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National Security and
International Affairs Division

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The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

Subject: Defense Programs: Opportunities to Reform Key Business Practices

Dear Mr. Chairman:

At your request, we summarized information on the defense budget and Department of Defense (DOD) infrastructure, inventory management, financial management, and acquisition programs. Since these programs are among the areas we have designated as high risk, that is vulnerable to waste and mismanagement, and in need of major reforms, we relied heavily on our recently issued series of reports on high-risk areas[1] in preparing this letter for you.

We have reported on problems and made numerous suggestions for improvements and efficiencies in DOD's infrastructure, inventory management, financial management, and acquisition programs for many years. While DOD has made progress in improving these programs, much remains to be done to fully implement the corrective actions needed to remove the high-risk designation. At the core of the high-risk problem areas is a lack of fundamental accountability. Until DOD incorporates accountability across its organization and programs and takes action to improve basic management practices and processes, it will continue to run inefficient operations that ultimately divert funds from more pressing needs. Furthermore, it will continue to lack the

[1]High Risk Series: Defense Infrastructure (GAO/HR-97-7, Feb. 1997); High Risk Series: Defense Inventory Management (GAO/HR-97-5, Feb. 1997); High Risk Series: Defense Financial Management (GAO/HR-97-3, Feb. 1997); and High Risk Series: Defense Weapon Systems Acquisition (GAO/HR-97-6, Feb. 1997).

information needed to manage its vast resources of over $1 trillion in assets, 3 million military and civilian personnel, and a budget of over $250 billion.

As you know, landmark legislation in the 1990s, including the expanded Chief Financial Officers Act of 1990 and the 1993 Government Performance and Results Act, established broad management reforms that, if implemented successfully, will help resolve high-risk problems and provide greater accountability in many government programs and operations. High-risk areas generally involve long-standing problems that are difficult to correct. Sustained management attention and congressional oversight are necessary to achieve full and effective implementation of legislative mandates, our suggestions, and corrective measures by agencies.

BACKGROUND

The changing international security environment has prompted significant changes in the defense program and budget. Since the fall of the Berlin Wall and dissolution of the Soviet Union, DOD has shifted its focus away from a strategy designed to meet the threat of global war to one oriented toward more diverse dangers that DOD considers to be characteristic of the post-Cold War security environment. These dangers include regional instability; the proliferation of nuclear, biological, and chemical weapons; terrorism; and dangers to democracy and reform in the former Soviet Union and elsewhere. To counter large-scale regional aggression, the current U.S. strategy requires military forces that are capable, in concert with regional allies, to fight and win two major regional conflicts that occur nearly simultaneously.

DOD has taken steps to adjust its program and budget to reflect the realities of the post- Cold War period. For example, it initiated a major downsizing program to reduce the size of the military--active duty and reserve personnel--and civilian force from a total of 4.4 million in fiscal year 1987 to 3.2 million personnel in fiscal year 1996. By fiscal year 2001, this number is projected to decrease to about 3 million. Of the active force, the enlisted ranks will be reduced by the largest percentage--from about 1.9 million in fiscal year 1987 to 1.2 million in fiscal year 2001, or 35 percent, compared to the officer corps for this same time period--from about 307,000 to 222,000, or 28 percent. Table 1 provides a detailed breakdown of changes in active military (officer and enlisted), reserve, and civilian personnel in fiscal years 1987, 1996, and 2001.

Table 1: Changes in the Numbers of Military and Civilian Personnel

Numbers in thousands

Category of Personnel	Fiscal year 1987	Fiscal year 1996	Fiscal year 2001	Change from fiscal year 1987-2001
Active military[a]	2,174	1,482	1,418	-756
Officer	307	234	222	-85
Enlisted	1,853	1,236	1,184	-669
Selected reserve[b]	1,151	931	892	-259
Civilians	1,133	830	729	-404
Total	4,458	3,243	3,039	-1,419

[a]Number includes military cadets.
[b]Number includes service reserve components and National Guard.

DOD has also reduced its structure–numbers of aircraft wings, divisions, and aircraft carriers. Table 2 shows the reduced force structure for selected elements between fiscal year 1990 and 1996 and the projected structure for fiscal year 1999 based on DOD's bottom-up review. As required by the fiscal year 1997 defense authorization act, DOD is reassessing the defense program, including the structure of the force, as part of a quadrennial defense review expected to be completed in May 1997. Therefore, changes to the bottom-up review plan for the projected force structure may occur, depending on the outcome of the review.

