

December 1997

# OUTSOURCING DOD LOGISTICS

## Savings Achievable But Defense Science Board's Projections Are Overstated



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**National Security and  
International Affairs Division**

B-277816

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Congressional requesters

As you requested, we reviewed the basis for the Defense Science Board's (DSB) estimate that the Department of Defense (DOD) could potentially save \$6 billion annually by reducing its logistics infrastructure costs within the continental United States (CONUS).<sup>1</sup> This report provides our analysis of the reasonableness of the savings projected by the Board. Specifically, we discuss (1) the opportunities for logistics infrastructure savings and (2) DOD's and our analyses of the DSB's projected logistics infrastructure savings.

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## Background

Faced with a goal of increasing the Department's investments in modernization without increasing overall defense budgets, DOD has recently focused on the cost of support operations and their associated infrastructure, with the objective of finding ways to provide required support resources and capability at reduced costs.<sup>2</sup> DOD recognizes that portions of its support structure are inefficient and continue to absorb a large share of the defense budget. To the extent support costs can be reduced, available future defense dollars could be used for modernization or other defense priorities.

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## DSB Studies Project Infrastructure Cost Savings From Outsourcing and Other Initiatives

The Office of the Secretary of Defense (OSD) requested that DSB identify DOD activities that the private sector could do more efficiently and to determine the expected savings from outsourcing. DSB, a civilian advisory board to DOD, issued two reports in 1996 addressing outsourcing and other opportunities for substantially reducing DOD support services.<sup>3</sup> The first focused solely on outsourcing and privatization issues.<sup>4</sup> The second, incorporating findings from the earlier report, had a broader scope that

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<sup>1</sup>As discussed in this report, logistics infrastructure refers only to CONUS logistics.

<sup>2</sup>We have identified this as a high-risk area. High-risk areas are those critical government operations that are highly vulnerable to waste, fraud, abuse, and mismanagement. High-Risk Series: Defense Infrastructure (GAO/HR-97-7, Feb. 1997) provides further discussion of our assessment of the defense infrastructure.

<sup>3</sup>Report of the Defense Science Board Task Force on Outsourcing and Privatization, August 1996, and Report on the Defense Science Board 1996 Summer Study on Achieving an Innovative Support Structure for 21st Century Military Superiority: Higher Performance at Lower Costs, November 1996.

<sup>4</sup>DOD defines outsourcing as the transfer of a function, previously performed in-house, to an outside provider. Privatization is a subset of outsourcing that involves the transfer or sale of government assets to the private sector.

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included other methods for reducing infrastructure costs. In preparation for the Quadrennial Defense Review (QDR), OSD's Program Analysis and Evaluation (PA&E) directorate assessed the DSB's savings estimates from the second report.<sup>5</sup> Our analysis also focused on the second report's findings and recommendations.

### First Study

The first DSB task force concluded that DOD could realize savings of 30 to 40 percent of logistics costs and achieve broad improvements in service delivery and responsiveness by outsourcing support services traditionally done by government personnel. The report cited evidence from the Center for Naval Analyses (CNA) public-private competition studies of commercial and depot maintenance activities. The Board also noted that an Outsourcing Institute study found that the private sector saved about 10 to 15 percent by outsourcing but that the public sector savings from outsourcing would be higher because of the inefficiency of government service organizations.<sup>6</sup> The DSB task force stated that an aggressive DOD outsourcing initiative could generate savings ranging from \$7 billion to \$12 billion annually by fiscal year 2002.

### Second Study

Building on the earlier study, DSB's second task force report provided a new vision wherein DOD would only provide warfighting, direct battlefield support, policy- and decision-making, and oversight activities. All other activities would be done by the private sector. DSB said that DOD would need to make an investment of about \$6 billion but would ultimately save about \$30 billion annually by the year 2002, primarily through outsourcing support functions.

Of these \$30 billion in annual savings, \$6 billion was to come from CONUS logistics infrastructure activities, which DSB defined as including inventory control points, distribution depots, maintenance depots, and installation supply and repair. About \$4.2 billion of the savings would be achieved by outsourcing these activities; the remaining \$1.8-billion savings would be achieved through improvements in inventory management practices and equipment reliability. Table 1 shows a breakout of the estimated logistics infrastructure savings.

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<sup>5</sup>The QDR is required by the Military Force Structure Review Act of 1996, which was included as part of the National Defense Authorization Act for Fiscal Year 1997. DOD designed the QDR to be a fundamental and comprehensive examination of America's defense needs from 1997 to 2015. The review examines potential threats, strategy, force structure, readiness posture, military modernization programs, defense infrastructure, and other elements of the defense program.

<sup>6</sup>The Outsourcing Institute, founded in 1993, is a professional association that provides information on the strategic use of outside resources.

**Table 1: Breakout of DSB Savings Estimates for CONUS Logistics Infrastructure**

| Dollars in billions                                       |                |
|---|----------------|
| <b>Savings initiative</b>                                 | <b>Savings</b> |
| Use of prime vendors and contractor logistics support     |                |
| Filling orders and repairing equipment                    | \$3.5          |
| Wholesale inventory                                       | 0.7            |
| <b>Subtotal</b>   | <b>4.2</b>     |
| Reductions from other initiatives                         |                |
| Inventory management improvements for non-deploying units | 0.3            |
| Equipment reliability improvements                        | 1.5            |
| <b>Subtotal</b>   | <b>1.8</b>     |
| <b>Total</b>  | <b>\$6.0</b>   |

Source: DSB.

