IMPROVING DEFENSE INVENTORY MANAGEMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE

OF THE

COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT HOUSE OF REPRESENTATIVES

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IMPROVING DEFENSE INVENTORY MANAGEMENT

THURSDAY, MARCH 20, 1997

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE,
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:40 a.m., in room 2154, Rayburn House Office Building, Hon. J. Dennis Hastert (chairman of the subcommittee) presiding.

Present: Representatives Hastert, Souder, Shadegg, Barrett, and Maloney.

Staff present: Robert Charles, staff director and chief counsel; Jim Wilon, defense counsel; Andrew Richardson, professional staff member; Ianthe Saylor; clerk; and Mark Stephenson, minority professional staff member.

Mr. HASTERT. Good morning. Thank you all for coming. The Subcommittee on National Security, International Affairs, and Criminal Justice will come to order.

Today, we have our first hearing on defense inventory management, a subject which will occupy our attention through the whole 105th Congress. Proper defense inventory management is crucial to America, because it relates to two of the most important functions of our Government: maintaining the strength as well as the readiness of the U.S. armed forces and ensuring that we spend the American taxpayers' money responsibly and effectively.

Our oversight of the Defense Department in general and defense inventory management in particular will consist of regular public hearings supported by a series of ongoing investigations. This sustained effort will be designed to identify more modern and efficient inventory management practices and ensure that they are fully implemented by the Department of Defense.

By doing this, we will be able to free up defense dollars for procurement, research and development, combat training, and other military readiness priorities. One thing is absolutely clear: There is the potential for enormous savings here. GAO recently estimated that DOD presently holds almost $70 billion worth of inventory, of which they say roughly $35 billion worth of that inventory is not needed.

According to GAO, this unneeded inventory results, at a minimum, in a bill to the American taxpayer of hundreds of millions of dollars for unnecessary storage each year. Even now, DOD is continuing to purchase more inventory than it really needs.

While DOD disagrees with some of the GAO's conclusions, the Department recognizes that it is holding billions of dollars worth of excess inventory. This inventory is sometimes difficult to dispose of properly, but doing so is absolutely necessary. More, the American taxpayer deserves that kind of action.

Speaking more broadly, we must remember that in recent years, as the U.S. military has been severely downsized, the combat forces, which you might call the military's "tooth," have suffered much more than the supporting infrastructure, or what we might call the "tail." Both DOD and Congress are committed to improving the "tooth-to-tail ratio," and DOD knows that inventory management is one part of the tail where a great amount of money may be saved.

One way to save money is to learn from private enterprise. American businesses have developed many modern and sophisticated methods of inventory management which ensure quick delivery and also save money. Many of these methods, like just-in-time delivery, supplier parts, and prime vendor contracts, can be applied to DOD's operations and tailored to the need for military readiness.

The Defense Department also can benefit from adopting more modern accounting and information management systems, which will increase visibility and accountability over all inventory and purchases.

Finally, DOD can privatize or outsource more supply and maintenance needs. Functions which have historically been performed by DOD personnel could often be done better and cheaper by private companies. Reforming defense inventory management will almost certainly result in a significant downsizing of DOD's logistic infrastructure, and thousands of DOD personnel could be affected.

Even as we improve our readiness, or the military's combat tooth, we must move forward gradually.

I now recognize the ranking member, Mr. Barrett of Wisconsin, for his opening statement.

Mr. BARRETT. Thank you, Mr. Chairman. I am glad that you have called this hearing on inventory management at the Department of Defense. It is an area in which it appears considerable savings could be achieved. These savings are desperately needed in this time of ever increasing budgetary pressures.

The Defense Department accounts for almost half of all discretionary spending, and if we are to make wise choices about the allocation of resources in other areas of discretionary spending, programs which protect the health and safety of our citizens, preserve our social safety net for the most needy, and make investments in our Nation's infrastructure, it is vital that the Defense Department be run in the most efficient manner possible.

I am distressed both by the magnitude of the inventory management problem at DOD and by the length of time it has existed. DOD currently has a secondary inventory valued at $67 billion. Of that amount, it is reported that a staggering $41.2 billion of inventory is not needed to support war reserves or operating requirements, and almost $15 billion of the unneeded inventory will likely never be used.

This is a shocking and totally unacceptable waste of taxpayer dollars, made all the worse by the fact that these problems have existed for a long time.

So, Mr. Chairman, I am very glad that you have called this hearing today. I understand that you plan to hold a number of additional hearings on this issue, and I look forward to working with you and the Department of Defense to eliminate this monumental waste of precious resources. Thank you.

Mr. HASTERT. I thank the ranking member, and at this time I would like to ask our first panel to come forward. Now, from the Department of Defense we have the Honorable James Emahiser, Assistant Deputy Under Secretary of Defense for Materiel and Distribution Management; and Mr. Jeffrey Jones, Executive Director for Logistics Management in the Defense Logistics Agency.

Gentlemen, welcome, and if you would please rise and raise your hand and take the oath.

[Witnesses sworn.]

Mr. HASTERT. Let the record show that the witnesses responded in the affirmative, and, Secretary Emahiser, would you please begin your testimony.