Table 2: Changes in Selected Force Structure Since the End of the Cold War

Service	Fiscal year 1990	Fiscal year 1996	Fiscal year 1999 plan based on bottom-up review
Army	18 active divisions 57 reserve brigades	10 active divisions 47 reserve brigades	10 active divisions 42 reserve brigades
Marine Corps	3 active divisions 1 reserve division	3 active divisions 1 reserve division	3 active divisions 1 reserve division
Navy	16 aircraft carriers 546 battle force ships	12 aircraft carriers 359 battle force ships	12 aircraft carriers 346 battle force ships
Air Force	24 active wings 12 reserve wings	13 active wings 8 reserve wings	13 active wings 7 reserve wings

Defense funding has also declined--by about $50 billion, or 17 percent, from about $293 billion in fiscal year 1990 to $250 billion in fiscal year 1997. Of DOD's individual appropriation accounts, procurement has been reduced to the greatest extent from about $95 billion in fiscal year 1990 to $39 billion in fiscal year 1997, or 59 percent. DOD said it took advantage of the force drawdown and slowed modernization to fully fund expenditures that guarantee near-term readiness--spare parts, training, and maintenance. Readiness continues to be a high priority for DOD.

Now that the drawdown in forces is nearly over, DOD wants to reverse the trend in procurement spending and fund the modernization it believes is needed to preserve the long-term readiness of the force against aging equipment. In its fiscal year 1997 Future Years Defense Program (FYDP), DOD projected an increase of about 54 percent in procurement spending, beginning in fiscal year 1997, to achieve a level of about $60 billion by fiscal year 2001, compared to $39 billion in fiscal year 1997. DOD's strategy for achieving its modernization plans is based on the assumptions that (1) the defense budget will modestly increase from fiscal year 1998 through 2001 and (2) savings will be realized from acquisition reform and by reducing infrastructure. The Secretary of Defense has suggested that if savings do not materialize as expected, it may be necessary to reduce the force structure and adjust DOD's strategy.

The following sections discuss DOD's infrastructure, inventory management, financial management, and acquisition programs. For each area, we identify key issues and related examples to highlight specific problems; the status of DOD's initiatives to make program improvements; and opportunities for additional reforms. Enclosures I, II, and III provide additional information on infrastructure, inventory management and financial management reforms.

INFRASTRUCTURE

DOD defines infrastructure as those activities that provide support services to mission programs, such as combat forces, and primarily operate from fixed locations. In the past several years, DOD has taken steps to reduce its infrastructure. However, it continues to keep unneeded facilities, operate many activities inefficiently, and construct or upgrade unneeded facilities. As a result, infrastructure remains a costly budget item. From 1997 to 2001, DOD plans to spend $744 billion, or about 60 percent of its total obligation authority, for infrastructure activities. Although DOD wants to reduce spending for infrastructure activities, its budgets actually show an increase of $9 billion over the next 5 years–from $146 billion in fiscal year 1997 to $155 billion in fiscal year 2001. Most infrastructure activities are funded through DOD's operation and maintenance and military personnel appropriations. Therefore, if DOD is to achieve significant infrastructure savings for force modernization, the savings must come from these accounts.

Key Issue: Many unneeded DOD facilities exist.

- At the time of the 1995 Base Realignment and Closure (BRAC) process, DOD's overall depot system had 40 percent excess capacity. This figure was derived by comparing fiscal year 1996 program workload with maximum potential capacity. DOD currently has 21 major depots–7 depots have 50 percent or more excess capacity, and 3 others have between 40 and 50 percent excess capacity.

- The executive branch intends to privatize the workload at two Air Force logistics centers. However, closing the centers and transferring the

workload to other centers would have enabled DOD to reduce total excess capacity within Air Force logistics centers from 45 to 8 percent.

- After all current base closure actions are completed, DOD's research and development laboratory infrastructure still will have about 35 percent excess capacity, according to DOD officials.

Key Issue: DOD operates some activities inefficiently.

- Duplicate support services continue to operate where military bases are located close to one another or where similar functions are performed at multiple locations. For example, Fort Lewis and McChord Air Force Base in Washington maintain separate airfield operations facilities. Fort Lewis personnel believe that both bases' airfield operations can be served by one facility. Fort Bragg and Pope Air Force Base in North Carolina have separate contract administration, supply and engineering, and other support services that potentially could be consolidated.

- To cover excessively high overhead costs, DOD frequently charges customers double or triple the cost of the basic transportation. The high overhead costs stem in part from an outdated and inefficient organizational structure and separate billing systems that could be streamlined.

- DOD estimates its processing costs for temporary duty travel–about $3.5 billion in fiscal year 1993–are as much as 30 percent of the direct travel cost. This percentage is well above the 10-percent average reported for private companies and the 6-percent rate that industry considers an efficient operation.

Key Issue: DOD continues to construct or upgrade unneeded facilities.

- The services are trying to add to their testing capability to protect their infrastructure rather than consolidate. For example, the Navy intends to construct a large anechoic chamber--a test room lined with sound-absorbing material--at Patuxent River, Maryland, and the Air Force plans to add to its anechoic capacity at Edwards Air Force, California, even though the existing chamber at Edwards is underused.

- DOD is spending $51 million in military construction funds on accounting facilities that are unneeded.