According to the DSB estimates, the \$6-billion savings represents an approximate 40-percent reduction in the \$14 billion the Board estimated DOD spends annually for CONUS logistics activities. According to a DSB task force member, estimates for the cost of installation supply and repair activities were unavailable. Therefore, the group used \$14 billion as a rough estimate to approximate total CONUS logistics cost, not including activities already contracted out. Although we were unable to substantiate those numbers, the data that is available indicates that DSB's estimate of \$14 billion for CONUS logistics costs is conservative. For example, the Navy has reported that more than \$8.5 billion of Navy resources was applied in fiscal year 1996 to maintenance programs in support of fleet ships and aircraft.<sup>7</sup>

The report also stated that to gain economies and achieve significant savings, DOD needs to consider dramatic changes in the way it does business. DSB said the Department must get out of the material management/distribution and repair business by expanding contractor logistics support to all fielded weapon systems and by expanding the use of "prime vendors" for all commodities. Contractor logistics support, which relies on a contractor to provide long-term, total life-cycle logistics support, combines depot-level maintenance with wholesale and selected retail material management functions. Under the "prime vendor" concept, DOD would rely on a single vendor to buy, warehouse, and distribute inventory to the customer as needed, thus removing the Defense Logistics Agency and the services from their present middleman role.

<sup>7</sup>Navy Regional Maintenance: Substantial Opportunities Exist to Build on Infrastructure Streamlining Progress (GAO/NSIAD-96-30, Nov. 13, 1997).

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## Results in Brief

Overall, we agree with the Defense Science Board that DOD can reduce the costs of its logistics activities through outsourcing and other initiatives. DOD has already achieved over \$700 million in savings from the use of a prime vendor program and other inventory-related reduction efforts for defense medical supplies. Also, according to studies by the Center for Naval Analyses, competition for work, including competition between the public sector and the private sector—regardless of which one wins—can result in cost savings. Further, many private sector firms have successfully used outsourcing to reduce their costs of operations.

The Program Analysis and Evaluation's analysis shows, however, that the Defense Science Board's estimated annual savings of \$6 billion is overstated by about \$4 billion because of errors in estimates, overly optimistic savings assumptions, and legal and cultural impediments. According to the Program Analysis and Evaluation's analysis, this \$4 billion includes (1) \$1 billion in overstated contract administration and oversight savings and one-time inventory savings and (2) \$3 billion in savings that would be unlikely or would be difficult to achieve within the Board's 6-year time frame, given certain legislative requirements and DOD's resistance to outsourcing all logistics functions.

Our analysis confirmed the Program Analysis and Evaluation's conclusion that the Board's estimated savings were overstated. Our analysis also raised questions about the Board's projected savings, but we do not know by how much or whether these questions would change the \$2 billion in savings that the Program Analysis and Evaluation concluded were achievable. For example, we found that the Board's estimated savings from improvements to equipment reliability were overstated by at least \$1.2 billion. Further, we question whether DOD would achieve a 25-percent savings from outsourcing, as the Board assumed, because the savings were based primarily on studies of public-private competitions in highly competitive private sector markets. However, competitive markets may not currently exist in some areas. For example, we reported that 91 percent of recent nonship depot maintenance contracts were awarded on a sole-source basis.

Notwithstanding our concerns about the magnitude of savings, DOD can make significant reductions in logistics costs. The Secretary of Defense has recently issued a strategic plan for achieving such reductions. This report is a step in the right direction. DOD now needs an implementation plan based on a realistic assessment of the savings potential of various cost-reduction alternatives and the time frames for accomplishing various

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activities required to identify and implement the most cost-effective solutions. This plan should be presented to Congress to provide a basis for congressional oversight.

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## Opportunities Exist for Logistics Infrastructure Savings

Our reviews of best practices within the private sector and ongoing work at DOD indicate that DOD has significant opportunities for reducing logistics costs and improving performance by changing its business processes. This work also indicates that determining the most cost-effective processes to use requires an evaluation of costs and benefits of each situation. These findings are consistent with the general theme of the DSB's reports that opportunities exist for savings in the operation of DOD's logistics support activities. However, DSB focused on outsourcing, while our work has focused first on reengineering and streamlining, and outsourcing where appropriate and more cost-effective.

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## DOD Can Reduce Logistics Costs

Over the past several years, DOD has considered a number of actions to improve the efficiency and effectiveness of its logistics system. As with the private sector, such actions should include using highly accurate information systems, consolidating certain activities, employing various process streamlining methods, and outsourcing. For example, defense maintenance depots have about 40-percent excess capacity, and we have advocated consolidating workloads to take advantage of economies of scale and eliminate unnecessary duplication.<sup>8</sup> Consolidating workloads from two closing depots would allow the Air Force, for instance, to achieve annual savings of over \$200 million and reduce its excess capacity from 45 percent to about 8 percent.