STATEMENTS OF JAMES B. EMAHISER, ASSISTANT DEPUTY UNDER SECRETARY OF DEFENSE FOR MATERIEL AND DISTRIBUTION MANAGEMENT; AND JEFFREY A. JONES, EXECUTIVE DIRECTOR FOR LOGISTICS MANAGEMENT, DEFENSE LOGISTICS AGENCY

Mr. EMAHISER. Mr. Chairman, members of the committee, and staff, thank you for the opportunity to appear before you today to discuss the Department of Defense's inventory management program and the initiatives we have underway to increase efficiency while maintaining support to the war fighter's needs. I would like to enter into the record my written statement responding to the four questions in your letter of invitation and make a brief oral statement.

Mr. HASTERT. Without objection, it is entered into the record.

Mr. EMAHISER. The DOD inventory management system affects every soldier, sailor, airman, and Marine and is crucial to their ability to perform their peacetime and wartime roles. Our inventory management system exists to support the war fighter and maintain readiness. Our gaol is to continue to support war-fighter requirements while executing our stewardship responsibility to the taxpayers.

In keeping with our acknowledgement in the DOD Logistics Strategic Plan that DOD infrastructure must be reduced in parallel with force structure, the Department has aggressively pursued inventory reduction since 1990. This first chart—and I draw your attention to the charts to your right—displayed shows that in constant 1995 dollars, the inventory has gone from $107 billion in 1989 to $67 billion in 1996, a 37 percent reduction over 7 years, and is forecast to decrease to $48 billion in 2003, a reduction of 55 percent.

The second chart displayed shows that 73 percent of DOD inventory by dollar value is repairable items. These are relatively expensive items, such as engines and avionics, that are used, returned

for repair, and then reissued. Measured in dollar value, DOD inventory tends to be inventory that has been used. Only 27 percent of the inventory is in consumable items, which are items expended or used up beyond recovery in the use for which they were designed or intended. This chart also shows that the bulk of DOD's inventory characterized as "inactive," that is, neither projected to be used in the next 2 years nor authorized war reserves, is primarily composed of repairable items.

The third chart shows one result of inventory reduction: actual and projected decreases in the DOD distribution depots. From 30 depots in 1991 through a projected decrease to 19 by 2003.

Mr. HASTERT. Could I interrupt?

Mr. EMAHISER. Yes.

Mr. HASTERT. Would you place the mic a little bit closer? We are missing some of your testimony.

Mr. EMAHISER. The final chart shows reductions in storage space. We are reducing storage capacity from 788 million cubic feet in 1992 to 411 million cubic feet by 2003, a 52 percent projected reduction. We are also reducing our occupied storage area from 631 million cubic feet in 1992 to 368 million in 2003, a projected 58 percent reduction.

It is crucial to note that inventory reductions are actually exceeding force structure reductions. Between 1990 and 1996, force structure reductions were approximately 30 percent. By contrast, in the same period, inventory reductions, as measured in constant 1995 dollars, were 35 percent. Planned force structure reductions continue through 2000, when the reduction for the 1990 base will exceed 32 percent but inventory during that same timeframe will amount to 46 percent overall reduction.

To accomplish the inventory reductions thus far, the DOD has implemented a series of aggressive initiatives. We are reducing cycle times such as it takes to fill a requisition. We are making greater use of existing inventory initiatives through such things as Total Asset Visibility in order to reduce the need to buy new inventory. We are retaining less materiel and disposing of more materiel that is no longer required.

Finally, we are significantly increasing our use of commercial logistics support capabilities, ranging from Prime Vendor for food and medical supplies and Virtual Prime Vendor for hardware items. We have also increased local purchase authority and are making greater use of the Government purchase card in order to meet our materiel requirements without bringing items into the DOD inventory.

Virtual Prime Vendor represents our effort to enhance supply support to depot maintenance activities by incorporating the best commercial logistics practices as identified by the successful bidders. The pilot site at Warner-Robbins Air Logistics Center initiated Virtual Prime Vendor in January 1997. Contractor proposals are being requested through a broad agency announcement for Air Logistics Centers as well as Army and Navy maintenance activities.

In another initiative to modernize our processes, we have contracted with Caterpillar and Andersen Consulting to benchmark our inventory management practice and performance against the

private sector. We intend to use the results of this study to further increase responsiveness and efficiency.

The Department of Defense is both proud of the progress we have made in reforming DOD inventory management and committed to further improvements. We are confident that management improvements, ambitious deployment of technology advances, and our expanded use of commercial logistics support capabilities will enable us to continue progress in this area.

We appreciate the interest of the subcommittee in defense inventory management and reform and look forward to working with you in the future to ensure success in this crucial area.

Thank you for your interest and support, and I will be glad to respond to any of your questions.

[The prepared statement of Mr. Emahiser follows:]

The Assistant Deputy Under Secretary of Defense for Materiel and Distribution Management
James B. Emahiser

Mr. Chairman, Members of the Committee, and staff, thank you for the opportunity to appear before you today to discuss the Department of Defense's inventory management program and the initiatives we have underway to increase efficiency while maintaining support to the war fighter's needs. In response to your specific requests in the letter of invitation, I will provide: (1) a brief historical overview of defense inventory management issues; (2) a discussion of significant measures taken by DoD in recent years to improve inventory management, and the effectiveness of those measures; (3) a summary of the relation of DoD inventory management reform to the ongoing logistics and infrastructure review within the congressionally mandated Quadrennial Defense Review; and (4) suggested legislative or policy reforms to improve DoD inventory management.

