Audit Report

OFFICE OF THE INSPECTOR GENERAL

LOW-RATE INITIAL PRODUCTION OF THE EA-6B PROGRAM

Report Number 93-039

December 18, 1992

Department of Defense

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The following acronyms are used in this report.

ACAT.....Acquisition Category
ADVCAP.....Advanced Capability
AIP.....Avionics Improvement Program
LRIP.....Low-Rate Initial Production
PRR.....Production Readiness Review
RDT.....Reliability Development Testing
RPG.....Receiver Processor Group
U.S.C.....United States Code
VEP.....Vehicle Enhancement Program
WRA.....Weapon Replaceable Assembly

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202-2884

December 18, 1992

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION

SUBJECT: Audit Report on the Low-Rate Initial Production of the EA-6B Program (Report No. 93-039)

We are providing this final report for your review and comments. On August 14, 1992, a draft of this report was provided to you for comments. Your comments on our recommendations were considered in preparing the final report.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, the Under Secretary of Defense for Acquisition must provide final comments on the unresolved recommendations by February 16, 1993. See the "Status of Recommendations" section at the end of the finding for the unresolved recommendations and the specific requirements for your comments. If appropriate, you may propose alternative methods for accomplishing desired improvements. This report does not identify any monetary benefits. Recommendations are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonoccurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the internal control weaknesses highlighted in Part I.

We appreciate the courtesies extended to our audit staff. If you have questions on this audit, please contact Mr. Russell A. Rau, Program Director, at (703) 693-0186 (DSN 223-0186) or Mr. Harold James, Project Manager, at (703) 614-3974 (DSN 224-3974). Appendix H lists the planned distribution of this report.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Navy

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Office of the Inspector General

AUDIT REPORT NO. 93-039 **December 18, 1992**
(Project No. 2AE-0026.01)

LOW-RATE INITIAL PRODUCTION OF THE EA-6B PROGRAM

EXECUTIVE SUMMARY

Introduction. The Navy EA-6B aircraft performs the electronic warfare mission of suppression and degradation of enemy electronic defense systems by use of tactical jamming. The last new production EA-6B aircraft was delivered in 1989. The total program office cost estimate for the five contracts involved in developing a remanufactured upgrade of the aircraft was $761 million. The estimated total production cost for performing the remanufacture upgrade on 102 EA-6B aircraft is $6.8 billion.

Objectives. The EA-6B was one of six programs included in our audit of "The Effectiveness of DoD Use of Low-Rate Initial Production in Major Defense Acquisition Programs." The audit objectives are to evaluate the effectiveness of DoD use of low-rate initial production in major Defense acquisition programs and to evaluate the readiness of the EA-6B program to enter low-rate initial production of remanufactured aircraft.

Audit Results. The Navy was proceeding to enter low-rate initial production of the EA-6B aircraft in September 1992, for as many as 21 remanufactured aircraft at an estimated cost of $1.8 billion without completing the prerequisites in design, testing, and preparation for production. The initial production contract for three remanufactured aircraft, estimated to cost $275 million, includes significant developmental efforts. Certain development contracts already awarded are funded with procurement appropriations. Additionally, operational testing to determine the operational suitability and effectiveness of the aircraft remanufactured during low-rate initial production would not occur until more than 1 year after the Milestone III full-rate production decision in April 1995. As a result, the Navy risked premature commitment to the low-rate initial production and full-rate production programs, as well as potential misuse of funds in violation of law.

Internal Controls. The audit identified material internal control weaknesses in that controls were not in place to ensure proper control of appropriations, as required by United States Code (U.S.C.), title 31, sec. 1301 and 1341, and DoD Directive 7200.1. These internal control weaknesses are described in Part I of the report.

Potential Benefits of Audit. This report does not identify any monetary benefits. However, implementation of the recommendations in this report will ensure that engineering and manufacturing development for the EA-6B Remanufacture Program

will continue until design, testing, and production readiness accomplishments fully support a low-rate initial production decision. Also, the program will not proceed to full-rate production until operational suitability and effectiveness of the aircraft remanufactured during low-rate initial production has been demonstrated in operational test and evaluation. In addition, controls will be implemented to ensure funds are used as intended by law (Appendix F).

Summary of Recommendations. We recommend that the low-rate initial production decision for EA-6B aircraft be postponed and made contingent on specific exit criteria and that individual EA-6B program segments be combined and managed as a single major Defense acquisition program. We also recommend that the results of operational test and evaluation of production aircraft be included in the Milestone III, Production and Deployment Review. Finally, we recommend that the EA-6B program comply with U.S.C., title 31, sec. 1301 and 1341, for the use of appropriated funds for their intended purpose.

Management Comments. Prior to receiving management comments to our draft report on November 20, 1992, we were informed that the low-rate initial production decision scheduled for September 1992 was postponed until at least March 1993. We clarified our position concerning why the MR-51 developmental aircraft was not considered production representative without additional modification based on briefings of our audit results to management. The Director, Tactical Systems, responded for the Under Secretary of Defense for Acquisition. The Director partially concurred with Recommendation 1.a. stating that the EA-6B remanufacture program, to include the advanced capability, vehicle enhancement program, and the avionics improvement program, will be restructured by the Navy as an Acquisition Category I C (component-managed) program after the Low-Rate Initial Production decision. The Director also partially concurred with Recommendation 1.b. He stated that the exit criteria for the entire remanufacture program will be established for the Milestone III decision but not also for each Low-Rate Initial Production decision. The Director concurred with Recommendation 1.c., which recommended that the Milestone III, Production and Deployment Review, include the results of operational test and evaluation of production aircraft; however, he indicated that production-representative aircraft may be used. Finally, the Director did not respond to Recommendation 1.d. because the recommendation is currently being addressed in Program Budget Decision 113, Navy and Marine Corps Aircraft, which has not been resolved. We determined that the corrective actions planned by the Under Secretary of Defense for Acquisition met the intent of Recommendations 1.a. and 1.c. However, we request that the Under Secretary reconsider the response to Recommendation 1.b. and provide comments to Recommendation 1.d. when responding to the final report. Comments to the final report are requested by February 16, 1993. Part II contains a

full discussion of the responsiveness of the Director's comments, and Part IV contains the full text of his comments.

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The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate, at (703) 614-6303 (DSN 224-6303).