In addition, our work has pointed out the benefits of outsourcing when careful economic analysis indicates the private sector can provide required support at less cost than a DOD activity can. For example, the Defense Logistics Agency has successfully taken steps to use prime vendors to supply personnel items directly to military facilities.<sup>9</sup> The consumable items under these vendor programs account for 2 percent of the consumable items DOD manages. DOD's prime vendor program for medical supplies, along with other inventory reduction efforts, has resulted in savings that we estimate exceed \$700 million. More

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<sup>8</sup>Defense Depot Maintenance: Challenges Facing DOD in Managing Working Capital Funds (GAO/T-NSIAD-AIMD-97-152, May 7, 1997).

<sup>9</sup>Inventory Management: Greater Use of Best Practices Could Reduce DOD's Logistics Costs (GAO/T-NSIAD-97-214, July 24, 1997).

importantly, this program has moved DOD out of the inventory storage and distribution function for these supplies, thus emptying warehouses, eliminating unnecessary layers of inventory, and reducing the overall size of the DOD supply system. Also, service is improved because DOD buys only the items that are currently needed and consumers can order and receive inventory within hours of the time the items are used.

While DOD has achieved benefits from outsourcing, it has been shown that adequate competition has been key to achieving significant reductions. Public-private competition studies by CNA have stressed this point. In its 1993 review of the Navy's Commercial Activities Program, CNA noted that about half the competitions were won by the in-house team and that when competitions with no savings were excluded, the savings from contracts awarded to the public sector were 50 percent and those to the private sector were 40 percent.<sup>10</sup> CNA officials concluded that because of competition both sectors were spurred to increase efficiency and reduce costs and DOD achieved greater savings. CNA also concluded that savings would have been less had the public sector been excluded from competition. Likewise, our review of DOD's public-private competition program for depot maintenance determined that such competitions resulted in reduced costs.

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## Private Sector Closely Analyzes Outsourcing Decisions

Facing increasing pressures to maintain market competitiveness, private companies have been reevaluating their organization and processes to cut costs and improve customer service. The most successful improvements include (1) using highly accurate information systems that provide cost, tracking, and control data; (2) consolidating and/or centralizing certain activities; (3) employing various methods to streamline work processes; and (4) shifting certain activities to third-party providers.<sup>11</sup> Each company's overall business strategy and assessment of "core competencies" guide which tools to use and how to use them.

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<sup>10</sup>Analysis of the Navy's Commercial Activities Program, Center for Naval Analyses, July 1993 and Outsourcing and Competition: Lessons Learned From DOD Commercial Activities Programs, Center for Naval Analyses, October 1996.

<sup>11</sup>Reports on this include: Best Management Practices: Reengineering the Air Force's Logistics System Can Yield Substantial Savings (GAO/NSIAD-96-5, Feb. 21, 1996); Inventory Management: The Army Could Reduce Logistics Costs for Aviation Parts by Adopting Best Practices (GAO/NSIAD-97-82, Apr. 15, 1997); Base Operations: Challenges Confronting DOD as It Renews Emphasis on Outsourcing (GAO/NSIAD-97-86, Mar. 11, 1997); Contract Management: Fixing DOD's Payment Problems Is Imperative (GAO/NSIAD-97-37, Apr. 10, 1997); Defense Infrastructure: Enhancing Performance Through Better Business Practices (GAO/T-NSIAD/AIMD-95-126, Mar. 23, 1995); and Financial Management Outsourcing Finance and Accounting (GAO/AIMD/NSIAD-98-43, Oct. 17, 1997).



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Private companies use a variety of approaches to meet their logistics support needs. For example, Southwest Airlines contracts out almost all maintenance, thus avoiding costly investments in facilities, personnel, and inventory. However, in contrast, having already made a significant investment in building infrastructure and training personnel, British Airways reached a different decision about its support operations. While it has sold off and/or outsourced some activities (namely engine repair and parts supply) and improved remaining in-house repair operations, the airline now has become a third-party supplier of aircraft overhaul.

Whether the organization decides to consolidate, reengineer, or outsource activities, or to do some combination thereof, the private firms and consultants with whom we met stressed that identifying and understanding the organization's core activities and obtaining accurate cost data for all in-house operations are critical to making informed business decisions and assessing overall performance. Core activities are those that are essential for meeting an organization's mission.

Before making decisions on what cost-saving options should be used, an organization should develop a performance-based, risk-adjusted analysis of benefits and costs for each option to provide (1) the foundation for comparing the baseline benefits and costs with proposed options and (2) a basis for decisionmakers to use in selecting a feasible option that meets performance goals.<sup>12</sup> The organization should also factor into the analysis the barriers and risks in implementing the options. Thus, the best practice would be to make an outsourcing decision only after a core assessment and comprehensive cost-benefit analysis have been performed rather than to take a blanket approach and outsource everything in a certain area.

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## PA&E Analysis Raises Questions on DSB Savings Estimates

PA&E's analysis of the DSB's estimated \$6 billion in annual logistics savings found that the estimate was overstated by about \$1 billion and that another \$3 billion in projected savings would be difficult to achieve or unlikely to be achieved.<sup>13</sup>

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<sup>12</sup>Business Process Reengineering Assessment Guide (GAO/AIMD-10.1.15, Apr. 1997).

<sup>13</sup>The PA&E estimates have been rounded. PA&E's figures are slightly higher than DSB's because PA&E used 1997 constant dollars. According to PA&E officials, the analysis required a quick turnaround, which limited its scope to considering costing factors such as investment costs and the double-counting of savings. The officials noted that PA&E did the analysis "in the same spirit" as DSB, therefore, it did not question the DSB's underlying assumptions, such as the savings potential from technological improvements or outsourcing.

