Audit Report

OFFICE OF THE INSPECTOR GENERAL

REVIEW OF THE ALL SOURCE ANALYSIS SYSTEM AS A PART OF THE AUDIT OF THE EFFECTIVENESS OF THE DEFENSE ACQUISITION BOARD REVIEW PROCESS-- FY 1993

Report No. 93-087 April 20, 1993

Department of Defense

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Acronyms

ADM	Acquisition Decision Memorandum
ASAS	All Source Analysis System
ATCCS	Army Tactical Command and Control System
C^3I	Command, Control, Communications and Intelligence
DAB	Defense Acquisition Board
DAES	Defense Acquisition Executive Summary
EMD	Engineering and Manufacturing Development
DOT&E	Director, Operational Test and Evaluation
EUT&E	Early User Test and Experimentation
FDT&E	Force Development Test and Experimentation
IOT&E	Initial Operational Test and Evaluation
LRIP	Low-Rate Initial Production
ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
PPQT	Preproduction Qualification Test
ROC	Required Operational Capability
TEMP	Test and Evaluation Master Plan
TEP	Test and Evaluation Plan
USD(A)	Under Secretary of Defense for Acquisition

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202-2884

April 20, 1993

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
COMPTROLLER OF THE DEPARTMENT OF DEFENSE

SUBJECT: Audit Report on the Review of the All Source Analysis System as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process--FY 1993 (Report No. 93-087)

We are providing this final report for your information and use. Comments on a draft of this report were considered in preparing the final report. DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, all addressees must provide final comments on the unresolved recommendations by June 21, 1993. See the "Management Comments" section at the end of the executive summary and the finding for the unresolved recommendations and the specific requirements for your comments.

As required by DoD Directive 7650.3, the comments must indicate concurrence or nonconcurrence in the finding and each recommendation addressed to you. Recommendations are subject to resolution in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the material internal control weaknesses highlighted in Part I.

We appreciate the courtesies extended to the audit staff. If you have questions on this report, please contact Program Director Russell A. Rau at (703) 693-0186 (DSN 223-0186). Appendix E lists the planned distribution of this report.

Edward R. Jones
Deputy Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Army
Assistant Secretary of Defense for Command, Control,
Communications, and Intelligence

Office of the Inspector General, DoD

Audit Report No. 93-087
Project No. 2AE-0033.02

April 20, 1993

REVIEW OF THE ALL SOURCE ANALYSIS SYSTEM AS A PART OF THE AUDIT OF THE EFFECTIVENESS OF THE DEFENSE ACQUISITION BOARD REVIEW PROCESS--FY 1993

EXECUTIVE SUMMARY

Introduction. The All Source Analysis System (ASAS) is a ground-based mobile intelligence-processing system designed to provide automated support to Army combat commanders. The ASAS will provide commanders a timely and comprehensive understanding of opposing force deployments, capabilities, and potential courses of action. The ASAS Program is an evolutionary development effort consisting of five blocks. As a result of our audit, the Under Secretary of Defense for Acquisition (USD[A]) redesignated the Defense Acquisition Board (DAB) program review scheduled for March 1993 as a Milestone II review rescheduled for May 1993.

Objectives. The overall audit objective was to evaluate the DAB review process for the acquisition of the ASAS. Specifically, we assessed the adequacy of testing to support decisions to field the Block I system and award the contract for the Block II system. We also reviewed the justification for not conducting a DAB Milestone II review. In addition, we evaluated the scope of issues defined and documentation required for the March 1993 ASAS Program review. Further, we assessed compliance with DoD acquisition policy.

Audit Results. The DAB process was not effective for the ASAS Program. Testing conducted and planned was inadequate to support a decision to field the Block I system or award the engineering and manufacturing development (EMD) contract for the Block II system. No DAB milestone review was held, and none was planned until 1997, although the Program had been in development since 1983 and had cost about $1.4 billion through FY 1992. The DAB program review planned for March 1993 did not include the materiel release decision for Block I and did not ensure preparation of all documentation needed for a thorough review.

Internal Controls. The audit identified material internal control weaknesses. Controls were not effective for the evolutionary acquisition strategy and not implemented for the ASAS Program when it entered major DAB program status. Part I discusses these internal control weaknesses.

Potential Benefits of Audit. Potential monetary benefits are not readily quantifiable because the cost of correcting Block I deficiencies after fielding is unknown (Appendix C). Savings would result from a proper assessment of the ASAS Program before fielding the Block I system or awarding the EMD contract for the Block II system.

Summary of Recommendations. We recommended that a DAB Milestone II review of the ASAS Program be conducted and that remaining FY 1993 ASAS funding be withheld until an acquisition decision memorandum is issued following the Milestone II review.

Management Comments. The USD(A) partially concurred with our finding and recommendations and the Comptroller of the Department of Defense concurred. A full discussion of their responses is in Part II; the complete text of their comments is in Appendix B and Part IV. We request that the USD(A) reconsider his position and that both he and the Comptroller provide additional comments to the report by June 21, 1993.

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This report was prepared by the Acquisition Management Directorate, Office of the Inspector General for Auditing, DoD. Copies of the report can be obtained from the Secondary Reports Distribution Unit, Audit Planning and Technical Support Directorate (703) 614-6303 (DSN 224-6303).

Part I - Introduction

Background

The All Source Analysis System (ASAS) is a ground-based mobile intelligence processing system designed to provide automated support to Army combat commanders. The ASAS will provide commanders a timely and comprehensive understanding of opposing force deployments, capabilities, and potential courses of action. The ASAS Program is an evolutionary development effort consisting of five increments (or blocks). As of June 1992, the cost to acquire the ASAS through Block III was estimated at $5.89 billion: $1.60 billion for Block I and $4.29 billion for Blocks II and III.[1]

The Block I portion of the ASAS Program provides an initial capability to perform four of six primary functions: intelligence collection management, signal intelligence management, situation analysis, and target analysis. The ASAS Block I program has been in development since 1983. Through FY 1992, the Army has expended $1.036 billion for development and $331 million for production of 12 Block I systems to be deployed from FY 1993 through FY 1995 to 11 priority (Force Package 1) units plus the Army Intelligence School. Block I development was not performed under Defense Acquisition Board (DAB) cognizance. Rather, the Joint Oversight Group[2] had responsibility for the Block I program.

Beginning in FY 1993, the Block II program will replace the ASAS Block I system with Army Tactical Command and Control System (ATCCS) common hardware and software but will not increase the number of primary functions beyond the four functions already attained. The Block III upgrade, scheduled for FYs 1998 to 2003, will develop the final two functions: electronic warfare support and operations security support. The Blocks IV and V upgrades during FYs 2002 to 2012 will improve and enhance existing capabilities. Block V is intended to fully satisfy all user requirements as stated in the ASAS Required Operational Capability (ROC).

Blocks IV and V are not included in the ASAS acquisition program baseline. According to the ASAS Program Manager, the cost of Blocks IV and V has not been determined.

[1] Source: Program Deviation Report, June 23, 1992. All Program costs and funding became unclassified on December 1, 1992. All dollars mentioned in this report are current (then-year) dollars.

[2] A committee of Army and Air Force general officers and Office of the Secretary of Defense (OSD) officials that directed the ASAS Program from 1982 to 1987.

Objectives

The overall audit objective was to evaluate the DAB review process for the acquisition of the ASAS. Specifically, we assessed the adequacy of testing to support decisions to field the Block I system and award the contract for the Block II system. We also reviewed the justification for not conducting a DAB Milestone II review. In addition, we evaluated the scope of issues defined and documentation required in support of the scheduled March 1993 DAB program review. Further, we assessed compliance with DoD Directive 5000.1, "Defense Acquisition," February 23, 1991; DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991; and DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports," February 23, 1991. Additionally, we reviewed applicable internal controls.

Scope

We performed this program audit from July through December 1992 and reviewed records dated from 1982 through 1992 relating to the ASAS. We performed this audit in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, and accordingly included such tests of internal controls as were deemed necessary. We discussed issues related to the ASAS and the DAB review process with Office of the Secretary of Defense (OSD), Defense Intelligence Agency, Joint Staff, and Army personnel responsible for the preparation or review of DAB-required documents. Appendix D lists activities visited or contacted.

Internal Controls

The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. Controls were not effective for the review and approval of the ASAS evolutionary acquisition strategy. Additionally, controls were not implemented on the ASAS Program when it entered major DAB program status to ensure preparation of an acquisition program baseline and other required documentation. Recommendations 1. and 2., if fully implemented, will correct these weaknesses for the ASAS Program. Monetary benefits are not readily quantifiable because the cost of correcting Block I deficiencies after fielding is unknown (Appendix C). Copies of the final report will be provided to the senior officials responsible for internal controls within OSD and the Department of the Army.

Prior Audits and Other Reviews

During the last 5 years, there has been no audit coverage on the ASAS relating to the DAB review process.

Other Matters of Interest

On September 3 and 11, 1992, we met with the Deputy Director, Intelligence Programs Support Group (Office of the Assistant Secretary of Defense for Command, Control, Communications and Intelligence) to discuss issues and documentation for the program review, then scheduled for January 1993. He requested our assistance in defining requirements for the review. Based on current results of our audit, we stated that a Milestone II review rather than a program review may be needed. At a minimum, we considered identification of a Block II low-rate initial production (LRIP) quantity and submission of an Operational Requirements Document (ORD) to be critical. The working group of the Command, Control, Communications and Intelligence (C^3I) Systems Committee held planning meetings on September 24 and October 1, 1992. On October 9, 1992, the Committee Chair issued a Committee Memorandum which provided guidance for the program review, then planned for March 1993. With these meetings and the memorandum, the Committee took positive steps to control the ASAS Program by defining issues to be addressed and requiring preparation of key documentation for the program review.

Part II - Finding and Recommendations

Effectiveness of the Defense Acquisition Board Review Process

The DAB review process was not effective for the ASAS Program. Specifically, testing and review prerequisites did not adequately support a decision to field the Block I system or award the engineering and manufacturing development (EMD) contract for the Block II system. No DAB milestone review was held, and none was planned until the Milestone III, Production and Deployment, decision for the Block II system in 1997, although the Program had been in development since 1983 and had cost $1.39 billion[3] in Development and Procurement funds through FY 1992. The DAB program review planned for March 1993 did not include the materiel release decision for Block I and did not require preparation of all documentation needed for entry of a major Defense acquisition program into EMD. As a result, the ASAS Program had not had the necessary direction, and the planned DAB review lacked essential information upon which to decide to proceed with the Program.