OVERVIEW OF DEFENSE INVENTORY MANAGEMENT ISSUES

The DoD inventory management system affects every soldier, sailor, airman, and Marine—and is crucial to their ability to perform their peacetime and wartime roles. DoD inventories of secondary items--defined as spare parts to support weapons systems as well as personnel support

commodities such as subsistence, medical materiel, and clothing-- increased substantially during the 1980's. This growth was a direct result of effort to eliminate the "hollow forces" of the late 1970's, which led to planes that could not fly and other weapons systems that could not function due to lack of spare parts. This inventory growth was fully supported by Congress and necessary to provide the forces with the readiness and capabilities demanded by a global war scenario.

Force modernization resulted in significant inventory growth as parts were purchased to support new weapons systems. With the fall of the Berlin Wall in 1989, the ensuing collapse of the Soviet Union and the end of the Cold War, changes in national defense strategy led to a comprehensive program to resize our inventories while maintaining readiness. An indication of the importance of this review is found in the fact that in the post-Cold War era, the defense budget has declined from over $360 billion to $250 billion in 1996 (using FY 96 dollars). These reductions have had dramatic impacts throughout the Department and have prompted realignment and new approaches to logistics support.

Before we move on to discuss the measures we have taken to improve DoD inventory management, I should give additional background on the DoD inventory management system. First, it is crucial to note that most of

the dollar value of the DoD inventory – 73 percent – consists of relatively expensive reparable items such as engines and avionics that are used, returned for repair, and then reissued. Measured in dollar value, Defense inventory tends to be inventory that has been used. However, since reparable items are used over and over, expenditures for new reparable items are only one-third of total DoD wholesale obligations. The remaining two-thirds of wholesale obligations are for consumable items, defined as items that are normally expended or used up beyond recovery in the use for which they are designed or intended.

A recent GAO report which has received much press attention estimated that $41 billion of DoD inventory is "unneeded". DoD does not agree with that GAO estimate. In the year for which GAO provided their estimate (end of FY 1995 data), DoD inventory was valued at $69.6 billion. Of that amount, $51.8 billion was either authorized war reserves, materiel in transit, or materiel estimated to be used within 2 years—the DoD definition for "active inventory". An additional $17.5 billion was materiel not anticipated to be used in the next two years, but for which a future use is anticipated. For this portion of the inventory, categorized as economic retention and contingency retention stock, the judgment has been made that either it is more economical to retain the inventory than to dispose of it and

reprocure at a later time, or that it is required for readiness. In other words, some future need is anticipated for $69.3 billion of the total $69.6 billion inventory. Finally, $300 million of the inventory is categorized as "potential reutilization/disposal" stock, meaning it fits none of the categories above and is awaiting disposal action.

SIGNIFICANT MEASURES TAKEN TO IMPROVE DOD INVENTORY MANAGEMENT

This leads us to the second question in your invitation letter — the significant measures taken by DoD in recent years to improve inventory management, and the effectiveness of those measures. The Department has aggressively pursued inventory reduction since 1990. In constant 1995 dollars, the inventory has gone from $107 billion in 1989 to $67 billion in 1996, a 37 percent reduction over seven years, and is forecast to decrease to $48 billion in 2003 — a reduction since 1989 of 55 percent. In then-year dollars, DoD inventory was $91 billion at the end of FY 1989 and is $68 billion at the end of FY 1996 and is forecast to decrease to $58 billion by FY 2003.

It is crucial to note that inventory reductions are actually exceeding force structure reductions. Between 1990 and 1996, force structure

reductions were just under 30 percent. By contrast, in the same period, inventory reductions as measured in constant FY 1995 dollars were 35 percent. Planned force structure reductions continue through 2000, when the reduction from the 1990 base will amount to just over 32 percent. By contrast, inventory reduction by 2000 will amount to 46 percent measured against the 1990 base.

To accomplish the inventory reductions thus far, the DoD has implemented a series of aggressive initiatives: We are reducing cycle times, such as the time it takes to fill a requisition, in order to reduce the need to hold "just-in-case" inventory. We are making greater use of existing inventory through initiatives such as Total Asset Visibility in order to reduce the need to buy new inventory. We are retaining less materiel and disposing of more materiel that is no longer required. Finally, we are significantly increasing our use of commercial logistics support capabilities in order to meet our materiel requirements.

The DoD Logistics Strategic Plan, which was originally issued in July 1995 and has been updated twice, provides a framework acknowledging that DoD infrastructure must be reduced in parallel with the force structure. The General Accounting Office has reviewed the Plan and given it high marks.

A guiding principle of the Plan is that the cost and "footprint" of logistics support must be reduced substantially without reducing readiness.

