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# DEFENSE DEPOT MAINTENANCE

## More Comprehensive and Consistent Workload Data Needed for Decisionmakers







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The Honorable Strom Thurmond  
Chairman  
The Honorable Sam Nunn  
Ranking Minority Member  
Committee on Armed Services  
United States Senate

The Honorable Floyd Spence  
Chairman  
The Honorable Ronald Dellums  
Ranking Minority Member  
Committee on National Security  
House of Representatives

As required by section 311 of the National Defense Authorization Act for Fiscal Year 1996, we analyzed the Department of Defense's (DOD) report, Depot Maintenance and Repair Workload, which was submitted to Congress April 4, 1996. Specifically, we focused on DOD's analysis of (1) the need for and effect of the 60/40 legislative requirement concerning the allocation of depot maintenance workloads between the public and private sectors, (2) historical public and private sector depot maintenance workload allocations, and (3) projected public and private depot maintenance workload allocations.

## Background

DOD spends about \$15 billion annually—or about 6 percent of its \$243-billion fiscal year 1996 budget—on depot maintenance activities. Depot maintenance involves repairing, overhauling, and modifying and upgrading defense systems and equipment. It also includes limited manufacture of parts, technical support, modifications, testing, and reclamation as well as software maintenance. About \$2 billion is spent on contractor logistics support, interim contractor support, and labor used to install some major modifications and parts of depot software maintenance, which are contracted to the private sector using procurement, rather than operation and maintenance funds. Depot maintenance is accomplished in both the DOD depot system and by about 1,300 defense contractors. Currently, there are 29 DOD depot maintenance facilities; 15 depots have been or are in the process of being closed. The DOD depot system employs about 89,000 DOD civilian personnel. This is 43 percent lower than the employment level in the peak year, 1987.

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The depot maintenance workload mix has been the subject of considerable debate in recent years. Historically, depot maintenance on most wartime critical systems was largely performed in DOD depots. The peacetime workload for such critical systems constituted what is referred to as depot maintenance core workload. During the Cold War, there was not much pressure to move work from DOD depots to the private sector. Military leaders expressed a clear preference for retaining much of their work in DOD depots. They expressed the view that the defense depots were highly flexible and responsive to changing military requirements and priorities and produced high-quality work. However, with the end of the Cold War and the subsequent declines in defense spending, there is now increased pressure to privatize more depot maintenance work. As acquisition programs began to decline, a growing concern focused on how the industrial base can be maintained without large development and production programs. Attention began to shift to DOD depot workloads as a potential source of work to keep the industrial base viable and reduce DOD infrastructure costs.

Efforts to increase the private sector's share are affected by several statutes that relate to the mix of maintenance work performed by the public and private sectors. Three of the most significant statutes affecting the workload mix are 10 U.S.C. 2464, 10 U.S.C. 2466, and 10 U.S.C. 2469. Title 10 U.S.C. 2464 provides that DOD activities should maintain a logistics capability sufficient to ensure technical competence and resources necessary for an effective and timely response to a mobilization or other national defense emergency. Title 10 U.S.C. 2466 prohibits the use of more than 40 percent of the funds made available in a fiscal year for depot-level maintenance or repair for private sector performance: the so-called "60/40" rule. Title 10 U.S.C. 2469 provides that DOD-performed depot maintenance and repair workloads valued at \$3 million or more cannot be changed to another DOD activity without the use of merit-based selection procedures or changed to contractor performance without the use of competitive procedures for competitions among private and public sector entities. In recent years DOD has sought relief from statutes DOD officials believe limit their flexibility to contract out additional depot maintenance workloads—including 10 U.S.C. 2466 and 2469 and other statutes affecting competition and privatization.

Directions for Defense, the 1995 report of the Commission on Roles and Missions, recommended that DOD privatize most existing depot

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maintenance work and all support for new and future weapon systems.<sup>1</sup> In his letter forwarding the Commission Report to Congress, the Secretary of Defense agreed with the Commission's recommendations but expressed a need for DOD to retain a limited organic core capability to meet essential wartime surge demands, promote competition, and sustain institutional expertise. DOD established joint teams and working groups to plan and direct efforts aimed at increasing privatization and outsourcing. DOD's January 1996 Plan for Increasing Depot Maintenance Privatization and Outsourcing provides for substantially increasing reliance on the private sector.

Section 311 of the National Defense Authorization Act for Fiscal Year 1996 reiterated long-standing congressional support for maintaining core capabilities within DOD depots as essential to national security.<sup>2</sup> Congress found that DOD did not have a comprehensive policy regarding the performance of depot-level maintenance and repair and expressed a compelling need for DOD to (1) articulate known and anticipated core maintenance and repair requirements, (2) organize its resources to meet those requirements economically and efficiently, and (3) determine what work should be performed by the private sector and how such work should be managed. Congress specified that DOD submit a policy report that provides for properly sizing depot capabilities to meet security requirements effectively and efficiently, competition between public and private entities for noncore workload, and performance of maintenance and repair for any new weapon systems defined as core in facilities owned and operated by the United States.

