acquisition executives for milestone decision authority responsibility are designated ACAT IC programs. ACAT II programs are major systems with an estimated total expense 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.

Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003, designates the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) as the Army Acquisition Executive and principal milestone decision authority to oversee the acquisition process within the Army. The Army Acquisition Executive is responsible for acquisition matters within the Army and for approving requests to initiate new acquisition programs that are supported by

approved capability documents, requisite funding, and required program documentation. The Army Acquisition Executive is the milestone decision authority for Army ACAT II programs, but has authority to delegate that authority to Army Program Executive Officers. Within the Army, 11 Program Executive Officers oversee 25 ACAT II programs.

To evaluate the adequacy of Army milestone decision authority management oversight, we reviewed 21 ACAT IC and II programs with an estimated development and procurement cost of \$39 billion. Of the 21 programs, the Army Acquisition Executive was the milestone decision authority for 7 ACAT IC programs and 1 ACAT II program. The remaining 13 programs were ACAT II programs for which the Army Acquisition Executive had delegated milestone decision authority to 7 Program Executive Officers. The remaining four Program Executive Officers were not included in the review because they were not assigned milestone decision authority for ACAT II weapon system programs. The process we used to select the 21 acquisition programs is identified in Appendix A.

Of the programs we reviewed, 14 were in the production phase, 6 were in the system development and demonstration phase, and 1 was in the preacquisition phase of the acquisition process. In addition, 13 of the 21 programs were listed on the Director, Operational Test and Evaluation “Oversight List.”¹ See Appendix C for a description of the 21 Army weapon systems, including identification of acquisition phase and acquisition category.

The Deputy Assistant Secretary of the Army for Policy and Procurement oversees the head of the contracting activities who appoints and supervises contracting officers. Contracting officers are the buying agents for the program managers, and are responsible for entering, administering, terminating, and making determinations and findings for contracting actions. The Federal Acquisition Regulation prohibits contracting officers from entering into contracts unless the contracts meet all requirements of law, executive orders, regulations, and all other applicable procedures, including clearances and approvals.

Objectives

The overall audit objective was to evaluate whether the Army Acquisition Executives’ management oversight and procurement authority for ACAT IC and II programs were adequate. Specifically, we evaluated the adequacy of program management and procurement decision processes used by the Army Acquisition Executive and the Program Executive Officers in their roles as milestone decision authorities and the contracting officers in their roles as procurement authorities. We also reviewed the adequacy of the management control program as it related to the audit objective. See Appendix A for a discussion of the scope and methodology and prior coverage related to the audit objectives. See Appendix D for a discussion of conditions identified on audits of Boeing KC-767A and C-130J aircraft and whether the Army’s management controls precluded similar occurrences. See Appendix E for a discussion of other matters of interest

¹ The Director, Operational Test and Evaluation “Oversight List” is a listing of programs that the Director Operational Test and Evaluation identifies annually for additional developmental, operational, and live-fire test oversight.

concerning Program Executive Officer Soldier and Army management layers. See Appendix F for an overview of the 21 Army acquisition programs.

Review of Internal Controls

DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, requires 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. Under DoD policy, acquisition program managers must use program cost, schedule, and performance parameters as control objectives to implement the requirements of DoD Instruction 5010.40. Accordingly, we limited our review to management controls used by Army milestone decision authorities and procurement officials when overseeing program manager and contracting officer actions in managing, developing, and acquiring ACAT IC and II weapon systems.

Adequacy of Management Controls. The Army Acquisition Executive, Program Executive Officer, and procurement authority management controls were generally adequate. However, we identified material management control weaknesses, as defined by DoD Instruction 5010.40, relating to preparing, updating, and obtaining program documentation; and exercising management oversight over acquisition programs in the production phase. Management controls contained in the DoD 5000 series of guidance and Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003, were adequate for program oversight; however, Army milestone decision authorities did not always implement those management controls.

Specifically, Army milestone decision authorities did not always do the following:

- ensure that program managers submitted required program documentation before holding program milestone reviews for entry into the system development and demonstration or production and deployment phase of the acquisition process; or
- exercise milestone decision responsibilities after the full-rate production decision when the program required follow-on operational testing.

Implementing Recommendations A.1., A.2., A.3., and B. will ensure adherence to required statutory and regulatory guidance.

In DoD Inspector General (IG) Report No. D-2004-047, "Implementation of the DoD Management Control Program for Army Category II and III Programs," January 23, 2004, we reported a deficiency concerning program managers providing incomplete program documentation at milestone decision reviews. The Army did not comment on the finding but stated that they were developing a new database called the Acquisition Information Enterprise System to provide a single location from which milestone decision authorities could obtain information on the status of program documentation. Finding A of our report is a repeat of the

finding in that report. We will provide a copy of our report to the senior Army official responsible for management controls in the Department of the Army.

Adequacy of Management’s Self-Evaluation. Army milestone decision authorities were diligent in holding program reviews and evaluating program documentation to make informed milestone decisions on acquisition programs. Also, program managers gave the milestone decision authorities briefings on acquisition program status for program oversight purposes. Further, contracting officers independently awarded contracts using sound procurement practices based on the Federal Acquisition Regulation. Though the Army’s management control process was adequate, we did identify material management control weaknesses as discussed previously. For the 21 acquisition programs reviewed, management identified Program Executive Offices and project or program offices as assessable units. However, none of those Offices identified a material management control weakness related to the issues discussed in the section “Adequacy of Management Controls.”

A. Preparing and Updating Program Documentation

Since FY 2000, program managers for 10 of the 21 programs had not prepared, updated, or obtained all required documentation before they scheduled program reviews with milestone decision authorities for entry into the system development and demonstration or production and deployment phase of the acquisition process. Additionally, program managers did not provide milestone decision authorities with updated program documentation between milestone decision reviews when significant changes affected programs. These conditions were caused, in part, by the Army milestone decision authorities not adhering to DoD acquisition policy when accepting requests from program managers to hold milestone decision reviews. These conditions also occurred because the Army was still developing its new system, the Future Business System, in which program managers will be required to store program documentation needed for program milestone decision reviews. As a result, milestone decision authorities did not have information needed to make fully informed milestone decisions. (This is a repeat finding that was discussed in DoD IG Report No. D-2004-047, "Implementation of the DoD Management Control Program for Army Category II and III Programs," January 23, 2004.)

Policy

DoD Instruction 5000.2 and Army Regulation 70-1 establish program manager requirements for preparing, updating, and obtaining required program documentation.

DoD. DoD Instruction 5000.2 identifies documents that program managers must provide at program milestone reviews. Key program documentation includes acquisition program baselines, information support plans, capabilities documents, and test and evaluation master plans. Program managers are not required to advise the milestone decision authority on their progress towards completing and obtaining those documents before program initiation, which is usually declared when a program enters the system development and demonstration phase. However, program managers are required to provide those key program documents for the milestone decision authority to review before program initiation and before subsequent milestone reviews are approved.

Army. Army Regulation 70-1 identifies milestone documentation requirements as the key management control for acquisition programs and the milestone decision review process as the evaluation of that control.

Submitting Required Program Documentation at Milestone Decision Reviews

Since FY 2000, program managers for 10 of the 21 had not prepared, updated, or obtained all required documents before the programs scheduled milestone reviews with milestone decision authorities for approval to enter into the system development and demonstration or production and deployment phase of the acquisition process.

For example, in October 2004, the Army Acquisition Executive reviewed and approved the Army Constructive Training Federation (ACTF) Program for entry into the system development and demonstration phase of the acquisition process without requiring the program manager to submit an analysis of alternatives, an information support plan, an acquisition strategy, and a validated requirements document. The milestone decision authority for another program, Excalibur, also did not require the program manager to present an analysis of alternatives. Documentation that was not available to milestone decision authorities on other programs included approved requirements documents, approved information support plans, and test and evaluation master plans.

DoD acquisition policy requires an analysis of alternatives to assess the advantages and disadvantages of alternatives being considered to satisfy system capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. Acquisition policy also requires an approved requirements document that contains validated system performance requirements to ensure that the program managers and their prime contractors design a system that will meet warfighter needs. DoD policy states that a test and evaluation master plan is needed to ensure that the test community has an understanding of the test requirements needed to validate the system performance parameters. DoD policy further states an information support plan is critical not only for system design, but also for test organizations to identify system integration issues that need to also be addressed during testing. The table on the following page shows the documentation available for milestone decision review since FY 2000 for the 10 Army acquisition programs.

Updated Program Documentation From Program Managers

Program managers did not provide milestone decision authorities with updated program documentation between milestone decision reviews when significant changes affected programs. This occurred because program managers believed that updating program documentation added no value to the process if milestone decision authorities are made aware of the changes through other means. For example, the Close Combat Tactical Trainer Program, which was approved for entry into the production phase, experienced significant cost and schedule deviations. However, the program manager did not report to the milestone decision authority in a program deviation report that the program baseline had been breached and that a revised acquisition program baseline was needed. Instead, the program manager verbally communicated the information concerning the cost and schedule breaches to the milestone decision authority. Program managers need to document significant changes in program 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 for ensuring that program managers evaluate the effect of the changes on all aspects of the program.

Documentation Available for Milestone Decision Reviews

| | <u>AoA</u> | <u>APB</u> | <u>AS</u> | <u>C4ISP/ISP</u> | <u>ORD/CDD</u> | <u>TEMP</u> |
|---|------------|------------|-----------|------------------|----------------|-------------|
| <u>Development Programs</u> | | | | | | |
| ACTF | No | No | No | No | No | No |
| Excalibur | No | Yes | Yes | No | Yes | Yes |
| Extended Range Multi-Purpose Land Warrior | Yes | Yes | Yes | No | Yes | Yes |
| <u>Production Programs</u> | | | | | | |
| Bradley | Yes | Yes | Yes | No | Yes | Yes |
| M829A3 | No | Yes | Yes | - | Yes | Yes |
| Maneuver Control System | No | No | No | No | Yes | Yes |
| PAC-3 | No | Yes | Yes | No | Yes | Yes |
| Shadow | Yes | Yes | Yes | No | Yes | Yes |
| SMART-T | No | Yes | No | No | No | Yes |

| | |
|---------|--|
| AoA | Analysis of Alternatives |
| APB | Acquisition Program Baseline |
| AS | Acquisition Strategy |
| CDD | Capabilities Development Document |
| C4ISP | Command, Control, Communication, Computers and Intelligence Support Plan |
| ISP | Information Support Plan |
| ORD | Operational Requirements Document |
| PAC-3 | Patriot Advanced Capability-3 |
| SMART-T | Secure Mobile Anti-Jam Reliable Tactical Terminal |
| TEMP | Test and Evaluation Master Plan |

Adherence to Internal Controls for Program Documentation

Problems with program documentation were caused, in part, by the Army milestone decision authorities not adhering to DoD acquisition policy internal controls when accepting requests from program managers to schedule milestone decision reviews. Also, the Army had not completed the development of a new database, the Future Business System. Program managers will be required to store in this database program documentation needed for milestone decision reviews.