Background

The ASAS is a major Defense acquisition program (Acquisition Category I D) for which the Under Secretary of Defense for Acquisition (USD[A]) is the milestone decision authority. The USD(A) chairs the DAB for milestone reviews, and the DAB is supported by three committees. The committee responsible for oversight of the ASAS Program is the C^3I Systems Committee chaired by the Deputy Assistant Secretary for Defense (Strategic and Tactical Command, Control and Communications), Office of the Assistant Secretary of Defense for C^3I.

Reviews. The DAB process provides for four types of reviews: milestone, special program, milestone committee, and non-milestone committee reviews.

Milestone Reviews. The purpose of a milestone review is to determine where the program is versus where it should be, where the program is going and how the program manager proposes to get there, what risks exist in the program and how the program manager will identify and close those risks, and if the program manager's proposed approach is affordable. Documentation is the primary means for the functional staff and the program manager to provide the milestone decision authority with the information needed to make a milestone decision. The milestone decision authority documents completion of the milestone review by issuing an acquisition decision memorandum (ADM).

[3] $1.368 billion for Block I and $22 million for Block II; $1.059 billion for development and $331 million for procurement.

The ADM for Milestone II should approve entry into Phase II, approve the proposed or modified acquisition strategy and development baseline, establish exit criteria that must be accomplished during Phase II, and identify LRIP quantities, if appropriate.

Special Program Reviews. The USD(A) may hold special program reviews between milestone reviews. Agenda topics shall be identified at least 30 calendar days before the scheduled review. Documentation required shall be tailored to the specific requirements for the program review but shall not exceed the requirements for a milestone review without specific authorization of the USD(A).

Milestone Committee Reviews. The purposes of the DAB committee reviews are to verify that exit criteria and the minimum required accomplishments of the phase preceding the milestone have been completed; provide an independent assessment of the program which, together with the Component's Integrated Program Summary, is the basis for the DAB review; and make recommendations on trade-offs among cost, schedule, and performance proposed by the program manager for decision by the USD(A).

Non-Milestone Committee Reviews. The three Committees convene periodically for special reviews, apart from the DAB milestone review process, as approved by the USD(A). In general, the procedures for milestone reviews apply. However, specific requirements are tailored to meet schedule constraints or special review considerations. As a minimum, a planning meeting will discuss plans and set requirements for the Committee review. Within a week of this meeting, the Committee Chair will issue a Committee Memorandum which will state clearly the purpose of the special review; establish the timeline of events; identify the documentation required; and describe the review issues, agenda, and responsibilities.

Test and Evaluation Programs. DoD Instruction 5000.2 establishes policies for test and evaluation programs, stating the program should be structured to provide:

- Essential information for assessment of acquisition risk and for decisionmaking,
- Verification of attainment of technical performance specifications and objectives,
- Verification that systems are operationally effective and suitable for intended use, and
- Essential information in support of decisionmaking.

The Test and Evaluation Master Plan (TEMP) documents the approved overall test and evaluation program for a system. Supporting developmental and operational test plans, such as a Test and Evaluation Plan (TEP), are generated to provide the details and schedule of testing.

At critical program decision points, test results are documented to support the decision by the milestone decision authority. At the Milestone II (EMD) decision, a Developmental Test and Evaluation Report is required to provide the results of developmental testing. Additionally, an Early Operational Assessment Report is required to support an LRIP decision at Milestone II. Operational assessments at the Milestone II decision point can be based on computer modeling, simulation, or analysis of system requirements and design specifications, where production representative units are unavailable for testing.

At the Milestone III, Production and Deployment, decision, the Component requires the Operational Test and Evaluation Report and the Beyond LRIP Report from the Director, Operational Test and Evaluation. These reports assess the initial operational test and evaluation performed and provide conclusions concerning operational effectiveness and suitability. The DoD Component must certify that a system is ready for initial operational test and evaluation (IOT&E) and obtain approval of the TEP before starting IOT&E. Operational testing must be performed on production or production-representative articles operated by typical users under combat conditions against threat representative forces.

Adequacy of Testing and Reviews

One minimum required accomplishment for EMD is that test results accurately show performance under operational conditions. The ASAS Block I Program has been in EMD since 1983. The Block II program was scheduled to start EMD in March 1993. However, testing conducted and testing planned were inadequate to support a decision to field Block I equipment or award the Block II EMD contract. Additionally, Army use of an accelerated acquisition strategy called "limited procurement-urgent"[4] circumvented established design and production readiness review and configuration audit requirements for Block I. Therefore, thorough operational test and evaluation of Block I before fielding is essential.

Block I Testing. The Block I test and evaluation program did not support the production decision in 1989 for the first units produced. Additionally, the test program had not provided for full evaluation of product qualification or operational suitability and effectiveness before fielding the Block I ASAS. In our opinion, the test program provided an appearance of successful progress rather than complete information upon which to base Program decisions.

Testing to Date. The Force Development Test and Experimentation (FDT&E), a combined developmental and operational test conducted in November and December 1989 by Test and Evaluation Command, was discontinued due to problems with the message parser, a unit that identifies

[4] The "limited procurement-urgent" strategy does not comply with current acquisition directives and instructions for major Defense acquisition programs.

incoming messages and routes them to the appropriate database. The purpose of the test, according to the FDT&E test report of February 1990, was to establish a performance baseline to support the Operational Test and Evaluation Agency's continuous evaluation of ASAS. Due to the problem with the parser, FDT&E failed to establish the required performance baseline for IOT&E. Rather than correcting the parser deficiencies and reaccomplishing FDT&E, the Army proceeded with more advanced testing.

The Preproduction Qualification Test (PPQT) is a series of technical tests that evaluates the design of a system relative to the performance requirements over the specified operational and environmental range before design release for production. The focus of PPQT is the proposed design, not the production end item's meeting contract technical performance specifications that is the focus of production verification testing. The Army Test and Evaluation Command conducted a PPQT from January through July 1992 to determine the materiel suitability of ASAS Block I units already produced for release to priority units. These tests were limited compared to formal Production Qualification testing, which is required by Army regulations to support a materiel release decision, requiring demonstration versus full test and evaluation of factors such as maintainability and reliability. Although a formal report was not yet completed, the Army Materiel Systems Analysis Activity rated ASAS as having low technical risk based on performance, supportability, and reliability and stated "We see no reason not to proceed on and conduct the IOT&E."

In our opinion, PPQT is not intended to support a materiel release decision or certification of readiness for IOT&E. The certification should confirm that the test article is a production or production-representative unit as determined by configuration audits and the full range of technical testing. On September 2, 1992, the Program Manager certified the Block I system was ready to enter IOT&E.

An IOT&E is required before entry into full-rate production, using production or production-representative articles, typical users, and realistic operating conditions. The IOT&E was conducted from September 8, 1992, through October 11, 1992, to assess the operational suitability and effectiveness of the ASAS Block I system and to support a materiel release decision in FY 1993. The IOT&E was based upon the negative assurance of the Army Materiel Systems Analysis Activity on the preliminary results of PPQT and without necessary support for the certification to proceed with IOT&E. As a result, we consider the entry into IOT&E to have been unduly expedited.

Initial Operational Test and Evaluation Invalid. Block I IOT&E did not include testing of interoperability as required by law, was not conducted on a production representative system, and was scheduled after the production of most ASAS Block I units. Further, the Test and Evaluation Plan was not timely and did not provide for determination of operational effectiveness and suitability.

Testing of Interoperability. Testing of interoperability for each ATCCS component system during IOT&E is required by Congress. Specifically, the FY 1991 Defense Appropriations Conference Report, October 24, 1990, stated:

> The conferees, therefore, direct the Army to revise its test and evaluation master plan for each ATCCS component system to include total system interoperability testing at each development and operational testing milestone.

The Collateral Enclave, a critical component of the ASAS that is the interface to and that provides interoperability with the ATCCS, was not tested during IOT&E. Although the TEMP included the requirement for interoperability testing, it excluded interoperability testing from IOT&E. Therefore, interoperability testing was not included in the TEP and was not conducted. In August 1992, the Program Office informed us that the Collateral Enclave was scheduled to be tested during Phase I of the ATCCS Early User Test and Experimentation (EUT&E) October 26 to 30, 1992. Then, on October 15, 1992 (4 days after IOT&E ended), the Program Office informed us that the Collateral Enclave would be demonstrated during Phase I and tested during Phase II of EUT&E in May 1993.

Production System and Decision. IOT&E must be conducted on production or production-representative systems before the full-rate production decision. DoD Instruction 5000.2 defines IOT&E as:

> All operational test and evaluation conducted on production or production representative articles, to support the decision to proceed beyond low-rate initial production. It is conducted to provide a valid estimate of expected system operational effectiveness and operational suitability.

The ASAS Block I IOT&E was performed on an interim system developed under unique Army "limited procurement-urgent" procedures, not a production system. Specifically, the Block I configuration is not intended to meet the operational requirements in the approved ROC of August 1991. Required reviews and other controls that normally support IOT&E prior to a production decision were bypassed at the time because of the expedited Army procedures, including production readiness reviews and functional and physical configuration audits. Further, Block I IOT&E did not support a production decision as most of the Block I equipment, planned only for the Army's priority units, had already been procured.

Test and Evaluation Plan. DoD Instruction 5000.2 requires the TEP to be provided to the Director, Operational Test and Evaluation (DOT&E), at least 60 days before start of IOT&E, and the DOT&E had so advised the Under Secretary of the Army (Operations Research) in a memorandum dated

March 30, 1992. However, the TEP was received for review by the DOT&E on August 21, 1992, only 18 days before IOT&E was to begin. On September 4, 1992, the DOT&E stated in a memorandum to the Under Secretary of the Army (Operations Research) that the TEP was adequate to support a baseline effort and an Army materiel release decision but noted that there were:

> significant limitations . . . that would prevent both a determination of operational effectiveness and suitability in accordance with the OT&E charter and the subsequent recommendation to the DAB in support of a traditional Milestone III decision.