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According to PA&E officials, DSB's \$6-billion savings estimate was overstated by about \$1 billion because contract administration and oversight costs were understated and one-time inventory savings (spread over 6 years) was claimed as steady state savings. Further, in assessing the degree of difficulty in achieving the savings, PA&E concluded that about \$1 billion would be difficult to achieve, but was possible if Congress changed the required 60/40 public-private split to 50-50, which has since occurred.<sup>14</sup> PA&E also believed that another \$2 billion was unlikely to be saved primarily because of timing and DOD's culture. It did not believe that DOD could carry out the proposals within the DSB's 6-year schedule, if at all.

PA&E's assessment concluded that the remaining \$2 billion of the DSB's \$6-billion savings estimate was achievable or already identified in DOD's future year defense program. PA&E officials defined as achievable those savings that they believed could be realized given DSB's 25-percent savings assumption and the then-current legal restrictions on outsourcing depot maintenance activities. About \$0.2 billion in savings would involve maximizing the use of outsourcing under legislative constraints as they existed at that time, such as the 60/40 rule.<sup>15</sup> The remainder of the achievable savings have already been identified in DOD's future year defense program. Table 2 shows PA&E's revised estimate of the DSB's logistics savings.

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<sup>14</sup>In addition to the 60/40 rule, other relevant statutes that govern depot-level activities have been amended, and new provisions added by the recently enacted 1998 DOD Authorization Act. For example, the 1998 Authorization Act provides for a new section 2460 in title 10, which for the first time would establish a statutory definition of depot-level maintenance and repair. Also, section 2464 of title 10 is amended to provide for the first time a DOD-maintained core logistics capability that is required to be government-owned and government-operated. The provision now requires the performance of core workloads necessary to maintain this capability within the public depots and that these facilities be assigned sufficient workloads to ensure cost-efficient operation and sufficient surge capacity. The impact of these changes remains to be seen.

<sup>15</sup>At the time of the PA&E report, 10 U.S.C. 2466 prohibited the use of more than 40 percent of the funds made available in a given fiscal year for the depot-level maintenance for performance of maintenance activities by nonfederal personnel. The provision has been amended by the 1998 DOD Authorization Act to increase the percentage to 50 percent.

**Table 2: PA&E's Revised Estimate of DSB's Logistics Savings**

| Dollars in billions                  |                |
|--------------------------------------|----------------|
|                                      | <b>Savings</b> |
| DSB                                  | \$6            |
| PA&E                                 |                |
| Understated costs/overstated savings | (1)            |
| Savings hard to achieve              | (1)            |
| Unlikely savings                     | (2)            |
| Achievable savings                   | \$2            |

Source: PA&amp;E.

## Our Analysis Also Raises Questions About DSB Savings Estimates

Our analysis confirms PA&E's conclusion that the DSB's logistics savings estimates are not well supported and are unlikely to be as large as estimated. Specifically, we found that (1) the Board's projected annual savings from reliability improvements are overstated by over \$1 billion; (2) the DSB's 25-percent savings rate from outsourcing appears to be overly optimistic; and (3) DSB, while recognizing it would be difficult to do so, assumed that DOD would overcome impediments that prevent the outsourcing of all logistics functions. We do not know by how much or whether these questions would change the \$2 billion in savings that PA&E concluded were achievable.

## Savings From Reliability Improvements Overstated

In addition to overstating inventory management savings noted by PA&E, the DSB task force overstated its estimate of annual savings from equipment reliability improvements. The Board's estimate of \$1.5 billion in annual savings by year 2002 (6 years from the year of DSB's study) is overstated by at least \$1.2 billion. DSB based its estimate on a Logistics Management Institute (LMI) study that assessed the reductions of operation and support costs that result from improved reliability and maintainability due to technological advancements.<sup>16</sup> Such advancements may include using improved materials and fewer component parts; thus reducing the number of spare purchases and the need for scheduled and unscheduled maintenance. Accomplishing these advancements requires an investment that must be evaluated in light of the expected return on investment.

For its study, LMI assumed an aggressive technology improvement program. For example, it assumed a 9 to 1 return on investment that would

<sup>16</sup>Using Technology to Reduce Cost of Ownership, Volume 1: Annotated Briefing (LG404RD4, Apr. 1996).

accrue over 20 years, with savings starting the second year. Further, it assumed that any given investment would generate a savings stream for at least 10 years. Based on these assumptions and its analysis, LMI concluded that with an annual investment starting at \$100 million and leveling at \$500 million within 5 years, DOD could achieve \$300 million in savings in the sixth year. DOD would not achieve the \$1.5-billion savings that DSB included in its savings estimate until the fourteenth year. Thus, even without questioning LMI's aggressive assumptions, the DSB's savings estimate is overstated by at least \$1.2 billion.

