

**GAO**

National Security and International  
Affairs

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**Systems Development  
and Production Issue  
Area**

**Active Assignments**

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# Foreword

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This report was prepared primarily to inform Congressional members and key staff of ongoing assignments in the General Accounting Office's Systems Development and Production issue area. This report contains assignments that were ongoing as of July 6, 1995, and presents a brief background statement and a list of key questions to be answered on each assignment. The report will be issued quarterly.

This report was compiled from information available in GAO's internal management information systems. Because the information was downloaded from computerized data bases intended for internal use, some information may appear in abbreviated form.

If you have questions or would like additional information about assignments listed, please contact Louis Rodrigues, Director; Brad Hathaway, Associate Director; or Thomas Schulz, Associate Director, on (202) 512-4841.

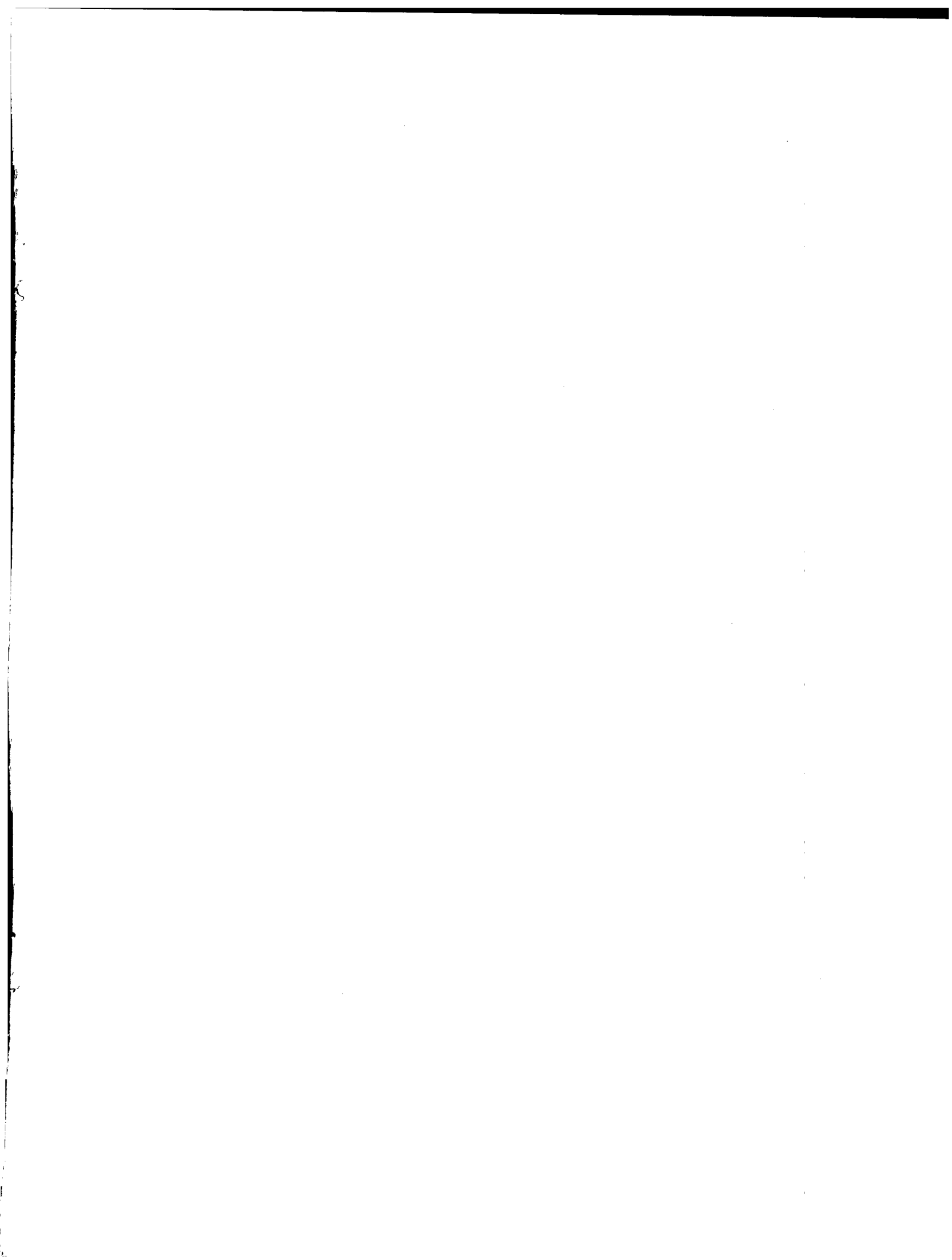
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## *Systems Development & Production*