The memorandum did not elaborate on the significant limitations. However, a tab to the staff package supporting the memorandum listed the following limitations:[5]

o The IOT&E is conducted using a Heavy Division. Material release decision is to field to Corps, Heavy Divisions and Light Divisions.

o The ATCCS interoperability testing is demonstration only and not included as a part of the formal operational testing.

o The IOT&E will test one software version; fielding will be on another software version.

o The majority of required interfaces will not be operationally tested.

o The majority of the thresholds used by the Army to determine operational effectiveness and suitability are opinion polls.

o Much of the data gathered to support the IOT&E will be in a garrison operation rather than field operations.

Testing Program Invalid. DoD Instruction 5000.2 states that

> Operational test and evaluation programs shall be structured to determine the operational effectiveness and suitability of a system under realistic combat conditions and to determine if the minimum acceptable operational performance requirements as specified in the Operational Requirements Document have been satisfied. . . . The Test and Evaluation Master Plan will be used to generate detailed test and evaluation plans.

[5] The tab was based on an Institute for Defense Analysis Review of the ASAS TEP, dated August 28, 1992.

The Instruction also states that all hardware and software changes that materially change system performance should be adequately tested and evaluated. This was not the case with the use of the Hawkeye system (an OSD-sponsored balanced technology initiative that became part of ASAS) and Collateral Enclave.

The ASAS operational testing program is invalid. Even though the second operational test, the FDT&E, failed to establish a performance baseline for IOT&E, the testing program continued as if there had been no problem. Further, two major changes occurred to the Block I system after FDT&E that were not properly tested prior to IOT&E. First, the integration of the Hawkeye system into the ASAS during 1991 was a major change to the configuration that was tested during FDT&E. Then, during 1992, specifying the use of common hardware and software in the Collateral Enclave (which was not subsequently tested during IOT&E) represented another significant change to the original system.

The ASAS testing program does not comply with DoD Instruction 5000.2. The TEP for the Block I IOT&E does not conform to the requirements of the TEMP because IOT&E did not test required interfaces, changed critical quantitative thresholds to non-critical criteria, and reduced the test from 45 to 26 days. In our opinion, the ASAS operational test and evaluation program is inadequate to assess operational suitability and effectiveness of the Block I system, justify a materiel release decision for the Block I system, or support award of the EMD contract for the Block II system. In particular, the change in critical performance thresholds relegates IOT&E to the subjective perceptions of the testers instead of objective performance measures.

DoD Instruction 5000.2 defines an operational assessment as:

> An evaluation of operational effectiveness and operational suitability made . . . on other than production systems. . . . Operational assessments may be made at any time . . . but will not substitute for the independent operational test and evaluation necessary to support full production decisions.

We consider the testing planned for Block I IOT&E to resemble more closely an operational assessment than an operational test and evaluation. The term "IOT&E", as applied to the evaluation made of the ASAS, gives the inaccurate impression that the testing performed meets the rigorous requirements for operational test and evaluation.

Impact of Inadequate Testing. As of September 30, 1992, the ASAS Program had cost $1.39 billion and was estimated to cost another $4.5 billion through Block III (FY 2003). The FY 1993 Defense Appropriations Act provided $47.7 million in procurement funds to begin fielding Block I and $57.1 million in RDT&E funds for "Evolutionary Acquisition."[6] The inadequate testing of the ASAS could cause the Army to prematurely decide to

[6] Of the $57.1 million, the program office has earmarked $17.4 million for Block I and $39.7 million for Block II.

field Block I and could result in additional costs to correct problems found after fielding. Reliance on test results based on inadequate testing could also impact the direction provided by the DAB on the ASAS Block II program entering EMD.

In our opinion, the Army should not have used expedited "limited procurement-urgent" procedures to bypass essential reviews in the acquisition process. These expedited procedures are not suitable for development or test and evaluation programs.

No DAB Milestone II Review

No DAB Milestone II review was held or planned, although the Army considers ASAS Block I to be essentially complete and is preparing to field Block I and award the EMD contract for Block II. In our opinion, the upcoming DAB review should be a formal Milestone II review that results in the rigorous oversight provided to DAB programs and should be conducted before the Block II EMD contract award.

Reviews Have Been Inadequate. The ASAS has been a DAB program since 1987 but has never had a DAB milestone review. From 1982 to 1987, the Program was under the purview of the Joint Oversight Group, which in 1984 declared that ASAS Block I had passed Milestone II in 1983. From 1988 through 1990, the C^3I Systems Committee of the DAB was briefed annually on the status of the Program, but no DAB review was held and no acquisition program baseline was required until 1991.

Before the ASAS Program was restructured in early 1991, a DAB Milestone III review for Block I production had been scheduled for July 1992. In November 1991, the Army submitted the Program's first acquisition program baseline, which showed a DAB program review in April 1993, just prior to the Block I materiel release decision. However, this program review was scheduled 9 months after the planned July 1992 award of the Block II EMD contract. Further, the DAB Milestone III review, now for the purpose of deciding Block II production and development, was postponed until November 1997. These events reflect the Army decision to cancel production of systems developed in ASAS Block I except for the provision of a limited near-term capability to priority units. In our opinion, these events also reflect a desire to postpone a DAB milestone review indefinitely and to award the Block II EMD contract well before the requested date for a DAB program review.

In December 1991, the USD(A) approved the program baseline. However, the USD(A) scheduled a DAB program review of the Block II program for July 1992 and stated he did not plan to reconvene the DAB at the Block I materiel release decision point "unless currently unforeseen problems arise." We consider a DAB review to be required before the Block I materiel release

because of the impact of Block I on the subsequent Block II program. Fielding the Block I system, especially the software, before full operational test and evaluation of the system (including all interfaces) can increase program risk on the Block I and II programs.

In addition to the baseline, other key program documentation required by acquisition regulations for a major Defense acquisition program beyond Milestone I (Demonstration and Validation), such as the Acquisition Plan, Acquisition Strategy Report, System Threat Assessment Report, and TEMP, were not required by or submitted to OSD until 1991. Further, an Operational Requirements Document, begun in 1991 and not scheduled to be completed until 1995, was not required by OSD until October 1992. The C^3I Committee Chair has requested that certain DAB documentation be prepared; however, the full requirements specified for a Milestone II review have not been imposed.

Procurement of Equipment Without a Production Decision. Most equipment needed for Block I materiel release has been procured. The plan for Block II is to replace all Block I equipment with the Block II equipment before the DAB Milestone III. Therefore, substantial procurements will occur without a milestone review or approval.

Block I Procurements. In 1986, the Army directed the procurement of a limited capability configuration of ASAS. In 1987, the Joint Oversight Group approved acquisition of the limited capability configuration systems for Ft. Hood, Texas, and in 1988 expanded the acquisition to include Europe. In January 1990, the Army directed restructuring of the Program to field the system as soon as possible with the minimum functionality acceptable to the user. Key elements in the restructuring were transition to common hardware and software and increased procurement funding through FY 2007.

The 1991 restructure, by incorporating the Hawkeye technology into the ASAS Program, doubled the systems on hand from 6 to 12 and eliminated the need for further procurement of Block I equipment. In March 1991, due to the success of the Hawkeye system during Desert Storm, the ASAS Program Manager included Hawkeye technology in the acquisition plan. This redirection was briefed to the C^3I Systems Committee in June 1991 and was approved in December 1991. Because of the redirection, the limited capability configuration systems and Hawkeye hardware equipped all Army Force Package 1 units (three Corps and eight Divisions) with the Block I limited capability version of ASAS for fielding from FY 1993 through FY 1995. Full production was delayed until Block II. Thus, a Milestone III review for Block I production was no longer relevant.

Block II Plan. As of August 1992, the Program Manager planned to field Block II in "capability packages," which are blocks within Block II. This plan would result in procurement and fielding 11 sets of equipment to replace the 11 operational Block I sets before Milestone III, half of the 22 total sets needed by the Army as specified in the ROC. However, as of October 1992, the Program Office required 28 sets for Block II. Because the Block I systems would be incrementally upgraded throughout Block II development and fielded to the 11 units comprising Force Package 1, the

Block I and Block II ASAS would be fielded without the Program having a formal milestone review and prior to a DAB Milestone III decision. Procurement and fielding of ASAS systems to all 11 of the Army's Force Package 1 units is especially significant since the ROC states that only 22 ASAS systems will be procured.

In a May 20, 1992, acquisition policy memorandum, the USD(A) stated that the dramatic lessening in the threat of a large-scale war in Europe permits the United States to reduce the size of its armed forces significantly. As the original ASAS requirement was based on a larger Army and a large-scale European war scenario, we believe that a more realistic requirement is closer to 11 systems than to 22, despite the Program Office's current estimate of 28 systems. Thus, with 11 Block II systems fielded by 1997, Milestone III may be less than fully effective as scheduled. Further, a formal Milestone II review is in order because of the possible diminished effectiveness of the 1997 Milestone III review.

No Low-Rate Initial Production. No LRIP was established for Block I, although since October 1989 DOT&E had stated in Defense Acquisition Executive Summary (DAES) assessments that the ASAS (Block I) was in LRIP without a Milestone IIIA decision or an operational assessment. Further, before October 1992, no LRIP was required for Block II despite comments by DOT&E in May and July 1992 DAES assessments that an LRIP for Block II must be established. Rather, the Program was planned to proceed directly to full-rate production. The United States Code, title 10, section 2400 states that the quantities of a system to be procured for LRIP shall be established when the decision is made to approve full-scale engineering development. It further defines LRIP for a new system as the minimum quantity necessary to provide production-configured or representative articles for operational tests, establish an initial production base, and permit an orderly increase in the production rate sufficient to lead to full-rate production upon successful completion of operational testing.