## DSB's Outsourcing Savings Assumption Is Overly Optimistic

DSB assumed that outsourcing all logistics activities would reduce DOD's logistics costs by 25 percent. The Board based this projection on public-private competition studies, industry studies by such companies as Caterpillar and Boeing, and anecdotal evidence. While we believe that savings can be achieved through appropriate outsourcing, these savings are a result of competition rather than from outsourcing itself. The studies DSB cited were primarily for commercial activities—such as base operations, real property maintenance, and food service.<sup>17</sup> As we have reported, these activities generally have highly competitive markets.<sup>18</sup> For some logistics activities, such as nonship depot maintenance, our recent work has shown that competitive markets do not currently exist. To the extent that competitive markets do not exist, the amount of savings that can be generated through outsourcing may be reduced.

As we reported in 1996, 76 percent of the 240 open depot maintenance contracts we examined were awarded noncompetitively (i.e., sole source).<sup>19</sup> More recently, we reported that the percentage of noncompetitive depot maintenance contracts had increased for activities other than shipyards. For the three services, about 91 percent of the 15,346 new depot maintenance contracts awarded from the beginning of fiscal year 1996 to date were sole source.<sup>20</sup> Moreover, the DSB recommended contractor logistics support arrangements for new and modified weapon

<sup>17</sup>Analysis of the Navy's Commercial Activities Program, Center for Naval Analyses, July 1993 and Outsourcing and Competition: Tools to Increase Efficiency (briefing to DSB), Center for Naval Analyses, January 1995.

<sup>18</sup>Defense Depot Maintenance: Commission on Roles and Mission's Privatization Assumptions Are Questionable (GAO/NSIAD-96-161, July 15, 1996) and Navy Maintenance: Assessment of the Public and Private Shipyard Competition Program (GAO/NSIAD-94-184, May 25, 1994).

<sup>19</sup>Defense Depot Maintenance: Commission on Roles and Mission's Privatization Assumptions Are Questionable (GAO/NSIAD-96-161, July 15, 1996).

<sup>20</sup>Defense Depot Maintenance: Challenges Facing DOD in Managing Working Capital Funds (GAO/T-NSIAD/AIMD-97-152, May 7, 1997).

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systems. Our past work demonstrates that most contractor logistics support depot work is sole sourced to the original equipment manufacturer, raising cost and future competition concerns. Furthermore, eliminating the public sector from competition, as advocated by DSB, could further decrease savings.

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### Impediments Limit DOD's Outsourcing of All Logistics Activities

In developing its savings estimates for CONUS logistics, DSB assumed that DOD would outsource all logistics activity. However, certain barriers, including legal and cultural impediments, must be overcome to fully implement DSB's recommendations. While it may be possible to implement DSB's recommendations, in some cases, implementation may require congressional action, and in others, implementation may take substantially longer than DSB's 6-year estimate. We did not quantify how much these impediments will reduce DSB's savings, but consistent with PA&E's analysis, these factors will mitigate portions of the projected savings.

### Legislative Barriers

Although it recommended that essentially all logistics—including material management and depot maintenance, distribution, and other activities—be outsourced, DSB recognized that outsourcing is limited or precluded by various laws and regulations. For example, fundamental to determining whether or not to outsource is the identification of core functions and activities. Section 2464 of title 10 U.S.C. states that DOD activities should maintain the government-owned and government-operated core logistics capability necessary to maintain and repair weapon systems and other military equipment needed to fulfill national strategic and contingency plans.

The delineation of core activities has historically proven to be extremely difficult. For example, proponents of increased privatization have questioned the justification for retaining many support activities as core and have recommended revising the core logistics requirement. Section 311 of the 1996 DOD Authorization Act directed the Secretary of Defense to develop a comprehensive depot maintenance policy, including a definition of DOD's required core depot maintenance capability. While DOD has identified a process for determining core depot maintenance capability requirements, it has not completed its evaluation. Moreover, DOD has not developed a process for identifying core requirements for other logistics functions and activities. Thus, core requirements in these areas are also unknown. The 1998 DOD Authorization Act again requires that the Department identify its core depot maintenance requirements, this time under the new provisions described above.

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Additionally, 10 U.S.C. 2466 states that no more than 50 percent of the depot maintenance funds made available in a given fiscal year may be spent for depot maintenance conducted by nonfederal personnel. This provision, along with other relevant provisions significantly affects DSB's savings estimate because about 50 percent of depot maintenance would not be subject to outsourcing.<sup>21</sup>

Section 2469 of title 10 states that DOD-performed depot maintenance and repair workloads valued at not less than \$3 million cannot be changed to contractor-performed work without using competitive procedures that include both public and private entities.<sup>22</sup> This requirement for public-private competition affects the DSB savings estimate because DSB assumed the requirement would be eliminated. The 1998 DOD Authorization Act also added a new section 2469a to title 10 that affects public-private competitions for certain workloads from closed or realigned installations.

Further, during the congressional deliberation on the 1997 DOD Authorization Act, DOD provided Congress a list of statutory encumbrances to outsourcing, including

- 10 U.S.C. 2461, which requires studies and reports before converting public workloads to a contractor;
- 10 U.S.C. 2465, which prohibits contracts for performance of fire-fighting and security guard functions;
- section 317 of the National Defense Authorization Act for Fiscal Year 1987 (P.L. 99-661), which prohibits the Secretary of Defense from contracting for the functions performed at Crane Army Ammunition Activity or McAllister Army Ammunition Plant;
- 10 U.S.C. 4532, which requires the Army to have supplies made by factories and arsenals if they can do so economically; and
- 10 U.S.C. 2305 (a)(1), which specifies that in preparing for the procurement of property or services, the Secretary of Defense shall specify the agency's needs and solicit bids or proposals in a manner designed to achieve full and open competition.