For example, reducing logistics cycle times is a primary goal of the Plan. Each Military Service has implemented its own initiative to achieve these reductions. Through Army's Velocity Management, Navy's Expeditionary Logistics, Air Force's Lean Logistics, and the Marine Corps' Precision Logistics, efforts are underway throughout the Department to reduce cycle times and improve responsiveness to user requirements. In a basic measure of responsiveness, the time elapsed between issuance of a customer order and satisfaction of that order – known as Logistics Response Time – improved by 15 percent in 1995. By September 1997, our goal is to reduce Logistics Response Time by one-third compared to two years earlier, and we have every hope of meeting that goal. Faster response to customer requirements both improves efficiency and reduces the "just-in-case" stocks maintained by DoD customers to protect against longer response times.

Another way to reduce inventory is through more efficient utilization of existing assets in order to reduce the need to buy more. Our Joint Total Asset Visibility program seeks process improvements designed to maximize use of assets throughout the supply system. Total Asset Visibility refers to a combination of systems enhancements and business rules that allow

managers to gather information about the quantity, location, and condition of assets anywhere in the supply system and apply that information to fill customer orders without having to initiate new purchases. By ensuring maximum use of existing inventory, we reduce our requirement to buy more.

To enhance Total Asset Visibility, the Defense Distribution Standard System (DSS) has been implemented at 11 wholesale distribution depots. DSS provides enhanced tools for improving asset accuracy and control, improves the operating efficiency of depots, supports intransit Total Asset Visibility by allowing use of automated information technology devices, from bar codes to radio frequency tags and optical memory cards, to continuously update the Joint Total Asset Visibility database. By September 1998, DSS will be deployed in all wholesale distribution depots.

In addition to reducing cycle times and making greater use of existing inventory, the Department is retaining less inventory. We have increased disposals of materiel that is no longer required. We have also lowered inventory retention levels – the amount of stock that can be retained in inventory based on anticipated usage.

The last major method of reducing DoD's inventory is greater reliance on commercial logistics support capabilities. The Department is

relying upon a series of initiatives to increase the use of commercial practices and distribution systems to satisfy our materiel requirements. These initiatives include Direct Vendor Delivery and Prime Vendor programs. The Defense Logistics Agency (DLA), the Department's commodity manager for nearly all consumable items, has taken the lead in these efforts. In those programs, suppliers deliver products directly to DoD customers and bypass DoD's warehousing and distribution system, thus reducing storage and transportation requirements. Day-to-day food-purchasing decisions have moved from supply center managers to individual customers. Troops in garrison now eat the same commercial food items that are served in restaurants and hotels. As a result fo these changes, military food-service operations are obtaining consistent, competitive prices and deliveries within 48 hours. DLA's inventory of subsistence items has been reduced by 76 percent, its cycle time by 93 percent and its operating costs by 31 percent. To date, emphasis has been on support to U.S. bases, but we are now working on using similar methods to support overseas garrison troop feeding.

In the area of medical distribution, we support one of the largest hospital systems in the world. Hospitals can now order brand-specific pharmaceuticals and medical supplies electronically from their "prime

vendors." Items are delivered within 24 hours instead of weeks. By relying more on commercial vendors, DLA has reduced its inventory of medical supplies by 55 percent.

With these two examples, let me also state that the Department of Defense has a primary commitment to military readiness and sustainment. While significant inventory reductions have been possible these categories of materiel using commercial distribution systems, all inventories cannot be eliminated. The Department continues, for example, to stock rations for surge and sustainment in contingencies. Similarly, some types of medical supplies that could be required in large quantities in likely combat zones are not in wide commercial trade in the U.S. Therefore, some stockage will continue to be required. In cases where industrial capacity exists, it is our practice to incorporate readiness and surge provisions into contracts, so that requirements under all conditions can be met with minimal reliance on DoD inventories.

The Department is also moving aggressively in other areas to expand the use of commercial logistics support capabilities to meet our materiel requirements. We have revised DoD regulations to grant greater authority to buy from local commercial suppliers rather than through the central supply system when such purchases provide the best value. By empowering

our field activities to choose "best-value" sources for commercially available products, we reduce response times and administrative costs while limiting the role of our central supply system to those cases where it really adds value—such as weapon-system related items and other cases where we can leverage our DoD-wide buying power.

We have also issued policy to encourage use of the Government purchase card for buys of commercial items up to $2500. A series of studies have shown that using the purchase card provides substantial administrative savings and reduces response times to customers for common-use items. The Navy has reduced its supply budget by $20 million due to efficiencies gained by increased use of the purchase card. The Army Audit Agency reports savings of $92 per purchase by using the purchase card. We are rapidly moving toward buying common-use, commercially available items – such as office supplies and base maintenance items -- at the local base using the Internet and the Government purchase card to obtain delivery directly to the end user in a few days, rather than maintaining multiple levels of inventory of such items within the Department. The success of these initiatives is demonstrated by the nearly 80 percent increase in DoD use of the Government purchase card from Fiscal Year 1995 to Fiscal Year 1996—from just under 800 hundred million dollars to more than $1.4 billion. We

anticipate further substantial increases in the future as we seek to maximize our use of commercial sources and distribution systems for common-use, commercially available items.