Decisions that resulted in the Program restructuring and redirection effectively skirted the statutorily imposed requirements concerning limitations on LRIP quantities and need for operational test and evaluation. This was done through the Army's use of an accelerated procurement strategy (i.e., "limited procurement-urgent") in 1986 and 1988 and incorporation of Hawkeye technology in 1991, thus precluding the need for further procurement of Block I systems. Since all Block I systems will be replaced during EMD by Block II systems, the Program requires a formally defined LRIP decision point based on USD(A)-approved exit criteria.

Block II Will Restart Acquisition Phase II. Like Block I, Block II will also be a limited capability configuration that will meet only four of six primary ASAS functions. Specifically, the four functions met by Block I and II are intelligence collection management, signal intelligence management, situation analysis, and target analysis; the two functions not met are electronic warfare support and operations security support. According to the Block II Master Schedule Replan of August 1992, the Block II ASAS will be developed and fielded to Force Package 1 units in five phases from FY 1993 through

FY 1996. As a result, significant overlap will occur with fielding of Block I units, scheduled for fielding from FY 1993 through FY 1995. This overlap needs to be addressed through review of both Block I materiel release and the overall Block II program to determine whether fielding of Block I is necessary concurrent with replacement by the Block II system. The minimum objective capability will not be met until Block III, scheduled for fielding in FY 2002.

We consider Block II to be a new program that should be required to meet all prerequisites for entry into EMD. The Block II contract is for EMD of both new hardware and software compared to the hardware and software used in Block I. More than simply remaining in acquisition Phase II until FY 1997 as implied by the evolutionary acquisition strategy, the ASAS Program will restart EMD for an essentially new system with award of the Block II contract. All Block I equipment will be replaced by common hardware and software in Block II, with the hardware representative of the eventual objective system. Therefore, Block II hardware should be managed through an effective systems engineering program that includes design and production readiness reviews, structured LRIP to confirm manufacturing processes and operational capabilities, and detailed exit criteria for proceeding both within EMD and to full-rate production.

The Block II software upgrade consists of the ASAS Block I limited capability system repackaged to the software specifications of the ATCCS. Portions of the ASAS software will be converted to an entirely new language. Additional software will be developed to meet the objective system requirements of the four Block II functions, including the use of common ATCCS support software and an open system architecture, capability for continued operations in a degraded environment or condition, incorporation of the Collateral Enclave, and diagnostic testing. The software for the additional Block III functions that comprise the objective system will be developed starting in FY 1997. With this plan, required design reviews and testing may be bypassed by an evolutionary acquisition strategy that does not comply with the rigors of a formal EMD program. Given the risk associated with the integration of the overall ATCCS software architecture, this plan should not be implemented.

In summary, we consider the Block II program to require a formal Milestone II review as a major Defense acquisition program entering EMD. The planned evolutionary acquisition strategy is not appropriate for the ASAS hardware and should not be used to bypass essential aspects of a properly disciplined developmental program for both the hardware and software. Program direction, including an approved acquisition program baseline for development and specific exit criteria, is essential from the milestone decision authority to ensure the evolutionary acquisition strategy properly provides for completion of prerequisites to production and deployment.

Blocks IV and V Excluded From Baseline. As of October 1992, the current Acquisition Strategy Report, ROC, and TEMP identified that the ASAS would be acquired in five blocks. The Budget Item Justification Sheet dated January 1992 and submitted with the FY 1993 President's Budget also described the Program as consisting of five blocks. The TEMP, dated October 1991, stated that

> The ASAS Block IV and V upgrades will improve and enhance existing capabilities, specifically in the areas of Intelligence Collection Management, All Source Analysis, Signals Intelligence and Situation Development applications in FY 01-06. Hardware modifications will also be added to allow operations on the move, to account for obsolescence, and to take advantage of improvements in computer technology, where applicable.

The Acquisition Strategy Report, dated November 1991, stated that Blocks IV and V will be implemented as Post Deployment Software Support efforts from FY 2002 through FY 2012 and that all user requirements as defined in the ROC will be fully satisfied upon completion of Block V. However, the current acquisition program baseline dated December 1991 includes costs for only three blocks and the Budget Item Justification Sheet for FYs 1994-95, submitted to OSD in October 1992, describes the Program as consisting of only three blocks. In the June 1992 DAES, the Program Manager responded to OSD comments on the number of blocks and stated that

> The approved baseline includes all development blocks. . . . ASAS briefed the CAIG[7] that its baseline would cost three development blocks of ASAS. Proposed Blocks IV and V were excluded because the PEO CCS[8] determined these developments were too far in the future (past 2002) to adequately define and cost, and were considered part of a planned ATCCS common development.

DoD Instruction 5000.2 requires that values for acquisition program baseline parameters reflect the cost of the system as it is expected to be produced or fielded. We do not consider "evolutionary acquisition" to mean the total cost of a program is not disclosed when the baseline is established or the budget is prepared. If the operational requirement will not be satisfied until Block V is completed, then the program cost should include all efforts through Block V to meet the overall requirement.

ASAS Is Not a True Evolutionary Acquisition Program. The ASAS Program employs the evolutionary acquisition strategy developed for the acquisition of command and control systems. DoD Instruction 5000.2 provides for such an alternative approach ". . . where requirements refinements are anticipated or where a technology risk or opportunity discourages immediate implementation of a required capability."

The evolutionary acquisition approach is described in the "Joint Logistics Commanders' Guidance for the Use of an Evolutionary Acquisition Strategy (EA) in Acquiring Command and Control (C2) Systems," Defense Systems Management College, March 1987. The Guidance states that "An underlying factor in evolutionary acquisition is the need to field a well-defined core capability quickly in response to a validated requirement."

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[7] Cost Analysis Improvement Group
[8] Program Executive Officer, Command and Control Systems

The guidance also states that evolutionary acquisition is not an exemption from disciplined configuration management or testing and is not an approach that provides for unconstrained requirements growth and an unbridled budget. It further states that blocks should be treated like separate acquisitions.

The ASAS does not meet the criteria for an evolutionary acquisition program. While it is a software intensive system that will be incrementally upgraded to achieve the requirements of the objective system, the Army did not plan to properly manage the individual blocks as separate acquisitions. The ASAS also failed the test for fielding a well-defined core capability quickly in response to a validated requirement. ASAS will have been in development for 10 years before the core system, Block I, is fielded. The "baseline" system will not be fully developed until the end of Block II, and the objective system will not be achieved until Block III. The ASAS development will span 30 years for the eventual five blocks. The evolutionary approach, in our opinion, is being used for justifying the circumvention of testing requirements, the continued avoidance of DAB oversight, and the delay in preparation of Program documentation defining system requirements and funding profiles.

Impact of No DAB Milestone Review. By 1997, the ASAS Program will not have had a DAB milestone review for 15 years, and two interim blocks will have been essentially procured and fielded at a cost of $1.75 billion[9]. Block II IOT&E and Milestone III DAB review will be meaningless since little will be left to test, procure, or field. The ASAS Program will have effectively circumvented the DAB process through "evolutionary acquisition."

Issues and Documentation for DAB Program Review

On February 3, 1992, a planning meeting was held for the scheduled July 1992 program review. The C^3I working group decided that the program review should be in January 1993, as the Block II contract planned award date was November 1992. Although the C^3I action officer prepared a memorandum, dated February 6, 1992, for the OSD staff to coordinate its position on the program review, a Committee Memorandum was not issued for 8 months (over 7 months late), causing a hiatus in official guidance for the program review. On October 9, 1992, after the working group held two additional planning meetings, the Committee Chair issued the memorandum, "Major Issues Guidance for ASAS DAB Program Review." The October guidance was more comprehensive than that contained in the February memorandum; however, the guidance did not include the materiel release decision for Block I and did not ensure preparation of all documentation needed for a thorough review.

Block I Material Release. The DAB program review planned for March 1993 did not include the materiel release decision for Block I. The Army Systems Acquisition Review Council is scheduled to make the decision on April 30, 1993. Army Regulation 700-142, "Materiel Release, Fielding, and

[9] $1.511 billion for Block I and $239 million for Block II.

Transfer," April 27, 1988, describes three types of materiel release: full release, conditional release, and training release.

> A full release is authorized when the materiel has been tested and evaluated and meets all established requirements of the requirements documents and specifications. . . . A conditional release may be authenticated when one or more of the criteria for full release have not been met. . . . Materiel release for training may include prototype or test items, . . . items that are incomplete (major components missing or defective), and/or items where one or more of the requirements for full release have not been met.

These criteria for materiel release provide wide latitude in the preconditions for release approval. In our opinion, because of the inadequacies of the testing program, the need for stringent criteria for the material release decision, and the high risk of incurring greater costs to correct problems after fielding, the DAB should make the Block I materiel release decision.

Documentation. The planned DAB program review does not ensure preparation of all documentation needed for a thorough review, which equates to the documentation required for Milestone II (Appendix A).

The C^3I action officer memorandum, dated February 6, 1992, did not define the critical issues to be addressed and documentation required for the January 1993 program review as required by DoD Instruction 5000.2. The memorandum required only a limited cost and operational effectiveness analysis/exit criteria, status of testing, status of the contract, an Integrated Program Summary (less Annex G), a Program Life-Cycle Cost Estimate, and an Independent Cost Estimate. Subsequently, however, the C^3I Committee Memorandum of October 9, 1992, required the Army to prepare for the rescheduled March 1993 program review all Milestone II documentation not previously required by the C^3I action officer memorandum of February 6, 1992, except as noted below. Specifically, the Committee Memorandum additionally required the Army to prepare an ORD, TEMP, acquisition program baseline, System Threat Assessment Report, and Manpower Estimate Report. The Committee did not require an Early Operational Assessment Report, needed to support an LRIP decision with exit criteria for Block II. It also did not require certain key documentation such as an Independent Cost Estimate Report, a Defense Intelligence Agency Intelligence Report, a Joint Requirements Oversight Council Assessment, and an Integrated Program Assessment to be prepared by OSD and other Defense organizations. These four documents, respectively, provide independent analysis and assessment of cost, threat, baseline performance objectives and thresholds, and overall program status.

We contacted the Defense Intelligence Agency and the OSD offices responsible for preparing the four documents. They generally responded that, although no requirement exists, the documents would be prepared for the program review. However, because preparation and review of all needed documentation must be ensured, a DAB Milestone review is warranted. We consider the actions of the

C^3I Committee to be positive and believe that a formal Milestone II review is prudent since Milestone II requirements are being substantially imposed by the Committee.