PART I - INTRODUCTION

Background

EA-6B Program. The primary mission of the EA-6B aircraft is the suppression and degradation of enemy electronic defense systems by use of tactical jamming. The basic EA-6B aircraft was introduced into the fleet in 1971; the last aircraft was produced in 1989. As of July 1992, there were 133 EA-6B aircraft in the Navy inventory. Since fleet introduction, many modification efforts have been made to improve the performance of the aircraft, including expanded capability, improved capabilities I and II, and the Block 91 Remanufacture Program (Remanufacture Program). All improvements have been completed except for the Remanufacture Program, which was being performed under the following contracts with Grumman Corporation:

- o N00019-83-C-0148, development of the receiver processor group, $255 million;
- o N00019-88-C-0227, Air vehicle enhancement, $100.3 million;
- o N00019-89-C-0121, avionics improvements, $254 million; and
- o N00019-90-C-0105, nonrecurring engineering on the receiver processor group, estimated cost $57.6 million.

In addition, the ALQ-149 communications jammer is provided to Grumman Corporation as Government-furnished equipment. The jammer was being developed under Contract N00082-C-0402 with Sanders Associates, Incorporated, for $93.6 million. A low-rate initial production (LRIP) decision relating to the Remanufacture Program was scheduled for September 1992. The Navy plans to remanufacture as many as 21 aircraft in LRIP for an estimated $1.8 billion, followed by another 81 aircraft in full-rate production. Total planned procurement cost for 102 remanufactured aircraft is $6.8 billion in then-year dollars. The EA-6B program is managed by the A-6/EA-6 Program Office under the Navy Program Executive Officer for Tactical Aircraft Programs. The EA-6B program is an acquisition category II program with the Navy Acquisition Executive serving as milestone decision authority.

Low-Rate Initial Production. The LRIP is described in DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," as the production of a system in limited quantity to provide articles for operational test and evaluation, to establish an initial production base, and to permit an orderly increase in the production rate sufficient to lead to full-rate production upon successful completion of operational testing.

The Instruction further provides that program acquisition strategies must be event driven, with entry into LRIP based on accomplishing specific program results, known as exit criteria. In addition, the Instruction requires that contracting activities support the acquisition strategy by imposing links between contract events and demonstrated program accomplishment.

Objectives

As a result of issues identified early in the survey phase of Project No. 2AE-0026, audit of "The Effectiveness of DOD Use of Low-Rate Initial Production in Major Defense Acquisition Programs," we expanded the scope of the audit work related to the EA-6B program. The overall audit objective was to evaluate the effectiveness of DOD use of LRIP in major Defense acquisition programs. The expanded audit objective was to evaluate the readiness of the EA-6B program to enter the LRIP of remanufactured aircraft.

Scope

We selected the EA-6B program as one of six major Defense acquisition programs to be in the overall audit. The selection included two systems each from the Army, Navy, and Air Force. The systems selected for review were drawn from the major acquisition programs that were anticipating an LRIP decision or had completed an initial LRIP decision since February 1991 and were proceeding toward either another LRIP decision or full-rate production. This audit was conducted 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 reviewed data and information from 1983 to July 1992, related to the issues addressed in the report. This program results audit was performed between April and July 1992. Personnel involved in the development and remanufacture aspects of the EA-6B program were interviewed as required. Appendix G lists activities visited or contacted.

Internal Controls

We evaluated the implementation of policies and procedures for control of appropriated funds for the various EA-6B aircraft contracts. 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. The audit concluded that existing internal controls, if properly implemented, were adequate to prevent or detect the deficiencies identified in this report. However, because the Navy considered part of the work related to the development of the EA-6B remanufactured aircraft to be separate engineering changes to the existing EA-6B aircraft, contracts for work efforts contributing to the development and testing of the remanufactured EA-6B aircraft were funded with the aircraft procurement appropriations

rather than with research and development funds. As a result, funds were potentially not being used for the purpose for which they were appropriated, as required by U.S.C., title 31, sec. 1301, and DoD Directive 7200.1. This lack of control could result in violations of U.S.C., title 31, sec. 1341.

Implementation of recommendation 1.d. in this report will correct these weaknesses. There are no monetary benefits to be realized by implementing this recommendation. A copy of the report is provided to the senior officials responsible for internal controls within the Offices of the Secretary of Defense and the Secretary of the Navy. Appendix A provides details on funding and work descriptions for EA-6B contract efforts.

Prior Audits and Other Reviews

Since 1987, the General Accounting Office has issued three reports and the DoD Inspector General's Office and the Naval Audit Service have each issued one report addressing the EA-6B Program. We did not follow up on the prior audits because previous reports did not contain issues or recommendations related to the issues in this report.

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PART II - FINDING AND RECOMMENDATIONS

READINESS FOR LOW-RATE INITIAL PRODUCTION

The EA-6B Remanufacture Program was not ready for LRIP in September 1992. Specifically, the Navy was proceeding with an LRIP decision for three remanufactured EA-6B aircraft estimated to cost $275 million without completing the prerequisites in design, testing, and preparation for production. The acquisition strategy based the LRIP decision on solely the advanced capability system when two other program segments, the vehicle enhancement program and the avionics improvement program, also comprise essential elements of the EA-6B Remanufacture Program. As many as 21 remanufactured aircraft, about 20 percent of total planned buy of 102, at an estimated cost of $1.8 billion are expected to be produced in LRIP. The Navy acquisition strategy is based on utilizing available procurement funding to continue program development rather than a logical sequence of demonstrated program accomplishments leading to a Milestone III decision. As a result, the Navy risked premature commitment to LRIP and full-rate production programs and potential misuse of appropriated funds in violation of law.

DISCUSSION OF DETAILS

Background

The EA-6B Block 91 Remanufacture Program originated from two decisions by the Secretary of the Navy (the Secretary). First, in March 1988, the Secretary approved Program Management Proposal 87-2, which merged on-going development projects designed to improve EA-6B aircraft performance of the electronic warfare mission. These projects became the "Block 91 upgrade," which was to be incorporated into 126 EA-6B new production aircraft to be manufactured beginning in 1991. Next, in September 1989, when the FY 1990 President's budget deleted EA-6B procurement after FY 1989, the Secretary approved a program change approval document which redefined the Block 91 upgrade as a "remanufacture only" program and, with the program management proposal, defined the Block 91 Remanufacture Program as it is today.