DOD's Initiatives

DOD has taken some steps to reduce infrastructure. With the help of the BRAC process, DOD has closed bases and reduced related personnel and other base support costs. By DOD's count, BRAC rounds in 1988, 1991, and 1993 produced decisions to fully or partially close 70 major domestic bases and reduce plant replacement value by 15 percent. DOD's goal during the 1995 BRAC round was to reduce the domestic base structure by a minimum of another 15 percent--achieving a total reduction of 30 percent. However, decisions resulting from this round will reduce the base structure by a total of 21 percent, or 9 percent short of DOD's goal. To its credit, DOD has programs to identify potential infrastructure reductions in many areas, however it lacks an overall strategic plan.

Opportunities for Reform

DOD has opportunities to reduce infrastructure costs and realize significant savings. As a first step, DOD needs to develop an overall strategic plan to guide efforts to reduce infrastructure activities. This plan should establish time frames and identify organizations and

Key Actions Needed:

- **Develop a strategic plan.**
- **Eliminate excess capacity.**
- **Reengineer inefficient operations.**

personnel responsible for accomplishing fiscal and operational goals. In developing the plan, DOD should consider using a variety of means to achieve reductions, including consolidations, closings, reengineering, and privatizing facilities and operations. It should also consider the need and timing for future BRAC rounds, as suggested by the 1995 BRAC Commission and others.

DOD also needs to take specific actions to eliminate unneeded and inefficient property, facilities, and overhead. DOD has numerous opportunities to eliminate excess capacity by consolidating workloads and closing facilities, especially in the areas of depot maintenance, training, research, and financial accounting. Greater efficiency could also be achieved if DOD consolidated and eliminated duplicate support services where military bases are located close to one another or where similar functions are performed at multiple locations. DOD also needs to apply private industry's best practices to reengineer key processes such as transportation, travel, and pay. Enclosure I further discusses reform opportunities.

INVENTORY MANAGEMENT

In 1992, we reported that DOD had wasted billions of dollars on excess supplies. This problem resulted because DOD believed that it was better to overbuy items than to manage with just the amount of stock needed. Had DOD used effective inventory management and control techniques and modern commercial inventory management practices, it would have had lower inventory levels and would have avoided the burden and expense of storing excess inventory. While some reform initiatives are underway, they are limited in scope and being implemented very slowly, and in some cases, benefits may not materialize for years, if at all. DOD needs to more aggressively pursue some reform initiatives that apply best commercial practices and take steps to reform the military services' policies and practices that result in overstated supply requirements.

Key Issue: DOD's inventory system is outdated, inefficient, and costly.

- DOD's inventory management system is multilayered and based on a belief that it is better to overbuy items, whereas private sector companies use streamlined systems.

- Inventories are often stored in as many as four different layers--depots, warehouses, and central and service end-user storage locations-- between suppliers and end users.

- Inventory turns over slowly--about once every 4 years for electronics supplies compared to 4 times per year in the private sector.

- Private sector practices include employing "just-in-time" practices that shift responsibility for storage and management to suppliers; using a few key suppliers to deliver items only when needed; and using direct delivery practices, electronic ordering systems, and barcoding.

- DOD commonly overstates requirements and understates the amount of inventory on hand when budgeting for and buying spare parts and supplies as a result of questionable policies for determining needs and poor accountability.

  - The Army identified a deficit inventory valued at $211 million that was actually a $23 million deficit and, as a result, budgeted for unneeded parts and supplies.

  - The Navy, in one year alone, overbudgeted by at least $60 million for 12 F-404 engine parts and will incur unnecessary costs of about $27 million because it did not have adequate visibility over $5.7 billion in operating materials and supplies on board ships and at 17 redistribution sites.

  - The Air Force excludes many of the assets it has on hand when it calculates the amounts of aviation spare parts it needs to buy.

Key Issue: DOD maintains excess inventories.

- About half of DOD's inventory of spare parts, clothing, medical supplies, and other items, valued at $69.6 billion, includes items that are not needed to support war reserve or current operating requirements.

  - In September 1994, the Air Force had $16 billion in aircraft parts that exceed its needs for daily operations and war reserves.

- The services have stored at nonmajor locations $2.7 billion in inventory that is not needed to meet current operating and war reserve requirements.

- DOD spends millions of dollars to manage and store excess items.

  - The Army has a 159-year supply of camouflage netting that exceeds war reserve and current operating requirements and will be replaced by a different item in 2003.

  - The Army pays $9.42 per year to store a single item valued at $2.96 in a storage bin that could hold 259 of these items. The Army had 404 more of this item than it needed overall, and only 3 requests for the item had been processed in the last 2 years–none of those orders were filled from the storage site that contained the single item.

  - The Navy and Defense Logistics Agency stock millions of dollars of unnecessary insurance items–parts that are not expected to fail through normal usage.

DOD's Initiatives

In the past several years, DOD has reduced inventories and has implemented some initiatives to improve its current management system and practices. Between 1989 and 1995, as U.S. forces were downsized and budgets were reduced, DOD reduced its inventories from $92.5 billion to $69.6 billion.[2] DOD is trying to develop a standard system for determining requirements but is encountering implementation problems and delays. DOD also planned to improve oversight of its inventory by acquiring total asset visibility by 1996. However, according to its current plan, this initiative will not be completely implemented until 2001. DOD has taken steps to identify ways to free up storage space and reduce storage costs by disposing of items that are not needed or are used infrequently. However, it has not taken steps to consolidate small inventory quantities at nonmajor locations into fewer storage locations.