## Cultural Barriers

DOD officials have repeatedly recognized the importance of using resources for the highest priority operational and investment needs rather than

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<sup>21</sup>As described earlier, the 1998 DOD Authorization Act changed the applicable provisions. For example, a new definition of depot maintenance was added in 10 U.S.C. 2460 that together with the amendment to 10 U.S.C. 2464 will impact DOD's ability to outsource depot maintenance activities.

<sup>22</sup>For these workloads, OMB Circular A-76 does not apply.

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maintaining unneeded property, facilities, and overhead. However, DOD has found that infrastructure reductions, whether through outsourcing or some other means, are difficult and painful because achieving significant cost savings may require up-front investments, the closure of installations, and the elimination of military and civilian jobs. In addition, according to DOD officials, the military services fear that savings achieved from outsourcing would be diverted to support other DOD requirements and may not be available to the outsourcing organization to fund service needs.

DSB recognized DOD's cultural resistance to outsourcing logistics activities and said that overcoming resistance may take some time. DOD has a tradition of remarkable military achievement but it also has an entrenched culture that resists dramatic changes from well-established patterns of behavior. In 1992, we reported that academic experts and business executives generally agreed that a culture change is a long-term effort that takes at least 5 to 10 years to complete.<sup>23</sup> Although a change in DOD's management culture is underway, continual support of its top managers is critical to successful completion of cultural change.

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## Conclusions and Recommendations

We agree with DSB that there are many opportunities for significant reductions in logistics infrastructure costs. However, the Board's projected savings are overly optimistic. Further, savings opportunities from consolidating and reengineering must be considered in addition to outsourcing. Even though the Board recognized that there are impediments to outsourcing, PA&E's and our analyses show that because of such impediments, not all logistics activities can be outsourced. This is particularly true for the legislative barriers—principally, the legislated workload mix between the public and private sectors. Moreover, PA&E's and our analyses show estimating errors of about \$1 billion for contract administration and inventory reductions and another \$1 billion for reliability improvements. These combined adjustments will further reduce the Board's projected savings by another 30 percent.

Notwithstanding the problems with DSB's estimates, DOD's effort to reduce costs and achieve savings is extremely important, and we encourage DOD to move forward as quickly as possible to develop a realistic and achievable cost-reduction program. As discussed in our high-risk infrastructure report, breaking down cultural resistance to change, overcoming service parochialism, and setting forth a clear framework for a

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<sup>23</sup>Organizational Culture: Techniques Companies Use to Perpetuate or Change Beliefs and Values (GAO/NSIAD-92-105, Feb. 27, 1992).

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reduced defense infrastructure are key to effectively implementing savings.

To aid in achieving the most savings possible, we recommend that the Secretary of Defense require the development of a detailed implementation plan for improving the efficiency and effectiveness of DOD's logistics infrastructure, including reengineering, consolidating, outsourcing logistics activities where appropriate, and reducing excess infrastructure. We recommend that the plan establish time frames for identifying and evaluating alternative support options and implementing the most cost-effective solutions and identify required resources, including personnel and funding, for accomplishing the cost-reduction initiatives. We also recommend that DOD present the plan to Congress in much the same way it presented its force structure reductions in the Base Force Plan and the bottom-up review. This would provide Congress a basis to oversee DOD's plan and would allow the affected parties to see what is going to happen and when.

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## Agency Comments

In commenting on a draft of this report (see app. II), DOD said that DSB had considered legal barriers to outsourcing and had expressly sought to identify the savings that could result if they were lifted. As noted in the report, we believe it is unlikely that the legal barriers cited would be lifted within the time frame DSB envisioned. DOD said that actions consistent with our recommendation were underway and there was no need for the recommended plan. Specifically, DOD said that the Secretary of Defense was preparing a more detailed plan for implementing the strategy formulated by QDR.

Subsequently, on November 12, 1997, the Secretary of Defense announced the publication of the Defense Reform Initiative Report. This report contained the results of the task force on defense reform established as a result of QDR. The task force, which was charged with identifying ways to improve DOD's organization and procedures, defined a series of initiatives in four major areas:

- reengineering, by adopting modern business practices to achieve world-class standards of performance;
- consolidating, by streamlining organizations to remove redundancy and maximize synergy;
- competing, by applying market mechanisms to improve quality, reduce costs, and respond to customer needs; and



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- eliminating infrastructure, by reducing excess support structure to free resources and focus on competencies.

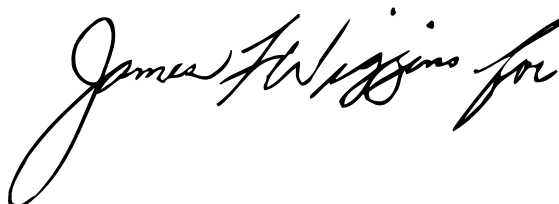
This report is a step in the right direction and sets forth certain strategic goals and direction. However, the intent of our recommendation was that a detailed implementation plan be developed, and we have modified our final recommendations accordingly.

Our scope and methodology are provided in appendix I.

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We are sending copies of this report to interested congressional committees; the Secretaries of Defense, the Army, the Navy, and the Air Force; the Director of the Office of Management and Budget; and interested congressional committees. Copies will be made available to others upon request.