The EA-6B Block 91 Remanufacture Program structure consists of three separate program segments, which entail work efforts that lead to the remanufacture configuration:

- Advanced capability (ADVCAP) onboard system, which was installed on aircraft AP-1 and used in developmental and operational flight testing between January and July 1992. This system includes:

o ALQ-99 receiver processor group (RPG), an upgrade to the aircraft's present ability to detect, identify, locate, and provide warning of threats; and

o ALQ-149 communications jammer for the interception and identification of voice, data links, and radar threats.

o Vehicle enhancement program (VEP) to incorporate maneuver improvements and upgraded engines to increase the stall margin in the EA-6B aircraft, which becomes critical with the additional ADVCAP system weight. The vehicle enhancements were made on aircraft MR-50, which was in flight testing, scheduled to end in November 1992.

o Avionics improvement program (AIP) to install the ADVCAP system and the VEP Upgrades into the MR-51 aircraft to validate system integration and compatibility and verify the remanufacture configuration. Aircraft MR-51 is scheduled for delivery in January 1994, and for flight testing between January 1994 and January 1995.

The segmented program structure is the result of a Navy effort to reduce the research and development funding used in the program. A memorandum for the record from the EA-6B program office dated February 21, 1992, states that a combined program structure was proposed to the Commander, Naval Air Systems Command, in 1987. The memorandum also states that the combined program structure was rejected because of the amount of required research and development funding. Under the combined program concept, all program elements (ADVCAP, VEP, and AIP), as well as nonrecurring engineering effort for remanufacture, would have been funded under the Research, Development, Test and Evaluation, Navy appropriation. Under the segmented program structure, only the ADVCAP portion of the program was established and funded as a development effort. The other program elements were established under an engineering change proposal and funded using the Aircraft Procurement, Navy appropriation.

Although the planned September 1992 LRIP decision would have provided the program authority to purchase as many as 21 remanufactured aircraft incorporating ADVCAP, VEP, and AIP, the current acquisition strategy allows supporting documentation for the LRIP decision to be limited to test, design, and production data on the ADVCAP alone.

The program has experienced schedule slips during 1991 and 1992, resulting primarily from technical problems with the RPG. As a result, the LRIP decision was moved from June to September 1992. The Navy has identified $17 million in FY 1992 long-lead funding for FY 1993 that would be at risk if the planned September LRIP decision was unsuccessful.

Readiness For Low-Rate Initial Production

The planning and preparation for the LRIP decision supporting the EA-6B Remanufacture Program did not meet the design, testing, and production preparation prerequisites established under DoD 4245.7-M, "Transition from Development to Production" and DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," for a low-risk transition into LRIP. Also, technical reviews, required during engineering and manufacturing development by Military Standard 1521-B, "Technical Reviews and Audits for Systems, Equipments, and Computer Software," would be performed after the LRIP decision. Shortfalls in program accomplishment and documentation in design, testing, and manufacturing areas critical to support an LRIP decision include:

o Significant problems, identified in developmental testing, which were scheduled for resolution after the LRIP decision;

o Documentation from the operational assessment and the production readiness review, which was scheduled for completion the month before the scheduled LRIP decision, leaving little time for analysis of results; and

o Documentation from technical reviews and from developmental, reliability, and operational testing, which would not be completed by the planned LRIP decision date.

Design. Our review of program plans and progress in accomplishing the technical reviews and audits of systems, equipments, and computer software, required by Military Standard 1521-B, showed that the hardware and software critical design reviews and the software test readiness reviews would be unavailable for the remanufactured EA-6B aircraft until after the LRIP decision. Under the Navy acquisition strategy at the time of our review, these reviews were not scheduled to support LRIP since the LRIP decision focused only on the ADVCAP segment of the program. In addition, due to program schedule slippage, the software test readiness review for the RPG (part of the ADVCAP) also would be performed after the LRIP decision.

Although both Military Standard 1521-B and DoD 4245.7-M state that critical design reviews and software test readiness reviews are normally performed during engineering and manufacturing development, these various reviews will be performed between 1 and 24 months after award of the LRIP contract. All incomplete reviews for the remanufactured aircraft are included as part of the statement of work for EA-6B remanufacture Purchase Request N00019-91-P7-MA030, which will be used to award the LRIP contract, rather than as part of engineering and manufacturing development. Appendix B lists program documentation details that would not be completed at the LRIP decision.

Each review discussed in the military standard and the acquisition regulation provides critical information as to the suitability of planned hardware and software system configurations for production and the completeness of system design.

Critical Design Review. The critical design review is defined under DoD Instruction 5000.2 as a review to:

- o determine if the detailed design of a system meets the performance and engineering requirements of the development specification;
- o establish the detailed design compatibility among the end item and other items of equipment, facilities, computer programs, and personnel;
- o assess producibility and risk areas; and
- o review the preliminary product specifications.

Because hardware and software critical design reviews for the remanufactured EA-6B aircraft (ADVCAP fully integrated with VEP and AIP) were scheduled after the LRIP decision in September 1992, the Government would be unable to ensure that all design areas were adequately examined, that design weaknesses were identified, and that solutions for design-related issues were available.

Test Readiness Review. The test readiness review is defined by Military Standard 1521-B as a review of computer software configuration items to determine contractor readiness to begin formal software testing. The impact of software design changes, software test resources, known software problems, and limitations to test software are among the factors assessed. By not performing this review for the RPG and the remanufactured aircraft until after the LRIP decision, the Government cannot fully assess Grumman Corporation's ability to test software adequately. The RPG has 242,467 lines of software coding and, as discussed under "Testing," has known software problems.

Testing. Our review of test documentation showed that significant deficiencies existed in the demonstrated ability of the ADVCAP system to perform its mission and that planned testing effort to support the LRIP decision had been significantly reduced. Additionally, testing of the performance suitability of the complete developmental version of the remanufacture aircraft does not begin until at least 9 months after the LRIP decision when the first aircraft incorporating VEP, AIP, and an engineering development model of the ADVCAP enters the testing program. This aircraft (MR-51) is not scheduled to fly until January 1994. We do not consider this developmental aircraft to be production representative, because it contains developmental versions of the ADVCAP and does not include the significant

upgrades and modifications resulting from the so-called "nonrecurring engineering" program that will be unique to the remanufactured aircraft. These upgrades include:

- o RPG and ALQ-149 upgrades,
- o Structural Data Recording System,
- o new exciter/transmitter pod,
- o addition of the automatic flight control system upgrades,
- o addition of countermeasures, and
- o safety modifications.