In addition, we are now moving to maximize use of commercial logistics support capabilities for maintenance depot requirements for weapons system repair support. Known as "Virtual Prime Vendor", this initiative solicits private sector proposals for enhanced supply support to depot maintenance activities by employing "best practices" from the commercial world. The pilot site is the Avionics/Electronic Warfare Shops at Warner Robins Air Logistics Center, which initiated Virtual Prime Vendor in January 1997. Contractor proposals are being requested for other Air Logistics Centers as well as Army and Navy maintenance activities. Virtual Prime Vendor offers the Department the opportunity to thoroughly test and assess the most advanced commercial logistics practices and determine their applicability throughout the DoD logistics system.

Another commercial logistics support initiative in the maintenance area is the Navy's Power by the Hour initiative, which provides powerplant maintenance support to Government owned aircraft engines in return for payment of established fees generated from the use of that engine. Services

available from the commercial provider may take the form of any combination of logistics, engineering, technical and maintenance support.

The impact of our initiatives to modernize our logistics processes is demonstrated in measures beyond inventory figures. In addition to significantly reducing its inventory since 1989, DoD has eliminated 38 distribution facilities, reduced storage capacity by 42 percent and reduced depot personnel by 35 percent. We expect additional infrastructure benefits from realigning Inventory Control point responsibilities. Since 1991, the Army has gone from 6 Inventory Control Points to 4, and: Navy from 2 to 1. DLA has gone from 6 to 5, and will reduce to 4 in 1999. Air Force will reduce from 5 to 3 in 2001.

Storage capacity was reduced from 788 million cubic feet in 1992 (when DLA was designated as wholesale distribution manager for the Department) to 568 million cubic feet in 1995—a 29 percent reduction in just three years. Occupied storage area was reduced from 631 million cubic feet to 395 million cubic feet in that period—a 37 percent reduction in three years.

DLA reduced distribution personnel by 21 percent between 1993 and 1996—from 22,000 to 17,300. Further reductions in storage capacity,

occupied storage area, and distribution personnel are scheduled annually over the next five years.

RELATION OF DOD INVENTORY MANAGEMENT TO QDR

This brings us to the third issue in your invitation letter —the relation of DoD inventory management reform to the ongoing logistics and infrastructure review within the congressionally mandated Quadrennial Defense Review. The best example of this relationship is in the area of expanded use of commercial logistics support capabilities, such as those discussed above. The analysis of the cost avoidance made possible by continuing and expanding these ongoing initiatives will be a key element of the recommendations to be made by the Logistics task force of the Infrastructure Panel. These recommendations are among those to be forwarded later this month to the Secretary for his review. The DoD report to Congress in fulfillment of the statutory requirement is due by May 15.

SUGGESTED LEGISLATIVE OR POLICY REFORMS

Finally, your invitation letter asked about suggested legislative or policy reforms to improve DoD inventory management. Our assessment of DoD inventory management reform progress does not indicate a need for

new legislation. We believe we have sufficient authority to continue our progress in reforming Defense inventory management. We look forward to working with you as future requirements emerge that may call for legislative relief.

SUMMARY

The Department of Defense is both proud of the progress we have made in reforming DoD inventory management, and committed to further improvements. The inventory reduction of 37 percent between 1989 and 1996 (from $107 billion to $67 billion measured in constant 1995 dollars) indicates our commitment in this area. Our projection of a further reduction to $48 billion by 2003 (again in constant 1995 dollars) establishes an ambitious target for the future. Our inventory drawdown is not only on track with force structure reductions; it actually exceeds those reductions. We are confident that management improvements, ambitious deployment of technological advances, and our expanded use of commercial logistics support capabilities will enable us to continue our progress in this area. And we must continue this progress in order to continue to support war fighter requirements while executing our stewardship responsibility to the taxpayers to get the biggest bang from every buck. We appreciate the

interest of the Subcommittee in Defense inventory management reform, and look forward to working with you in the future to ensure success in this crucial area. Thank you for your interest and support.

Mr. HASTERT. Thank you. Mr. Jones.

Mr. JONES. Thank you, Mr. Chairman. I will make mine very short.

I want to echo Mr. Emahiser's thanks to the committee for the opportunity to be here today. GAO will testify after we do, and as they go through their report and their discussion, I would ask you to bear in mind a few facts. Our role is combat support. It is not to make sales. Lives are at stake in what we do.

The GAO has made some astute observations from time to time, and some of those have led to changes in the way we do business in the Department, and we understand their role and appreciate their role very much. But it does not serve this discussion well to have some of the facts presented this morning as facts, and I will give you the example of the 100-year supply of parts, and I can explain that later if you would like to.

Billions of dollars could, in fact, be wasted by throwing away the inventory that we have on hand. Even though we may not have bought it for the right reasons, looking backward historically, we certainly bought it for the right reasons at the time. For the 2 cents that we get on the dollar for throwing away inventory through the disposal system, the cost of buy-back would be extremely expensive.

We have made mistakes. There is no doubt about it. We are sensitive to that, and we plan to take all kinds of corrective action, as Jim has said, to make sure we minimize the number of mistakes we make in the future.

DOD logisticians are on the front lines to support any contingency. We agree with using commercial sector practices, and we agree with bringing the commercial sector into our business and letting them do our business where they can, and we have several examples that we can bring out today in more discussion about how we have done that. But the parallels do end rather quickly in some areas.