Causes for Ineffectiveness of the DAB Process

The DAB process regarding the ASAS Program was not effective for two main reasons. First, the C^3I Systems Committee did not begin to exert any substantial control over the Program until almost 4 years after the ASAS became a major Defense acquisition program. Then, the Army continued to control the Program as it had under the Joint Oversight Group and before the ASAS became a DAB program.

DAB Control Not Exerted for 4 Years. Although the ASAS became a major DAB program in 1987, the C^3I Systems Committee did not exert any substantial control until 1991 when some basic DAB documentation was first required. This occurred because the ASAS Program ascribed to the evolutionary acquisition concept and the C^3I Committee had allowed ASAS to deviate from conventional requirements for major Defense programs. Another factor was that no specific criteria existed in DoD Instruction 5000.2 for evolutionary acquisition programs and no guidance existed to address documentation requirements for an ongoing Defense acquisition program entering DAB program status between major milestones. Also, the complexity of the Program, frequent programmatic changes, confusing array of jargon and acronyms, and turnover of ASAS action officers within C^3I have made understanding the Program difficult and contributed to the weakness in oversight.

Army Control Over the ASAS Program. In the absence of effective DAB oversight, the Army had continued aggressively to control the direction of the ASAS Program as the Joint Oversight Group had done prior to ASAS' becoming a DAB program.

In November 1982, the operating policy of the ASAS Program was established when a memorandum from the Army Chief of Staff exempted the Program from traditional milestones and those requirements, except legal, which "impede normal systems development and acquisition."

In December 1991, following a restructure to incorporate Hawkeye, the ASAS Program was made to comply with some DAB documentation requirements, including a baseline. However, the baseline reflected only three blocks, not the full five-block Program as described in the Acquisition Strategy, ROC, TEMP, and FY 1993 President's Budget.

In June 1992, following a funding cut in the Army FYs 1994 through 1999 Program Objective Memorandum, the ASAS Program was again restructured. The Army revised the Block II plan to replace two equipment enclaves with one, which caused changes in system specifications and resulted in performance and schedule breaches of the baseline. Although the Program Manager briefed OSD and submitted a Program Deviation Report in June 1992 with a new

baseline attached, no OSD approval was received. However, the Program moved ahead as if OSD approval had been obtained. For instance, the Army amended its request for proposal for the Block II contract to reflect the restructure before a new baseline was submitted to OSD for approval.

On February 7, 1992, the Army Director of Information Systems for Command, Control, Communications, and Computers sent a memorandum to the Deputy Assistant Secretary of Defense (C^3I) and asked for his help to ensure that the scope of the DAB review, then planned for January 1993, remained limited to award of the Block II contract. The Director stated, "I don't feel the standard DoD 5000.2 'cookbook' approach applies."

On several occasions during our audit, the Program Manager and other Program officials strongly expressed their opinions that OSD was hindering the Program by changing documentation requirements and withholding funding. For example, they cited OSD vacillation about whether an ORD was needed instead of the ROC and whether the Collateral Enclave should be included in the TEMP. Also, they did not believe the DoD Comptroller, a non-signatory to the baseline, should have the capability to impede execution of their Program by withholding funds and adversely affecting Program cost and schedule.

On August 26, 1992, the reply by the Deputy Under Secretary of the Army (Operations Research) to a DOT&E memorandum of August 24, 1992, regarding late receipt of the TEP showed the Army's intent to begin IOT&E on September 8, 1992, regardless of DOT&E's warning that the TEP may not be approved. The reply stated, "As to options available to us should your approval not be completed prior to the scheduled start of test date, there really are none that are reasonable. . . . We will start pilot testing on 8 September with record trials scheduled to start one week later."

Conclusion

We disagree that the overall ASAS Program should be considered to have met the requirements for entry into EMD in 1983 based solely on the Block I program. The ASAS Program redirection by the USD(A) in 1991 canceled production of all but a limited number of Block I systems that already had been produced instead of proceeding with the Block II program. The Army has not recognized the materiality of the redirection in its restructure of the Program, relying on the concept of "evolutionary acquisition" to bypass essential program management controls. The result, in our opinion, is an appearance of imminent success to a program ongoing more than 10 years, when the system has not been adequately tested and does not meet overall user requirements. The Block II program relies on substantially different hardware and software than Block I and is planned to replace the Block I systems. Additionally, the "objective system" that meets the minimum user requirements will not be attained until the Block III software is developed and implemented, now scheduled for FY 2002. The Block I systems are neither intended to meet the full range of operational

requirements nor reasonably represent the production hardware and software to be fielded as part of Block II or subsequent blocks.

We consider the ASAS Block I program to equal prototyping done during the Demonstration and Validation phase of the acquisition process and the testing as equivalent to an operational assessment instead of the more rigorous IOT&E. In particular, the interoperability of Block I systems with the overall ATCCS program has not been thoroughly tested, although it is an area of significant importance and potential risk. While the Army has identified a military requirement to field the limited capability provided by the Block I system, this action does not diminish the need for the overall ASAS Program to meet requirements for a DAB milestone review prior to entry into EMD. Although the Program has not been required to pass a DAB milestone review, the Army plans to initiate an EMD program estimated to cost $239 million through FY 1997. This is in addition to procurement costs to replace Block I and field Block II units, with future Program costs through Block III estimated at $4.5 billion. The positive actions by the cognizant DAB Committee to conduct a DAB program review and require preparation of key DAB documents do not go far enough to ensure adequate program oversight in a DAB Milestone II review.

Therefore, we believe that a DAB Milestone II review of the ASAS Program should be conducted for the following reasons:

- A milestone review was not conducted in the 10 years ASAS has existed and was not planned for another 5 years.

- The effectiveness of the Milestone III review scheduled for 1997 may be diminished because of the plan to replace all 11 operational Block I systems with Block II systems by 1997.

- The Block I materiel release decision should be made by the DAB because of the inadequacies of the testing program, the minimal criteria for an Army release, and the high risk of incurring greater costs to correct problems after fielding.

- Block II would effectively restart EMD and will not be the objective system.

- Blocks IV and V must be considered part of the ASAS Program and included in the baseline if they are included in the prospective ORD and derivative documentation.

- All documentation needed for a thorough review must be prepared.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Under Secretary of Defense for Acquisition conduct a Defense Acquisition Board Milestone II review of the All Source Analysis System Program and include the fielding of Block I.

2. We recommend that the Comptroller of the Department of Defense withhold all remaining FY 1993 Procurement funds of $47.7 million appropriated for the fielding of the All Source Analysis System Block I and all remaining FY 1993 Development funds of $57.1 million appropriated for "Evolutionary Acquisition" of Blocks I and II until the Under Secretary of Defense for Acquisition issues a favorable acquisition decision memorandum following the Defense Acquisition Board Milestone II review for the All Source Analysis System.

Management Comments. We received comments from the USD(A) and the DoD Comptroller. The USD(A) also included comments from the Army for our consideration. The USD(A) partially concurred with Recommendations 1. and 2. although Recommendation 2. was not addressed to the USD(A). The DoD Comptroller concurred with Recommendation 2., subject to concurrence by the USD(A). Complete comments by the USD(A) (including the Army comments) and the DoD Comptroller are in Part IV of this report.

Regarding Recommendation 1., the USD(A) concurred with conducting a DAB Milestone II review of the ASAS Program. Also, to make the Block II EMD decision, the USD(A) agreed to review at Milestone II the results of Block I IOT&E and the Army's plan for follow-on testing. However, the USD(A) nonconcurred with including the fielding of Block I as part of a DAB decision.

Regarding Recommendation 2., the USD(A) concurred with withholding the ASAS Block II funds but nonconcurred with withholding Block I funds because such action could critically hamper ongoing testing and preparations for fielding.

Regarding Recommendation 2., the DoD Comptroller stated that the Block II funds were being withheld pending DAB review of the Program. The Comptroller also proposed withholding Block I funds subject to concurrence by the USD(A). See Appendix B for the DoD Comptroller's response to the USD(A) request for comments.

Audit Response. Comments by the USD(A) are not fully responsive.

o While the USD(A) has redesignated the upcoming DAB review as a formal Milestone II, he still plans for the Army to make the Block I fielding decision. When we completed field work in December 1992, the Army Systems Acquisition Review Council was scheduled to make the Block I materiel release decision in April 1993, after the DAB review then planned for March 1993. This sequence of events would have met the intent of Recommendation 1. since the USD(A) agreed to review Block I IOT&E and

plans for follow-on testing as part of the recommended Milestone II review. However, the Army now plans to conduct the Block I materiel release decision before the DAB review due to the scheduled review date slipping to May 1993. Therefore, we ask that the USD(A) reconsider his position and either rescind the authority for the Army to make the Block I materiel release decision or direct the Army to defer the decision until after the DAB review. As mentioned in the report, the Block I materiel release decision should be considered by the DAB because of inadequacies of the testing program, the minimal criteria for an Army release, and the high risk of incurring greater costs to correct problems after fielding. Our conclusion is further supported by an overall operational evaluation of Block I by the Operational Test and Evaluation Command, December 21, 1992, which stated that the ASAS does not meet operational effectiveness criteria, mission performance requirements, suitability criteria, or sustainment requirements.

o The USD(A) opposes withholding funds for the fielding of Block I. The first reason given is that the USD(A) delegated Block I fielding authority to the Army and, therefore, the associated funds should remain with the Army. We reported that in December 1991 the USD(A) did not plan to reconvene the DAB at the materiel release point "unless currently unforseen problems arise." We believe that recent results of operational testing and other arguments made in our report regarding Block I materiel release and fielding warrant reconsideration of the earlier USD(A) decision. The other reason given for opposing the withhold is that it could critically hamper ongoing testing and preparations for the fielding. The purpose of our recommendation is indeed to curtail further spending on Block I, particularly regarding fielding, until the DAB reviews the Program. Also, as we have stated in our report, the testing program is invalid and inadequate to support a Block I fielding decision. Therefore, we believe that no further funds should be spent on testing until the DAB reviews the Program.

o The USD(A) comments do not indicate concurrence or nonconcurrence with the material internal control weaknesses cited in our report.