Operational testing of LRIP aircraft cannot be done until a year after the scheduled full-rate production decision in the third quarter of 1995, because the first LRIP delivery is not scheduled until the third quarter of 1996. Our review assessed the results of developmental and reliability development testing performed through June 1992 and examined plans for developmental, operational, and reliability development testing efforts through 1995.

Developmental Testing. Developmental testing of the overall EA-6B remanufacture configuration would not be performed to support the LRIP decision. In addition, developmental testing performed on the ADVCAP system by the Naval Air Warfare Center, Patuxent River, MD, between January and May 1992, resulted in finding 46 Part I deficiencies. A Part I rating indicates a deficiency which adversely affects the safety of flight or prevents accomplishment of the primary mission. Twenty-six of the deficiencies have been assigned to Grumman Corporation to correct; the remaining 20 are assigned to Sanders Associates, which makes the ALQ-149. While the developmental test report issued by the Naval Air Warfare Center on May 14, 1992, states that both the RPG and the ALQ-149 will be satisfactory after correction of the Part I deficiencies, fixes for 22 of the 26 deficiencies assigned to Grumman Corporation and 10 of the 20 assigned to Sanders Associates were not scheduled for completion until after the LRIP decision. Grumman engineers stated that most of their assigned deficiencies are software related and that, because they must devote programming resources to develop software for the AIP, they do not expect to complete fixes until mid-1993. The engineers stated that the most challenging problem they faced was improving the pulse rate interval algorithm. The algorithm is essential to help the ADVCAP system classify and identify electronic pulses from threat assets so that appropriate jamming techniques can be applied.

DoD 4245.7-M states that test stability, defined as the absence or near absence of failures in development testing of a stable

design, is essential to reduce risk in the transition from development to production. Details on the Part I deficiencies assigned to Grumman Corporation and Sanders Associates are provided in Appendices C and D. In summary, developmental testing did not yet support entry into LRIP for the overall Remanufacture Program.

Operational Testing. An operational assessment of the EA-6B Remanufacture Program had not been performed in support of the LRIP decision. Operational testing to support the LRIP decision, like developmental testing, was also limited to the ADVCAP system using engineering and development models and not production representative units. Operational testing will be further limited by the results of developmental testing. Test personnel at the Navy developmental test activity (Naval Air Warfare Center, Patuxent River, MD) recommended operational testing on the ADVCAP to start in June 1992, as planned. They also stated that the following processing categories are not considered operationally mission suitable and should not be expected to perform at that level during the operational tests:

- radar warning signal processing and display,
- identification functions,
- reactive assignments to complex emitters, and
- ALQ-149 radar and communication functions.

In addition, the operational testing of ADVCAP was not scheduled for completion until August 1992, one month before the scheduled LRIP decision, leaving little time for results analysis. Also, operational testing to determine the operational suitability and effectiveness of the aircraft remanufactured during LRIP would not occur until more than one year after the scheduled Milestone III decision, scheduled for April 1995. In summary, the operational testing on ADVCAP provides little basis for proceeding with LRIP on the overall Remanufacture Program.

Reliability Development Testing. Our review of reliability development testing (RDT) conducted and planned showed that the amount of RDT that would support the LRIP decision had been greatly reduced. Originally the engineering and manufacturing development contract required between 1500 and 2000 hours of RDT on each of 13 unique weapon replaceable assemblies (WRAs) making up the RPG. Contract Specification Change Notice 3, submitted by Grumman Corporation in November 1989, reduced the contract requirement to 400 hours on 4 WRAs deemed to be system representative. This reduction of RDT to support the LRIP decision resulted from delays related to design problems experienced by Litton Corporation, the subcontractor responsible for providing the RPG. The Navy has not formally accepted this change but has operated as if there were acceptance.

Although Grumman engineers estimated that planned RDT before LRIP will be representative of 83 percent of RPG technology, WRAs essential to performance of the system mission would not be tested. For example, among the untested assemblies would be WRA 20, the fast set on local oscillator. This assembly establishes the timing requirements to process enemy electronic emissions and pulses, a process which must be done before the RPG can perform its mission to detect, identify, locate, and provide warning of threats. Grumman engineers stated that WRA 20 would not be available for RDT before LRIP because the current configuration was considered inadequate for production and Litton was redesigning the assembly. DoD 4245.7-M states that reliability development testing reduces the risk of allowing systems with poor reliability to transition from development to production and that this testing should be completed before the initial production decision. Appendix E provides details on planned RDT effort.

Test of Block-91 Remanufacture Configuration. Our review of program planning documents showed that the performance of the remanufacture configuration, which includes the ADVCAP system integrated with avionics added under AIP and installed in the enhanced vehicle, will be tested after a remanufacture prototype is delivered in the second quarter of FY 1994. Although Navy sought an LRIP in September 1992, which would have provided authority to remanufacture as many as 21 aircraft, test documentation to support the decision would have been limited to developmental and operational testing on the ADVCAP system (discussed above). The ADVCAP testing was done on an EA-6B vehicle that did not include VEP upgrades and the ADVCAP system was not integrated with the avionics components that will be installed under AIP. Flight testing of the VEP, with weight added to simulate ADVCAP, will not end until the fourth quarter of 1993.

Preparation for Production. Our review of documentation to prepare for production of the remanufacture aircraft showed that required production readiness reviews had not been performed and that the contractor had not met delivery or specification requirements for engineering development models of the RPG.

Production Readiness Reviews. Production readiness reviews (PRRs), which validate contractor production engineering performance and which must be satisfactorily accomplished before executing a production decision, had not been conducted as required by Military Standard 1521-B. The only PRRs which will be accomplished before the LRIP decision will be single reviews for the two ADVCAP components, RPG and ALQ-149. The RPG review was scheduled for July 1992, and the ALQ-149 review was done in August 1990. No PRR was scheduled for the remanufactured aircraft.

The Military Standard requires PRRs to be done incrementally during engineering and manufacturing development. The first review is to be completed 90 days after the critical design review with additional reviews at least yearly thereafter. The Military Standard requires the incremental review so that the earlier PRRs can focus on gross level concerns, such as identifying high risk/low yield manufacturing processes, while the later reviews are more refined and deal with such concerns as production planning, facilities' allocation, and fabrication of tools and test equipment. This program's segmented nature has impaired an effective production readiness review because each segment is a separate contract requiring separate, not interrelated, PRRs.