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### **WEAPON SYSTEMS JUSTIFICATION**

**TITLE: MONITORING OPERATIONAL TEST OF B-1B BOMBER (707059)**

**BACKGROUND :** The FY 94 Defense Authorization Act requires the Air Force to conduct a test of the B-1B bomber to determine the future costs and capabilities of the bomber. We are required to evaluate and comment on the Air Force test.

**KEY QUESTIONS :** (1) Was the Air Force test conducted in a manner consistent with the test plan that was submitted to the congressional defense committees? (2) Were the results of the test completely and accurately reported to the committees?

**TITLE: STATUS OF NAVY TACTICAL AIRCRAFT MODERNIZATION EFFORTS (707072)**

**BACKGROUND :** The Navy plans to replace the F/A-18C/D fleet with an E/F version of the aircraft. The F/A-18E/F, currently under development, is projected to have a total program cost of \$89 billion. At the same time, the Joint Advanced Strike Technology (JAST) program is expected to develop an aircraft which is intended to cost less to produce and have more capability than the F/A-18E/F.

**KEY QUESTIONS :** (1) Does F/A-18E/F cost, schedule, and performance status warrant continuation of the program, and is the JAST program a viable alternative? (2) Is the JAST program properly structured, or should it be managed under normal DOD acquisition regulations and the DAB process?

**TITLE: EVALUATION OF THE INTEGRATION OF ATCCS INTO THE ARMY BATTLE COMMAND SYSTEM (707077)**

**BACKGROUND :** The Army has spent nearly \$3 billion over the last 10 years developing its tactical command and control system (ATCCS) and it has fielded only a limited capability. The Army is now trying to integrate the pieces of ATCCS into its larger battle command system (ABCS). This will take several years and will cost billions of dollars.

**KEY QUESTIONS :** (1) Will ABCS impact existing battlefield automation efforts and will this result in the elimination of existing capabilities (breakage)? (2) What actions has the Army taken and/or plans to take to ease transition to ABCS? (3) How will the Army integrate the various ABCS components? (4) What will ABCS cost and when will it be fielded?

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### WEAPON SYSTEMS JUSTIFICATION

**TITLE: SHALLOW WATER ANTISUBMARINE WARFARE LIGHTWEIGHT TORPEDO (707082)**

**BACKGROUND :** The Mk-46 torpedo, the oldest torpedo in the fleet, and the Mk-50 are experiencing performance deficiencies against a diesel submarine in shallow, littoral water. As a result, the Navy plans to expend over \$600 million upgrading these torpedoes and developing a new lightweight hybrid torpedo.

**KEY QUESTIONS :** (1) In times of budgetary constraints, should the Navy be conducting these three efforts and if not; which program will be of greater benefit to the fleet? (2) To what extent will the improvements increase torpedo performance (probability of kill), at what cost, and will performance be demonstrated prior to a commitment to production?

**TITLE: ACQUISITION OF THE ENHANCED FIBER OPTIC-GUIDED MISSILE (EFOG-M) SYSTEM (707090)**

**BACKGROUND :** The Enhanced Fiber Optic Guided Missile (EFOG-M) is being designed to engage armored vehicles, helicopters, and other high value targets beyond line of sight at ranges up to 15 kilometers. The Army is spending \$280 million for 300 missiles, 12 fire units, and associated equipment for use in assessing its military utility and may procure large quantities based on the evaluation results.