Concerning the USD(A) comments on Recommendation 1., we acknowledged in our report that the purpose of the DAB program review was to examine the Block II program before entry into EMD. Further, our recommendation was not to "entitle" the upcoming DAB review a Milestone II review but to conduct one. As noted in our report, the Committee Memorandum issued in October 1992 required most of the Milestone II documentation as well as other issues to be addressed only after our meetings with the Deputy Director, Intelligence Programs Support Group, identified the need to include them in the DAB review. Moreover, content of the program review notwithstanding, a Milestone II review provides greater assurance of compliance with acquisition regulations.

The USD(A) comments contend that our finding on the effectiveness of the DAB review process is not supported by the audit report and imply the evaluation is not credible because we did not wait until the DAB review was held to audit and evaluate the process. Our primary purpose in auditing and

reporting before the DAB review is to provide the USD(A) with timely and useful information. While we agree that to delay the audit would provide a more complete picture of the process for historical purposes, the result would also be less useful for decisionmaking. The DAB review is the end product of the process and is structured by that process. By the time a DAB planning meeting has occurred and a Committee Memorandum has been issued, all major issues and required documentation should be identified. At this point, the framework for the DAB review is established. We believe there is little to be gained in awaiting the outcome of the DAB review and only then to report on deficiencies identified when available corrective actions are severely limited.

Comments by the DoD Comptroller are considered responsive. The Comptroller communicated his comments to the USD(A) on February 19, 1993, and provided us with a copy (Appendix B). In particular, he noted:

o The effectiveness of the DAB review process can be examined on actions taken and need not be deferred until the Milestone II review.

o The DAB review planned for May 1993 may not occur because the Army has proposed that the Block II program be deferred in the FY 1994 budget adjustment and the response to the IG, DoD, should reflect this.

o The adverse reports on Block I testing reveal that the current configuration is not effective or suitable and may represent problems of sufficient magnitude to reconvene the DAB at the Block I materiel release decision point in accordance with the USD(A) memorandum of December 19, 1991. The Comptroller added that the response to Recommendation 2. should recognize this possibility.

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Part III - Additional Information

Appendix A. Milestone II Documentation Requirements

Operational Requirements Document
System Threat Assessment Report
Defense Intelligence Agency Intelligence Report
Joint Requirements Oversight Council Assessment
Integrated Program Summary
Integrated Program Assessment
Program Life-Cycle Cost Estimate
Acquisition Program Baseline Agreement
Manpower Estimate Report
Test and Evaluation Master Plan
Developmental Test and Evaluation Report
Independent Cost Estimate
Independent Cost Estimate Report
Cost and Operational Effectiveness Analysis
Early Operational Assessment Report

Appendix B. DoD Comptroller Comments to the Under Secretary of Defense for Acquisition

OFFICE OF THE COMPTROLLER OF THE DEPARTMENT OF DEFENSE

WASHINGTON, DC 20301-1100

(Program/Budget) FEB 19 1993

MEMORANDUM FOR DEPUTY DIRECTOR, ACQUISITION SYSTEMS MANAGEMENT

SUBJECT: Draft DoD IG Audit Report on the All Source Analysis System (ASAS) Program (No. 2AE-0033.02)

Your memorandum of February 10, 1993 requested our review of the proposed Under Secretary of Defense for Acquisition response to the subject report. We do not concur with the proposed response for the following reasons:

1) The second paragraph suggests that the audit report on the effectiveness of the Defense Acquisition Board review process is premature because the report does not address the forthcoming review of Block II, originally planned for July 1992 but after several delays, now planned for May 1993. There was a review of the ASAS program by the Defense Acquisition Board principals in the fall of 1991 that culminated in the decision memorandum signed by the Under Secretary of Defense for Acquisition on December 19, 1991. The effectiveness of the Defense Acquisition Board review process can be examined on actions taken by the Defense Acquisition Board to date and need not be deferred until the forthcoming Milestone II review.

2) The review planned for May 1993 may not occur because the Army has proposed that the Block II program be deferred in the FY 1994 budget adjustment. If this funding reduction is accepted, there will be little need for a Defense Acquisition Board review of Block II in May 1993. The proposed response should be modified to reflect current program plans.

3) The decision memorandum signed by the Under Secretary of Defense for Acquisition on December 19, 1991 indicated that the Defense Acquisition Board would not be reconvened at the Block I material redistribution decision point unless unforeseen problems arose. The adverse reports regarding the results of recent Block I testing in the January 1993 Defense Acquisition Executive Summary, together with the adverse commentary in the Army attachments to your memorandum that indicate that testing reveals that the current configuration is not effective or suitable, may represent unforeseen problems of sufficient magnitude to reconvene the Defense Acquisition Board at the Block I material redistribution decision point in accordance with the decision memorandum of December 19, 1991. The proposed response to Recommendation 2 of the subject report should recognize this possibility. If sufficient reason to reconvene

Appendix B. DoD Comptroller Comments to the Under Secretary of Defense for Acquisition

the Defense Acquisition Board for this purpose is found, then the funding withholds proposed in Recommendation 2 would be an effective means of protecting public resources while these matters are resolved.

Bruce A. Dauer
Director for Investment
(Acting)

cc:

ASD(PA&E)
DOT&E
DoD/IG

Appendix C. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
1.	Program Results. Would ensure a more comprehensive assessment of the ASAS Program.	Nonmonetary.
2.	Economy and Efficiency. Would ensure funds are spent only after thorough review and approval of all key issues by USD(A).	Not quantifiable because the cost of correcting Block I deficiencies after fielding is unknown.

Appendix D. Activities Visited or Contacted

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Washington, DC
  Director, Defense Research and Engineering, Washington, DC
  Deputy Director, Defense System Procurement Strategies, Washington, DC
  Deputy Director, Test and Evaluation, Washington, DC
Assistant Secretary of Defense (Command, Control, Communications and Intelligence), Washington, DC
Assistant Secretary of Defense (Program Analysis and Evaluation), Washington, DC
Comptroller of the Department of Defense, Washington, DC
Director, Operational Test and Evaluation, Washington, DC

Department of the Army

Office of the Under Secretary of the Army (Operations Research), Washington, DC
Assistant Secretary of the Army (Financial Management), Washington, DC
Assistant Secretary of the Army (Research, Development and Acquisition), Washington, DC
Office of the Army Chief of Staff, Washington, DC
Office of the Deputy Chief of Staff for Operations and Plans, Washington, DC
Army Materiel Systems Analysis Activity, Army Materiel Command, Aberdeen, MD
All Source Analysis System Program Office, Army Command and Control Systems, McLean, VA
U.S. Army Cost and Economic Analysis Center, Arlington, VA

Other Defense Organizations

Defense Intelligence Agency, Washington, DC
Joint Staff, Washington, DC

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)
Assistant Secretary of Defense (Program Analysis and Evaluation)
Assistant Secretary of Defense (Public Affairs)
Comptroller of the Department of Defense

Department of the Army

Secretary of the Army
Assistant Secretary of the Army (Research, Development and Acquisition)
Inspector General, Department of the Army
Auditor General, Army Audit Agency
Commanding General, Army Materiel Command

Department of the Navy

Naval Audit Service Headquarters

Defense Agencies

Director, Defense Contract Audit Agency
Inspector General, Defense Intelligence Agency
Director, Defense Logistics Agency
Director, Defense Logistics Studies Information Exchange
Director, National Security Agency

Non-DoD Activities

Office of Management and Budget
U.S. General Accounting Office, National Security and International Affairs Division, Technical Information Center

Chairman and Ranking Minority Member of the Following Congressional Committees and Subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security, Committee on Government Operations

Part IV - Management Comments

Under Secretary of Defense for Acquisition

Comptroller, Department of Defense

Under Secretary of Defense for Acquisition Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

February 24, 1993

ACQUISITION

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Draft Audit Report on the All Source Analysis System (ASAS) Program As a Part of the Audit of the Defense Acquisition Board Review Process -- FY 1993 (Project No. 2AE-0033.02)

We have reviewed the subject draft report and offer the following comments concerning recommendations contained in the report. Comments from the Army are also attached to this memorandum for your consideration in preparing the final report.

The stated purpose of the report was to evaluate the effectiveness of the DAB review process for acquisition of major defense acquisition programs. We found that IG's finding, that the DAB process was not effective, is not at all supported by the audit report. A credible evaluation of the effectiveness of any process would require the process to have been completed. We believe that a judgment on DAB effectiveness in reviewing the ASAS program should be made after the DAB, now scheduled for the end of May 1993, is held.

The following comments address the two recommendations in the draft report:

Recommendation #1. *That USD(A) conduct a Milestone II DAB to address contract award for Block II and fielding of Block I.*

- We concur with your recommendation to entitle the upcoming DAB review a Milestone II rather than a program review. The purpose of the review has always been to review the readiness of Block II for the Engineering and Manufacturing Development (EMD) phase. The major issues guidance memorandum sent to the Army for the upcoming DAB has requested all of the documentation required for a Milestone II DAB.

- With regard to the ASAS Block I program, USD(A) delegated the fielding decision to the Army, and we do not see any reason to reverse that decision at this time. As far as your recommendation to review the results of testing of Block I is concerned, the results of the initial operational test and evaluation (IOT&E) as well as the Army's plan for follow-on testing will be presented to

the DAB as a part of the information required for the USD(A) to make the ASAS Block II EMD decision.

Recommendation #2. *That the DoD Comptroller withhold all remaining FY93 ASAS Block I funds ($47.7M) and all FY93 RDT&E funds ($57.1M) for the ASAS Block I & II programs pending favorable Milestone II DAB decisions.*

- We support the withholding of the ASAS Block II EMD funds until the DAB review. However, we do not agree with the recommendation to withhold the ASAS Block I funds for two reasons: First, USD(A) made an acquisition management decision on the Block I program, delegating fielding authority to the Army. Therefore, management of the associated funds required for Block I fielding should also remain with the Army. Secondly, if the funds were withheld, it could critically hamper ongoing testing and preparations for the fielding.