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[2]Much of this reduction resulted from revaluing excess inventory and unserviceable items.

DOD has also adopted commercial practices to begin reengineering the existing system, but its initiatives have generally been limited and represent only a small portion of DOD's operations. For example, the Defense Logistics Agency has successfully used best inventory practices on personnel items (medicines, food, and clothing), using direct vendor delivery for these items. However, these initiatives deal with only about 3 percent of the items for which this concept could be used, and DOD has not aggressively pursued additional opportunities to apply these practices. Also, the Air Force is redesigning its logistics operations, including testing leading-edge business practices that remove unnecessary inventory layers, repair parts as they break, and rapidly transport parts between end users and the repair facilities. However, at the time of our review, this testing was being applied to less than 1 percent of the Air Force's inventory items.

Opportunities for Reform

DOD needs to significantly reform its inventory management system. DOD can further reduce excess inventories and operate the current system more efficiently and effectively. In the long term, DOD should be more aggressive in identifying and adopting best business practices from the private sector to reengineer its inventory system.

Key Actions Needed:

- **Further reduce inventory.**
- **Improve efficiency of current system.**
- **Apply best commercial practices to reengineer current system.**

DOD has numerous opportunities to make reforms and achieve savings. For example, eliminating unneeded inventory that is often stored in small quantities at nonmajor locations and infrequently requested could result in reduced inventory holding costs of about $382 million a year. DOD could save $723 million by (1) reclaiming spare parts from excess aircraft, (2) considering parts on hand at depot maintenance as an offset to spare and repair parts requirements, (3) eliminating duplicate depot maintenance requirements, (4) reducing overstated requirements, and (5) correcting inaccurate budget data. DOD also needs to provide managers with modern, automated accounting and management systems to better control and monitor its inventory.

Also, DOD should expand its reengineering efforts to other areas. For example, the Defense Logistic Agency could significantly reduce hardware inventories and related management costs if it adopted innovative commercial practices such as using supplier parks and other techniques that give established commercial distribution networks the responsibility to manage and store inventories and distribute inventory items directly to end users on a frequent and regular basis. The Air Force could expand efforts to redesign its logistics operations by making greater use of third-party logistics services, establishing closer partnerships with suppliers, using local distribution centers, using centralized repair facilities, and modifying repair facilities to accommodate these practices. Enclosure II further discusses reform opportunities.

FINANCIAL MANAGEMENT

DOD needs accurate financial information and effective processes to safeguard and manage its vast resources--over $1 trillion in assets, 3 million military and civilian personnel, and a budget of about $250 billion for fiscal year 1997. However, defense financial management systems are substandard, and its outmoded processes are plagued by serious weaknesses and inefficiencies. For example, it has been unable to match billions of dollars in disbursements to the specific goods or services it is paying for. DOD has taken some important first steps to resolve these problems, which are the result of decades of neglect, but still has a long way to go to achieve meaningful and sustained financial management. Addressing these problems is also critical to solving DOD's other high-risk areas.

In the past several years, Congress has passed important legislation to provide a framework for DOD and other agencies to reform their financial management.[3] Among other things, this legislation requires an organizational structure coupled with specific responsibilities that provide direct accountability for financial management improvements and annual measurements of achievements through financial statement preparation and audits. To further help, the Federal Accounting Standards Advisory Board has made substantial progress in developing and recommending a comprehensive set of accounting concepts and standards for the federal government. Properly implemented, these

[3]This legislation includes the Chief Financial Officers Act of 1990, the Government Management Reform Act of 1994, and the recently enacted Federal Financial Management Improvement Act of 1996.

requirements will provide a framework for DOD to strengthen not only its financial management operations and reporting but also its ability to meet critical mission objectives.

Key Issue: Financial weaknesses undermine decision-making and accountability.

- Because of weaknesses in financial management systems, practices, and procedures, federal auditors have concluded that DOD will not likely be able to pass the test of an independent financial statement audit, a long-standing and fundamental prerequisite in state and local governments, until the next century.

- DOD's existing accounting and financial management practices are disparate, nonstandard, and piecemeal and cannot be used to assemble a complete accounting for Department operations. Only 5 of DOD's 249 reported primary financial systems conform to federal standards. This is a major reason why DOD lacks complete information on the costs to buy and operate weapon systems and contributes to DOD's continuing purchases of unneeded materials.

- DOD has had a continuing problem in promptly or accurately matching billions of dollars in cash disbursements with the related obligations, or accounts payable, those payments are intended to cover. We recently estimated that DOD's problem disbursements totaled at least $43 billion--$25 billion more than reported by DOD.

- Individuals responsible for carrying out DOD's financial operations frequently lack the necessary experience, technical competencies, and training. For example, only about 58 percent of the key managers at central accounting locations, which are responsible for accounting for DOD's $250 billion annual budget, had more than the minimum amount of accounting training necessary to qualify as an accountant in the federal government, and only 6 of 107 key managers were certified public accountants. DOD has not yet defined minimum continuing professional education requirements for its financial workforce.