**KEY QUESTIONS :** 1. Have data collection methods and definitive measures of success been established to evaluate EFOG-M's performance during planned demonstrations and evaluations? 2. Has the developer reached agreements with independent testers and evaluators to minimize the need and costs to retest and reevaluate EFOG-M's performance in the event of a larger procurement?

**TITLE: REVIEW OF AV-8B REMANUFACTURE PROGRAM (707096)**

**BACKGROUND :** The Navy has initiated a modification program to remanufacture the Marine Corps AV-8B aircraft. The program converts 72 of its day attack models to night attack radar equipped aircraft. This requires disassembly; modification of some components; and reassembly of selected original, modified, and new component parts. The program is estimated to cost \$2.2 billion.

**KEY QUESTIONS :** (1) Is disassembling the day attack AV-8B and reusing its assemblies and parts to produce a night attack radar capable aircraft the most efficient and effective use of scarce resources?

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### **WEAPON SYSTEMS JUSTIFICATION**

**TITLE: COMBAT AIR POWER ASSESSMENT--SURVEILLANCE AND RECONNAISSANCE (707098)**

**BACKGROUND :** The services and other agencies collect, relay, process, and disseminate surveillance and reconnaissance data to support national intelligence requirements and the warfighter in the conduct of military operations. Due to threat changes, force reductions, and declining budgets, there may be a need to realign and consolidate intelligence gathering responsibilities.

**KEY QUESTIONS :** (1) What assets and capabilities are available to conduct surveillance and reconnaissance, and what are the plans for modernization? (2) To what extent do the services and agencies intelligence roles, assets, and capabilities overlap? (3) Are there opportunities to improve collection and timely dissemination of information to the warfighter?

**TITLE: THE NAVY'S EFFORTS TO DEVELOP A COMBAT SYSTEM FOR THE NSSN (707112)**

**BACKGROUND :** The Navy plans to develop a new combat system for its' new attack submarine (NSSN). The system is a major cost driver, therefore, affordability through use of commercial off the shelf (COTS) equipment is planned. We have previously reported that combat system design concurrent with sub construction has caused delays and raised costs (BSY1 and BSY2). To reduce combat system cost, schedule, and technical risks the Navy encountered in developing the BSY1 and BSY2 systems, the Navy emphasizes extensive use of COTS equi

**KEY QUESTIONS :** (1) What options were considered in choosing the planned acquisition strategy and do less costly alternatives exist? (2) What is the cost to design and build the system? (3) How will the combat system differ from the BSY1 and BSY2? (4) How will the Navy avoid repeating prior mistakes?

**TITLE: SURVEY OF B-1B CONVENTIONAL MISSION UPGRADE PROGRAM (707120)**

**BACKGROUND :** The Air Force plans to spend almost \$3 billion to upgrade the B-1B bomber's conventional capabilities, primarily by adding a new defensive avionics system and precision guided munitions to the aircraft. Staff on the authorization and appropriations committees have expressed interest in this work.

**KEY QUESTIONS :** (1) What is the status of the upgrade program? (2) Should the program proceed as planned or should it be modified to a less costly strategy for giving the B-1B the conventional capabilities that the aircraft will need in the future? (3) Is the upgrade program schedule in sync with the development programs for the precision guided munitions planned for the B-1B?

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### **WEAPON SYSTEMS ACQUISITION PROCESS**

**TITLE: EVALUATION OF THE SERVICES' EFFORTS TO DEVELOP COOPERATIVE IFF SYSTEMS (707055)**

**BACKGROUND :** Both the Army and Navy are developing cooperative Identification Friend or Foe (IFF) systems. The Navy is charged with coordinating the Army and Navy efforts. However, they seem to be developing two mutually exclusive systems, which may result in the need to field two IFF systems on some combat platforms. Both the HASC and HAC are interested in this issue.

**KEY QUESTIONS :** (1) Is there interservice duplication of IFF development? (2) Will these development efforts require some platforms to have multiple systems? (3) Are the services fully considering the platform types fielded? (4) How much will these systems cost? (5) Will they be fielded in effective quantities? (6) Is the implementation schedule appropriate?