Engineering Development Models. Our review of the contractor performance against delivery schedules set for RPG engineering development models showed continuous schedule slippage. Although all six models were to be delivered by March 1989, under the engineering and manufacturing development contract at a cost of $255 million, the Government had accepted only one model, delivered in 1987. No further deliveries are forecasted until December 1993. Also, the Government withheld payment of approximately $4 million on the accepted model because 5 of the 21 WRAs were not included and another 6 WRAs did not meet configuration requirements. No units have been presented for Government acceptance since 1987, and the Government has been withholding progress payments since July 11, 1991, until deliveries resume. Two RPG engineering development models were at Grumman facilities and were being used in test and development, but these had not been accepted by the Government. The latest contract proposal from Grumman Corporation now has delivery dates for models 2 through 6 set for December 1993. The delays in producing engineering models have had an impact on the testing program for the RPG because the models were to be test assets. The RPG unit used for the developmental tests to support LRIP had components from each of the three engineering models. Also the Navy has cited the limited service life remaining on the RPG model as one reason to shift reliability development testing from the engineering and manufacturing development contract to the LRIP effort.

Effects of Proceeding to LRIP

The Navy's objectives in proceeding to LRIP in September 1992 were to maintain the EA-6B remanufacture schedule and to obligate FY 1992 long-lead procurement funding for FY 1993. The benefits of proceeding with LRIP are offset by program risk because:

- deficiencies are identified in design, testing, and preparation for production; and

- a developmental aircraft, with vehicle and avionics improvements and a fully integrated ADVCAP engineering development model, will be unavailable for testing until 1993.

The LRIP decision would have started the production line and provided Navy the authority to buy as many as 21 remanufactured aircraft costing $1.8 billion when significant questions of design, performance, and production are unanswered. Given the status of development, a production line would have created an unacceptable level of concurrency between development and production. Later schedule delays could result in the Navy's needing to award production contracts based on a potential production break rather than on demonstrated program progress. The program was not ready in September 1992 to begin the ramp up to full-rate production. The risks associated with such an LRIP decision are noted in DoD 4245.7-M, which states that the first evidence of weapon system problems does not always become apparent until a program transitions from engineering and manufacturing development to production.

Conclusions

A September 1992 LRIP start for the EA-6B program could not be justified due to the risks of transitioning to production with unresolved testing issues and incomplete testing, design, and production documentation. The EA-6B acquisition strategy should be restructured to allow the program to continue engineering and development work but not enter LRIP until:

- o correction of ADVCAP deficiencies noted in developmental testing;

- o completion of the technical reviews required by Military Standard 1521-B; and

- o successful testing of the EA-6B developmental flight test vehicle (the MR-51 aircraft) that fully integrates VEP, AIP, and the engineering and manufacturing development version of ADVCAP.

The restructured acquisition strategy should be event driven, in compliance with DoD Directive 5000.2, with entry into LRIP based on demonstrated program accomplishment. Specific exit criteria should be established, both in the acquisition strategy and the contractual agreements. These exit criteria should include the requirement to reach specified performance levels in testing and to complete technical reviews and audits.

To ensure that the LRIP decision will be fully supported by design, testing, and production planning documentation, we consider it essential that the existing segmented efforts, ADVCAP, VEP, AIP, and remanufacture, be combined into the EA-6B Remanufacture Program. The combined program should be classified as an acquisition category (ACAT) ID major Defense acquisition program with Defense Acquisition Board cognizance and the Under Secretary of Defense for Acquisition as the milestone decision authority. Presently, ADVCAP is classified at the ACAT II level while the other program segments are included under an engineering change proposal and have no ACAT designation.

We base this conclusion on several factors:

o The program exceeds the dollar value thresholds for designation as an acquisition category I program.

o The criticality of the EA-6B program to Navy and Air Force missions was demonstrated during Operation Desert Storm. The EA-6B aircraft accompanied and supported both Navy and Air Force aircraft on their respective missions. Therefore, the interoperability of the EA-6B aircraft with Air Force aircraft is a factor that should be addressed at the Defense Acquisition Board versus the component level.

o The Navy has raised industrial base concerns about the prime contractor's and major subcontractors' need to proceed into low-rate initial production. Such concerns are broader than the EA-6B program and Navy programs collectively and should be considered by the Defense Acquisition Board in its oversight role.

o We are quite concerned about the Naval Air Systems Command's structure of the program. Relying on procurement funds for the development effort, coupled with plans to prematurely proceed into LRIP when not supported by program progress, clearly indicates the need for additional oversight. Combining individual program segments would also alter the program funding, since all program effort leading to the development and testing of the MR-51 aircraft would now be recognized as developmental. Procurement funding, which is being used on three of the five development program contracts under the current acquisition strategy, and Research, Development, Test, and Evaluation funding can then be adjusted so that funds are used for the purpose for which they were appropriated, as required by U.S.C., title 31, sec. 1301, and DoD Directive 7200.1 and to avoid violation of Anti-Deficiency Act of U.S.C., title 31, sec. 1341. Appendix A provides information on funding and work descriptions associated with the existing EA-6B.

o Finally, we consider it essential that a production aircraft be used for operational test and evaluation supporting the Milestone III, Production and Deployment, decision because the MR-51 developmental aircraft is not fully production representative.

Our conclusions are supported by recent changes in DoD acquisition policy. The Under Secretary of Defense for Acquisition stated in a May 20, 1992, acquisition policy memorandum that because of the breakup of the Warsaw Pact and the dissolution of the Soviet Union, the pressure of rapidly advancing high technology weapons in the hands of potential enemies has significantly lessened. The memorandum further states that the need to replace existing weapons systems to maintain a significant technological advantage is no longer as urgent and that program concurrency can be reduced. Entering

production prematurely and performing developmental work as part of a production contract is contrary to the intent of this guidance.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Under Secretary of Defense for Acquisition:

a. Designate the EA-6B Remanufacture Program, including advanced capability, vehicle enhancement program, and avionics improvement program, as a single acquisition category I D major Defense acquisition program.

b. Direct the establishment of specific exit criteria for the EA-6B Remanufacture Program to enter LRIP.

c. Direct that the Milestone III Production and Deployment Review of EA-6B program include the results of operational test and evaluation of production aircraft.

d. Direct the Assistant Secretary of the Navy (Research, Development and Acquisition) to report the actions taken to align development and procurement funds with the nature of the work required and ensure the EA-6B program complies with U.S.C., title 31, sec. 1301 and 1341, for the use of appropriated funds for their intended purpose.