Scheduling Program Milestone Decision Reviews. In some instances, the Army milestone decision authorities allowed program managers to schedule milestone decision reviews without all of the required documentation because new acquisition programs were started to replace former programs. For those programs, the milestone decision authority allowed program managers to submit

the former program documentation that was approved and new draft documentation. For example, the ACTF program manager stated that his program resulted from the replacement of the Warfighter Simulation Program, which intended to integrate the capabilities of six training programs. In this case, the program manager provided the milestone decision authority with documentation approved for the former Warfighter Program.

In other instances, milestone decision authorities allowed program managers to present studies that were not conducted as part of approved plans for analyses of alternatives. For example, the Excalibur program manager used the results from a "Precision Munitions Mix Analysis" to conclude that the Excalibur was the best alternative. However, the program manager did not have an approved analysis of alternatives plan and analysis of alternatives as required by DoD Instruction 5000.2.

Ongoing Management Action. In FY 2004, Army representatives stated that the Service began developing a new database called the Acquisition Information Enterprise System. The representatives stated that the system was to have the following five capabilities:

1. a virtual Army System Acquisition Review Council to standardize the process of preparing, coordinating, and staffing program documentation;
2. an acquisition program baseline module to provide a centralized holding place for all unclassified acquisition program baselines;
3. acquisition program portfolios to facilitate decision making by providing program information tailored to the user's needs;
4. Defense Contract Management Agency assessments to evaluate the overall health of the program; and
5. a probability-of-success metric to indicate how well a program is delivering the required capability within approved cost and schedule parameters.

In January 2006, a representative from the Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) stated that the Acquisition Information Enterprise System did not exist under that name. He stated that the concept of the system was being implemented under a different approach that included the Acquisition Information Management system, the Virtual InSight tool, and the Future Business System. The representative also stated the following about the approach.

- The Acquisition Information Management system includes a module for acquisition program baselines that is not yet available to all of the Army acquisition program managers.
- The Virtual InSight tool will implement a standardized milestone decision process, provide a standard template and a tool for scheduling and support. The software program is undergoing full release testing. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) required in a Virtual InSight policy memorandum that all acquisition program managers use the program tool for milestone decision reviews.

-
- The Army plans to develop a Future Business System. The Future Business System will integrate the Acquisition Information Management system and Virtual InSight tool into an enterprise suite of software modules that will satisfy the five capabilities identified in FY 2004.

As of July 2006, the Army had prepared a draft initial capabilities document to begin developing the Future Business System. The initial capabilities document stated that the goal of the system is to provide more efficient support of acquisition programs and to deliver enterprise systems appropriate to the business of acquisition. However, the document does not specifically state that the five capabilities identified in FY 2004 will be satisfied. Accordingly, the Army still needs to complete the system for milestone decision authorities to use. The system will help determine whether program managers are preparing, updating, or obtaining required program documentation and whether program managers are taking necessary actions to ensure that required program documentation will be available at program milestone reviews. Furthermore, the Army still needs to establish milestone dates for developing and implementing the Future Business System.

Conclusion

Without having all of the required program documentation, Army milestone decision authorities may not be aware of the potential or actual cost, schedule, and performance problems at the time of and between program milestone decision reviews. In addition, because program managers were not periodically reporting their status toward completing or obtaining required program documentation after receiving milestone approval, milestone decision authorities did not have information needed to determine whether a program was progressing as agreed to by the program managers in the acquisition program baseline agreement.

Because milestone decision authorities rely on key program documentation as an internal management control point for managing the program, the Army needs to continue its efforts to establish a tool such as the Future Business System to provide the milestone decision authorities with the status of program information.

Recommendations

A. We recommend that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology):

1. Accelerate the development and establish milestones for implementing the Future Business System.

2. List the five capabilities (a virtual Army System Acquisition Review Council, an acquisition program baseline module, an acquisition program portfolio, Defense Contract Management Agency assessments, and a probability-of-success metric) in the initial capabilities document for the Future Business System.

3. Reemphasize in a policy memorandum to Army milestone decision authorities the responsibility to hold program managers accountable for submitting approved program documentation before and between milestone reviews as required by DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003.

Management Comments. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) did not provide comments to the draft report. Accordingly, we request that he provide comments in response to the final report.

B. Overseeing Acquisition Programs in the Production Phase

Army milestone decision authorities for 6 of the 14 programs in production did not verify that program managers timely corrected critical system operational and developmental performance deficiencies outstanding at the full-rate production decision. Army milestone decision authorities did not exercise their management oversight responsibilities because they did not require program managers to report the status of their corrective actions in quarterly program status reports, called SmartCharts. As a result, the Army milestone decision authorities allowed full-rate production to continue without assurance that program managers had timely corrected critical developmental and operational performance deficiencies in systems fielded to the warfighter. Further, program managers will incur extensive retrofit costs to modify fielded systems if performance deficiencies are not corrected before the production and fielding of large quantities of units.

Engineering Change and Materiel Release Policy

Army Regulation 70-1, "Army Acquisition Policy," December 31, 2003, provides policy for acquisition program managers to follow when testing and fielding systems. Army Regulation 700-142, "Materiel Release, Fielding, and Transfer," July 26, 2004, states that the milestone decision authority is responsible for overseeing the program managers to ensure that the total system is tested in its fielded configuration and that the evaluation process is complete. The Regulation addresses milestone decision authority responsibilities for managing the materiel release of systems. Regulation 700-142 states that the materiel release process is intended to ensure that Army materiel is safe, operationally suitable, and supportable before release to users. It also states that program managers will ensure that all critical and major test incidents disclosed during system operational and development testing have been resolved or provisions have been made for resolution.

In April 2006, an official in the Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) stated that the Life Cycle Management Commanders were given authority to approve the conditional release of items that had critical developmental and operational test issues outstanding at the full-rate production decision.

Continuation of Milestone Decision Responsibilities

Army milestone decision authorities for 6 of 14 programs in production did not verify that program managers timely corrected critical system developmental and operational performance deficiencies outstanding at the full-rate production decision. Of the 21 acquisition programs reviewed, 14 had full-rate production decisions that occurred from 1980 through 2003. For 6 of the 14 programs, milestone decision authorities did not require program managers to report the status of the correction of critical developmental and operational test deficiencies.

Because of the uncorrected deficiencies identified at the full-rate production decision, the warfighter had to use the systems under an urgent or conditional release of materiel.

Outstanding Operational and Developmental Test Issues. The six Army programs that the milestone decision authority conditionally released to users at the full-rate production decision were the Advanced Field Artillery Tactical Data System; Bradley Fighting Vehicle System; Javelin; Patriot Advanced Capability-3; Forward Area Air Defense Command, Control, and Intelligence System; and the Secure Mobile Anti-Jam Reliable Tactical Terminal. Program managers still had not resolved critical operational test deficiencies for the Advanced Field Artillery Tactical Data System, which had its full-rate production decision in December 1995, and the Patriot Advanced Capability-3, which had its production decision in January 2005. Users were still operating the systems under a conditional materiel release as of July 2006.

Advanced Field Artillery Tactical Data System. The operational requirements document, updated in February 2004, stated that interoperability was a key performance parameter and that safe operation of the system was essential. The milestone decision authority approved the conditional release of four previous versions of the Advanced Field Artillery Tactical Data System because the system software had not demonstrated horizontal interoperability with the Army Battle Command Systems based on the results of operational testing. In February 2004, the Army independent testers reported that the current version of the system software had nine performance deficiencies. These deficiencies included three critical test deficiencies: the continued inability to interoperate, and two safety issues concerning soldier survivability resulting from the system's failure to detect coordination requirements from command and control units. In the system evaluation report, Army independent testers stated that the program manager should conduct further testing to resolve the three critical test deficiencies. The SmartCharts that the program manager submitted to the milestone decision authority in September 2005 did not report the status toward resolving the three critical test deficiencies nor the other six test deficiencies identified in the system evaluation report.

Patriot Advanced Capability-3. The operational requirements document for the missile system stated that operational availability was a critical technical parameter. In the September 2002 system evaluation report, the Army independent testers stated that the Patriot Advanced Capability-3 system was effective and suitable with limitations. Limitations reported included a critical operational test deficiency related to the operational availability of the system. The system had a demonstrated mean-time-between-critical-mission-failure of 19.8 hours versus a requirement of 21 hours, and a demonstrated mean-time-to-repair of 3.5 hours versus a requirement of 2 hours. Based on the operational test deficiencies identified in the system evaluation report, the Army Deputy Chief of Staff for Operations (G-3) issued an urgent materiel release for the missile system in October 2002. Subsequently, in April 2004, the Army Deputy issued a conditional materiel release for the missile system. At that time, the program manager reported in his get-well plan a need to resolve 17 conditions identified in the September 2002 system evaluations report. In the SmartCharts submitted to the milestone decision authority in September 2005, the program manager only reported on the correction of the identification friend or foe condition, 1 of the 17 conditions identified in his get-well plan.

Program managers for the remaining four programs had obtained full materiel releases. However, program managers did not inform milestone decision authorities through SmartCharts of the resolution of outstanding materiel deficiencies before the Army Life Cycle Management Commanders granted full materiel releases.

Status Reporting

Although Army milestone decision authorities were aware of their responsibility to oversee program manager progress in correcting critical system developmental and operational performance deficiencies outstanding at the full-rate production decision, they did not require the program managers to report the status on resolving those deficiencies in the quarterly SmartCharts.

The Army Acquisition Executive requires program managers to prepare quarterly SmartCharts for the milestone decision authorities. Annually, the Army Acquisition Executive establishes the SmartChart template to provide guidance on the type of program data that program managers need to report for inclusion in the Army acquisition system database. The draft template for FY 2006 required program managers to focus on issues that affect program cost, schedule, and fielding, but it did not require program managers to report information on critical developmental and operational test deficiencies outstanding at the full-rate production decision. Although the SmartChart template allowed program managers to address other information that affected their programs, reporting the status of outstanding critical developmental and operational performance deficiencies was not mandatory.