**TITLE: EVALUATION OF ARMY EFFORTS TO DIGITIZE THE BATTLEFIELD (707078)**

**BACKGROUND :** The Army ATCCS has spent \$10 billion to digitize corps and divisions. \$2.1 billion more is needed to complete the digital battlefield by providing brigades and below with a separate system and tying the network together by enhancing existing communications systems. Both the HNSC and HAC require the Army to report to them on their plan of action and system architecture.

**KEY QUESTIONS :** (1) Does the Army have an effective plan to digitize the battlefield? (2) What is the cost? (3) Is the implementation schedule appropriate? (4) Are the Army's test plans adequate?

**TITLE: REVIEW OF THE DEVELOPMENT AND ACQUISITION OF THE LONGBOW APACHE HELICOPTER (707087)**

**BACKGROUND :** The Army plans to modify all of its AH-64A Apache attack helicopters into two improved versions known as the AH-64D Longbow Apache. One version, about 227 Apache helicopters, will have a Fire Control Radar and new engines. An improved Hellfire missile and other changes are being developed for both versions. DOD recently assessed the radar development as being high risk.

**KEY QUESTIONS :** (1) Is the Longbow Apache ready to proceed from developmental to operational testing? (2) Have technical difficulties with the Longbow Apache caused development and production costs to rise, requirements to be reduced or delays in the program? (3) Will previously identified Apache problems be resolved prior to production of the Longbow Apache?



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### **WEAPON SYSTEMS ACQUISITION PROCESS**

**TITLE: THE ARMY'S FAMILY OF MEDIUM TACTICAL VEHICLES TESTING (707089)**

**BACKGROUND :** Reliability problems with the Family of Medium Tactical Vehicles (FMTV) identified during production quality and operational testing resulted in the suspension of both tests. Rather than delay the full-scale production decision, the Army modified its testing procedures to allow the FMTV to demonstrate its reliability.

**KEY QUESTIONS :** (1) What is the current status of FMTV testing? (2) How were the problems that resulted in the test suspension corrected? (3) Has the FMTV demonstrated sufficient improvement for the FMTV program to enter full-scale production?

**TITLE: IS DOD OBTAINING COST-EFFECTIVE WARRANTIES ON MAJOR WEAPON SYSTEMS? (707099)**

**BACKGROUND :** Due to concerns about the reliability of U.S. weapon systems, Congress passed laws in 1984 and 1985 that require DOD to obtain warranties on major weapon systems. In 1989, GAO reported that DOD had little assurance that warranty benefits were being fully realized. We also found that the services had difficulty in obtaining accurate information concerning warranty claims.

**KEY QUESTIONS :** (1) Does DOD's warranty administration process have weaknesses that may lead program offices to procure non-cost-effective warranties? (2) Is DOD's warranty waiver process effective? (3) Are essential performance requirement warranties beneficial for all contracts?

**TITLE: REVIEW OF DOD'S ACQUISITION OF THE ALR-67(V)3 ADVANCED SPECIAL RECEIVER (707104)**

**BACKGROUND :** The ALR-67(V)3 ASR is to be the Navy's next generation radar warning device for the F/A-18 E/F fighter. It will be the most expensive radar warning receiver (RWR) ever built with a unit cost of about \$1m and a program cost of \$1b. Senator Roth's letter raises concerns about the Navy's acquisition strategy, particularly the absence of operational testing prior to LRIP.

**KEY QUESTIONS :** (1) Is the planned LRIP acquisition justified? (2) Is the LRIP consistent with operational test and evaluation statutes? (3) Is the acquisition strategy consistent with the recommendations made in our LRIP report, NSIAD-95-18?

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### **WEAPON SYSTEMS ACQUISITION PROCESS**

**TITLE: C-17 COST REDUCTION EFFORTS AND AFFORDABILITY (707109)**

**BACKGROUND :** In December 1993, the Secretary of Defense announced that the C-17 program would be stopped at 40 aircraft unless McDonnell Douglas could produce the aircraft at a reasonable cost. Although C-17 unit cost is decreasing, the rate of decrease has not been as rapid as planned by the Air Force. As a result, total program cost has increased \$4 billion.