MANAGEMENT COMMENTS

Prior to receiving management comments to our draft report on November 20, 1992, we were informed that the low-rate initial production decision scheduled for September 1992 was postponed until at least March 1993. The Director, Tactical Systems, responded for the Under Secretary of Defense for Acquisition. The Director stated that the EA-6B Program had changed substantially since the draft report was published, and statements accurate at the time are no longer so. However, the recommendations are still pertinent, and his comments specifically address the recommendations.

The Director partially concurred with Recommendations 1.a. and 1.b. He concurred with Recommendation 1.c.; but the Director did not respond to Recommendation 1.d.

o Recommendation 1.a. Partially concur. The EA-6B remanufacture program, to include the advanced capability, vehicle enhancement program, and avionics improvement program, will be restructured by the Navy as an Acquisition Category I C program after the Milestone IIA LRIP decision. The program structure and documentation will be revised accordingly for the remainder of the program milestones. However, the current program structure and documentation, which is based on the

AN/ALQ-99 RPG and AN/ALQ-149 exit criteria, will be used by the Navy to make the Milestone IIA decision.

o Recommendation 1.b. Partially concur. Exit criteria for the entire EA-6B remanufacture program will be established for the Milestone III decision. Meanwhile, the results of the AN/ALQ-99 PRIG and AN/ALQ-149 operational assessment and data from Engineering Change Proposal 500, covering airplane level issues, will be used by the Navy to make the Milestone IIA decision.

o Recommendation 1.c. Concur.

o Exit criteria will be revised after Milestone IIA to reflect the entire EA-6B remanufacture program.

o The operational test will be conducted on a production-representative aircraft.

o The results of the operational test will be presented at Milestone III.

o Recommendation 1.4. No Response. This recommendation is currently being addressed in Program Budget Decision 113, Navy and Marine Corps Aircraft, which has not been resolved.

The full text of the Director's comments is presented at Part IV of this report.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

Recommendation 1.a. The corrective actions planned by the Under Secretary of Defense for Acquisition are responsive to the intent of Recommendation 1.a. Although we continue to believe that the EA-6B program would benefit from the higher level of oversight provided by an acquisition category I D classification, the planned consolidation and management of program segments as a single acquisition category I C program, after the Milestone IIA decision, should ensure availability of the program documentation necessary to support future program production decisions. No additional comments to Recommendation 1.a. are required.

Recommendation 1.b. The corrective actions planned by the Under Secretary of Defense for Acquisition partially meet the intent of Recommendation 1.b. Establishing specific exit criteria for the Milestone III decision that reflect the entire EA-6B program is a needed measure, but we believe exit criteria should also be approved at the Milestone IIA decision point for subsequent low-rate initial production buys. To meet the full intent of the recommendation, we believe the Milestone IIA decision should limit remanufacture authorization to only a limited quantity of EA-6B aircraft in an initial low-rate production lot and establish specific exit criteria, reflective of the entire program, to be used for decisions on subsequent low-rate

production lots. We request the Under Secretary of Defense reconsider the response to Recommendation 1.b. when responding to the final report.

Recommendation 1.c. The corrective actions planned by the Under Secretary of Defense for Acquisition meet the intent of Recommendation 1.c. The use of a production-representative aircraft for operational test and evaluation will provide the proper basis for making the Milestone III Production and Deployment decision. It should be noted, however, that we continue to consider the MR-51 aircraft a test article that does not contain all upgrades in the remanufacture program and relies on engineering development models of the advanced capabilities system. Therefore, the Navy certification that the EA-6B is ready to commence the operational test and evaluation, required by DoD Instruction 5000.2, should specifically document modifications made to upgrade the MR-51 to a production-representative configuration, if the MR-51 is to be used in operational test and evaluation. No additional comments to Recommendation 1.c. are required.

Recommendation 1.d. The Under Secretary of Defense for Acquisition did not provide a response to Recommendation 1.d. We request that the Under Secretary provide a response to this recommendation after receipt of the final report.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.b.	USD(A)	x	x	x	
1.d.	USD(A)	x	x	x	IC

* IC = material internal control weakness

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PART III - ADDITIONAL INFORMATION

APPENDIX A - Funding and Work Discriptions for EA-6B Contract Efforts

APPENDIX B - Schedule of Program Documentation That Will Not Be Completed at LRIP Decision

APPENDIX C - Grumman Corporation's Planned Correction of Developmental Testing Discrepancies in Advanced Capabilities OnBoard System

APPENDIX D - Sanders Associates' Planned Correction of Developmental Testing Discrepancies in ALQ-149 Communications Jammer

APPENDIX E - Planned Reliability Development Testing for Unique Receiver Processor Group Weapon Replaceable Assemblies

APPENDIX F - Summary of Potential Benefits Resulting from Audit

APPENDIX G - Activities Visited or Contacted

APPENDIX H - Report Distribution

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APPENDIX A - FUNDING AND WORK DESCRIPTIONS FOR EA-6B CONTRACT EFFORTS

CONTRACT #	APPROPRIATION	WORK DESCRIPTION
N00019 83-C-0148 (Basic)	Research, Development, Test and Evaluation	Grumman will furnish six engineering development models of the receiver/processor group, which are to be compatible with the EA-6B advanced capability weapons system and with other equipment within the aircraft.
N00019 82-C-0402 (Basic)	Research, Development Test and Evaluation	Sanders Associates shall design, fabricate, test, and furnish seven engineering development models of the ALQ-149.
N00019 88-C-0227 (Basic)	Aircraft Procurement, Navy	Grumman will provide vehicle enhancements using aircraft MR-50 to include design, fabrication, and installation efforts for engine upgrade; maneuverability improvements; and safety features.
N00019 90-C-0105 (Basic)	Aircraft Procurement, Navy	Grumman will conduct a receiver processor group production nonrecurring engineering program to include: program management, engineering, quality assurance engineering management, nonrecurring design engineering, software, data, and upgrade to drawings.
N00019 89-C-0121 (Basic)	Aircraft Procurement, Navy	Grumman shall integrate equipment developed under contracts 1 and 2 above and vehicle enhancements made under contract 3 into the MR-51 aircraft and make other avionics upgrades. Grumman will perform system checkout to ensure installed systems will work together.
N00019-91 P7-MA030 (PR-LRIP)	Aircraft Procurement, Navy	In this proposed procurement request, Grumman shall deliver the advanced capability system, vehicle enhancements, and avionics improvements in a manufacturing representative remanufactured aircraft.