- DOD has not adhered to fundamental internal controls, which should be an inherent and routine aspect of a department's operations. For example, DOD did not effectively reconcile its cash balances--comparable to balancing your checkbook; conduct physical counts of inventories--critical for detecting fraud and theft; reconcile payroll and personnel records--critical to ensuring that only valid personnel are paid when separate payroll and personnel systems are maintained; and detect and follow up on abnormal balances--essential for ensuring the accuracy of reports and identifying potential waste, fraud, or theft. One result of these problems is that DOD has paid millions of dollars in unauthorized military payroll payments.

- Pervasive weaknesses in controls over access to sensitive computer information place this data at risk of improper modification, theft, inappropriate disclosure, or destruction. As a result, computer hackers, or ill-intentioned authorized users, could make unauthorized payments to themselves or divert materials without detection.

- DOD has been plagued with duplicative and outmoded business practices that are complex, slow, and error-prone. For example, until recently a traveler was required to go through about 40 steps to gain approval and reimbursement for expenses. Such processes also contribute to contractor overpayments and DOD's inability to account for billions of dollars. Antiquated and deficient business practices--unless substantially reengineered--severely limit DOD's ability to overcome its deficiencies in financial management systems and operations.

DOD Initiatives

To DOD's credit, its leadership has recognized the importance of tackling the broad range of financial management problems and has many reform initiatives underway. In laying out his blueprint for reform in February 1995, the Secretary of Defense called for a number of long-needed steps such as consolidating finance and accounting systems, validating disbursements before they are made, strengthening overall control mechanisms, and modernizing its business practices. The Department has taken the following specific actions in each of these areas.

- Attempted to identify all its financial management systems and modifying those systems to meet DOD-wide and federal requirements. We recently reported that DOD's latest report on its inventory of financial systems,

however, still excludes hundreds of systems it uses to carry out financial operations; without such a comprehensive inventory of its financial systems, DOD's ability to carry out its basic stewardship responsibilities will continue to be impaired.

- Established a defense accounting system program management office dedicated to providing centralized management control and oversight for Defense Finance and Accounting Service (DFAS) accounting systems.

- Begun a number of short and long-term initiatives to reduce its problem disbursements, such as implementing a policy to match disbursements to obligations, prior to payment, for payments.

- Upgraded skills and professionalism of its financial management workforce, by (1) improving the technical and managerial competencies for accounting managers and staff; (2) provided more on-the-job training to interns; and (3) developed a DFAS Career Development System which will identify competencies obtained through training, education, organizational assignments, and self-development initiatives.

- Reduced and clarified key internal control requirements and increased accountability on managers for ensuring these requirements are followed.

- Initiated efforts to reengineer business practices, including travel practices.

Opportunities for Reform

While DOD's actions, planned and underway, offer the potential for significant progress, we believe that many additional actions are necessary. Since 1990, we and DOD auditors have made over 400 recommendations to improve DOD's financial management weaknesses. For example, DOD needs to continue efforts to improve its finance and accounting systems. Before it can do so effectively, however, DOD must first have a complete picture of what those systems are, what information they process, and how those systems relate to each other. Also, DOD needs to supplement its current efforts to reduce problem disbursements by determining the extent to which ongoing initiatives will result in improvements in areas that are the most significant contributors to disbursement problems.

Key Actions Needed:

- **Strengthen finance and accounting systems.**
- **Accumulate accurate cost information.**
- **Reduce problem disbursements.**
- **Improve workforce quality.**
- **Strengthen management controls.**
- **Reengineer business practices.**

To further improve the quality of its financial workforce, DOD needs to identify the skills, experience, and number of personnel needed for its financial operations; change its hiring criteria; and upgrade the job experience and training of its financial managers. To strengthen internal controls, DOD needs to take actions such as improving the quality of data in current financial systems, implementing basic financial controls, and implementing a comprehensive computer security management program. Further, rather than focusing on information technology improvements within existing processes and organization, DOD needs to adopt a more aggressive approach to reengineering not bounded by existing processes and organization. Enclosure III further discusses reform opportunities.

DEFENSE ACQUISITION

DOD spends over $75 billion annually to research, develop, and procure aircraft, ships, ground vehicles, missiles, and other weapon systems. Despite DOD's past and current efforts to reform the acquisition system, wasteful practices still add billions of dollars to defense acquisition costs. While DOD expenditures have produced many of the most capable weapons in the world, many new weapon systems cost more and do less than anticipated, and schedules are often delayed. Moreover, the need for some of these costly weapons, particularly since the end of the Cold War, is questionable. DOD is pursuing a number of positive initiatives that should, over time, improve the cost-effectiveness of its acquisition processes. Our work, however, suggests that not all of these specific reforms are sufficient and that stronger actions are needed.

Key Issue: DOD's requirements process results in questionable programs.