Conclusion

The Army milestone decision authorities' responsibility to oversee programs does not end at the full-rate production decision when critical development and operational test deficiencies remain outstanding. Army milestone decision authorities must keep informed of the program manager's progress toward resolving those issues to have assurance that warfighters are provided weapon systems that satisfy their operational requirements. If the system performance deficiencies do not get corrected before the production and fielding of large quantities of units, program managers can incur extensive retrofit costs to modify fielded systems.

To help Army milestone decision authorities exercise their continuing milestone responsibilities, the Army's SmartChart quarterly reporting requirements need to be revised to require program managers to report their status toward resolving critical developmental and operational test deficiencies that were outstanding at the full-rate production decision.

Recommendation

B. We recommend that the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) revise reporting requirements for the quarterly program SmartCharts to require program managers to report their status toward resolving critical system operational and developmental performance deficiencies outstanding at the full-rate production decision as required by DoD Instruction 5000.2, "Operation of the Defense Acquisition System."

Management Comments. The Assistant Secretary of the Army (Acquisition, Logistics, and Technology) did not provide comments to the draft report. Accordingly, we request that he provide comments in response to the final report.

Appendix A. Scope and Methodology

We evaluated whether the Army Acquisition Executive's management oversight and procurement authority for Acquisition Category (ACAT) IC and II programs was adequate. To accomplish this objective, we determined the effectiveness of the milestone decision authorities' oversight and whether program managers provided the milestone decision authorities with required documentation in support of program milestone reviews.

To evaluate the adequacy of Army milestone decision authorities' oversight, we judgmentally selected 21 ACAT IC and II programs to review from a list of programs provided by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology). The Army Acquisition Executive was the milestone decision authority for seven ACAT IC and one ACAT II programs selected for review. Seven of the 11 Army Program Executive Officers were the milestone decision authorities for the remaining 13 ACAT II programs selected for review. The remaining four Program Executive Officers were not included in the review because they did not oversee any ACAT II programs. We also evaluated the effectiveness of the process used by the Army contracting officers to solicit, negotiate, award, and administer contracts for the 21 acquisition program offices selected for review.

We performed this audit from July 2005 through July 2006 in accordance with generally accepted government auditing standards. We reviewed documentation dated from June 1981 through December 2005, which we obtained from offices of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Program Executive Office, Missiles and Space, Huntsville, Alabama; the Program Executive Office, Aviation, Huntsville, Alabama; the Program Executive Office, Simulation, Training, and Instrumentation, Orlando, Florida; the Program Executive Office, Ground Combat Systems, Warren, Michigan; the Program Executive Office, Combat Support and Combat Service Support, Warren, Michigan; the Program Executive Office, Ammunition, Picatinny Arsenal, New Jersey; the Program Executive Office, Soldier, Fort Belvoir, Virginia; the Program Executive Office, Command, Control, and Communications (Tactical), Fort Monmouth, New Jersey; the Program Executive Office, Chemical and Biological Defense, Fort Detrick, Maryland; and program offices and contracting officers for the 21 Army programs selected for review.

To accomplish the audit objectives, we took the following steps.

- We reviewed DoD Directive 5000.1, "Defense Acquisition System," to determine DoD policy applicable to all acquisition programs.
- We reviewed DoD Instruction 5000.2, "Operations of the Defense Acquisition System," May 12, 2003, to determine whether Army acquisition programs were assigned the appropriate acquisition category and program managers were complying with mandatory DoD acquisition requirements. Specifically, we evaluated whether milestone decision authorities held program managers accountable for submitting required acquisition documentation at and between program milestone decision

points and whether milestone decision authorities maintained oversight of the resolution of critical developmental and operational test deficiencies after full-rate production decisions.

- We reviewed Army Regulation 70-1, “Army Acquisition Policy,” December 31, 2003, to determine whether the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) implemented mandatory DoD acquisition requirements in the Regulation.
- We reviewed Federal Acquisition Regulation Part 15, “Negotiating Contracts,” to determine contracting officer requirements for supporting contract price reasonableness determinations in their price negotiation memorandums.
- We determined whether the conditions identified in audits of the Boeing KC-767A tanker aircraft (DoD Inspector General (IG) Report No. D-2003-129, “Assessment of DoD Leasing Actions,” August 29, 2003, and DoD IG Report No. D-2004-064, “Acquisition of the Boeing KC-767A Tanker Aircraft,” March 29, 2004) and the C-130J aircraft (DoD IG Report No. D-2004-102, “Contracting for and Performance of the C-130J Aircraft,” July 23, 2004) were also occurring in the execution of acquisition programs within the Army.

Limitations. We excluded from this review an evaluation of the milestone decision authority oversight provided by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) and the Program Executive Officer Soldier for the Objective Individual Combat Weapon Program because of other ongoing and completed audits of that program. DoD IG Report No. D-2006-004, “Acquisition of the Objective Individual Combat Weapon,” October 7, 2005, DoD IG Report No. D-2006-087, “Acquisition of the Objective Individual Combat Weapon Increments II and III,” May 15, 2006, and DoD IG Report No. D-2006-123, “Program Management of the Objective Individual Combat Weapon Increment I,” September 29, 2006, addressed management oversight internal control weaknesses on that program. Also, because of limited travel resources, we did not visit Defense Contract Management Agency Offices at the contractor locations to review documentation for acceptance and delivery of the systems from the contractors.

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

Use of Technical Assistance. A representative from the Quantitative Methods Division, Office of the DoD Assistant Inspector General for Policy and Oversight, developed the criteria for selecting the appropriate sample size of Army ACAT IC and II programs to be reviewed. Based on the number of Army milestone decision authorities, the representative stated that 50 percent of the ACAT IC programs and 50 percent of the ACAT II programs within each Program Executive Office should be selected for review. Applying the recommended criteria, we selected 7 ACAT IC programs and 14 ACAT II programs for review. The following table shows the results of the program selection process.

Program Selection Process

| <u>Milestone Decision Authority</u> | <u>ACAT IC</u> | | | <u>ACAT II</u> | | |
|--|-----------------|-----------------|------------------------|-----------------|-----------------|----------------------|
| | <u>Programs</u> | <u>Reviewed</u> | <u>Percentage</u> | <u>Programs</u> | <u>Reviewed</u> | <u>Percentage</u> |
| Army Acquisition Executive | 14 | 7 | 50 | 4 | 2 | 50 |
| Program Executive Offices: | | | | | | |
| Ammunition | 0 | 0 | N/A ¹ | 3 | 2 | 67 |
| Aviation | 0 | 0 | N/A ¹ | 1 | 1 | 100 |
| Chemical and Biological Defense | 0 | 0 | N/A ¹ | 2 | 1 | 50 |
| Combat Support and Combat Service Support | 0 | 0 | N/A ¹ | 0 | 0 | N/A ² |
| Command, Control, and Communications (Tactical) | 0 | 0 | N/A ¹ | 8 | 4 | 50 |
| Enterprise Information Systems | 0 | 0 | N/A ¹ | 0 | 0 | N/A ² |
| Ground Combat Systems | 0 | 0 | N/A ¹ | 2 | 1 | 50 |
| Intelligence, Electronic Warfare, and Sensors | 0 | 0 | N/A ¹ | 0 | 0 | N/A ² |
| Missiles and Space | 0 | 0 | N/A ¹ | 4 | 2 | 50 |
| Simulation, Training, and Instrumentation | 0 | 0 | N/A ¹ | 1 | 1 | 100 |
| Soldier | <u>0</u> | <u>0</u> | <u>N/A¹</u> | <u>0</u> | <u>0</u> | <u>0³</u> |
| Total: | 14 | 7 | 50 | 25 | 14 | 56 |

1 DoD Instruction 5000.2 requires the Army Acquisition Executive to be the milestone decision authority for ACAT IC programs.

2 PEOs for Combat Support and Combat Service Support, Enterprise Information Systems, and Intelligence, Electronic Warfare, and Sensors were not milestone decision authorities for any ACAT II programs.

3 The only PEO Soldier ACAT II program is the Objective Individual Combat Weapon. We did not review it because of ongoing DoD IG audits of that program.

Government Accountability Office High-Risk Area. The Government Accountability Office (GAO) has identified several high-risk areas in DoD. This report provides coverage of the DoD Weapon System Acquisition high-risk area.

Prior Coverage

During the last 5 years, GAO, DoD IG, and Army Audit Agency (AAA) issued five reports that discussed material management control weaknesses associated with the acquisition of Army ACAT IC and II programs. Unrestricted GAO, DoD IG, and Army Audit Agency reports can be accessed at <http://www.gao.gov>, <http://www.dodig.mil/audit/reports> and <https://www.aaa.army.mil/reports>, respectively.

GAO

GAO Report No. GAO-05-427, “Defense Logistics: Better Management and Oversight of Pre-positioning Programs Needed to Reduce Risk and Improve Future Programs,” September 6, 2005

GAO Report No. GAO-01-372, "Defense Inventory: Steps the Army Can Take to Improve the Management and Oversight of Excess Ammunition," April 12, 2001

DoD IG

DoD IG Report No. D-2006-123, "Program Management of the Objective Individual Combat Weapon Increment I," September 29, 2006

DoD IG Report No. D-2006-087, "Acquisition of the Objective Individual Combat Weapon Increments II and III," May 15, 2006

DoD IG Report No. D-2006-004, "Acquisition of the Objective Individual Combat Weapon," October 7, 2005

DoD IG Report No. D-2004-047, "Implementation of the DoD Management Control Program for Army Acquisition Category II and III Programs," January 23, 2004

AAA

AAA 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

AAA 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

Appendix B. Glossary

Acquisition Category. An acquisition category is established to facilitate decentralized decision making and execution and compliance with statutory requirements. The categories determine the level of review, decision authority, and applicable procedures.

Acquisition Category I. Acquisition Category I programs are major Defense acquisition programs. A major Defense acquisition program is a program estimated by the Under Secretary of Defense for Acquisition, Technology, and Logistics to require eventual expense for research, development, test and evaluation of more than \$365 million (FY 2000 constant dollars) or procurement of more than \$2.19 billion (FY 2000 constant dollars), or those otherwise designated by the Under Secretary of Defense for Acquisition, Technology, and Logistics to be Acquisition Category I.

Acquisition Category IC. Acquisition Category IC programs are major Defense acquisition programs for which the Under Secretary of Defense for Acquisition, Technology, and Logistics has delegated milestone decision authority to the DoD Component Head or the DoD Component Acquisition Executive.