Section 311 also required DOD to provide a workload distribution report that included (1) an analysis of the need for 10 U.S.C. 2466—the 60/40 rule, its effects on readiness and national security, and a description of specific difficulties experienced by DOD as a result of that requirement; (2) an analysis of the public-private distribution of depot maintenance and repair workloads for fiscal years 1991 through 1995; and (3) a projection of the public-private workload distribution for fiscal years 1997 through 2001.

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<sup>1</sup>The Commission was formed in accordance with section 954(b) of the National Defense Authorization Act for Fiscal Year 1994. The Commission's report was submitted to the DOD May 24, 1995. The Secretary of Defense forwarded this report to Congress on August 24, 1995.

<sup>2</sup>Core maintenance is the capability maintained within DOD depots to meet readiness and sustainability requirements of the weapon systems that support the Joint Chiefs of Staff contingency scenarios. Core exists to minimize operational risks and to guarantee required readiness for these weapon systems. Core depot maintenance capabilities are intended to comprise only the minimum essential facilities, equipment, and skilled personnel necessary to ensure a ready and controlled source of required technical competence. Depot maintenance for the designated weapon systems have historically been the primary workloads assigned to DOD depots to support core depot maintenance capabilities.

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The act also required us to analyze and report to Congress on each of these reports within 45 days of their submission. Our analysis of DOD's policy report is being provided separately.<sup>3</sup>

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## Results in Brief

DOD generally complied with the section 311 requirements regarding workload data, except that it did not provide direct labor hour data as required by Congress. DOD stated that it does not collect labor hour statistics from private contractors. However, our analysis of DOD's workload report shows that the use of more comprehensive and consistent data would provide Congress and DOD decisionmakers a more accurate picture of historical and future projections of depot maintenance workload allocations between the public and private sectors. Without such data, the reports are of limited use to Congress and defense decisionmakers when considering public and private sector workload allocation policy. Specifically:

- The 60/40 rule has not adversely affected military readiness. DOD's workload report primarily justifies eliminating the 60/40 rule on the premise that the allocation is arbitrary and the restriction does not allow the Department to operate in a business-like manner. Our work shows that, with few exceptions, the 60/40 rule has not affected past public-private workload allocation decisions. When DOD's workload allocation decision process determined that the most cost-effective source of repair should be in the private sector, workloads were privatized. However, if not repealed, the 60/40 rule would restrict DOD's plans for large-scale privatization. In this context, we believe any large-scale privatization initiative will also require actions to resolve the excess capacity problem that currently exists at defense depots. Also, a depot maintenance privatization initiative that is cost-effective will require a more competitive environment than exists today.
- The historical public-private depot workload data for fiscal years 1991 to 1995 presented in the workload distribution report includes in the public sector workload share, the value of repair parts and services they purchase from the private sector. Some of these parts are furnished to the private sector as government-furnished material. Also, although requested by Congress to report workload data in direct labor hours, the report does not do so. DOD states that it does not collect such data from the private sector.

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<sup>3</sup>Defense Depot Maintenance: DOD's Policy Report Leaves Future Role of Depot System Uncertain (GAO/NSIAD-96-165, May 21, 1996).

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- The report's projections of public-private depot workloads for fiscal years 1997 to 2001 are not consistent and comparable to historical data. Like the historical data, the future data includes in the public workload share the repair parts and services DOD purchases from the private sector, including those that are provided to private sector contractors as government-furnished material. However, the future data does not include certain types of private sector depot maintenance costs, including interim contractor support and contractor logistics support, which are included in the historical data. Projections of workload mix will be further affected by risk assessments relating to repair workloads that are yet to be made. Our report includes a matter for congressional consideration for improving the methodology and process DOD uses to collect, analyze, and report depot maintenance workload data for the public and private sectors.

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## Effects of the 60/40 Provision

DOD's report questions the need for the 60/40 legislative rule (10 U.S.C. 2466) that limits the percentage of depot maintenance work performed in the private sector. The report stated that the provision has influenced DOD's approach to depot maintenance management and cited various types of privatization options that the rule has precluded. It noted that such options could be more cost-effective. The report does not cite any readiness effects, adverse or otherwise. If the 60/40 provision is repealed, DOD's policy preference for privatizing depot maintenance could result in a large shift of work from the public to the private sector. Under current conditions, a large shift to the private sector, if not properly managed, could result in a more costly depot maintenance system and could increase readiness risks. We found that (1) depot workload competition is limited and privatization without competition may not achieve expected savings, (2) privatization could increase public depot excess capacity and increase depot maintenance costs, and (3) privatization of some mission-essential workloads could increase readiness risks.

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## Readiness Not Seen as a Problem

DOD's workload distribution report did not cite any direct effects of the 60/40 provision on military readiness or national security. DOD officials stated that there were no readiness concerns to report. However, the report discussed potential costs and the need to downsize DOD's Cold War depot maintenance infrastructure. Further, the report noted that relief from 10 U.S.C. 2466 would allow DOD to consider lower cost depot maintenance options, such as establishing government-owned and contractor-operated operations, outsourcing new systems, teaming with industry, and using contract employees at DOD facilities.