- DOD's process for determining weapon system needs and identifying solutions offers little assurance that its investments provide the greatest payoff in added capability and the most cost-effective alternatives.
  - DOD does not routinely assess joint mission needs and the aggregate capabilities of the services to meet requirements. Instead, DOD relies heavily on each military service to identify its requirements and propose solutions.
  - For example, the operational deficiencies in the F/A-18C/D aircraft cited by DOD to justify buying the F/A-18E/F either have not materialized as projected or can be corrected with nonstructural changes to the C/D. Furthermore, the E/F's operational capabilities will be only marginally improved over the C/D model but will cost an additional $17 billion. Continuing to procure and upgrade the F/A-18C/D until the next generation strike fighter achieves operational capability could provide DOD greater capability at significantly lower cost.

- DOD makes major force structure and planning decisions without having completed analyses of the services' combat air power requirements and capabilities.

  - DOD is proceeding with some major air power modernization programs without clear evidence that they are justified. Despite numerous overlapping, often redundant interdiction capabilities, the services plan to spend over $200 billion over the next 15 to 20 years to buy aircraft and other weapons that will further enhance their interdiction capabilities.

Key Issue: DOD sets unrealistic cost, schedule, and performance estimates.

- DOD has historically experienced cost overruns, schedule delays, and performance shortfalls in its weapons acquisition programs.

  - The desire of program sponsors to keep program cost estimates as low as possible and to present attractive milestone schedules encourages the use of unreasonable assumptions about the pace and magnitude of the technical effort, material costs, production rates, savings from competition, and other factors.

- We continue to find examples of programs with overly optimistic projections and excessive risks.

  - Air Force plans call for the Joint Air-to-Surface Standoff Missile to be developed and initially deployed in 5 years for no more than $700,000 per missile. However, the plan does not appear to allow enough time to develop and test the complex technology needed and to integrate the missile into the appropriate aircraft.

  - DOD's estimated unit cost of $44 million (in fiscal year 1996 dollars) for its F/A-18E/F is understated. The estimate is based on buying 1,000 aircraft for the Navy and Marine Corps, producing 72 per year. The Marines no longer plan to buy the aircraft, and Congress has questioned the affordability of producing 72 aircraft per year under likely budgets. By reducing the number of aircraft to be procured and the annual

production rate to more realistic goals, we calculate the unit cost at about $53 million (in fiscal year 1996 dollars).

- The quality and credibility of DOD's cost information remain a problem.
  - As we reported in March 1996, the Navy's financial reports excluded billions of dollars invested in building aircraft and missiles and modernizing weapons systems. Also, the Navy's reported costs for ships under construction did not include all relevant costs.

Key Issue: DOD uses high-risk acquisition strategies.

- DOD acquires weapons based on optimistic assumptions about the maturity and availability of enabling technologies.
- DOD often buys large numbers of untested weapons during low-rate initial production to gain early commitment to and support for the programs. To help pay for these purchases, DOD has had to cut back by more than half its planned production rates for many weapons that have already been successfully tested. This practice is wasteful because DOD must often make costly modifications to these untested weapons to make them usable and must lower annual buys of tested, proven weapons, stretching out full-rate production for years due to a lack of funds.
  - The Air Force's C-17 airlift aircraft, the Navy's T45A trainer aircraft, and the Army's family of medium tactical vehicles encountered problems during test and evaluation that required major changes after significant quantities were bought during low-rate production.
  - DOD, primarily because of funding limitations, has reduced the annual full-rate production for 17 of the 22 proven weapons we reviewed, extending the completion of weapons production an average of 8 years longer than planned. According to DOD records, if these weapons were produced at the originally planned rates and respective cost estimates, the quantities produced as of the end of fiscal year 1996 would have cost nearly $10 billion less.

- The F-22 program involves considerable risk because it embodies important technological advances that are critical to its operational success. DOD's plans, however, call for the program to enter production well before initial operational testing and evaluation begins. In December 1996, the Air Force announced that (1) the development program would cost about $2.2 billion more than expected and (2) the program would be restructured and changes would be incorporated that make systems easier to produce in order to reduce risk before entering the production phase. The program changes would avoid about $13.1 billion of potential cost growth in the production program.

DOD's Initiatives

DOD is implementing a variety of acquisition reforms and is reporting some success in terms of cost savings or avoidance and other benefits. We are now evaluating several of these initiatives. Two of the areas that DOD is emphasizing are the processes by which it determines what to buy and how to buy. In terms of what to buy, DOD is focusing on achieving (1) greater reliance on commercial products and processes, (2) more timely infusion of new technology into new or existing systems, and (3) an expanded role for the Joint Requirements Oversight Council. For example:

- Solicitations for military products now state requirements in performance terms. If military or federal specifications or standards are necessary, a waiver to use them must be obtained.

- DOD has an Advanced Concept Technology Demonstration Program that emphasizes reduction of risk early in the acquisition process, compression of cycle time, and innovation. Technologists and operational users may work together to assess the usefulness of mature technologies. Military commanders can develop operational concepts prior to major acquisition decisions and dollar commitments.