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APPENDIX B - SCHEDULE OF PROGRAM DOCUMENTATION THAT WILL NOT BE COMPLETED AT LRIP DECISION

Item	Program Segment Coverage	Months after LRIP
Critical Design Reviews:		
- Hardware	Remanufactured aircraft	24
- Software	Remanufactured aircraft	To be determined[1]
Software Test Readiness Review	Remanufactured aircraft	To be determined[2]
Testing:		
- Developmental	Remanufactured aircraft	28
- Operational	Remanufactured aircraft	28
- Reliability Development	Advanced capability	To be determined

[1]Software preliminary design review and software critical design review to be replaced by interface control working groups.

[2]Thirty days before respective software test.

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APPENDIX C - GRUMMAN CORPORATION'S PLANNED CORRECTION OF DEVELOPMENTAL TESTING DISCREPANCIES IN ADVANCED CAPABILITIES ONBOARD SYSTEM

Deficiency Number	Deficiency Description	Correction Date/Action
2	Failure of the receiver processor group radar function to transition the threat status of certain emmitters properly	2nd Quarter 1993
9	Excessive receiver processor group response time to certain radar warning emitters	2nd Quarter 1993
10	Inadequate radar warning digital display indicator cuing	2nd Quarter 1993
11	Multiple erroneous emitter reports generated by certain modulation type	2nd Quarter 1995
12	Inability of the receiver processor group to determine modulation type	2nd Quarter 1993
13	Inconsistent receiver processor group parametric processing performance	2nd Quarter 1993
14	Failure of the receiver processor group to measure a modulation parameter correctly	2nd Quarter 1993
15	Inadequate probability of detection for scanning emitters	2nd Quarter 1993
17	Failure of the receiver processor group built-in-test to report valid test results:	
	-Software	2nd Quarter 1993
	-Hardware	2nd Quarter 1995
18	Failure of the receiver processor group to tune with libraries activitated and valid navigation data	2nd Quarter 1993
21	False alarms when pulse rate interval limits overlap for different pulse rate interval types	2nd Quarter 1993

APPENDIX C - GRUMMAN CORPORATION'S PLANNED CORRECTION OF DEVELOPMENTAL TESTING DISCREPANCIES IN ADVANCED CAPABILITIES ONBOARD SYSTEM
(Continued)

Deficiency Number	Deficiency Description	Correction Date/Action
22	Failure of the receiver processor group to update a radar warning emitter report amplitude decrease	2nd Quarter 1993
23	Erroneous reporting of communication warning signals in electronic countermeasures active mode	Fixed
24	Submerged emitter symbology at incorrect frequency on frequency display	2nd Quarter 1993
26	Erroneous radar processor group detection of a modulation characteristic	2nd Quarter 1995
27	Erroneous emitter jam strategy override for system and target level jammer assignments	2nd Quarter 1993
28	Inability of radar processor group to track emitter parametric changes for complex emitters	2nd Quarter 1993
29	Inconsistent reporting of modulation interval data by radar processor group	2nd Quarter 1993
31	Failure of the central mission computer to poll the AN/ALQ-149 when communications are lost	Fixed
32	Erroneous frequency report by the radar processor group	Fixed
35	Chafing of the AN/ALQ-149 circuit breaker wiring	Fixed
38	Inadequate radar warning symbology for certain signals	2nd Quarter 1993

APPENDIX C - GRUMMAN CORPORATION'S PLANNED CORRECTION OF DEVELOPMENTAL TESTING DISCREPANCIES IN ADVANCED CAPABILITIES ONBOARD SYSTEM
(Continued)

Deficiency Number	Deficiency Description	Correction Date/Action
41	Information file dependency causes incorrect radar processor group parameter measurement	2nd Quarter 1993
42	Failure of the central mission computer to report bit failure messages to the operator	2nd Quarter 1993
43	Unsafe installation of the radar processor group channelizer weapon replaceable assemblies	2nd Quarter 1995
44	Inadequate separation of aircraft wiring from fluid carrying lines	2nd Quarter 1993

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APPENDIX D - SANDERS ASSOCIATES' PLANNED CORRECTION OF DEVELOPMENTAL TESTING DISCREPANCIES IN ALQ-149 COMMUNICATIONS JAMMER

Deficiency Number	Deficiency Description	Correction Date/Action
1	Inconsistent AN/ALQ-149 performance (dependence on transmission source)	2nd Quarter 1992[1]
3	ALQ-149 system crash following operator initiated bit	Fixed
4	Insufficient AN/ALQ-149 radar direction of arrival performance	Fixed
5	Insufficient AN/ALQ-149 communications direction of arrival performance	2nd Quarter 1992
6	False alarms for AN/ALQ-149 radar signals due to parametric measurement	2nd Quarter 1994
7	Inadequate AN/ALQ-149 signal typing capability	3rd Quarter 1995
8	Inadequate AN/ALQ-149 detection of low duty cycle signals	2nd Quarter 1994
16	AN/ALQ-149 crash due to faulty memory subsystem module	3rd Quarter 1995
19	Loss of all AN/ALQ-149 system functions due to feature extractor failures	2nd Quarter 1994
20	Poor signal detection with wide A1 libraries	3rd Quarter 1995
25	Incorrect identification of signal 14-1D as signal type 3	3rd Quarter 1995
30	Inability of ALQ-149 to recognize test signal 11	3rd Quarter 1992[1]
33	AN/ALQ-149 blanking based solely on master radiate switch position	2nd Quarter 1992[2]
34	Failure of the AN/ALQ-149 to report correct radar parameter tags	2nd Quarter 1994
36	Failure of the ALQ-149 to identify signal type 23 correctly	3rd Quarter 1992[1]

APPENDIX D - SANDERS ASSOCIATES' PLANNED CORRECTION OF DEVELOPMENTAL TESTING DISCREPANCIES IN ALQ-149 COMMUNICATIONS JAMMER (Continued)

Deficiency Number	Deficiency Description	Correction Date/Action
37	Inadequate AN/ALQ-149 radar dynamic range	2nd Quarter 1994
39	Failure of the AN/ALQ-149 to report unknown active radar emitters	2nd Quarter 1992[2]
40	Inability of the AN/ALQ-149 to report all radar ambiguities	3rd Quarter 1992[2]
45	Excessive time required for ALQ-149 tactical jamming system background bit to detect and report 80 megahertz clock failure	3rd Quarter 1992
46	False ALQ-149 radar emitter reports due to ambient environment signals	2nd Quarter 1994

[1]Possible solution available in 1992, additional Government direction or information required.
[2]Fix is available in 1992 but planned to be done in 1993 as part of Avionics Improvement Program.