Acquisition Category II. Acquisition Category II programs are acquisition programs that do not meet the criteria for an Acquisition Category I program, but do meet the criteria for a major system. A major system is a program estimated by the DoD Component Head to require eventual expense for research, development, test and evaluation of more than \$140 million (FY 2000 constant dollars), or for procurement of more than \$660 million (FY 2000 constant dollars) or those otherwise designated by the DoD Component Head to be Acquisition Category II. The milestone decision authority is the DoD Component Acquisition Executive.

Acquisition Decision Memorandum. The acquisition decision memorandum is a memorandum signed by the milestone decision authority that documents decisions made as the result of a milestone decision review or decision review.

Acquisition Executive. Acquisition executives are the individuals charged with the overall acquisition management responsibilities within their respective organizations.

Acquisition Plan. An acquisition plan is a formal written document reflecting the specific actions necessary to execute the approach established in the approved acquisition strategy and guiding contractual implementation.

Acquisition Program Baseline. The acquisition program baseline prescribes the key cost, schedule, and performance constraints that must be achieved by the program before the next milestone decision review in the acquisition process.

Acquisition Strategy. An acquisition strategy is a business and technical management approach designed to achieve program objectives within the resource constraints. It is the framework for planning, directing, contracting for, and managing a program. It provides a master schedule for research, development, test, production, fielding, modification, postproduction management, and other

activities essential for program success. The acquisition strategy is the basis for formulating functional plans and strategies (for example, test and evaluation master plans and acquisition plans).

Analysis of Alternatives. An analysis of alternatives is the evaluation of the operational effectiveness, operational suitability, and estimated costs of alternative systems to meet a mission capability. The analysis assesses the advantages and disadvantages of alternative systems being considered to satisfy a validated need, including the sensitivity of each alternative to possible changes in key assumptions or variables.

Command, Control, Communications, Computers, and Intelligence Support Plan. This plan is a required document for all acquisition programs that connect in any way to the communications and information infrastructure, and includes both information technology systems and National Security System programs. The plan identifies command, control, communications, computers, intelligence, surveillance, and reconnaissance needs, dependencies, and interfaces. It focuses on interoperability, supportability, and sufficiency concerns throughout a program's life cycle.

Capability Development Document. A capability development document captures the information necessary to develop a proposed program, normally using an evolutionary acquisition strategy. The capability development document outlines an affordable increment of militarily useful, logistically supportable, and technically mature capability. The capability development document supports a system development and demonstration program decision review.

Capability Production Document. A capability production document addresses the production elements specific to a single increment of an acquisition program. The Joint Requirements Oversight Council validates and approves the capability production document before a production and deployment decision review. The capability production document has key performance attributes and parameters that are more refined than those in a capability development document.

Capstone Requirements Document. A capstone requirements document contains capabilities-based requirements that facilitate the development of individual capability development documents. It provides a common framework and operational concept to guide capability development documents. Capstone requirements documents that have been approved by the Joint Requirements Oversight Council are valid until absorbed into appropriate integrated architectures as required by Chairman of the Joint Chief of Staff Instruction 3170.1E, "Joint Capabilities Integration and Development System," May 11, 2005. The Joint Requirements Oversight Council retains the authority to specifically direct the development of new capstone requirements documents, as necessary.

Conditional Materiel Release. Materiel release conditions, deficiencies, or shortfalls are generally recognized as issues that are significant enough to be raised to decision makers for consideration before release approval. A conditional materiel release is the release of an item for use when test deficiencies, or shortfalls occur. The program manager lists all conditions in a "get-well plan" and categorizes the deficiencies accordingly.

Contracting Officer. A contracting officer has the authority to enter into, administer, and terminate contracts and make related determinations and findings for the Government.

Cost Analysis. A cost analysis is an analysis and evaluation of each element of cost in a contractor's proposal to determine reasonableness.

Developmental Test and Evaluation. Developmental test and evaluation is any engineering test used to verify status of weapon systems technical progress, verify that design risks are minimized, substantiate achievement of contract technical performance, and certify readiness for initial operational testing. Development tests generally require instrumentation and measurements and are accomplished by engineers, technicians, or soldier operator-maintainer test personnel in a controlled environment to facilitate analysis of failures.

Information Support Plan. The information support plan, formerly known as the command, control, communications, computers, and intelligence support plan, identifies and documents information needs, infrastructure support, information technology, and National Security Systems interface requirements and dependencies. The information support plan focuses on net-centricity, interoperability, supportability, and sufficiency concerns.

Initial Operational Test and Evaluation. An initial operational test and evaluation is a dedicated operational test and evaluation conducted on production or production-representative articles to determine whether systems are operationally effective and suitable to support a decision to proceed beyond low-rate initial production.

Interoperability. Interoperability is the ability of systems, units, or forces to provide data, information, materiel, and services to (and accept the same from) other systems, units, or forces. This exchange enables systems, units, and forces to operate effectively together.

Key Performance Parameter. A key performance parameter is the minimum attribute or characteristic considered most essential for an effective military capability. For capabilities documents, key performance parameters are validated by the Joint Requirements Oversight Council for joint requirements documents, by the Functional Capabilities Board for requirements documents that jointly affect Services, and by the DoD Component for requirements documents that are prepared independently by a Service. The capability development document and the capability production document key performance parameters are included verbatim in the acquisition program baseline agreement.

Life-Cycle Cost. Life-cycle cost is the total cost to the Government of acquisition and ownership of a system over its useful life. It includes the cost of development, acquisition, operations, and support (including human resources), and where applicable, disposal.

Low-Rate Initial Production. Low-rate initial production is the first segment of the production and deployment phase. Its purpose is to establish an initial production base for the system, permit an orderly ramp-up sufficient to lead to a smooth transition to full-rate production, and to provide production-representative articles for initial operational test and evaluation and live-fire testing. For major

Defense acquisition programs, low-rate initial production quantities in excess of 10 percent of the acquisition objective must be reported in the selected acquisition report.

Milestone Decision Authority. The milestone decision authority is the designated individual with overall responsibility for a program. The milestone decision authority approves program initiation and entry of an acquisition program into the next phase of the acquisition process. The milestone decision authority is accountable for cost, schedule, and performance reporting to higher levels of management, including congressional reporting.

Net-Ready Key Performance Parameter. A net-ready key performance parameter addresses information needs, information timeliness, information assurance, and network functions required for information exchange and use. A net-ready key performance parameter consists of measurable and testable characteristics, performance metrics, or both, required for the timely, accurate, and complete exchange and use of information to satisfy information needs for a given capability. The net-ready key performance parameter is documented in the capability development document, the capabilities production document, and the capstone requirements document.

Operational Requirements Document. An operational requirements document is a legacy document that contains performance parameters and related operational performance parameters for the proposed concept or system. Operational requirements documents were accepted for Joint Staff review until December 2003. Capability development documents and capability production documents developed in accordance with Chairman of the Joint Chiefs of Staff Instruction 3170.01C replaced the operational requirements document. The Instruction allows a validated and approved operational requirements document to be used to support program initiation and the low-rate initial production decision until June 2005, after which all programs must use capability development documents and capability production documents.

Operational Test and Evaluation. Operational test and evaluation is the field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the purpose of determining its effectiveness and suitability for use in combat by typical military users.

Program Executive Officer. A Program Executive Officer is a military or civilian official who has the responsibility for directing several major Defense acquisition programs and for directing major and nonmajor system acquisition programs. A Program Executive Officer has no other command or staff responsibilities within the Component, and reports to and receives guidance from only the DoD Component Acquisition Executive.

Research, Development, Test and Evaluation. Research, development, test and evaluation are activities for developing a new system or expanding the performance of fielded systems.

System Development and Demonstration. The system development and demonstration phase (milestone B) is the third phase of the DoD system acquisition process and consists of system integration and system demonstration. This phase also contains a design readiness review at the conclusion of the system integration.

Test and Evaluation Master Plan. The test and evaluation master plan documents the overall structure and objectives of the test and evaluation program. It provides a framework for generating detailed test and evaluation plans and for documenting schedule and resource implications associated with the test and evaluation program. The test and evaluation master plan identifies the necessary developmental test and evaluation, operational test and evaluation, and live-fire test and evaluation activities.

Urgent Materiel Release. An urgent materiel release satisfies the need to field equipment to meet an urgent operational requirement in support of specific operations.

Urgent Need Statement. An urgent need statement is a request from Field Commanders that identifies situations where soldiers' lives are jeopardized or mission accomplishment cannot be met without system being requested. The need statement is forwarded to the U.S. Army Office of the Deputy Chief of Staff for Operations who, in coordination with the U.S. Army Materiel Command and the U.S. Army Training and Doctrine Command, determines whether to support the request and take immediate action to satisfy the urgent need.

Appendix C. Description of the 21 Army Weapon Systems

Acquisition Category IC Programs

Bradley Fighting Vehicle System Upgrade. The Bradley Fighting Vehicle System Upgrade is under the Program Executive Office (PEO) for Ground Combat Systems. The Army Acquisition Executive is the milestone decision authority for this program. The Bradley Upgrade has been in the production phase of the acquisition process since its full-rate production review on April 30, 2001. The Bradley was upgraded with enhanced command and control, greater lethality, and additional protection for transport of infantry soldiers to critical points on the battlefield.

Excalibur—Projectile, 155-Millimeter Extended Range (XM982). The Excalibur is under the PEO for Ammunition with the Army Acquisition Executive as the milestone decision authority. The Excalibur satisfies the need for a cannon-delivered projectile that enables the maneuver commander to engage critical targets to include fleeting or short-dwell targets with increased precision, range, and lethality while minimizing collateral damage in the target area. The Army's most recent involvement in Operations Iraqi Freedom and Enduring Freedom has reinforced the need for Excalibur's responsive precision attack of critical point targets, including targets in urban environments or restrictive terrain, under all weather conditions while minimizing collateral damage. Prompted by an urgent need request from the warfighter, the milestone decision authority approved the Excalibur Block 1a-1 for low-rate initial production in May 2005 and plans to hold a low-rate initial production review for Block 1a-2 in FY 2007. Excalibur is the first satellite-guided extended-range projectile.

Family of Medium Tactical Vehicles. Family of Medium Tactical Vehicles (FMTV) is under PEO for Combat Support and Combat Service Support with the Army Acquisition Executive assigned as the milestone decision authority. The FMTV program has been in the production phase of the acquisition process since its full-rate production review in August 1995. The mission of the FMTV is to transport cargo, soldiers, and associated equipment in local and line haul missions in combat, combat support, and combat service support missions.