**KEY QUESTIONS :** (1) Has the Air Force adequately budgeted for the C-17 in the outyears? (2) What criteria has the Air Force established to measure needed improvement in costs to justify continuation of the C-17 program. (3) How effective are initiatives to reduce program cost? (4) Does the Air Force have an acquisition strategy for acquiring non developmental wide-body aircraft?

**TITLE: C-17 RELIABILITY, MAINTAINABILITY AND AVAILABILITY EVALUATION (707111)**

**BACKGROUND :** The C-17 development contract requires the Air Force to conduct a 30-day reliability, maintainability and availability evaluation (RM&AE) of the C-17 to (1) assess RM&A compliance and (2) determine if the contractor qualifies to receive a \$12 million RM&A incentive fee. The RM&AE results will be used by the Defense Acquisition Board to support the upcoming C-17 milestone IIIB.

**KEY QUESTIONS :** (1) Does the RM&AE reflect how the C-17 will be used in war and peace? (2) Are controls adequate to assure the validity of evaluation data and collection procedures? (3) Is the C-17 utilization rate model based on reasonable assumptions? (4) How will RM&AE data be used in the C-17 utilization rate model to establish a utilization rate and how will this information be used?

### **BUDGET ANALYSIS**

**TITLE: ANALYSIS OF DOD'S FISCAL YEAR 1996 RDT&E AND PROCUREMENT SYSTEMS BUDGETS (707100)**

**BACKGROUND :** Prior budget work has resulted in substantial funding reductions. This assignment will address defense development and procurement funding requests for fiscal year 1996.

**KEY QUESTIONS :** (1) Should fiscal year 1996 budget requests be denied or reduced in view of changes in requirements, performance, cost options, forces structure and potentially more economical production and delivery schedules? (2) Does DOD have unused funds from prior years?

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### **BUDGET ANALYSIS**

**TITLE: TERMINATION OF AND ALTERNATIVES TO THE TRI-SERVICE STANDOFF ATTACK MISSILE (TSSAM) PROGRAM (707107)**

**BACKGROUND :** The \$13.7 billion stealth Tri-Service Standoff Attack Missile (TSSAM) program is being terminated because of significant development problems and unit cost growth. Congress has rescinded \$281.8 million in unobligated appropriations. Part of nearly \$280 million in unliquidated obligations may also be available for rescission after the program is terminated.

**KEY QUESTIONS :** (1) Are excess prior-year funds for TSSAM available for rescission? (2) Are the services plans for a follow-on program realistic in terms of cost, performance, and schedule? (3) Have the services fully considered using existing systems or modifications to existing systems to meet their stated requirements?

**TITLE: REVIEW OF DOD'S FISCAL YEAR 1996 CLASSIFIED INTELLIGENCE PROGRAMS (707108)**

**BACKGROUND :** Each year GAO provides assistance to congressional committees on the defense budget. Prior budget work has resulted in substantial funding reductions, rescissions, and restrictions. This assignment will address DOD fiscal year 1996 funding requests for selected classified intelligence programs. The exact budget for these programs is classified.

**KEY QUESTIONS :** (1) Do changes in the world situation and force reductions eliminate the need for some intelligence programs? (2) Do operational performance problems and testing delays for selected budget line items eliminate the need for fiscal year 1996 funding? (3) Are less costly classified intelligence programs viable alternatives?

### **OTHER ISSUE AREA WORK - SD&P**

**TITLE: REVIEW OF MISSILE APPROACH WARNING SYSTEMS (707004)**

**BACKGROUND :** The services are now trying to acquire Missile Approach Warning Systems (MAWS) for their tactical fighters. DOD designated the Navy to be lead agency for this common effort because it has contracted for more than 1800 AAR-47 MAWS for helicopter and transport aircraft. We have reported to the Congress in the past that AAR-47s experience false alarm problems.

**KEY QUESTIONS :** (1) Has the Navy resolved the AAR-47 false alarm problem? (2) Why doesn't the Navy own the data rights to the new software intended to solve the AAR-47 problems? (3) Does the new software work?