We believe that the Army should continue the testing of Block I for fielding, and that the DAB review should be conducted as originally directed by USD(A). We also believe that to determine the effectiveness of the DAB process, it would be of more value if DoD IG would audit and evaluate the ASAS DAB review process after the DAB is conducted.

Gene H. Porter
Principal Deputy Director
Acquisition Policy and
Program Integration

Attachment

2

DEPARTMENT OF THE ARMY
OFFICE OF THE SECRETARY OF THE ARMY
WASHINGTON, DC 20310-0107

Office, Director of Information Systems for Command, Control, Communications, & Computers

SAIS-SDT

12 6 JAN 1993

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE (ACQUISITION)

SUBJECT: Draft DoD IG Audit Report on the All Source Analysis System (ASAS) Program (Project No. 2AE-0033.02)

1. References:

a. Draft DoD IG Report, 28 Dec 92, Subj: Draft Audit Report on the Review of the All Source Analysis System as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process--FY 1993 (Project No. 2AE-0033.02).

b. Memorandum, Under Secretary of Defense (Acquisition), 19 Dec 1991, Subj: ASAS Program Documentation.

2. The Army does not agree with the two recommendations contained in the draft DoD IG audit report (reference a). The first recommendation is that a Milestone II DAB review of the ASAS program be conducted to include the fielding of ASAS Block I. We believe that there are no acquisition issues which require a DAB review of the ASAS Block I materiel release decision, and that this decision should remain with the Army. The report also recommends that all remaining FY 93 ASAS funding be withheld pending a Milestone II DAB. If implemented, this recommendation would stop the ASAS Program Manager's efforts to prepare for a DAB review. Moreover, the findings and recommendations are not focused on the DAB review process which is ostensibly the primary objective of the audit. We recommend that USD(A) and DoD Comptroller not concur with the draft Dod IG audit report recommendations and that the report be withdrawn.

3. Milestone II DAB Recommendation.

a. The first report recommendation is that the USD(A) should conduct a DAB Milestone II review of the ASAS program which includes the fielding of Block I. From an Army perspective, upgrading the currently scheduled DAB special program review to a formal Milestone II DAB is a difference without distinction with regard to reviewing the ASAS Block II Engineering and Manufacturing Development (EMD) contract award. The Army is already complying with all the Milestone II DAB documentation requirements. The Army supports the USD(A) position expressed in reference b that ASAS Block I materiel release is an Army

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decision. We believe that there are no acquisition issues involved in fielding the on-hand ASAS Block I equipment to Army units and that the Army's materiel release decision process will ensure that the equipment is operationally effective and suitable before it enters the force.

b. The draft audit report cites six reasons for its first recommendation. Army comments on these reasons follow:

Reason: "A milestone review was not conducted in the 10 years ASAS has existed and is not planned for another 5 years."

Comment: DAB Milestone reviews are event, not calendar driven. An event requiring a DAB milestone review has not occurred during the time ASAS has been a DAB program. ASAS became a DAB reviewed program in 1987 after it had entered the EMD phase. The next required milestone review is at the completion of the EMD phase in FY 97.

Reason: "The effectiveness of the Milestone III review scheduled for 1997 may be diminished because of the plan to replace all 11 operational Block I systems with Block II systems by then."

Comment: The Army has no plans to replace Block I systems with Block II systems prior to a DAB Milestone III production and deployment decision for ASAS Block II.

The draft report incorrectly asserts that as of Aug 92, the Program Manager planned to field Block II in "capability packages," which are blocks within Block II. The ASAS Project Manager's "capability package" plan is to improve Block I systems after they are fielded. During Block II EMD, the contractor will be required to provide periodic deliverables for evaluation. As appropriate, PM ASAS and CECOM will package some of the Block II advances into capability packages that can be applied to ASAS Block I. The process is similar to how M-60 and M-48 main battle tanks were continuously improved during M-1 Abrams development. The Army's intent is to keep ASAS Block I technology as current as possible, so it can redistribute Block I systems to lower priority units after Block II is fielded.

The report cites the plan to replace Block I with Block II systems prior to 1997 several times (pp. 2, 19, 20, and

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21). We recommend that findings based on these references be reviewed and withdrawn.

Reason: "The Block I materiel release decision should be made by the DAB because of the inadequacies of the testing program, the minimal criteria for an Army release, and the high risk of incurring greater costs to correct problems after fielding."

Comment: There is no value added by a DAB review of Block I materiel release. The testing and evaluation program provides adequate information for the Army to make the materiel release decision. The Army has a very rigorous type classification and materiel release approval program which ensures that equipment is operationally effective and suitable before it is fielded. Finally, Block I fielding will reduce, not increase ASAS program risk.

The draft report asserts that the ASAS test and evaluation program is inadequate. The U.S. Army Operational Test and Evaluation Command has prepared detailed comments on the report sections addressing the adequacy of testing and reviews which is enclosed.

The IG report was prepared between July and December 1992, but it does not discuss the conduct of the ASAS IOT&E, data collected, or results. Far from being a perfunctory "rubber stamp," ASAS testing has revealed a number of hardware, software and training problems which need to be fixed prior to fielding. The testing also revealed a number of training and doctrine, tactics, techniques and procedures (DTT&P) difficulties that the Army needs to address as the IEW mission area is automated. Prior to a conditional materiel release decision, hardware and software solutions will be evaluated through additional operational and technical testing during March and early April 1993. A Follow-on Operational Test and Evaluation will be conducted in FY 94 before an unconditional materiel release decision is made by the Army. The ASAS testing and evaluation program is clearly providing the information required for decisions on Block I fielding.

Regarding risk reduction, the Army materiel release decision process ensures that Block I deficiencies are corrected before fielding so that there will not be a high risk of additional costs to correct problems after fielding. In fact, when fielded Block I will reduce the training and

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doctrinal risk issues associated with ASAS development since lessons learned from field experience with IEW automation will be available during Block II development.

Finally, a minor argument against including Block I fielding in a Milestone II DAB is that the purposes stated in DoDI 5000.2 for a Milestone II DAB do not include a materiel release decision for equipment which has already been procured. The audit report criticizes lack of strict adherence to DoDI 5000.2 procedures yet makes a procedural recommendation which is not covered by the acquisition directives.

Reason: "Block II would effectively restart EMD and will not be the objective system."

Comment: Partially agree. As correctly stated in the report, Block III, not II, is the objective ASAS system. However, as also correctly explained in the report (p. 22), the Block II development program will migrate Block I functionality to the Army Tactical Command and Control System (ATCCS) common hardware/software open systems architecture and then improve it. Therefore, Block II is not a complete EMD restart.

Reason: "Blocks IV and V must be considered part of the ASAS Program and included in the baseline if they are included in the prospective ORD and derivative documentation."

Comment: The ASAS ORD, which was approved on 14 Jan 93, states that Block III is the objective ASAS system. PM ASAS is required to build the objective system. Blocks IV and V are desired enhancements, not baseline requirements.

Reason: Preparation of all documentation needed for a thorough review must be assured."

Comment: In preparation for the currently scheduled DAB special program review, the Army is already providing all the Army produced documents required for a Milestone II DAB.

4. Funding Withhold Recommendation. The second draft report recommendation is that the DoD Comptroller withhold all remaining ASAS FY 93 funding until a DAB Milestone II is completed. Withholding remaining FY 93 funding would effectively shut down the ASAS Project Office. PM ASAS would not be able to prepare

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for the DAB review discussed in the report's first recommendation. The DoD Comptroller Office is already withholding $11.5 million of ASAS Block II associated funding pending the DAB review. We believe that withholding Block I funding until a DAB review is unwarranted since, as previously discussed, Block I fielding should not be a DAB decision. Additional withholds would critically hamper ongoing testing efforts and DAB and fielding preparations.

5. Additional Areas of Concern. The Army disagrees with assertions in the report that the Army used Limited Procurement-Urgent procedures and an evolutionary acquisition strategy to circumvent acquisition oversight in the ASAS program. In addition, we recommend that the report be revised to include more emphasis on the DAB review process.

a. The report states, "In our opinion, the Army should not have used expedited "limited procurement-urgent" procedures to bypass essential reviews in the acquisition process." (p. 17)

Response: The Army employed valid Limited Procurement-Urgent procedures to procure the Limited Capability Configuration-Europe (LCC-E) equipment which is now part of ASAS Block I in an attempt to meet a critical operational requirement, not to skirt acquisition oversight. Since 1988 the C3I Committee has reviewed ASAS seven times and has approved significant changes in the ASAS program's structure and schedule. Prior to then the Assistant Secretary of Defense for Command, Control, Communications and Intelligence (ASD(C3I)) was a member of the Joint Oversight Group which provided programmatic oversight for the Joint Tactical Fusion Program which managed ASAS development. Although the Central Region threat has disappeared, the urgency with which tactical commanders improvised ASAS-like intelligence automation architectures during operations DESERT SHIELD/STORM and RESTORE HOPE reaffirm the urgency of the requirement and the wisdom of the LCC-E decision.

b. The report also states, "The ASAS Program will have effectively circumvented the DAB process through 'evolutionary acquisition,'" (p. 25) and concludes that ASAS is not a true evolutionary acquisition program.

Response: The report conclusion that the ASAS Program circumvented the DAB process through evolutionary acquisition is based on the assertion that Block II systems will be fielded before a Milestone III decision. As previously discussed, this assertion is incorrect. The report concludes that ASAS is not an

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evolutionary acquisition program because a core capability has not been rapidly fielded and because the Army "did not plan to properly manage the individual blocks as separate acquisitions." (p. 24) We believe that the ASAS program meets the evolutionary acquisition program criteria. The Army is attempting to field Block I which will provide a functional baseline upon which to build subsequent blocks, and Blocks II and III will be developed with separate, competitively awarded contracts.

c. The draft report states that the overall objective of the audit was to evaluate the DAB review process of the ASAS system. Yet the draft audit report makes no recommendations to correct some of the causes the report associates with the basic finding that the DAB review process was not effective for the ASAS program. Causes cited in the report include lack of DoDI 5000.2 guidance for evolutionary acquisition programs and lack of documentation requirements for ongoing programs entering DAB program status between major milestones (p.27). We recommend that the audit place more emphasis on DAB review process issues such as these and include the major issue of how the acquisition process can be changed to accommodate the unique problems associated with software intensive systems.