Javelin (Advanced Anti-Tank Weapon System—Medium). The Javelin is under the PEO for Missiles and Space with the Army Acquisition Executive assigned as the milestone decision authority. The Javelin has been in the production phase of the acquisition process since its full-rate production review in May 1997. The Javelin is a man-portable, fire-and-forget, medium anti-tank missile employed by dismounted troops to defeat current and future threat armored combat vehicles out to 2,000 meters. The Javelin attacks most targets from the top to defeat explosive reactive armor. It also has the capability, in the direct fire mode, to attack targets under cover or those that would be unreachable by top attack.

Land Warrior. The Land Warrior is under the PEO for Soldier with the Army Acquisition Executive assigned as the milestone decision authority. The Land Warrior program is in the system development and demonstration phase of the acquisition process and is preparing for a low-rate initial production decision in FY 2007. The Land Warrior program is the first holistic, integrated system of systems focused on the needs of the individual soldier. The Land Warrior builds on the soldier's inherent abilities and equips the soldier to endure environmental threats while integrating the soldier into the digital battlefield. The Land Warrior system includes soldier equipment such as uniform, ballistic, nuclear, biological, and chemical protection, and a personal electronics system that provides the soldier with power, computation, network communications, and geo-location.

Longbow Hellfire. The Longbow Hellfire missile program is under the PEO for Missiles and Space with the Army Acquisition Executive assigned as the milestone decision authority. The Longbow Hellfire program has been in the production phase of the acquisition process since its full-rate production decision review in October 1995. The Longbow Hellfire missile program started following Desert Storm when the Army had a need for a missile that could perform in adverse weather, battlefield smoke, and dust, which are conditions that significantly degrade the range of the laser designators and electro-optically guided missiles.

Patriot Advanced Capability-3. The Patriot Advanced Capability-3 (PAC-3) is under the PEO for Missiles and Space with the Army Acquisition Executive assigned as the milestone decision authority. The PAC-3 was approved for block production in January 2005. The PAC-3 missile provides essential increases in battle space, accuracy, lethality, and firepower required to counter the most stressing tactical ballistic missile and air-breathing threats for the future. The PAC-3 program office is developing a new missile called the missile segment enhancement, which will improve the performance of the system. The new missile segment enhancement will improve system performance by increasing maneuverability and enabling higher altitude engagements and longer down-range engagements. In September 2002, the Army Deputy Chief of Staff for Operations (G-3) approved an urgent materiel release of the PAC-3 missile segment in anticipation of a need for the missile during Operations Iraqi Freedom and Enduring Freedom.

Acquisition Category II Programs

2.75-Inch Rocket System. The 2.75-Inch Rocket Program has the PEO for Missiles and Space as its milestone decision authority. The 2.75-Inch Rocket has been in the production phase of the acquisition process since its full-rate production decision in 1980. The 2.75-Inch Rocket is an unguided missile that provides air-to-ground suppression, smoke screening, illumination, and direct and indirect fires to defeat area materiel and personnel targets at close and extended ranges.

Army Constructive Training Federation. The Army Constructive Training Federation (ACTF) Program is under the PEO for Simulation, Training, and Instrumentation with the Army Acquisition Executive retaining responsibility as the milestone decision authority. The ACTF simulates the battle command

environment to provide training to unit commanders, staff, and command posts on how to focus warfighters and systems when countering threats. The ACTF is in development and has a low-rate initial production decision scheduled for the fourth quarter of FY 2006. The Army needs the ACTF program to train large groups of personnel without having to expend funds to destroy military devices in demonstration and training activities.

Advanced Field Artillery Tactical Data System. The Advanced Field Artillery Tactical Data System (AFATDS) Program has the PEO for Command, Control, and Communications (Tactical) as its milestone decision authority. The AFATDS program has been in the production phase of the acquisition process since its full-rate production decision in December 1995. The AFATDS provides Army, Navy, Air Force and Marine Corps units with automated fire support through command, control, and communications. The AFATDS pairs targets to weapons platforms to provide optimum use of fire support assets.

Close Combat Tactical Trainer. The Close Combat Tactical Trainer (CCTT) Program has the PEO for Simulation, Training, and Instrumentation as its milestone decision authority. The CCTT program has been in the production phase of the acquisition process since its full-rate production decision in December 1998. The CCTT program is a simulation system that replicates actual combat vehicles, weapon systems, and command and control elements. These elements are networked for real-time, fully interactive, collective task training on computer-generated terrain. The system's computers create a simulated battlefield which, when viewed by soldiers using the system, creates the illusion of moving and fighting over actual terrain, operating or riding inside the actual vehicles, and employing the actual weapon systems mounted in or on the vehicles.

Extended Range Multi-Purpose Unmanned Aerial Vehicle. The Extended Range Multi-Purpose Unmanned Aerial Vehicle (ERMP UAV) Program has the PEO for Aviation as its milestone decision authority. The ERMP UAV program entered into the system development and demonstration phase of the acquisition process in April 2005, and has a low-rate initial production decision scheduled in July 2008. The ERMP UAV system will provide combatant commanders with a real-time responsive capability to conduct long-term, wide area, near real-time reconnaissance, surveillance, target acquisition, communication relay, and attack missions. The ERMP UAV system will provide more coverage than five legacy systems could provide combined.

Forward Area Air Defense Command, Control, and Intelligence System. The Forward Area Air Defense Command, Control, and Intelligence (FAADC2I) System Program has the PEO for Command, Control, and Communications (Tactical) as its milestone decision authority. The FAADC2I program has been in the production phase of the acquisition process since its full-rate production decision in April 1995. The FAADC2I system provides critical FAAD information to support the command and control decision process at various levels of command. To provide this capability, the FAADC2I system ties weapons together in a network that integrates the FAADC2I system into the Army command and control system architecture.

Joint Vaccine Acquisition Program. The Joint Vaccine Acquisition Program (JVAP) is under the Joint PEO for Chemical and Biological Defense with the Joint PEO retaining responsibility as the milestone decision authority. The goal of

the JVAP program is to develop, produce, and stockpile medical products licensed by the Food and Drug Administration to protect the warfighter in a biological warfare environment.

Cartridge, 120-Millimeter, M829A3. The Cartridge, 120-Millimeter, M829A3 Program (the M829A3) has the PEO for Ammunition as its milestone decision authority. The M829A3 program has been in the production phase of the acquisition process since its full-rate production decision in March 2003. The M829A3 cartridges are anti-armor kinetic energy rounds that are fired from the M256 120-millimeter smoothbore cannon mounted on the Abrams main battle tank. The M829A3 cartridge was developed to counter advances in armor protection technologies, including explosive reactive armor.

Maneuver Control System. The Maneuver Control System (MCS) Program has the PEO for Command, Control, and Communications (Tactical) as its milestone decision authority. The MCS program entered full-rate production decision in June 2005. The MCS provides a primary point of interface for interoperability with related command-oriented information systems of joint and allied forces. The MCS enables commanders to better command and control forces by providing the ability to see and understand the battle space faster and with greater clarity. The MCS is also used by the Active Army, Army Reserve, and National Guard Components.

Paladin Field Artillery Ammunition Support Vehicle. The Paladin Program has the PEO for Ground Combat Systems as its milestone decision authority. The Paladin program has been in the production phase of the acquisition process since its full-rate production decision in March 1993. The Paladin is a 155-millimeter self-propelled howitzer artillery weapon system that provides the primary indirect fire support for modular heavy brigade combat teams and armor and mechanized infantry divisions. The system consists of an improved version of the M109 self-propelled howitzer with significant enhancements in survivability, reliability, availability, maintainability, range, and rate-of-fire.

Shadow Tactical Unmanned Aerial Vehicle. The Shadow Program is under the PEO for Aviation with the Army Acquisition Executive retaining responsibility as the milestone decision authority. The Shadow program has been in the production phase of the acquisition process since its full-rate production decision in October 2002. The Shadow is an unmanned aerial vehicle system that provides flexible, responsive, near real-time reconnaissance, surveillance, target acquisition, battle damage assessment, and battle management support to maneuver commanders at brigade and armored cavalry regiments for peace and war operations.

Surface-Launched Advanced Medium Range Air-to-Air Missile. The Surface-Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) Program has the PEO for Missiles and Space as its milestone decision authority. The SLAMRAAM program has been in the system development and demonstration phase of the acquisition process since September 2003 and has a low-rate initial production decision scheduled for third quarter FY 2006. The SLAMRAAM missile system will protect the force from aerial surveillance and air attack. The SLAMRAAM will also support a variety of Army missions at the tactical, operational, and strategic levels of warfare including dominance, control, and exploitation of the Army, interagency, joint, and multinational force aerial battle space.

Secure Mobile Anti-Jam Reliable Tactical Terminal. The Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T) Program has the PEO for Command, Control, and Communications (Tactical) as its milestone decision authority. The SMART-T program has been in the production phase of the acquisition process since its full-rate production decision in January 1999. The SMART-T terminal provides secure anti-jam data and voice communication for tactical users over the extremely high frequency and super high frequency ranges. The SMART-T is an integral part of the Army's future communications architecture and serves as the key transmission system for range extension of the Warfighter Information Network-Tactical System.

Preacquisition Program

Mid Range Munition (MRM). The Mid Range Munition Program is a preacquisition program under the oversight of the Army Research Development and Engineering Center, Picatinny Arsenal, New Jersey, with plans to transition to the PEO for Ammunition in FY 2008. The MRM is a precision-guided munition that will provide a moving or stationary Mounted Combat System with the capability to engage and destroy moving and stationary targets in a beyond-line-of-sight mode. The objective of the MRM program is to provide the Mounted Combat System of the Future Combat System and M1A2 System Enhancement Performance Program with a precision munition that is capable of defeating line-of-sight and beyond-line-of-sight threats out to more than 12 kilometers.

Appendix D. Comparison With Conditions Identified on Audits of Boeing KC-767A and C-130J Aircraft

As a result of audits of the Boeing KC-767A Tanker Aircraft (Report Nos. D-2003-129, "Assessment of DoD Leasing Actions," August 29, 2003, and D-2004-064, "Acquisition of the Boeing KC-767A Tanker Aircraft," March 29, 2004) and the C-130J Aircraft (Report No. D-2004-102, "Contracting for and Performance of the C-130J Aircraft," July 23, 2004), the DoD Inspector General (IG) initiated the series of audits of the Service acquisition executives to determine if management oversight problems identified in the referenced reports were more widely occurring across the Military Departments. At the April 14, 2005, hearing on management and oversight of Air Force acquisition programs, the Senate Armed Services Subcommittee also expressed interest in the results of the DoD IG audits concerning whether similar conditions were occurring within the other Services. The results of the review of 21 Army Acquisition Category IC and II programs as related to the 15 conditions identified in the earlier audits of the two Air Force acquisition programs follows.