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Section 311 also provided that the DOD report describe any specific difficulties experienced as a result of the 60/40 provision. Although the report indicated the section 2466 requirement has influenced the Department's approach to depot management for some time, it provided no examples of particular instances when the 60/40 provision has inhibited the Department from contracting out depot maintenance workload that it wanted to privatize. We asked service officials to identify examples of this situation, but only the Army was able to identify one. According to Army officials, when DOD was conducting public-private competitions, one planned Army aviation public-private competition was changed to a public-public competition. This was done because of concern that if a contractor won the competition, the resulting reallocation of Army aviation maintenance would have violated the 60/40 rule for this particular Army commodity, although not for the Army as a whole. This situation caused the Army to discontinue public-private competitions for aviation programs before DOD terminated the program.

DOD officials noted that they have not experienced negative effects on military readiness resulting from 60/40. Further, DOD depots historically have produced high-quality work and have been responsive to the needs of military commanders. The issue is whether, as DOD reported, the 60/40 provision limited the Department's flexibility to move depot maintenance workloads to the private sector, where contractor maintenance can be more cost-effective.

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## Management Flexibility Is the Key Concern

DOD's workload distribution report emphasized that DOD needs the flexibility to make source of repair decisions without being constrained by mandated limits. However, DOD officials acknowledged that given the current methodology for computing public-private workload mix, the services have some latitude to contract out additional depot maintenance work without breaching the 40-percent threshold for almost all services and commodities. Using the 60/40 rule and the current methodology for developing the mix for fiscal year 1996, we estimate that the Air Force can contract out additional workloads valued at \$559 million, the Army \$69 million, the Marine Corps \$40 million, the naval aviation community \$33 million, and the naval ship community \$223 million. As discussed later in our report, we are concerned that the current methodology for computing the public-private workload mix overstates the public sector's share and understates the private sector's share.

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DOD's workload report states that relief from the 60/40 rule is needed to permit a shift in the workload mix to the private sector and that the Department has developed a reasonable, quantitative approach for identifying the need for and size of required organic core capabilities. However, as discussed in our companion report analyzing DOD's depot maintenance policy report, DOD's new core methodology is based on subjective judgments of risks—the procedures and criteria for which have not yet been established. Further, DOD's depot maintenance policy limits DOD depots from competing with the private sector for noncore workloads, even though the current DOD depot market is not highly competitive, which limits the potential for privatization savings. Lastly, DOD depots that will remain open after completion of depot closures directed by previous Base Realignment and Closure processes, have substantial excess capacity—a factor that also reduces potential cost-saving opportunities resulting from large-scale privatizations.

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**Current Depot  
Maintenance Market Is Not  
Highly Competitive**

Although DOD's workload distribution report stated that privatization would lower depot maintenance costs, DOD offered no documentation to show that its plans to rapidly increase the private sector's share of depot maintenance workload will be cost-effective. Our work has found that privatization savings result primarily from market place competition and that such an environment does not currently exist for many depot maintenance workloads.

While the DOD policy discusses competition for depot maintenance work, we found that the actual contracting environment for most types of equipment is largely noncompetitive. We asked 12 DOD buying commands to identify depot maintenance contracts that were open during 1995. They identified 8,452 contracts valued at \$7.3 billion. We selected 240 high-dollar value contracts valued at \$4.3 billion to analyze the commands' use of competitive procedures for the contracted workloads. Table 1 shows the results of our analysis.

**Table 1: Procedures for Contract Award (dollars in billions)**

Service command	Competition						Total awards	
	Full and open		Limited <sup>a</sup>		Sole source		Number	Value
	Number	Value	Number	Value	Number	Value		
Army	10	\$0.578	3	\$0.017	43	\$0.538	56	\$1.133
Air Force	37	1.348	1	0.100	60	0.900	98	2.348
Navy	2	0.286	5	0.048	79	0.518	86	0.852
<b>Total</b>	<b>49</b>	<b>\$2.212</b>	<b>9</b>	<b>\$0.165</b>	<b>182</b>	<b>\$1.956</b>	<b>240</b>	<b>\$4.333</b>

<sup>a</sup>Limited competition refers to those that are conducted using other than full and open competition.

As shown, the 12 buying commands awarded 182, or 76 percent, of the contracts through sole-source negotiation; 49, or 20 percent, through full and open competition; and 9, or 4 percent, through limited competition. The 49 fully competitive awards accounted for about 51 percent of the total dollar value, while the 182 sole-source contracts accounted for about 45 percent of the dollar value.

In reviewing the number of offerors for the 49 contracts valued at \$2.2 billion that were awarded through full and open competition, we found that the commands averaged 3.6 offers for the 49 contracts—ranging from a low of only 2 offers to a high of 10. For 30 of the 49 contracts—about 86 percent of the \$2.2 billion—the number of offers was 4 or less. Five contracts valued at \$525.8 million had only 2 offers, while only 19 contracts valued at \$309.4 million had 5 or more offers.