- The Joint Requirements Oversight Council's review of service programs and budgets has been expanded, and a warfighting capabilities assessment process was established to support the Council. To be most helpful, these changes need to lead to comprehensive analyses that will assess needs for new acquisitions from a joint requirements perspective and identify opportunities to reduce some of the extensive overlaps in warfighting capabilities among the services.

In considering how to buy, DOD has focused on teamwork, encouraging risk management rather than risk avoidance, reducing reporting requirements, and reducing layers of review and oversight that add no value. For example:

- DOD has a pilot program in which participants are given relief from certain statutes, regulations, and internal DOD acquisition directives. Savings are expected from, among other things, less government oversight in contractors' plants and reduced documentation requirements.

- The Secretary of Defense has directed the use of integrated product teams (1) to build more successful acquisition programs by developing executable and affordable program strategies and plans and (2) to identify and resolve problems early. This concept is a fundamental shift from conducting after-the-fact oversight.

- DOD has updated its regulations governing the acquisition of major weapon systems to, among other things, incorporate new laws and policies, separate mandatory policies and procedures from discretionary practices, and reduce the sheer volume and complexity of the regulations.

- DOD established a working group to track reforms to reduce the cost of managing and overseeing DOD's contracts. Although DOD expects substantial savings from reforming DOD's management and oversight requirements, the savings are likely to be significantly less than expected.

- In the past 2 years, DOD has adopted a broader approach for ensuring that products perform the way they are supposed to, based on teaming with the contractor to control processes while reducing reliance on inspection. We believe the results of this approach could be enhanced if DOD implemented some of the advanced quality concepts found in the commercial world.

- DOD is implementing an initiative to reduce costs under which the system performance and target costs are decided on the basis of cost-performance tradeoffs. The assumption is that the acquisition process will make cost more a constraint, and less a variable, while obtaining the needed effectiveness and suitability of the system.

Opportunities for Reform

DOD and Congress also need to take much stronger actions to effectively control the influence of the acquisition culture. DOD needs to develop a requirements assessment process that (1) yields more comprehensive information on joint mission needs; (2) compares these needs to aggregate service capabilities; (3) determines the most cost-effective means to satisfy shortages; and (4) assesses the relative merits of retiring alternative assets, reducing procurement quantities, or canceling acquisition programs, where excesses exist.

Key Actions Needed:

- **Conduct joint mission assessments.**
- **Test sufficiently before production.**

While we support DOD's reengineering of its weapon systems acquisition process, not all of the specific reforms are sufficient. For example, in 1994, we recommended that DOD establish better controls over the start and continuation of low-rate initial production. DOD agreed to consider our specific suggestions when it updated its acquisition regulations. However, in the 1996 update of those regulations, DOD included no controls over low-rate initial production. We believe DOD missed an opportunity to reduce the risk of prematurely starting production without doing any operational testing and evaluation. Also, DOD needs to be careful in its zeal to reduce unnecessary documentation and oversight requirements so that it does not, in effect, eliminate those functions necessary to ensure that the acquisition programs are meeting their objectives in a cost-effective manner.

We conducted our work between November 1996 and February 1997 in accordance with generally accepted government auditing standards. We did not obtain agency comments on a draft of this report because it was based on our prior work.

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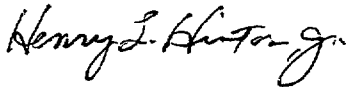
of the House Budget Committee, the Secretary of Defense, and the Director, Office of Management and Budget. We will also provide copies to other interested parties upon request.

Please contact me at (202) 512-6599 if you or your staff have any questions concerning this report.

Sincerely yours,



Henry L. Hinton, Jr.
Assistant Comptroller General

Enclosures

OPPORTUNITIES TO REDUCE DOD'S INFRASTRUCTURE ACTIVITIES

As a result of recent base realignment and closure rounds, DOD has closed some unneeded facilities and realigned others. At the same time, DOD continues to keep more facilities than it needs, operate many activities inefficiently, and construct or upgrade unneeded facilities. Our work to date has identified numerous areas where DOD's infrastructure activities can be eliminated, streamlined, or reengineered to be made more efficient. While DOD has made some progress in this area, we believe that additional actions could further reduce infrastructure, such as the following measures.

- Consolidate Air Force and Navy electronic warfare threat testing capabilities and high performance fixed-wing aircraft testing capabilities.

- Consolidate services' rotary wing training at one location to reduce the amount of unused ramp space, now twice the space needed.

- Identify opportunities to reduce excess capacity in research and development laboratory infrastructure.

- Complete a cost analysis that considers the savings potential of consolidating the San Antonio and Sacramento depot maintenance workloads at other DOD depots, before privatizing any San Antonio or Sacramento workloads.

- Review the cost implications of delaying the transfer of ground communications and electronic equipment from Sacramento Air Logistics Center to the Tobyhanna Army Depot, Pennsylvania.

- Evaluate the cost effectiveness of consolidating all tactical missile workload at the Tobyhanna depot.