1. Condition: The former Deputy Assistant Secretary of the Air Force (Acquisition) used her position as the milestone decision authority and head of Air Force contracting to conduct and inappropriately influence the results of the contract negotiations with Boeing to acquire Boeing KC-767A tanker aircraft.

Question: Did acquisition executives within the Army use their positions as milestone decision authorities to inappropriately influence the results of contractor selection and negotiations for the 21 programs selected for review?

Results: For the 21 programs reviewed, we did not find evidence that acquisition executives within the Army used their positions to inappropriately influence the results of contractor selection and negotiations.

2. Condition: On both the Boeing KC-767A tanker aircraft and the C-130J programs, Air Force contracting officers did not properly justify the use of a commercial item acquisition strategy. The Federal Acquisition Regulation states that a commercial item is any item, other than real property, that is used customarily by the general public or by nongovernmental entities for purposes other than governmental purposes. Further, commercial items are those that have been sold, leased, or licensed to the general public; or have been offered for sale, lease, or license to the general public.

Question: Did Army contracting officers use and properly justify the use of a commercial item acquisition strategy for the 21 programs selected for review?

Results: For the 21 programs reviewed, Army contracting officers did not use a commercial item acquisition strategy. Army contracting officers used Federal Acquisition Regulation Part 15, "Contracting by Negotiation," as part of their acquisition planning.

3. Condition: On the C-130J program, the Air Force conditionally accepted the delivery of C-130J aircraft that did not meet commercial contract specifications or operational requirements.

Question: Did the Army acquisition officials conditionally accept delivery of items before the items met contract specifications and operational requirements for the 21 programs selected for review?

Results: As discussed in Appendix A, we did not visit Defense Contract Management Agency Offices at the contractor locations to determine whether the systems for the 21 programs reviewed had been accepted before meeting contract specifications. However, contract terms for 1 of the 21 programs, the Family of Medium Tactical Vehicles, authorized the Defense Contract Management Agency Office to conditionally accept the delivery of systems before the systems met contract specifications or operational requirements. We plan to determine whether the Army conditionally accepted any medium tactical vehicles before meeting contract specifications under a separate audit project.

4. Condition: On the C-130J program, the Air Force contracting officer did not adequately manage the financing of the contract. This inadequate management resulted in the Air Force paying the contractor 85 percent of the price of the aircraft before aircraft acceptance inspection and 99 percent of the price of the aircraft on conditional acceptance and delivery of noncompliant aircraft.

Question: Did Army contracting officers properly manage the financing of deliverable items on the 14 production contracts included in the 21 programs selected for review?

Results: On 8 of 14 production contracts, the Army contracting officers included Federal Acquisition Regulation Clause 52-232-16, "Progress Payments," or Defense Federal Acquisition Regulation Clause 252-232-7004, "Progress Payment Rates," which limited the contractor financing to 80 percent or less, of the contract price before acceptance of the deliverable items. Four other production contracts included a contract clause to base progress payments on contractual performance. The remaining two production contracts did not include either the clause or base progress payments on contractual performance. As stated in the results section for Question 3, the contract terms for the Family of Medium Tactical Vehicles authorized the Defense Contract Management Agency Office to conditionally accept the delivery of systems before the systems met contract specifications or operational requirements.

5. Condition: On the Boeing KC-767A tanker aircraft program, the Air Force contracting officer negotiated a prohibited cost-plus-a-percentage-of-cost contract. Cost-plus-a-percentage-of-cost contracts are prohibited by section 2306 (a), title 10, United States Code, "Kinds of Contracts." The Federal Acquisition Regulation states that a cost-plus-a-percentage-of-cost contract is a cost reimbursement contract that provides a contractor a fee based on a specified percentage of the contractor's actual cost of performing the work. According to the Government Accountability Office, a cost-plus-a-percentage-of-cost contract occurs on either fixed-price or cost contracts when contracting officers award a contract for which:

- payment for profit is based on a predetermined percentage rate;

-
- a predetermined percentage rate applies to the actual cost of work performed;
 - contractor entitlement is uncertain at the time of contracting;
 - contractor entitlement increases commensurately with increased performance costs; and
 - Government audit rights are excluded.

Question: Did Army contracting officers use a prohibited cost-plus-a-percentage-of-cost system of contracting through the use of limitation of earnings clauses and the exclusion of Government audit rights on the 21 programs selected for review?

Results: We did not find any instances where the contracting officers structured and awarded a contract that could be defined as a cost-plus-a-percentage-of-cost contract. We reviewed the basic contract clauses, the award fee plans, the incentive fee schedules, and the cost performance reports that were available for the 27 fixed-price and cost contracts for the 21 programs selected for review. Of the 27 contracts, 22 included the Government audit rights clause as part of the contract and did not contain any of the other 4 conditions where a cost-plus-percentage-of-cost contract could occur. For the remaining five contracts where the Government audit rights clause was not included, we determined that a cost-plus-percentage-of-cost contract structure did not exist because the contracts did not contain the other four conditions.

6. Condition: On the Boeing KC-767A tanker aircraft program, the proposed lease did not meet all of the criteria requirements for an operating lease. Further, the proposed lease would have cost the Air Force more than purchasing the aircraft. Office of Management and Budget Circular A-11 states that an operating lease must meet the following six requirements.

- The asset is a general-purpose asset rather than being for a special purpose of the Government and is not built to unique specification of the Government as a lessee.
- There is a private-sector market for the asset.
- The present value of the minimum lease payments over the life of the lease does not exceed 90 percent of the fair market value of the asset at the beginning of the lease term.
- The lease does not contain a bargain-price purchase option.
- Ownership of the asset remains with the lessor during the term of the lease and is not transferred to the Government at or shortly after the end of the lease term.
- The lease term does not exceed 75 percent of the estimated economic life of the asset.

Question: Did Army contracting officers use and properly justify the use of leases in accordance with Office of Management and Budget Circular A-11 on the 21 programs selected for review?

Results: For the 21 programs reviewed, Army contracting officers did not consider the use of a lease before awarding contracts for the weapon systems.

7. Condition: On the Boeing KC-767A tanker aircraft program, the Air Force contracting officer did not require Boeing to submit cost and pricing data related to prior commercial sales to enable the Air Force contracting officer to determine price reasonableness.

Question: Did Army contracting officers require contractors to submit cost or pricing data to enable the contracting officers to determine price reasonableness for the 21 programs selected for review?

Results: As indicated in price negotiation memorandums for 20 of 21 programs reviewed, Army contracting officers relied on cost or pricing data to negotiate the contract price and support a price reasonableness determination. The Army had not awarded a contract on the remaining program, the Mid Range Munition, because it is a preacquisition program.

8. Condition: The Assessment of Leasing Actions report stated that the Air Force took full advantage of Section 8159 of the DoD Appropriations Act for FY 2002 that authorized the Air Force to lease not more than 100 general purpose Boeing KC-767 aircraft. With this authority, the Air Force did not prepare a formal analysis of alternatives to determine the best possible system solution to fulfill its need for a tanker aircraft replacement. DoD Instruction 5000.2 requires that an analysis of alternatives be completed before program initiation and approved by the Director, Program Analysis & Evaluation for major Defense acquisition programs. The analysis of alternatives is an evaluation of the system's operational effectiveness, operational suitability, and estimated costs of alternative systems to meet a mission capability. The analysis assesses the advantages and disadvantages of alternatives being considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables.

Question: Did the Army prepare an analysis of alternatives to support the acquisition of the 21 programs selected for review?

Results: For the 21 acquisition programs reviewed, the Army milestone decision authorities had approved 6 programs for entry into the system development and demonstration phase of the acquisition process within the last 5 years. For two (one ACAT IC and one ACAT II) of the six programs, the Army did not prepare an analysis of alternatives as required. On the Excalibur Program (an ACAT IC program), the Army prepared a "Precision Munitions Mix Analysis" but not an approved analysis of alternatives in support of the low-rate initial production decision. For the Army Constructive Training Federation (an ACAT II program), the program manager stated that the milestone decision authority approved the program for entry into system development and demonstration with the provision that the program manager must obtain an analysis of alternatives.

Finding A addresses the issue of program documentation available to milestone decision authorities at program reviews.

9. Condition: On the Boeing KC-767A tanker aircraft program, the Office of the Assistant Secretary of the Air Force (Acquisition) did not establish a disciplined acquisition strategy to ensure that the warfighters operational requirements were being satisfied. The Office of Management and Budget Circular A-109, "Major System Acquisitions," April 5, 1976, states that Federal agencies should tailor an acquisition strategy for each major system to ensure that each major system fulfills a mission need and operates effectively in its intended environment. DoD Instruction 5000.2 requires the program manager to prepare and the milestone decision authority to approve an acquisition strategy by the system development and demonstration acquisition phase of the acquisition process.

Question: Did Army program managers prepare disciplined acquisition strategies in accordance with requirements in Office of Management and Budget Circular A-109 and DoD Instruction 5000.2 for the 21 programs selected for review?

Results: Six programs were in the system development and demonstration phase of the acquisition process. For one of the six, the program manager had not completed a disciplined acquisition strategy because approval of the capabilities development document was pending. The requirements document had been awaiting approval for 2 years as of July 2006. Program managers for 7 of 14 Army programs in the production phase of the acquisition process had on file approved acquisition strategy documents that indicated a disciplined acquisition strategy was in place for the acquisition of the weapon systems. Program managers for 5 of the remaining 7 programs had acquisition strategies that were not approved but did indicate a disciplined acquisition strategy. Program managers for the remaining two systems could not provide the audit team with an acquisition strategy and we therefore could not determine whether those programs had a disciplined acquisition strategy. The program manager for the Mid Range Munition, a preacquisition program, was in the process of developing a disciplined acquisition strategy.

10. Condition: On the Boeing KC-767A tanker aircraft program, the program manager did not plan to complete an information support plan (formerly referred to as a command, control, communications, computers and intelligence support plan) before the milestone decision to acquire the first 100 tanker aircraft. An information support plan is needed to identify, plan, and manage command, control, communication, computers, and intelligence supportability needs, dependencies between systems, and interface and interoperability requirements. DoD Instruction 5000.2 requires program managers to prepare an information support plan before the decision reviews for entering into the system development and demonstration and the production and deployment phases of the acquisition process.

Question: Did Army milestone decision authorities require program managers to prepare and obtain approval for information support plans before the systems development and demonstration and production and deployment phases of the acquisition process for the 21 programs selected for review?