A large portion of the dollar value of the contracts went to 71 contractors. Of these 71 contractors, 13 had about 76 percent of the \$4.3 billion. Three of these 13 contractors had workload valued at \$1.3 billion—30 percent of the \$4.3 billion.

The private sector market was more competitive for certain types of systems and equipment than for others. For example, competitive awards were more frequent for repair of ground vehicles, trucks, airframes, engines, and other items while sole-source contracts were prevalent for fire control systems, communications and radar equipment, electronic components, and other components. We noted that one buying activity that obligates about \$180 million per year for depot maintenance contracts for repair of ship components used sole-source contracts 100 percent of the time—with many of the awards based on cost-type contracts. Officials

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said they did not have the technical data, technical manpower, or contracting skills to use competitive contracting. Additionally, officials noted that the process for qualifying repair sources is difficult and time-consuming.

We also analyzed the impact of other conditions on competition. DOD buying commands reported that not having access to required technical data and their inability to precisely define the repair work that must be done frequently influenced their using sole-source repair contracts. The buying commands reported that adequately defining the types of depot maintenance tasks required to complete any given repair or overhaul presents a difficult challenge. For much of the depot maintenance work, specific tasks that must be done, spare and repair parts that will be required, and the type and skill level of the labor required cannot be identified until the equipment or component is inducted into the repair facility for inspection and repair. Our review of depot maintenance contracts showed the difficulty in constraining cost growth in this environment—particularly when cost-type contracts are used. It also showed the large costs normally associated with drafting statements of work, conducting the competitions, and administering the contracts. DOD officials stated that because of these difficulties, DOD depots can often perform depot maintenance work more cost-effectively than contractors. For example, DOD buying commands sometimes used both DOD depots and private sector repair sources for repairing a limited number of items. To compare prices, we looked at 414 items that both sectors maintained. For 62 percent of the items, the contractor's repair price was higher than the DOD depot's price for the same item. Further, our review of DOD's public-private competition program showed that DOD depots won 67 percent of the nonship competitions.

Given the influence that competition has on the potential for savings when outsourcing DOD work, achieving savings from contracting out depot maintenance workloads will require significant changes in the way the Department manages its contract workload. However, given that the DOD policy proposes using a contractor logistic support model for depot maintenance and that this model has historically involved sole-source contracting to the original equipment manufacturer, it is unclear that large-scale contracting will get the savings DOD states it expects to achieve.

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## DOD Depot System Has Large Excess Capacity

Another factor that must be considered when assessing the 60/40 rule is the excess capacity that exists in DOD's depot system. A combination of factors created the extensive excess capacity in the DOD depot system. These factors include (1) the downsizing of the armed forces due to the end of the Cold War; (2) efforts by some DOD components to conduct more repairs in field-level maintenance activities; (3) contracting out more depot work to the private sector; and (4) the increased reliability, maintainability, and durability of most military systems and equipment.

While depot maintenance personnel have been reduced by 43 percent since 1987, similar depot infrastructure reductions have not been made. DOD's depot system had 40 percent excess capacity for fiscal year 1996, based on an analysis of maximum potential capacity and programmed workload as the basis for comparison and assuming a 5-day week, one 8-hour-per-day shift operation. The excess capacity varied in each service, from a low of 33 percent in naval aviation, to 35 percent for naval shipyards, 42 percent for the Army, and a high of 45 percent for the Air Force. Some initiatives have been used in recent years to reduce some of DOD's excess capacity. These initiatives include consolidating workloads, implementing competition between government depots and the private sector, mothballing depot plant equipment, and tearing down unused buildings or converting them to other military uses. However, depot downsizing has largely occurred through the Base Realignment and Closure process.

Fifteen depots have closed or are in the process of being closed as a result of base closure decisions.<sup>4</sup> Although this will eliminate some excess capacity, privatization-in-place rather than closure and consolidation of workloads in remaining depots has been proposed for seven depots. Privatization-in-place will result in privatizing excess capacity rather than eliminating it. We are reporting separately on in-place privatizations.

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## Reported Historical Workloads Could Be More Comprehensive

Section 311 did not provide specific guidance on data to be included in the workload reports. The data reported in DOD's historical public-private workloads for fiscal years 1991 through 1993 were extracted from data collected by the Defense Science Board. This data collection included the value of parts and services the depots purchase from the private sector as public sector costs. Some of these repair parts were provided to private sector contractors as government-furnished material and should have

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<sup>4</sup>Additionally, the Red River Army Depot, which is being realigned rather than closed, is not included in this number.