Our national strategy now is much more of a get-up-and-go than it ever has been. We have to be prepared on day one to support our forces. Leaner is better, but leaner has to be extremely capable; it cannot just be smaller. We cannot restructure the logistics system without permission from others. We need BRAC; and as you saw, the last chart on the depot drawdown, that has been accomplished through base realignment and closure, with the help of the Congress.

That is how we do that, and reducing inventory is part of the equation, but it is not the answer to reducing our facilities. The environment that we work in is not stable. Optempo changes. The amount of engagement changes constantly. National policy changes constantly. We make decisions with the best information we have at the time, and we make every attempt to make the right decision, but given the instability of the environment, some decisions can be judged wrong in retrospect, and that is true.

I would like to have a productive discussion today. I think this is a good opportunity to lay out some of the issues for the record, but there is a high risk in assuming there is a large savings to be made in inventory. There are no recommendations in this report. GAO does not recommend that we dispose of the inventory that

they claim is unneeded. We will dispose of some of it, but we will try to dispose of it responsibly, looking at the cost to dispose versus the cost of repurchasing.

We will close more warehouses. We will probably come to the Congress and ask for permission to do that, assuming that the Department decides that it wants another round of BRAC. That decision has not been made.

There is lots of data—and I will repeat that—lots of data saying that disposing items, once bought, without considering the potential for their reuse in the future wastes money, and I cannot overemphasize that.

I will finish right now by saying that lives depend upon our being right in the Department of Defense. We want to be efficient. Believe me, inventory is not fun to manage. Improvements can be made, and we are making them as quickly as we can, given the broad responsibility and the shared responsibility across the Department and the various different missions of the services and agencies.

We agree with the GAO on many items. We agree with a lot of their instincts. We do not always agree with the way they do their analysis, but we have to be careful that we do not get ourselves in the position where we have to tell a sailor, or an airman in this case, "Sorry, the C–135 wing spar is not a popular item. We do not carry it anymore."

That is all I have. Thank you, Mr. Chairman.

Mr. HASTERT. Thank you.

Mr. Emahiser, in your explanation, could you walk through with us one more time what is—you called "reused equipment"? For example, let's say you take an engine or components off an F–14 and you rebuild that engine and you replace that engine with something that you had in inventory. Once that engine is rebuilt, then it goes into inventory. Is that what you are saying?

Mr. EMAHISER. Basically, sir, you are correct. The what we would call "repairable items," engines, are——

Mr. HASTERT. Repairable.

Mr. EMAHISER [continuing]. Repairable. They can be repaired——

Mr. HASTERT. Repairable. All right, yes.

Mr. EMAHISER [continuing]. In the commercial system. When they are brought into the inventory, the planning is such that that is how we are going to maintain that engine or transmission. When it is broken, we bring it into the depot system, or we put it into a commercial contractor where it is repaired and then once repaired, brought back into the inventory for reuse again.

Many of our engines and transmissions go through that cycle five, six, eight times over their life span, and so that is why they are more expensive in general than consumable items, items like spark plugs that are used up and thrown away once what they are bought for, their useful life, expires. But you are correct. That is what a repairable item is. It is used, broken, fixed, put back into the inventory, and reissued.

Mr. HASTERT. So let's take an F–15 or an F–14, whatever we are using here, and saying that that piece of equipment has an engine or several engines in it; it is part of the plane. There may be one

or two engines in inventory to back up every plane that we have. Is that correct?

Mr. EMAHISER. I cannot tell you, in all honesty, how many engines there are in the inventory that would back up the F–15 or the F–18, but there would be several engines in the inventory to support the fleet of aircraft, and there would be a computation that the Navy or the Air Force would go through to decide how many engines need to be brought into the inventory to support the readiness of that aircraft fleet.

Mr. HASTERT. Well, I mean, let's back up here a minute. If, in fact, and I am just conjecturing, but if, in fact, that there are two engines to back up every airplane and that is needed, or if there are 1,000 engines to back up 1,500 airplanes or something, I think that is something that you ought to have a handle on.

Mr. EMAHISER. I personally do not know——

Mr. HASTERT. Well, I would like some written answers——

Mr. EMAHISER. OK.

Mr. HASTERT [continuing]. To those types of questions, and we will submit those to you.

Mr. EMAHISER. All right.

Mr. HASTERT. Mr. Jones, you cautioned us to go slow here and make sure that what we are counting is what we are really counting. In my opening statement, I said that we need to use just-in-time philosophy and some of these things that are being practiced in the private sector. Just to preface what—so to set the stage for what the GAO may say later, what is practical and what is not practical in those types of situations, in your opinion? Again, pull that mic up as close as possible.

Mr. JONES. Yes, I will do it. Is that good enough?

Mr. HASTERT. Yes.

Mr. JONES. Well, let me give you two examples, Mr. Chairman. Let me give you the example of maintenance process in the Department versus manufacturing process. We hear that Toyota or Honda or Chrysler or Ford has a just-in-time inventory process. As a matter of fact, when there is a strike in the parts business, they bring their production line to a halt.

The difference between that process and what we do in repair is that most of our repair, a lot of our repair is inspect and replace, inspect and repair. Until we open up the item, we do not know what is going to be needed.