- Eliminate duplicate support services by, for example, arranging for airfield operations facilities to serve both Fort Lewis and McChord Air Force Base in Washington and consolidating contract administration, supply and engineering, and other support services at Fort Bragg and Pope Air Force Base in North Carolina.

- Incorporate commercial practices in employee pay functions to reduce the number of employees involved with civilian payroll functions by an additional 470 persons, save $16 million in operating costs, and reduce the number of locations needed for civilian pay functions.

- Consider changes to the defense transportation system's organizational structure to address duplication and overlap.

- Institute a single, intermodal billing system for transportation services provided by the U.S. Transportation Command to replace inefficient separate billing systems.

- Reduce the number of employees for civilian payroll functions by an additional 470 persons, reduce operating costs by $16 million, and further reduce the number of operating locations for civilian pay functions.

- Consider closing DOD's Uniformed Services University of the Health Sciences because it costs twice as much to educate a physician in this school as it does to provide scholarships for students to attend civilian medical schools. This action would achieve savings of $272 million during fiscal years 1997-2001.

- Apply the best practices of private industry to travel processing operations to improve service and reduce costs.

OPPORTUNITIES FOR REFORMING DOD'S INVENTORY MANAGEMENT

While we continue to see pockets of improvement, DOD has made little progress in correcting systemic problems that have traditionally resulted in large unneeded inventories. In the short term, DOD needs to improve the efficiency of its current inventory system. However, in the long run, DOD must adopt more efficient and effective modern business practices. To achieve these goals, DOD should take the following actions.

- Implement private sector practices that streamline logistics operations and reduce layers of inventory, including supplier parks and other actions that give established commercial distribution networks the responsibility to manage, store, and distribute inventory directly to end users on a frequent and regular basis.

- Improve efforts to redesign Air Force logistics operations by testing additional commercial practices such as the greater use of third-party services, closer partnerships with suppliers, the use of local distribution centers, the use of centralized repair facilities, and the modification of repair facilities to accommodate these practices.

- Take long-range action to eliminate the overstocking of items, increase the use of commercial practices, put in place and monitor improved performance measures that stress cost-effectiveness and inventory reductions, and improve the computer systems used in inventory management.

- Place top management emphasis on (1) establishing inventory indicators that highlight reduction and disposal of unneeded inventory, (2) implementing efficient and effective inventory management practices, and (3) training personnel in those practices, and rewarding the right behavior.

- Improve the accuracy of data and the quantity, condition, and value of inventory items managed through current logistics and financial systems and aggressively enforce existing policies and procedures to minimize the acquisition and accumulation of unnecessary inventory.

- Renew emphasis on implementing initiatives to reduce the lead time for acquiring inventory items, periodically validate and update old lead-time data for long lead-time items, and consider lead-time reductions as a factor in deciding whether to continue purchasing spare parts from the prime contractor or from the actual manufacturer.

- Review insurance items--spare parts that are not expected to fail through normal usage to ensure that they are mission essential and stocked in appropriate quantities.

- Further reduce inventory by reclaiming spare parts from excess aircraft; considering parts on hand at the depot maintenance facilities as an offset to spare and repair parts requirements; eliminating duplicate depot maintenance requirements; reducing requirements that were overstated due to inaccurate lead times, demand rates , and due-out quantities; and correcting inaccurate budget data.

OPPORTUNITIES FOR REFORMING DOD'S FINANCIAL MANAGEMENT

DOD's financial management systems, practices, and procedures continue to be hampered by significant weaknesses. To DOD's credit, its leadership has recognized the importance of tackling the broad range of financial management problems and has many reform initiatives underway. While DOD's actions, planned and underway, offer the potential for significant progress, we believe that many additional actions are necessary, including the following measures.

- Pursue short-term actions to improve the quality and reliability of data.
- Use standard data elements, such as object class codes.
- Conduct a comprehensive inventory of systems used to carry out its financial operations, and once, completed, prioritize system improvements that must be made, identify data requirements, and begin integrating the systems.
- Determine whether the multitude of its efforts to reduce problem disbursements will result in improvements in the areas that most significantly contribute to its problems.
- Determine the appropriate number of staff with the requisite skills to ensure that its plan for financial reform will be implemented.
- Establish an independent, outside board of experts to provide counsel, oversight, and perspective to DOD's reform efforts.
- Address staffing issues, such as filling financial management vacancies, upgrading the experience of financial managers, and using contractors.
- Enhance its hiring criteria to include demonstrated experience in successfully implementing accounting or finance systems and demonstrated technical competency in accounting.
- Clean up existing data in its financial systems and place special emphasis on ensuring that basic accounting policies and procedures are followed so as to improve data accuracy in the current systems while new systems are under development.
- Place high priority on implementing basic controls, such as conducting periodic physical inventories, reconciling accounts, and analyzing abnormal balances or fluctuations.

- Develop a comprehensive computer security management program, including limiting computer system access, requiring sensitive data files and critical production programs to be identified and access to them monitored, strengthening security software standards in critical areas, controlling physical security at computer facilities, and providing for completing and testing disaster recovery plans.

- Pursue reengineering approaches that are not bounded by existing processes and organization.

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