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been reported as costs of contractor maintenance. Additionally, repair contracts awarded by DOD depots were included as public depot maintenance costs rather than private sector maintenance costs and some contractor depot maintenance costs for classified systems were not included in the private sector data. The services followed a similar approach for fiscal years 1994 and 1995. These conditions resulted in overstating the public sector's reported share of depot maintenance workload and understating the private sector's share. Reporting workload in direct labor hours would provide a more accurate picture of workload mix in that it would address the repair parts problem. Section 311 of the Authorization Act specified that, in addition to dollar values, DOD should report workload mix in direct labor hours. However, DOD's report did not include such data. DOD officials stated that they do not collect direct labor hour data from commercial contractors and could not provide such data or provide a reasonable labor hour comparison estimate.

In 1994, we testified about our concern that repair parts and materials, maintenance and engineering services, and other goods and services procured from the private sector were included in the public sector's depot maintenance funding.<sup>5</sup> Additionally, the costs associated with private contractors did not include maintenance costs for some classified systems. Further, the cost for parts and materials that were provided to contractors as government-furnished material were included as public sector rather than private sector costs. In quantifying the impact of these factors, we noted that in 1994 about \$437 million of the \$1.2 billion expended by Army depots in fiscal year 1993—about 31 percent—went to the private sector. About 21 percent of the dollars expended by the Army depots went to buy parts and material and about 10 percent for other goods and services. If these expenditures were added to the amount of depot maintenance funds spent directly in the private sector, we estimated that about 58 percent of the Army's depot maintenance budget was spent at that time in the private sector. We identified similar results in the Navy and the Air Force. Further, we found that a Defense Science Board Task Force Report estimated that the public-private ratio becomes nearly 50-50 when dollars spent at DOD depots for parts and components—but purchased from the private sector—are included as part of the private sector's share. If included, other goods and services procured from the private sector would increase the private sector's share above 50 percent.

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<sup>5</sup>Depot Maintenance: Issues in Allocating Workload Between the Public and Private Sectors (GAO/T-NSIAD-94-161, Apr. 12, 1994).

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## Data Reported in Historical Workloads Excluded From Future Projections

Like the historical data provided for fiscal years 1991 through 1995, the future workload projections for fiscal years 1997 through 2001 also overstate the public sector's share by the treatment of funding for repair parts and subcontracts to the private sector and understate the private sector's share by including the funding of government-furnished material in the public sector's share and by not including in the private sector share the costs of contract depot maintenance for some classified systems and the cost of contracts awarded by DOD depots for maintenance and repair services. The future projections further understate the private sector share by not including maintenance costs for interim contractor support and contractor logistics support—although these costs were included in the historical analysis. DOD officials noted that section 311 did not provide specific guidance on what data should be included in the reports. The reported projected workload data could be further understating the private share since it reflects only preliminary calculations of revised core requirements. Since the services do not have an approved methodology for conducting repair base assessments or risk analyses, they have not yet conducted these assessments. Therefore, it is not possible to determine how much of the existing DOD depot workload may be privatized. Our companion report analyzing DOD's report, Policy Regarding Performance of Depot-Level Maintenance and Repair, discusses this issue further. After the risk assessments are completed, additional workloads will likely be privatized. However, the precise amounts cannot be estimated.

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## Reported Workload Projections Exclude Some Contracted Workloads

DOD's future workload projections exclude funding for two categories of contractor maintenance activities, interim contractor support and contractor logistics support, that are included in the historical data. Although the services included funding for these categories in the fiscal years 1997 through 2001 data they forwarded to the Office of the Secretary of Defense (OSD), the decision was made to exclude this information from the projected workload report. Officials stated that congressional direction was not specific regarding what should be included. We noted that for the Air Force, which has considerably more contractor maintenance in these categories than the other services, including these categories would significantly limit the Air Force's ability to implement planned privatization initiatives if 60/40 is not repealed. It would have little impact in the other services. Nonetheless, as a result of the exclusion of interim contractor support and contractor logistics support from the projected workloads, the historical and future workload data are not directly comparable.

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Appendix I shows adjusted future workload data that includes interim contractor support and contractor logistics support funding projections as contractor costs. The percentage split between public and private for fiscal year 1997 is 60/40 when these contractor maintenance categories are included compared to DOD's reported 64/36. In 2001, the workload going to the private sector would increase to 53 percent from the reported 50 percent. The impact of these two categories of contractor maintenance would be far more significant on the Air Force, altering its projections of public-private sector mix in 2001 from 46/54 to 40/60. We asked DOD officials about the reliability of the data reported for interim contractor support and contractor logistics support. They stated that these estimates are probably understated to some extent since some costs are covered in weapon system program costs and are not readily available.

Also as part of our analysis of DOD's workload data, we noted that the Marine Corps included several categories of contractor maintenance in the future workload projections that it did not include in the historical data. Consequently, a comparison of the Marine Corps' historical and future data gives the impression that the Marine Corps will significantly increase its contractor maintenance. However, when we adjusted the data to make it comparable, the historical and future data are relatively consistent.