Please contact me at (202) 512-8412 if you or your staff have any questions concerning this report. Major contributors to this report were James Wiggins, Julia Denman, Hilary Sullivan, and Jeffrey Knott. John Brosnan from our Office of General Counsel provided the legal review.



David R. Warren, Director  
Defense Management Issues

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List of Requesters

The Honorable James M. Inhofe  
Chairman

The Honorable Charles S. Robb  
Ranking Minority Member  
Subcommittee on Readiness  
Committee on Armed Services  
United States Senate

The Honorable Neil Abercrombie  
The Honorable Saxby Chambliss  
The Honorable Tillie K. Fowler  
The Honorable James V. Hansen  
The Honorable John N. Hostettler  
The Honorable Ernest J. Istook  
The Honorable Walter B. Jones, Jr.  
The Honorable Solomon P. Ortiz  
The Honorable Norman Sisisky  
The Honorable J.C. Watts, Jr.  
House of Representatives

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## Abbreviations

|       |                                    |
|-------|------------------------------------|
| CNA   | Center for Naval Analyses          |
| CONUS | continental United States          |
| DOD   | Department of Defense              |
| DSB   | Defense Science Board              |
| LMI   | Logistics Management Institute     |
| PA&E  | Program Analysis and Evaluation    |
| QDR   | Quadrennial Defense Review         |
| OSD   | Office of the Secretary of Defense |

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# Scope and Methodology

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The scope of our review was limited to reviewing the Defense Science Board's (DSB) projected \$6 billion annual savings for the continental United States (CONUS) logistics. To determine the basis of DSB's savings estimate and recommendations, we reviewed the two DSB reports that made savings estimates based on outsourcing: Report of the Defense Science Board Task Force on Outsourcing and Privatization, August 28, 1996, and Report of the Defense Science Board 1996 Summer Study on Achieving an Innovative Support Structure for 21st Century Military Superiority: Higher Performance at Lower Costs, November 1996. We discussed the assumptions with task force members and reviewed supporting data that was available to us. We requested DSB task force minutes pertaining to these studies; however, we did not receive them in time to include them in our review.

We reviewed the Center for Naval Analyses (CNA) studies of public-private competitions cited by DSB as well as CNA's more recent studies and discussed those studies with CNA officials. A CNA official said that CNA analysts performed limited testing of the computer-generated data they had used in analyzing the results from the commercial activity competitions. He said that the data was reasonably accurate for the purposes of their studies. We did not independently verify the data used in CNA's studies because we did not rely solely on CNA's studies for our conclusions.

To further evaluate DSB's savings estimates and recommendations we (1) reviewed Program Analysis and Evaluation's (PA&E) analysis and discussed that analysis and conclusions with PA&E officials and (2) reviewed the Logistics Management Institute's (LMI) study, Using Technology to Reduce Cost of Ownership, Volume 1: Annotated Briefing (LG404RD4, April 1996), and discussed the studies' assumptions and conclusions with LMI officials. In addition, we reviewed our past reports and testimony on depot maintenance, public-private competitions, and infrastructure reductions.

To determine other infrastructure savings opportunities for the Department of Defense (DOD), we relied on our past reports and testimony on commercial "best practices," public-private competitions, and depot maintenance. In addition, we also drew on ongoing work on outsourcing practices within the private sector.

We performed our review at the following locations: Logistics Management Institute, Arlington, Va.; DOD's Office of Maintenance Policy,

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**Appendix I**  
**Scope and Methodology**

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Office of Program Analysis and Evaluation; and the Defense Science Board, Washington, D.C. We also had discussions with officials from the Center for Naval Analyses, Alexandria, Va.

We conducted our review in July and August 1997, and, except where noted, in accordance with generally accepted government auditing standards.

# Comments From the Department of Defense



ACQUISITION AND  
TECHNOLOGY

## OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

September 17, 1997

Mr. David R. Warren  
Director, Defense Management Issues  
National Security and International Affairs Division  
U.S. General Accounting Office  
Washington, D.C. 20508

Dear Mr. Warren:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "Defense Science Board's Savings Estimate Is Overly Optimistic," dated August 27, 1997 (GAO Code 709266/OSD Case 1452). The DoD appreciates the GAO's effort and recognition of the benefits of competition and outsourcing to the logistics infrastructure.

The DSB consists of a select group of individuals (from universities, industry, and former civilian and military government leaders) who have knowledge of the subject being studied by the DSB. We ask the DSB to undertake studies in order to get an independent perspective. In this study, the DSB was asked to investigate the savings that could result through the introduction of more competition and outsourcing.

The GAO report states that the DSB overestimates potential savings, noting that the DSB did not take into account the limits to outsourcing imposed by statute or legal barriers. The DSB did note the existence of these barriers and expressly sought to identify the savings that could result if they were lifted. In assessing the DSB's work, the GAO report might also take note of the potential advantages of such changes.

We believe that we are already undertaking actions consistent with those recommended in the report and, hence, do not believe we need to submit an additional plan. The Quadrennial Defense Review formulated a strategic plan across the Department, including logistics functions. The Secretary is now creating a more detailed plan for implementing that strategy as part of the program and budget review this fall. Additionally, Congress receives information and reviews the existing competition and outsourcing program through prior notification of cost comparison studies.