Now, clearly, if you have a programmed overhaul, there are some things you can predict, and there other things that you cannot predict until you open the boxes. So one of the examples that frequently gets miscarried is that the manufacturing example being applied to the Department does not fit exactly because we do not know exactly what the production is going to be. Am I making myself clear?

It is sort of like taking your television to the repair shop, and you do not know what it is going to cost to fix it until they open it up and look at it. So there are some limits there that are real limits on how we can do just in time.

The other one is in the commodity areas that we manage in the Defense Logistics Agency. When we went to the Prime Vendor Program, we looked at the market and said, where is the market in

managing various different commodities? We found that there was a robust market out there delivering pharmaceuticals to hospitals, and we were not taking advantage of that, and that made no sense, and anybody that would have criticized us for not using that capability would have been correct.

So we went out, and we basically worked contracts with vendors to allow pharmaceutical products to be delivered directly to our customers on a just-in-time basis. Now, there is one twist in this, and if I can just summarize quickly, and that is that we still have storage requirements for wartime, so we had to work with our vendors to be able to exact from them an increased production volume in order to meet the kinds of requirements that we would have if we were suddenly to deploy or if we had to suddenly take twice the volume to a ship that was about to sail from port.

So there were a lot of things we had to do even in that area of highly commercial business in order to be able to make it work; and the further you get away from commercial items, the harder it is to apply those principles, but we are trying, and that is exactly the challenge before us.

Mr. HASTERT. Mr. Emahiser, what is the value of DOD's inventory at this time and how much of that, in your opinion, is excess?

Mr. EMAHISER. The current value of the DOD inventory is approximately $69.6 billion when GAO did their study. Currently, the number is about $67 billion for this decrease from the 1995 base to 1996.

In our view, the excess, or what we predict would be excess, is about $300 million.

Mr. HASTERT. $300?

Mr. EMAHISER. $300 million.

Mr. HASTERT. Million?

Mr. EMAHISER. Yes, sir.

Mr. HASTERT. Out of $67 billion?

Mr. EMAHISER. Yes, sir.

Mr. HASTERT. Thank you. Mr. Barrett.

Mr. BARRETT. One of the criticisms in the GAO report is that there continues to be a storage of a large amount of hardware items, such as bolts, valves, and fuses, that cost millions of dollars to manage and store, that these hardware inventories could last for more than 2 years. To date, there has not been tested the most innovative commercial practices GAO has seen used by companies to reduce inventories and costs, such as using supplier parts and other techniques that could give established commercial distribution networks the responsibility to help with the inventory. Would you respond to this, please?

Mr. EMAHISER. Well, first of all, I think that the Department is trying to make steps to bring themselves what I would just call into utilization of commercial best practices. In my opening statement, I mentioned the contract that we have got with Caterpillar and Andersen benchmarking the Department with them to be able to take in, pick up things from them that they are using in their overall system. Jeff has mentioned earlier the movement to prime vendor for medical and for subsistence. Those are extremely positive moves by the Department.

I mentioned the Virtual Prime Vendor, which is being tested now at Warner-Robbins, where a contractor, in fact, comes in and runs the supply side, the distribution side of the businesses that support the actual maintenance production line. The contractor is, in fact, responsible for assuring that parts are there just in time so that the maintenance line can maintain its integrity and produce whatever equipment it is. In this case, it is part of the propeller system for the C–130 aircraft.

There are other areas that we have looked at. Direct Vendor Delivery. The Army has a program utilizing Direct Vendor Delivery for tires, commercial tires, to support the equipment, which has been extremely successful.

So I would say that the Department is making positive progress, and we are moving. It is not like it was 5 years ago, so I think that, in fact, we are moving ahead.

Mr. HASTERT. What kind of defense functions do you think should not be privatized, that you should not have that type of arrangement with?

Mr. EMAHISER. I think you need to go back and look at what are basically the core functions of the Department—and I do not mean core depot maintenance, so I am not talking depot maintenance kinds of core; what are the core functions?—and then step back from there to see what we need that could move into the private sector.

Certainly, we are looking at things like the distribution system. We are looking at things like the Defense Reutilization and Marketing Service—we are part of that—to move into the private sector. Other areas that are being looked at in the overall area are things in the automation, which is outside my scope, but we are looking at automation support, financial support, and those kinds of things, which would have an impact on the overall inventory management system.

Mr. HASTERT. I need to have a better understanding of why there are these sharp differences between you and the GAO in terms of the value of the unnecessary inventory. They peg the number at $41 billion in their GAO report.

Mr. EMAHISER. Basically, part of it is semantics, and part of it, in fact, is an evaluation issue. The nearly $12 billion of the difference is in valuation, as I mentioned——

Mr. HASTERT. $12 million or $12 billion?

Mr. EMAHISER. $12 billion is the number that we would say is potential excess. Under the accounting practices that the Department must use, that is then valued at 2½ to 3 percent scrap value, and that is where my $300 million number came from earlier. So there is a major difference there of what we would say versus the needed and unneeded, which is the terminology we do not recognize.

Mr. HASTERT. But if they are saying $41.2 billion, and you are saying that you disagree over $12 million——

Mr. EMAHISER. $12 billion.

Mr. HASTERT. Oh, $12 billion.