6. My POC for these comments is MAJ Curtis, (703) 695-1054.

Encl

DAVID J. KELLEY
Brigadier General, GS
Director of Systems Management

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DEPARTMENT OF THE ARMY

UNITED STATES ARMY OPERATIONAL TEST AND EVALUATION COMMAND
PARK CENTER IV 4501 FORD AVENUE
ALEXANDRIA, VIRGINIA 22302-1458

CSTE-OPM

21 January 1993

MEMORANDUM FOR Deputy Under Secretary of the Army (Operations Research), ATTN: SAUS-OR, Washington, DC 20310

SUBJECT: Comment on the DOD IG Draft Audit Report on the Review of ASAS as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process -- FY 93 (Project No. 2AE-0033.02)

1. Enclosed is proposed response to subject report for inclusion in DISC4 response to the Under Secretary of Defense (Acquisition). It addresses those sections of the report pertinent to the "Adequacy of Testing and Reviews".

2. The OPTEC ODCSOPS POC is Major Steve Reaves, 703-756-1516.

FOR THE COMMANDER:

DAVID B. KENT
LTC, GS
Deputy Chief of Staff
for Operations

CF:
Director, Information Systems for Command, Control, Communications and Computers, ATTN: SAIS-ZA, Washington, DC 20310
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BUY US SAVINGS BONDS THROUGH THE PAYROLL DEDUCTION PLAN

ENCL

SUBJECT: Comment on the DOD IG Draft Audit Report on the Review of ASAS as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process -- FY 93 (Project No. 2AE-0033.02)

1. Subject report has been reviewed. The following comments, pertinent to those sections addressing the "adequacy of Testing and Reviews", are provided for purposes of clarification and accuracy. Request the draft report be amended accordingly prior to publication.

a. The report advances the premise that testing conducted and testing planned for ASAS Block I are inadequate to support a decision to field Block I equipment, or award the Block II EMD contract. This conclusion is based upon an apparent misperception as to the purpose of operationally testing ASAS. The test program, and specifically the IOTE, are to support a materiel release decision, which the IG report refers to as fielding, and not the Block II EMD contract award.

b. The Block I ASAS was initially intended for low rate initial production for the objective system. Development problems, in concert with changes to the threat and the Army's role in national security, mandated changes to the ASAS program. Block I is therefore now intended for fielding as an interim system; no further production decisions on Block I are required.

c. The draft report cites selected outcomes of the 1989 Force Development Test and Experimentation (FDTE) as evidence of flawed test and evaluation. Particular notice is taken of the failure to establish a performance baseline during the test and of the continuation with further testing despite equipment failures during Force Development Test and Evaluation (FDTE). The report implies that FDTE should have been repeated because of the failure of a message parser.

(1) FDTE is conducted principally in support of the Combat Developer. It enables him to refine doctrine, training and logistics concepts for a particular system. It is also a source of valuable lessons on how to operationally test a system. Test and evaluation of equipment are secondary and, most often, the Army relies upon surrogate equipment. Failure of a piece of equipment or a major change to equipment are not grounds to repeat a doctrinal experiment.

(2) The absence of a performance baseline does not obviate the validity of future operational testing and evaluation. Systems are tested and evaluated against stated

"User Requirements". Baselines are useful in assessing system maturity, e.g., the applicable reliability, availability, and maintainability (RAM) data collected for the Portable ASAS Workstation and the Forward Sensor Interface and Control during FDTE were data sources for the Initial Operational Test and Evaluation (IOTE) of these functions. However, baselines are not the measure for assessing effectiveness and suitability. Further, there has never been a requirement to establish an ASAS operational baseline.

d. The draft report questions the validity of the IOTE on the basis that it did not address interoperability, the representativeness of the system tested, and scheduling IOTE after the production of most ASAS Block I units. It also raises issues with the duration of IOTE, testing of only one unit configuration, gathering test data in a garrison environment, whether the test supports a fielding decision and the award for the Block II Engineering and Manufacturing Development contract. The report correctly notes that the Test and Evaluation Plan (TEP) for the IOTE was not timely, however, the contention that the TEP did not provide for the determination of operational effectiveness and suitability is incorrect.

(1) The ASAS was the first Army Tactical Command and Control System (ATCCS) Battlefield Functional Area (BFA) to undergo IOTE. No other ATCCS BFA was at a sufficient level of maturity to permit an automated, interoperable system to interact in the electronic mode. Consequently, interoperability testing was not an option during the ASAS IOTE.

(2) The Collateral Enclave (CE) did not undergo interoperability testing during the ATCCS Early User Test and Experimentation (EUTE) in October 1992; the technical evaluator concluded the system was not ready. Interoperability was successfully demonstrated during the command post exercise phase; formal testing will occur, in conjunction with ATCCS testing when the CE is sufficiently mature.

(3) The auditors conclusion that interoperability testing was not included in the TEP is incorrect. The IOTE was designed to make ASAS receive and process the types of messages it will receive from national-level assets. Testing Joint and Allied interoperability was planned for the IOTE, but postponed to permit updating of message formats.

(4) The equipment tested during IOTE was representative of the ASAS Block I equipment. The assertion contained in the report to the contrary is false and misleading. The report correctly states that most of the Block I systems had been produced prior to the IOTE.

(5) The timing of the IOTE, with respect to equipment production does not invalidate the test; the purpose of the test was to evaluate operational effectiveness and suitability. The express purpose of the IOTE was to support a Block I fielding decision by the Army, not by the DAB as indicated in the draft report. The statement that IOTE did not support a production decision is correct. A production decision was never predicated on this IOTE.

(6) The length of the IOTE, as planned and executed, differs from the length stated in the ASAS TEMP because the necessary data could be collected in a shorter time frame. Schedules contained in the TEMP represent planning estimates; subsequent deviations do not invalidate the results. On the contrary, it would be irresponsible to prolong testing at increased cost to satisfy calendar requirements after the necessary data to satisfy evaluation objectives had been obtained.

(7) The draft report cites heavy division configuration used during the test as a limitation. This configuration was selected because of its similarity to the Corps configuration. It includes all equipment found in the Light Division. Testing additional configurations would have resulted in substantially higher costs with little return on the investment.

(8) The report correctly notes that much of the data gathered to support IOTE was gathered in garrison vice field operations. This is not a test limitation as the auditors imply. The structure of the IOTE followed the long-established operational pattern of military intelligence units preparing for and executing a combat mission. A unit equipped with the ASAS will perform many operational tasks and prepare for deployment while in garrison. The IOTE captured operational data on ASAS performance in both garrison and field environments.

(9) Use of the term "opinion poll" to describe some of the methods employed for determining operational effectiveness and suitability is inappropriate and pejorative as it is applied to the accepted practice of drawing on the professional military judgment of a panel of subject matter experts for qualitative information. The implied criticism that no other data was used to assess operational performance is not correct. The IOTE evaluation makes extensive use of quantified data.

e. The draft report includes the incorrect assertion that the ASAS testing program is invalid. The IG's evidence to support this claim is drawn from the FDTE, the integration between the HAWKEYE and CE, and the differences between the TEMP and the TEP.

(1) The HAWKEYE underwent testing during the IOTE. It will be evaluated as part of ASAS. The CE is not part of Block I ASAS, neither is it part of the current Block I fielding decision because the enclave has not been operationally tested to support a materiel release decision. The CE will be scheduled for operational testing in a future ATCCS test window. If operationally effective and suitable, the CE is likely to be fielded with Block I ASAS.

(2) Discrepancies between the TEMP and the TEP have been addressed with the exception of the change of critical quantitative thresholds to non-critical criteria. This distinction is irrelevant because all criteria and measures of performance were considered in the evaluation, regardless of the criticality label applied. In short, OPTEC evaluates operational effectiveness and suitability and is not limited to issues and criteria labeled "critical".

f. The auditors' conclusion that testing planned for Block I IOTE more closely resembles an operational assessment than an operational test and evaluation appears to be based on the misconceptions discussed earlier. The report frequently notes that most Block I ASAS equipment has been procured. This is irrelevant to the determination of effectiveness and suitability by us, as required by Congress and OSD. The ASAS IOTE met the requirement for an operational test and evaluation; an approved threat, typical users, and production representative ASAS equipment, were included in the IOTE.

2. It is unfortunate that the operational testers and evaluators were not consulted during the course of this audit; a significantly different report may have resulted. The ASAS IOTE conducted 7 Sep - 11 Oct 92 concluded that the current configuration of the system is not effective or suitable. The report does not support full materiel release until hardware, software, procedural and training problems identified during IOTE have been corrected and verified in a follow-on test and evaluation program.

3. We disagree with the conclusion of the draft report dealing with the validity of operational testing. They are based on inaccurate information and limited understanding of the operational testing and evaluation process. The operational test and evaluation program for ASAS Block I was valid and adequate to support required decisions.

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Comptroller, Department of Defense, Comments

COMPTROLLER OF THE DEPARTMENT OF DEFENSE

WASHINGTON, DC 20301-1100

JAN 22 1993

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report on the Review of the All Source Analysis System as a Part of the Audit of the Effectiveness of the Defense Acquisition Board Review Process--FY 1993 (Project No. 2AE-0033.02)

Your memorandum of December 28, 1992, provided a copy of the subject audit report that recommended funding withholds of All Source Analysis System development and procurement funds.

Funds appropriated in FY 1993 for Block II development have been on withhold since the beginning of the fiscal year. These funds will remain on withhold pending Defense Acquisition Board review of this program.

Also, in response to the report recommendation, remaining unobligated and uncommitted FY 1993 development and procurement funds for Block I, except for program office costs such as salaries, are being proposed for withhold subject to concurrence by the Under Secretary of Defense for Acquisition. The previously released funds that have now been obligated and committed will continue program efforts until this matter is resolved. The funds are sufficient to allow the program office to prepare for the forthcoming Defense Acquisition Board review.

Donald B. Shycoff
Acting Comptroller

cc: USD(A)

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