APPENDIX E - PLANNED RELIABILITY DEVELOPMENT TESTING FOR UNIQUE RECEIVER PROCESSOR GROUP WEAPON REPLACEABLE ASSEMBLIES

Weapon Replaceable Assemblies		Test Hours Scheduled		Total Test Time (Hours)
Number	Name	Before LRIP	After LRIP	
3	Down converter	400	1100	1500
5	Switch matrix			0
6	Channelizer	0	2000	2000
7	Cued analyzer	0	1500	1500
9	Auxiliary analyzer	0	1500	1500
10	Advanced feature extractor processor	To be determined	To be determined	To be determined
11	Signal processor	0	2000	2000
12	Cluster associates	0	2000	2000
13	Frequency input data converter	400	1600	2000
18	Power supply	400	1100	1500
20	Common fast set on local oscillator	0	2000	2000
21	Built-in-test/ calibration	400	1600	2000
22	Power Divider			0

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APPENDIX F - SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT

Recommendation Reference	Description of Benefit	Type of Benefit
1.a.	Internal control and compliance with regulations. Combining EA-6B program segments into one major Defense acquisition program will ensure that the low-rate initial production decision will be fully supported by design, testing, and production planning documentation. Also program effort will be funded in accordance with public law.	Nonmonetary.
1.b.	Compliance with regulations. Establishing specific exit criteria will reduce program risk in the transition from production to development.	Nonmonetary.
1.c.	Compliance with public law. Operational test and evaluation of production representative aircraft before the full-rate production decision will reduce program risk.	Nonmonetary.
1.d.	Compliance with public law and internal controls. Actions taken will ensure use of funds meets the intent of the law.	Nonmonetary.

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APPENDIX G - ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition, Washington, DC

Department of the Navy

Office of the Assistant Secretary of the Navy (Research, Development and Acquisition), Washington, DC
A-6/EA-6 Program Office, Naval Air Systems Command, Washington, DC

Defense Agencies

Defense Logistics Agency, Cameron Station, Alexandria, VA
Defense Plant Representative Office, Grumman Aerospace Corporation, Bethpage, NY

Non-Government Activities

Grumman Aerospace Corporation, Bethpage, NY

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APPENDIX H - REPORT DISTRIBUTION

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition
Comptroller, DoD
General Counsel, DoD

Department of the Navy

Secretary of the Navy
Navy Auditor General
Assistant Secretary of the Navy (Financial Management)
Assistant Secretary of the Navy (Research, Development and Acquisition)
Program Executive Officer, Tactical Aircraft Programs, Naval Air Systems Command
Program Manager, A-6/EA-6 Program, Naval Air Systems Command

Defense Agency

Defense Logistics Agency
Defense Contract Management Command
Defense Plant Representative Office, Grumman Aerospace Corporation

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 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

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PART IV - MANAGEMENT COMMENTS

Office of the Under Secretary of Defense for Acquisition

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Office of the Under Secretary of Defense for Acquisition Comments

OFFICE OF THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

ACQUISITION

30 NOV 1992

MEMORANDUM FOR DOD/IG (DEPUTY DIRECTOR, ACQUISITION MANAGEMENT DIVISION)

SUBJECT: Draft DoD/IG Audit Report on the EA-6B Program (Project No. 2AE-0026.01)

The subject audit report has been reviewed, and the following comments are provided for your consideration. Based on discussions with the DoD/IG audit team, the comments specifically address only the Recommendations for Corrective Action. The program has changed substantially since the draft report was published, and statements accurate at the time are no longer so. However, the recommendations remain pertinent.

a. Recommendation 1.a. Partially concur. The current program structure and documentation will be used as a basis for the Milestone IIA LRIP decision. The current operational assessment is based on the AN/ALQ-99 RPG and the AN/ALQ-149 exit criteria, and the data will be sufficient to allow the Service Acquisition Executive to make the Milestone IIA decision. Subsequent to Milestone IIA, the EA-6B remanufacture program, to include the advanced capability, vehicle enhancement program, and avionics improvement program, will be managed by the Navy as an ACAT IC program. The program structure and documentation will be revised accordingly for the remainder of the program milestones. Using the current program approach will reduce the risk of unnecessary delays to the Milestone IIA schedule due to documentation perturbations.

b. Recommendation 1.b. Partially Concur. We agree that specific exit criteria will reduce program risk in the transition from development to production. The current program was developed for an early operational assessment of the highest risk areas, the AN/ALQ-99 RPG and AN/ALQ-149. The aircraft level issues were the subject of a separate engineering change proposal, ECP 500. The results of the AN/ALQ-99 RPG and AN/ALQ-149 operational assessment and data from ECP 500 will provide the Service Acquisition Executive with sufficient data to make a Milestone IIA decision. After Milestone IIA, with the designation of the integrated EA-6B program as an ACAT IC program, the exit criteria for Milestone III will be established to reflect the entire EA-6B remanufacture program.

c. Recommendation 1.c. Concur. The exit criteria will be revised after Milestone IIA to reflect the entire remanufacture program which includes advanced capability, vehicle enhancement program, and avionics improvement program. The operational test will be conducted on a production representative aircraft. The results of the operational test will be presented at Milestone III.

d. Recommendation 1.d. We are unable to comment on this recommendation because it is currently being addressed in PBD 113, Navy and Marine Corps Aircraft, which has not been resolved. This recommendation is under consideration.

Frank Kendall
Director
Tactical Systems

AUDIT TEAM MEMBERS

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