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### **OTHER ISSUE AREA WORK - SD&P**

**TITLE: B-2 COST, PERFORMANCE, AND PROCUREMENT ISSUES (707044)**

**BACKGROUND :** With the FY 95 Authorization Conference, the B-2 program was maintained at 20 aircraft. Program concerns center around the estimated cost to build 20 aircraft and the risks that remain in the development and flight test program. Technical performance, schedule, warranty, and cost concerns remain.

**KEY QUESTIONS :** (1) Will the test program show the B-2 can perform without significant retrofit efforts? (2) Can the B-2 be developed, tested, and produced within estimated costs? (3) Are appropriate costs to curtail the B-2 program included in the cost estimate?

**TITLE: NAVY'S DEPLOYMENT OF THE AIRBORNE SELF-PROTECTION JAMMER (ASPJ) ON F-14D AIRCRAFT (707048)**

**BACKGROUND :** The Navy terminated the F-14D program after 56 aircraft were produced and the Airborne Self-Protection Jammer (ASPJ) program after 95 units were produced. The ASPJ program was terminated because tests revealed that it could not meet its operational requirements. The Navy now plans to test and possibly deploy the ASPJ on the F-14D aircraft.

**KEY QUESTIONS :** How has DOD revised its F-14D Test and Evaluation Master Plan to: (1) account for testing of the Airborne Self-Protection Jammer (ASPJ), (2) demonstrate that the F-14D will operate more effectively with rather than without the ASPJ, and (3) reflect ASPJ reliability, supportability, and suitability relative to the F-14D?

**TITLE: FISCAL YEAR 1996 DOD SPACE PROGRAMS AND ACTIVITIES (707093)**

**BACKGROUND :** DOD plans to spend about \$70 billion on military and intelligence space programs and activities during the next 5 years. The House Appropriations National Security Subcommittee is concerned about DOD's management in this area and how best to organize space resources to efficiently and effectively support the warfighting forces.

**KEY QUESTIONS :** How can DOD (1) reduce costs and increase efficiencies in the acquisition and operations of space assets and (2) more effectively organize and manage space resources to support joint military operations?

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### **OTHER ISSUE AREA WORK - SD&P**

**TITLE: REVIEW OF THE JOINT-TACTICAL UNMANNED AERIAL VEHICLE (707097)**

**BACKGROUND :** In Spring 1994, DOD merged the Close-Range and Short-Range UAV programs into the Joint-Tactical UAV program. The Close-Range, called Maneuver, will use a down-sized joint tactical UAV ground station. However, neither the Maneuver air vehicle nor the ground station has been developed yet. The Short-Range, called Hunter, continues to have problems, as we reported in the past.

**KEY QUESTIONS :** 1. Does the Maneuver, formerly the Close-Range UAV, system acquisition plan ensure adequate testing prior to production?

**TITLE: SURVEY OF THE INTERCOOLED RECUPERATED ENGINE TESTING PROGRAM (707113)**

**BACKGROUND :** The Navy is having its Intercooled Recuperated (IRC) Engine tested by the manufacturer. The Navy originally planned to do concurrent developmental engine testing at its own facility, but cancelled that plan citing budget constraints. This engine is planned for the DDG-51 and other combatants.

**KEY QUESTIONS :** (1) Has any ship propulsion systems been only tested by the manufacturer (exclusive of ship integration testing)? (2) Has the manufacturer identified any technical problems and what are they? (3) What costs have been incurred for technical problem fixes? (4) What actions would be relevant to this program?

**TITLE: REVIEW OF DOD'S ACQUISITION OF THE JOINT-TACTICAL UAV (707117)**

**BACKGROUND :** In Spring 1994, DOD merged the Close-Range (Maneuver) and Short-Range (Hunter) UAV programs into the Joint-Tactical UAV (JTUAV) program. DOD completed an independent review of the JTUAV program in April 1995 that will result in a complete restructuring of the program schedule. DOD plans a user demonstration for fall of 1996 which could result in DOD replacing Hunter.

**KEY QUESTIONS :** (1) Has the Hunter system demonstrated that it is ready for full-rate production? (2) Does the Maneuver system acquisition plan ensure adequate testing prior to production?