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### Reported Workload Projections Will Likely Change

In January 1996, the services were directed by OSD to submit two views of their estimated depot maintenance workload distribution projections. The first view of the future workload distribution projection was to show the actual fiscal year 1995 results and projected workload distributions for fiscal years 1996 through 2001 based on the services' existing assessment of core requirements. The second was to show a revised projection of fiscal year 1996 through 2001 workloads based on the recomputation of core using a revised core methodology and an assumption that all noncore workload would be privatized. The revised methodology includes a risk assessment of mission-essential workloads previously defined as core to determine if they can be outsourced. For the most part, the services were not able to complete the assessments for the second requirement.

With the exception of the naval ship community, the services have not completed calculations of their core requirements using their new methodology. They are only now beginning to conduct risk assessments of critical workloads to determine which ones can be contracted out to the private sector with an acceptable risk. Until the services conduct these

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assessments, it is uncertain what workloads DOD will move to the private sector.

## Air Force

The public-private sector mix in 2001 for the Air Force is projected to be 46/54, if interim contractor support and contractor logistics support costs of \$524 million are excluded as contractor maintenance. The Air Force public-private mix for 2001, including these additional contractor maintenance costs is 40/60.

The Air Force data shows a 57-percent increase in contract depot maintenance, representing a projected \$723 million increase between 1997 and 2001. The Air Force's projections of future workload distribution used the fiscal year 1997 core computation as its base. The Air Force workload projections assumed that all workloads from the three closing Air Force depots will be privatized, except for workload expected to be transferred to an Army depot. These projections show no additional privatizations would likely result from future risk analyses. Further, they do not reflect significant new system workloads. Most of the Air Force's major new system acquisitions will be managed under interim contractor support or contractor logistics support during this time period. As previously reported, these expenditures are not included in the reported workload projections.

The Air Force's calculation of its fiscal year 1997 core is 25.5 million direct labor hours, down from 27.7 million direct labor hours calculated for fiscal year 1994. The Air Force's projection of future depot maintenance workload distribution was based on the following assumptions:

- privatization-in-place of depot maintenance and metrology and calibration workloads at the Aerospace Guidance and Metrology Center (fiscal year 1996);
- privatization of five prototype workloads, including hydraulics, electronic accessories, software, C-5 paint/depaint, and fuel accessories at San Antonio and Sacramento Air Logistics Centers (fiscal year 1997);
- privatization of remaining San Antonio and Sacramento depot maintenance workloads by 2001, when these activities are to be closed as government depots; and
- establishment of joint venture private sector partnerships at Warner Robins and Oklahoma City Air Logistics Centers (fiscal years 1998 through 2001).

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**Army**

Using the data provided in the workload report, the public-private sector mix in 2001 is projected to be 56/44 for the Army. The Army workload data shows a 28-percent increase in contract depot maintenance, which represents a projected \$111-million increase between 1997 and 2001. When including \$72 million for interim contractor support and contractor logistics support, the Army public-private mix for 2001 is 53/47.

In projecting public-private workload distribution, the Army recomputed its core capability requirements, slightly reducing its previous depot maintenance core requirements to support the two-major regional contingency scenario. The Army did not use the revised methodology to determine if any mission-essential workloads previously identified as core could be privatized. Instead, top-level Army managers met and approved plans to change the status of some workloads previously identified as core to noncore—thereby allowing these workloads to be privatized over the next few years. This reduced the Army's core workload requirement by about 3.4 million direct labor hours.

The Army, in developing its projected workload distribution, made the following assumptions:

- All the missile work at Letterkenny Army Depot would be privatized by creating a government-owned, contractor-operated missile facility and a government-owned, contractor-operated Paladin operation.<sup>6</sup>
- All troop support vehicles and trucks currently repaired at the Red River Army Depot would be privatized and a public-private partnership arrangement would be created to support the Bradley Fighting Vehicle system core workload.
- Noncore small arms workload currently repaired at the Anniston Army Depot would be privatized, and partnership agreements would be established with private sector firms for combat vehicles and artillery support.
- Repair work on the OH-58D and CH-47D helicopters currently repaired at the Corpus Christi Army Depot would be privatized, if the peacetime workload requirements for the Apache and Blackhawk helicopters equal or exceed core.

**Marine Corps**

Using the data provided in the workload report, the public-private sector mix in 2001 for the Marine Corps is projected to be 81/19. The Marine Corps data shows a \$12-million decline in the amount of contract depot

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<sup>6</sup>We are currently reviewing privatization-in-place options being considered for Army depots and plan to issue a report on this work at a later date.

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maintenance workload between 1997 and 2001, when the Marine Corps data is normalized by taking out contract data included in the future data, but not in the historical data. The Marine Corps public-private mix for 2001 using corrected data is 95/05.

Marine Corps officials stated that its depot maintenance core requirements will not significantly change over the 5-year period. Further, officials noted that because of the small quantities and irregular and varied nature of workloads maintained in its depots, it is usually not cost-effective to privatize noncore workloads. Although some future privatization initiatives are under consideration, since they have not yet been studied for feasibility and interest, they were not factored into the Marine Corps' workload distribution analysis. The potential Marine Corps privatization initiatives are the paint booth and blast booth facilities on both Marine Corps ground system depots, outsourcing disassembly functions of certain commodity lines, and developing a partnership with the private sector for the amphibious assault vehicle hull rework.