The Department appreciates the opportunity to comment on this draft report.

Sincerely,

John B. Goodman  
Deputy Under Secretary  
(Industrial Affairs and Installation)





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**Appendix II**  
**Comments From the Department of Defense**

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**Appendix II**  
**Comments From the Department of Defense**

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**Appendix II**  
**Comments From the Department of Defense**

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# Related GAO Products

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Air Force Depot Maintenance: Information on the Cost Effectiveness of B-1B and B-52 Support Options ([GAO/NSIAD-97-210BR](#), Sept. 12, 1997).

Navy Depot Maintenance: Privatizing the Louisville Operations in Place Is Not Cost Effective ([GAO/NSIAD-97-52](#), July 31, 1997).

Defense Depot Maintenance: Challenges Facing DOD in Managing Working Capital Funds ([GAO/T-NSIAD/AIMD-97-152](#), May 7, 1997).

Depot Maintenance: Uncertainties and Challenges DOD Faces in Restructuring Its Depot Maintenance Program ([GAO/T-NSIAD-97-111](#), Mar. 18, 1997) and ([GAO/T-NSIAD-112](#), Apr. 10, 1997).

Defense Outsourcing: Challenges Facing DOD as It Attempts to Save Billions in Infrastructure Costs ([GAO/T-NSIAD-97-110](#), Mar. 12, 1997).

Navy Ordnance: Analysis of Business Area Price Increases and Financial Losses ([GAO/AIMD/NSIAD-97-74](#), Mar. 14, 1997).

High-Risk Series: Defense Infrastructure ([GAO/HR-97-7](#), Feb. 1997).

Air Force Depot Maintenance: Privatization-in-Place Plans Are Costly While Excess Capacity Exists ([GAO/NSIAD-97-13](#), Dec. 31, 1996).

Army Depot Maintenance: Privatization Without Further Downsizing Increases Costly Excess Capacity ([GAO/NSIAD-96-201](#), Sept. 18, 1996).

Navy Depot Maintenance: Cost and Savings Issues Related to Privatizing-in-Place the Louisville, Kentucky, Depot ([GAO/NSIAD-96-202](#), Sept. 18, 1996).

Defense Depot Maintenance: Commission on Roles and Mission's Privatization Assumptions Are Questionable ([GAO/NSIAD-96-161](#), July 15, 1996).

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

Defense Depot Maintenance: More Comprehensive and Consistent Workload Data Needed for Decisionmakers ([GAO/NSIAD-96-166](#), May 21, 1996).

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**Related GAO Products**

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Defense Depot Maintenance: Privatization and the Debate Over the Public-Private Mix ([GAO/T-NSIAD-96-146](#), Apr. 16, 1996) and ([GAO/T-NSIAD-96-148](#), Apr. 17, 1996).

Military Bases: Closure and Realignment Savings Are Significant, but Not Easily Quantified ([GAO/NSIAD-96-67](#), Apr. 8, 1996).

Depot Maintenance: Opportunities to Privatize Repair of Military Engines ([GAO/NSIAD-96-33](#), Mar. 5, 1996).

Closing Maintenance Depots: Savings, Personnel, and Workload Redistribution Issues ([GAO/NSIAD-96-29](#), Mar. 4, 1996).

Navy Maintenance: Assessment of the Public-Private Competition Program for Aviation Maintenance ([GAO/NSIAD-96-30](#), Jan. 22, 1996).

Depot Maintenance: The Navy's Decision to Stop F/A-18 Repairs at Ogden Air Logistics Center ([GAO/NSIAD-96-31](#), Dec. 15, 1995).

Military Bases: Case Studies on Selected Bases Closed in 1988 and 1991 ([GAO/NSIAD-95-139](#), Aug. 15, 1995).

Military Base Closure: Analysis of DOD's Process and Recommendations for 1995 ([GAO/T-NSIAD-95-132](#), Apr. 17, 1995).

Military Bases: Analysis of DOD's 1995 Process and Recommendations for Closure and Realignment ([GAO/NSIAD-95-133](#), Apr. 14, 1995).

Aerospace Guidance and Metrology Center: Cost Growth and Other Factors Affect Closure and Privatization ([GAO/NSIAD-95-60](#), Dec. 9, 1994).

Navy Maintenance: Assessment of the Public and Private Shipyard Competition Program ([GAO/NSIAD-94-184](#), May 25, 1994).

Depot Maintenance: Issues in Allocating Workload Between the Public and Private Sectors ([GAO/T-NSIAD-94-161](#), Apr. 12, 1994).

Depot Maintenance ([GAO/NSIAD-93-292R](#), Sept. 30, 1993).

Depot Maintenance: Issues in Management and Restructuring to Support a Downsized Military ([GAO/T-NSIAD-93-13](#), May 6, 1993).

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**Related GAO Products**

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Air Logistics Center Indicators ([GAO/NSIAD-93-146R](#), Feb. 25, 1993).

Defense Force Management: Challenges Facing DOD as It Continues to Downsize Its Civilian Workforce ([GAO/NSIAD-93-123](#), Feb. 12, 1993).

Navy Maintenance: Public-Private Competition for F-14 Aircraft Maintenance ([GAO/NSIAD-92-143](#), May 20, 1992).

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