Results: For the 6 programs that had entered the system development and demonstration phase of the acquisition process, one program manager submitted an approved information support plan, and four program managers submitted draft information support plans at the program milestone decision review. The

milestone decision authority did not require an information support plan for the Joint Vaccine Acquisition Program because it did not have any interoperability requirements. For the 14 programs that were in the production and deployment phase, five program managers had draft information support plans and four program managers did not prepare plans because their programs did not have any interoperability requirements. Five program managers had their full-rate production decisions before the requirement for an information support plan was established. Because it is in the preacquisition phase of the acquisition life cycle, the Mid Range Munition program has not yet developed an Information Support Plan.

11. Condition: The operational requirements document developed by the Air Force did not require that the first 100 Boeing KC-767A tanker aircraft acquired meet warfighter requirements for interoperability. As a result, the aircraft acquired would not have fully met the key performance parameter for interoperability.

Question: Did the Army Deputy Chief of Staff for Operations require program managers to meet a net-ready (formerly interoperability) key performance parameter and include it in the capability development documents and capability production documents?

Results: The Army Deputy Chief of Staff for Operations included a key performance parameter for net-readiness in capabilities development documents for the five of six Army acquisition programs that were in the system development and demonstration phase. The other program, Joint Vaccine Acquisition Program, did not need a net-ready key performance parameter because the program did not have interoperability requirements. Also, the Army requirements community included a key performance parameter for net-readiness in requirements documents for 5 of the 14 acquisition programs in the production and deployment phase. Of the remaining nine acquisition programs, a key performance parameter for net-readiness was not applicable to four programs because the systems did not have a mission that required the system to be interoperable. The other five systems had interoperability requirements but the Army Deputy Chief of Staff for operations had not updated the capability production documents to identify net-readiness as a key performance parameter.

12. Condition: On both the Boeing KC-767A tanker aircraft program and the C-130J program, the Air Force did not ensure that warfighter operational requirements were adequately established in the contract specifications.

Question: Did Army program managers ensure that contracting officers included the requirements identified in the operational requirements or capabilities development documents in contract specification before awarding development contracts for the six programs reviewed in the system development and demonstration phase of the acquisition process?

Results: For the six Army acquisition programs that were in the system development and demonstration phase, program managers had verified that contracting officers included requirements identified in operational requirements documents or capabilities development documents in system contract specifications.

13. Condition: The Air Force did not comply with statutory provisions for determining the operational effectiveness, suitability, and survivability of the Boeing KC-767A tanker aircraft before proceeding beyond low-rate initial production and committing to the subsequent production of all 100 KC-767A tanker aircraft. Section 2399, title 10, United States Code, “Operational Test and Evaluation of Defense Acquisition Programs,” states that a major Defense acquisition program may not proceed beyond low-rate initial production until initial operational test and evaluation of the program is completed. Further, section 2366, title 10, United States Code, states that a covered system, a system under the oversight of the Director, Operational Test and Evaluation, may not proceed beyond low-rate initial production until realistic survivability testing of the system has been completed.

Question: Did Army milestone decision authorities ensure that initial operational test and evaluation was completed before they approved the 14 Army acquisition programs for full-rate production? Also, did the Army milestone decision authorities ensure that survivability testing was planned and conducted for the 12 covered acquisition programs?

Results: The Army milestone decision authorities ensured that program managers for 12 of 14 acquisition programs in production completed initial operation test and evaluation before approving the programs for full-rate production. Further, Army milestone decision authorities ensured that program managers planned or completed survivability testing for 6 of the 12 covered acquisition programs before approving the acquisition programs for full-rate production. Program managers for the other six systems stated that they had not planned to present the results of survivability testing to their milestone decision authorities because they believed that their systems did not require that level of testing. The Director, Operational Test and Evaluation had determined that the six programs were covered acquisition programs.

14. Condition: Costly contract modifications to convert the commercial aircraft to the KC-767A military configuration would occur because the KC-767A system Program Office did not fully develop system engineering requirements.

Question: Did Army program managers prepare comprehensive systems engineering plans for the six acquisition programs reviewed that were in the system development and demonstration phase of the acquisition process?

Results: For the six Army acquisition programs that were in the system development and demonstration phase of the acquisition process, five Army program managers had prepared systems engineering documents required in DoD 5000 series of guidance to verify that system operational requirements would be met in accordance with DoD policy. The remaining program, the Joint Vaccine Acquisition Program, did not prepare a plan because the program did not have any systems engineering requirements.

15. Condition: On the Boeing KC-767A tanker aircraft and the C-130J program, the Assistant Secretary of the Air Force (Acquisition) did not hold program managers accountable for completing statutory and regulatory requirements. DoD IG Report No. D-2004-064, “Acquisition of the Boeing KC-767A Tanker Aircraft,” March 29, 2004, cited requirements in the areas of commercial items; two statutory testing requirements; cost-plus-a-percentage-of-cost system of contracting; leases; and acquisition documentation, such as the acquisition

strategy and requirements documents. The C-130J report cited requirements in the areas of commercial items; multiyear contract award; and testing.

Question: Are the Army milestone decision authorities holding program managers accountable for completing statutory and regulatory document requirements before milestone decisions and program reviews for the 21 programs selected for review?

Results: Army milestone decision authorities approved 10 of the 21 programs reviewed for entry into the system development and demonstration or production and deployment phase of the acquisition process before program managers prepared, updated, or obtained all required documentation to support the decision to proceed into the next phase of the acquisition process. Finding A discusses the adequacy of program documentation supporting program milestone decision reviews.

Appendix E. Other Matters of Interest

This appendix discusses two matters of interest for Army management's attention. Because we identified a material control weakness associated with the Program Executive Office (PEO) Soldier in DoD Inspector General Report No. D-2006-004, "Audit of the Acquisition of the Objective Individual Combat Weapon," October 7, 2005, we assessed the adequacy of PEO Soldier's internal controls concerning acquisition category (ACAT) classification during this audit. Also, we noted that for some Army acquisition programs, the Army had more than two levels of management oversight between the program manager and the milestone decision authority. A discussion of these two matters follows.

Program Executive Office Soldier

We reviewed 13 ACAT II and III programs managed by the Program Executive Officer Soldier to determine whether the appropriate ACAT classification had been established and whether the acquisition program had requirements documents validated and approved at the appropriate level. We also reviewed the statements of assurance provided to the Program Executive Officer from the product managers to determine whether material weaknesses were identified for their programs. We determined that one acquisition program, the Common Remotely Operated Weapon Station Program, may require reclassification from an ACAT III program to an ACAT II program because the Army Deputy Chief of Staff for Operations established an acquisition objective which will require estimated procurement funds totaling \$2 billion to fulfill the requirement.¹ DoD Instruction 5000.2 states that ACAT II programs are major acquisition programs with an estimated total expense for procurement of more than \$660 million in FY 2000 constant dollars. ACAT III programs are acquisition programs with an estimated total in FY 2000 constant dollars less than ACAT II program dollar procurement threshold.

We also found one deficiency with a statement of assurance. The Program Executive Officer Soldier approved the Advanced Combat Helmet Program system for entry into the system development and demonstration phase of the acquisition process without having an approved capability development document from the Deputy Chief of Staff for Operations. The product manager did not identify any material internal control weaknesses in the program's statements of assurance.

Army Acquisition Oversight Process

DoD Directive 5000.1 provides the basic framework for the DoD acquisition system and states that, to streamline organizations, management structures should

¹ During the review, a representative for the Program Executive Office Soldier stated that the Office informed the Army Acquisition Executive that the program was expected to be classified as an ACAT II but was awaiting approval of the acquisition objective by the Deputy Chief of Staff of the Army G-3.

have short, clearly defined lines of responsibility, authority, and accountability. It further states that there should be no more than two levels of program review between the program manager and the milestone decision authority.

During this review, we visited 10 PEOs and reviewed 21 programs. For the 21 programs reviewed, the number of levels of management oversight between the program offices and the milestone decision authorities varied. Army Regulation 70-1 defines a project manager as an individual who is a colonel or GS-15, and a product manager as an individual who is a lieutenant colonel or GS-14. The regulation states that project or product managers serve as the materiel developers of systems and are assigned full responsibility for the systems under development.

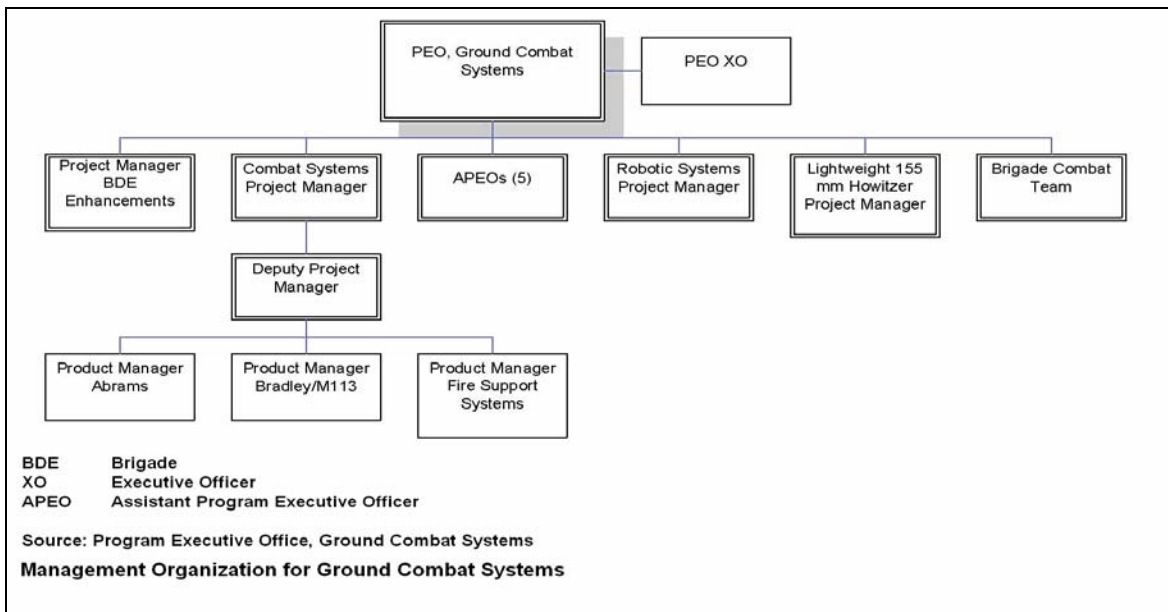
The number of levels of management oversight varied for the 21 programs because in October 2001 the Army Chief of Staff issued a policy memorandum that restructured the Army program executive officer and program manager command structure. The intent of the memorandum was to ensure that program managers would be responsible and accountable for life-cycle management of their assigned programs. The memorandum required the Army to establish two senior leadership positions, a military Program Executive Officer and a civilian deputy Program Executive Officer. The memorandum also stated that the direct reporting chain of command within the PEO could be structured as follows:

- product managers report to project managers;
- project managers report to a Program Executive Officer or the Army Acquisition Executive; and,
- PEOs report to the Army Acquisition Executive.