## Naval Ships

Using the data provided in the workload report, the public-private sector mix in 2001 is projected to be 48/52 for naval ships. The \$8 million reported for interim contractor support and contractor logistics support is not large enough to affect the workload mix for ships. The naval shipyard workload data shows a 70-percent increase in contract work between 1997 and 2001, a projected \$797-million increase in privatized work. The growth in contracted ship workload will result from the closure of four naval shipyards, which will eliminate the two DOD shipyards that only performed nonnuclear work.

Only the Naval Sea Systems Command has completed its 1996 core determination, including risk assessments. The Command calculated its revised ship repair core as 23.3 million direct labor hours, down 16.5 million from 39.8 million in fiscal year 1994. In revising its core computation, it used the same risk analysis process as in fiscal year 1994, which was based on the following three risk factors:

- the absence of an assured competitive private sector source of depot-level maintenance and modernization;
- scenario numerical requirements in relation to total ship-class inventory (number of ships in class compared with scenario requirement); and
- unique maintenance requirement, including large deck ship drydocking and maintenance, complex combatant modernization and depot-level

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maintenance, nuclear ship defueling or refueling, maintenance and modernization engineering, and battle damage repair.

Each class containing ships specified by the Joint Chiefs of Staff contingency scenarios was evaluated on the basis of the above risk factors. If there were no risk factors present, the ship class was classified as low risk and considered noncore. If one or two risk factors were present, the class was considered moderate and could be considered core or noncore. If all three risk factors were present, the class was placed in the high-risk category and considered core. These ships are assigned to the public or private sector on the basis of assured capability. Naval shipyards were assigned 43 scenario ships as core, while private shipyards were assigned 148 scenario ships on the basis of assured capability.

The results of the revised risk assessment were the same as the results in 1994. However, to better reflect workload schedule realities, such as homeporting issues and split work packages on aircraft carriers, the closure or planned closure of 4 naval shipyards, and the planned deactivation of four ballistic missile submarines, Navy officials said that they reduced the 1994 requirement by 11 ships. This reduction includes the planned deactivations of the four ballistic missile submarines and seven ships that will move from pre-risk core to mission-essential but noncore in the private sector—two ballistic missile submarines, two aircraft carriers, two amphibious ships, and one surface combatant.

## Naval Aviation

Using the data provided in the workload report, the public-private sector mix in 2001 is projected to be 55/45 for naval aviation. Adjusting the private sector to account for the projected \$26 million interim contractor support and contractor logistics support program would change the mix to 54/46. The naval aviation workload data shows a \$62-million decline in projected contract workload between 1997 and 2001, and a \$120-million decline in projected DOD depot workload over this period.

The Naval Aviation Systems Command did not use the revised core methodology when calculating its core requirements. Accordingly, the computation did not change from the 13-million direct labor hour requirement previously identified. Navy officials stated that a contractor is helping to develop a risk assessment methodology, but this has not yet been completed. When a methodology is approved and risk assessments are completed for core workloads, the Navy's core requirements will be revised.

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Given the current status of its reassessment, the revised projected workload distribution for naval aviation was developed using the assumption that workload valued at \$184 million that had been identified as noncore using the old criteria would be privatized. This workload includes various engine overhauls; modifications and upgrades on the F-14 aircraft; maintenance work on missiles, components, ground support equipment, gear boxes, and torque meters; and scheduled depot-level maintenance on various aircraft. According to Navy officials, a significant portion of this work is currently interserviced to other service depots.

Naval Warfare Centers

Additionally, the Navy is also privatizing-in-place the Naval Surface Warfare Center, Crane Division Detachment, Louisville, Kentucky, and Naval Air Warfare Center, Aircraft Division, Indianapolis, Indiana. The Louisville privatization involves sole-source awards to two original equipment manufacturers. The Navy expects to award these contracts in July 1996. The Indianapolis privatization is expected in 1997.

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**Matters for  
Congressional  
Consideration**

More comprehensive and consistent workload data would improve congressional oversight of the allocation of workload between the public and private sectors. Congress may wish to consider providing specific guidance to DOD regarding how depot maintenance data should be collected, analyzed, and reported to reflect the balance of workload between DOD depots and the private sector. More specifically, Congress may wish to require that (1) all contractor maintenance categories be included, regardless of the funding source or security classification of the systems, (2) repair parts be appropriately categorized or excluded, and (3) local purchases of maintenance and repair services be allocated to the private sector's share.

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**Agency Comments**

DOD officials commented orally on a draft of this report. The officials were concerned that the report's discussion of reported workload data implied that DOD had not complied with the guidance contained in section 311 of the Authorization Act. They noted that the act did not provide specific guidance on the data to be included in the report and that the DOD workload report noted that certain logistic support data was not included in the workload projections. The officials also noted that the report's treatment of public depot purchases of repair parts and services from the private sector is consistent with how DOD has historically reported the data. We revised the report to make it clear that our concerns with the reported data were not implying noncompliance with the section 311

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reporting requirement. We also deleted one draft recommendation that DOD change its methodology for reporting workload data and added matters for congressional consideration that address this issue. With the above exceptions and a few technical corrections, DOD officials stated that they did not disagree with the data presented in our report.

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## Scope and Methodology

We reviewed DOD's Depot-Level Maintenance and Repair Workload Report, which DOD submitted to Congress April 4, 1996. We compared the DOD data and commentary with the requirements cited in section 311 of the National Defense Authorization Act for Fiscal Year 1996. From each military service and OSD, we obtained back-up data and discussed privatization initiatives. We also drew extensively from information gathered in our related reviews of depot maintenance, including privatization-in-place, closing depots, public-private competitions, and depot maintenance contracting.

We interviewed officials and examined documents at OSD, the Army, the Navy, the Marine Corps, and the Air Force headquarters, Washington, D.C.; Army Materiel Command, Alexandria, Virginia; Naval Air Systems Command, Arlington, Virginia; Marine Corps' Logistics Plan and Strategic Mobility Division, Arlington, Virginia; Naval Sea Systems Command, Arlington, Virginia; Air Force Materiel Command, Dayton, Ohio; Army Industrial Operations Command, Rock Island, Illinois; Naval Aviation Depot, Jacksonville, Florida; Ogden Air Logistics Center, Ogden, Utah; Oklahoma City Air Logistics Center, Oklahoma City, Oklahoma; and Warner Robins Air Logistics Center, Warner Robins, Georgia.

We conducted our review from February to May 1996 in accordance with generally accepted government auditing standards. We discussed our draft report with agency officials and included their comments where appropriate.

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We are sending copies of this report to the Chairmen and Ranking Minority Members, House and Senate Committees on Appropriations, the

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Senate Committee on Governmental Affairs, and the House Committee on Government Reform and Oversight; the Secretaries of Defense, the Army, the Navy, and the Air Force; and the Director, Office of Management and Budget. Please contact me at (202) 512-8412 if you have any questions. Major contributors to this report are listed in appendix II.

A handwritten signature in black ink that reads "David R. Warren". The signature is written in a cursive style with a long horizontal flourish at the end.

David R. Warren  
Director, Defense Management Issues

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# Services' Projected Workload Including Interim Contractor Support/Contractor Logistics Support

Constant Fiscal Year 1996 (dollars in millions)

	Army	Air Force	Navy	Marine Corps	DOD
<b>Fiscal year 1997</b>					
Total workload (including ICS/CLS) <sup>a</sup>	\$1,329	\$4,261	\$5,338	\$213	\$11,141
Public	872	2,421	3,223	163	6,679
Private	398	1,279	2,089	50	3,816
ICS/CLS <sup>a</sup>	59	561	26	0	646
Total private	\$457	\$1,840	\$2,115	\$50	\$4,462
Public-private mix (percent)	66/34	57/43	60/40	77/23	60/40
<b>Fiscal year 1998</b>					
Total workload (including ICS/CLS) <sup>a</sup>	\$1,225	\$4,202	\$5,316	\$186	\$10,929
Public	678	2,054	3,115	152	5,999
Private	494	1,549	2,173	34	4,250
ICS/CLS <sup>a</sup>	53	598	28	0	679
Total private	\$547	\$2,147	\$2,201	\$34	\$4,929
Public-private mix (percent)	55/45	49/51	59/41	82/18	55/45
<b>Fiscal year 1999</b>					
Total workload (including ICS/CLS) <sup>a</sup>	\$1,314	\$4,341	\$5,754	\$187	\$11,596
Public	729	1,834	2,983	147	5,693
Private	520	1,930	2,740	39	5,229
ICS/CLS <sup>a</sup>	65	577	31	0	673
Total private	\$585	\$2,507	\$2,771	\$39	\$5,902
Public-private mix (percent)	55/45	42/58	52/48	79/21	49/51
<b>Fiscal year 2000</b>					
Total workload (including ICS/CLS) <sup>a</sup>	\$1,266	\$4,378	\$6,060	\$187	\$11,891
Public	669	1,755	3,184	144	5,752
Private	529	2,060	2,842	43	5,474
ICS/CLS <sup>a</sup>	68	563	34	0	665
Total private	\$597	\$2,623	\$2,876	\$43	\$6,139
Public-private mix (percent)	53/47	40/60	53/47	77/23	48/52
<b>Fiscal year 2001</b>					
Total workload (including ICS/CLS) <sup>a</sup>	\$1,238	\$4,236	\$5,628	\$186	\$11,287
Public	657	1,710	2,788	151	5,306
Private	509	2,002	2,806	35	5,352
ICS/CLS <sup>a</sup>	72	524	34	0	630
Total private	\$581	\$2,526	\$2,840	\$35	\$5,982
Public-private mix (percent)	53/47	40/60	50/50	81/19	47/53

<sup>a</sup>Interim Contractor Support/Contractor Logistics Support.

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# Major Contributors to This Report

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