For the 21 programs selected for review, PEOs required program managers to supervise the efforts of several project or product managers. The overarching program manager was therefore responsible for overseeing multiple programs. In turn, Program Executive Officers oversaw the overarching program managers.

For example, the PEO for Ground Combat Systems at the Army Tank-automotive and Armaments Command oversaw five project managers who oversaw program divisions for Robotic Systems, Modular Brigade Enhancements, Lightweight 155-Millimeter Howitzers, Stryker Brigade Combat Team, and Combat Systems. Within each of these five divisions, multiple program offices with project and product managers were assigned to oversee the materiel development of individual programs. One of the programs under the Ground Combat Division, the Bradley Fighting Vehicles, an ACAT I program, was further segmented into three programs: one program to recapitalize and upgrade older vehicles, a second program to modernize and upgrade vehicles, and a third program to continue development of a new fire support vehicle. As a result, the project manager for Bradley Fighting Vehicles received and reviewed information from the product manager and reported the results to the program manager for Combat Systems. The program manager then reported to the PEO for the Ground Combat Systems within the Tank-automotive and Armaments Command. Because the Bradley program is an ACAT I program, the Army Acquisition Executive was the milestone decision authority. Accordingly, before milestone decisions can be made, program management oversight occurred at three different levels between

the product managers and the Army Acquisition Executive. The following figure shows the management layers for the Ground Combat Systems within the Tank-automotive and Armaments Command.



PEOs acknowledge that the review process can be lengthy. A representative from the Tactical Vehicles program office stated that it took 7 years to obtain one of several approvals needed for the acquisition of the High Mobility Multipurpose Wheeled Vehicle. Further, a May 2004 memorandum issued by the PEO, Tactical Missiles, stated that 4 months lead time was required to coordinate a revised acquisition strategy for approval, and 7 months lead time was required to coordinate cost analysis information before a program review with the milestone decision authority.

Thus, the Army acquisition management oversight process for reviewing and approving acquisition programs at milestone reviews exceeds, in some instances, the number of levels of oversight specified in DOD Directive 5000.1. As a result, the oversight process is cumbersome, and it delays acquisition milestone decisions.

Appendix F. Overview of the 21 Army Acquisition Programs

| <u>Program Name</u> | <u>Phase</u> | <u>Last Program Milestone Date</u> | <u>RDT&E (in millions)</u> | <u>Procurement (in millions)</u> | <u>Total Cost (in millions)</u> | <u>GWOT¹ Funding (in millions)</u> | <u>DOT&E Oversight</u> | <u>Urgent Need</u> | <u>Milestone Decision Authority</u> |
|--|--------------|------------------------------------|--------------------------------|----------------------------------|---------------------------------|---|----------------------------|--------------------|---|
| <u>ACAT IC Programs</u> | | | | | | | | | |
| Bradley Fighting Vehicle System Upgrade | P&D | April 30, 2001 | \$ 0 | \$ 797.5 | \$ 797.5 | \$ 0 | Yes | No | Army Acquisition Executive |
| Excalibur—Projectile, 155-mm Extended Range (XM982) | SDD | May 23, 2005 | 395.3 | 1,397.4 | 1,792.7 | 0 | Yes | Yes | Army Acquisition Executive |
| Family of Medium Tactical Vehicles | P&D | Aug. 29, 1995 | 11.3 | 12,915.3 | 12,926.6 | 30,289.3 | Yes | Yes | Army Acquisition Executive |
| Javelin (Advanced Anti-Tank Weapon System—Medium) | P&D | May 23, 1997 | 0 | 314.8 | 314.8 | 133.0 | Yes | No | Army Acquisition Executive |
| Land Warrior | SDD | Feb. 10, 2005 | 225.8 | 11,543.8 | 11,769.6 | 0 | Yes | Yes | Army Acquisition Executive |
| Longbow Hellfire | P&D | Oct. 18, 1995 | 0 | 2.5 | 2.5 | 0 | Yes | No | Army Acquisition Executive |
| Patriot Advanced Capability-3 | P&D | Jan. 11, 2005 | 253.6 | 3474.4 | 3,728.0 | 0 | Yes | Yes | Army Acquisition Executive |
| <u>ACAT II Programs</u> | | | | | | | | | |
| 2.75-Inch Rocket System | P&D | Not Available ² | 0 | 2,744.5 | 2,744.5 | 13.0 | No | No | PEO Missiles and Space |
| Army Constructive Training Federation | SDD | Oct. 22, 2004 | 291.3 | 0 | 291.3 | 0 | No | No | PEO Army Acquisition Executive |
| Advanced Field Artillery Tactical Data System | P&D | Dec. 13, 1995 | 71.8 | 111.5 | 183.3 | 11.0 | Yes | No | PEO Command, Control, and Communications (Tactical) |
| Close Combat Tactical Trainer | P&D | Dec. 14, 1998 | 15.1 | 187.7 | 202.8 | 0 | No | No | PEO Simulation, Training, and Instrumentation |
| Extended Range Multi-Purpose Unmanned Aerial Vehicle | SDD | April 20, 2005 | 241.0 | 619.8 | 860.8 | 0 | Yes | No | PEO Aviation |
| Forward Area Air Defense Command, Control, and Intelligence System | P&D | April 24, 1995 | 225.6 | 403.0 | 658.6 | 165.0 | No | Yes | PEO Command, Control, and Communications (Tactical) |
| Joint Vaccine Acquisition Program | PFDOS | - | 444.2 | 261.6 | 705.8 | 0 | No | No | PEO Chemical and Biological Defense |
| Cartridge, 120-mm, M829A3 | P&D | March 3, 2003 | 0 | 1305.5 | 1,305.5 | 0 | No | No | PEO Ammunition |
| Maneuver Control System | P&D | June 29, 2005 | 74.2 | 238.9 | 313.1 | 30.0 | Yes | No | PEO Command, Control, and Communications (Tactical) |
| Mid Range Munition ³ | PACQ | - | 39.1 | 0 | 39.1 | 0 | Yes | No | PEO Ammunition |
| Paladin Field Artillery Ammunition Support Vehicle | P&D | Mar. 31, 1993 | 6.4 | 215.7 | 222.1 | 0 | No | No | PEO Ground Combat Systems |
| Shadow Tactical Unmanned Aerial Vehicle | P&D | Oct. 1, 2002 | 69.8 | 363.1 | 432.9 | 312.7 | Yes | No | Army Acquisition Executive |
| Surface-Launched Advanced Medium Range Air-to-Air Missile | SDD | Sept. 16, 2003 | 65.3 | 113.7 | 179.0 | 0 | Yes | No | PEO Missiles and Space |
| Secure Mobile Anti-Jam Reliable Tactical Terminal | P&D | Jan. 25, 1999 | 5.3 | 373.0 | 378.3 | 0 | No | No | PEO Command, Control, and Communications (Tactical) |
| Total | | | \$2,465.1 | \$37,383.7 | \$39,848.8 | \$30,954.0 | | | |

DOT&E Director, Operational Test and Evaluation Oversight List

GWOT Global War on Terrorism

PACQ Preacquisition Program

PEO Program Executive Officer

PFDOS Production, Fielding, Development and Operational Support

P&D Production and Deployment

RDT&E Research, Development, Technology, and Evaluation Funding

SDD System Development and Demonstration

¹ This column represents funding for Army Programs in FY 2004 and FY 2005.

² The Acquisition Decision Memorandum was not available.

³ The Mid-Range Munition funding comes from the Army's Science and Technology Budget.

Appendix G. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
 Director, Acquisition Resources and Analysis
Under Secretary of Defense (Comptroller)/Chief Financial Officer
 Deputy Chief Financial Officer
 Deputy Comptroller (Program/Budget)
Director, Program Analysis and Evaluation
Director, Defense Procurement and Acquisition Policy

Joint Staff

Director, Joint Staff

Department of the Army

Assistant Secretary of the Army (Acquisition, Logistics, and Technology)
 Program Executive Officer, Ammunition
 Project Manager, Maneuver Ammunition Systems-Direct Fire
 Product Manager, Large Caliber
 Product Manager, Medium Caliber
 Project Manager, Combat Ammunition Systems-Indirect Fire
 Product Manager, Excalibur
 Program Executive Officer, Aviation
 Project Manager, Unmanned Aerial Vehicle Systems
 Joint Program Executive Officer, Chemical and Biological Defense
 Joint Chemical and Biological Medical Systems
 Product Manager, Joint Vaccine Acquisition Program
 Program Executive Officer, Combat Support, and Combat Service Support
 Project Manager, Tactical Vehicles
 Product Manager, Medium Tactical Vehicles
 Program Executive Officer, Command, Control, and Communications (Tactical)
 Project Manager, Intelligence, and Effects
 Project Manager, Counter-Rocket, Artillery, Mortar
 Project Manager, Ground Combat Command and Control
 Product Manager, Maneuver Control System
 Project Manager, Warfighter Information Network-Tactical
 Product Manager, Extreme Satellite Systems
 Program Executive Officer, Ground Combat Systems
 Project Manager, Combat Systems
 Product Manager, Bradley Fighting Vehicle Systems
 Project Manager, Fire Support Platforms

Program Executive Officer, Missiles and Space
Project Manager, Joint Attack Munition Systems
Product Manager, Rockets
Product Manger, Missiles
Project Manager, Close Combat Weapon System
Product Manager, Javelin
Project Manager, Lower Tier
Product Manager, Patriot Advanced Capabilty-3
Project Manager, Common Missile Defense Special
Product Manager, Surface-Launched Advanced Medium Range Air-to-Air
Missile
Program Executive Officer, Soldier
Project Manager Soldier, Warrior
Product Manager, Land Warrior
Program Executive Officer, Simulation, Training, and Instrumentation
Project Manager, Combined Arms Tactical Trainers
Deputy Chief of Staff for Operations (G-3/5/7)
Deputy Chief of Staff for Programs (G-8)
Auditor General, Department of the Army

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Auditor General, Department of the Air Force

Non-Defense Federal Organization

Office of Management and Budget

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 Homeland Security and 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 Management, Finance, and Accountability,
Committee on Government Reform
House Subcommittee on National Security, Emerging Threats, and International
Relations, Committee on Government Reform

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