Mr. EMAHISER. $12 billion. I am sorry.

Mr. HASTERT. OK.

Mr. EMAHISER. The other portion of that has to do, again, with the definition of needed versus unneeded. What we categorize inventory as potential reutilization is valued at a salvage value, as I have mentioned. The other area is that we have areas of things like contingency and reutilization, which says that we have looked at it, we need to hold that stock, bought into the inventory, and we made a conscious decision that there will be a need for that inventory over a period of time, generally 5 to 6 years.

The other portion of the inventory that we hold, once it is bought, is where we take and see that it has—we looked at cost to hold versus cost to procure, and that equates to a substantial portion of the $41 billion which we say we still need that will be consumed in more than 2 years, but certainly within a 5 to 6 year period.

Mr. HASTERT. OK. I have no other questions at this time.

Mr. SOUDER [presiding]. I am sorry I missed your opening statements. Let me ask a couple of questions. The staff has put some of this together. I sat through one of the hearings the last session of Congress, one of the hearings on this, and I am trying to get up to speed.

When there is excess inventory, how much roughly is spent, what kind of salvage value in excess inventory is it?

Mr. EMAHISER. We would view excess inventory as being held at scrap value, which would be 2½ to 3 percent of its acquisition and replacement cost. In the discussion with the GAO report, we would say that we have about $12 billion in what we would call potential excess materiel, and then because of accounting rules, we would evaluate that at about 3 percent, which would drive us down to the $300 million.

Mr. SOUDER. How long does it usually take to dispose of such inventory?

Mr. EMAHISER. Once that is identified, it is relooked at to see if possibly there is a claimant that has been missed with the Department of Defense, and then it is opened up for possible reutilization by other sectors of the Federal Government, State governments, police, and only after that has been exhausted that it is sold off through the Defense Reutilization and Marketing Service.

So that would take some period of time, but generally I would say less than a year. Jeff may have a better idea.

Mr. SOUDER. Do you have any further comment?

Mr. JONES. Yes. Mr. Souder, the times are prescribed in the regulations by GSA for screening, and Mr. Emahiser described them in the right order. The public is entitled to get Government property after it is declared excess and surplus at that point, and when that process, the screening process is done, which generally takes 90 to 120 days, then the Government and the Department of Defense in this case creates a sale for those items that do not require demilitarization, and those are the particularly sensitive military items.

Mr. SOUDER. Are we still purchasing excess inventory?

Mr. JONES. My opinion is that we are not purchasing excess inventory. That is not to say that a mistake does not get made every now and then, but in general, I am 100 percent confident that no one intentionally purchases excess inventory.

Mr. SOUDER. In other words, you are saying that you believe the excess inventory that is currently there was intentionally—you do not believe that that was intentionally purchased, either?

Mr. JONES. I do not believe that it was intentionally procured. That is correct.

Mr. SOUDER. Are you saying that—what would be some of the key variables, and maybe we have already covered this, that would cause these errors, and are we working to tighten that?

Mr. JONES. When we do what I would call a supply control study or a study to decide what needs to be bought, it is a point in time, and so things change once we move to contract because the contracting time takes, you know, takes a period of time.

So when an item manager runs a supply control study, they look at the assets they have on hand, and the assets they have on hand not only in their own inventory, but in the inventory of the other service; they look at what is due in; they will look at their back orders; and then make a conscious decision, if it is a consumable, to go ahead and procure. If it is a repairable, repairable item, then they will also look at the unserviceable inventory that is being held in depot stocks and what can be repaired and then only by what cannot be satisfied from the repair lines and make the decision to buy.

They will look at things like what the current force structure is. They will look at previous demands going back several years. All those kinds of things enter into the equation before that buy decision is made.

Mr. SOUDER. Do you calculate what the salvage—in other words, is part of the decision the balance of the potential likelihood that you may have an emergency or need a rise versus the salvage value? In other words, the market may go up and down on certain products.

Mr. JONES. I am not sure that I understand your question, so let me approach it this way. Once inventory is on hand, then the decision is made, even if it appears to be above the order point now, we will look at a cost to hold that in inventory versus the cost to dispose. Generally, the cost to hold inventory is about a third of a percent of the value of the item. There is a cost to dispose of an item, particularly if it has to be demilled, so we will look at that. So that enters into the equation.

Mr. SOUDER. Thank you. I may have an additional question. Congresswoman Maloney.

Mrs. MALONEY. Thank you very much. In the interest of time, I would like to ask the Chair if he would submit my opening statement, as read, in the record?

Mr. SOUDER. Without objection, so ordered.

[The prepared statement of Hon. Carolyn B. Maloney follows:]

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Rep. Carolyn B. Maloney -- Opening Statement
Hearing on Improving Defense Inventory Management

March 19, 1997

Mr. Chairman, thank you for convening this hearing. It is clear that there is a massive problem with the way the Department of Defense manages its inventory. Literally billions of dollars could be saved and I congratulate the Chairman for launching this investigation.

Last Spring I asked the GAO investigate this problem. They have complied with an excellent and timely report -- Defense Logistics: Much of the Inventory Exceeds Current Needs. What that report documents is a national travesty: $41 billion in unneeded inventory; $14.6 billion in inventory that will never by used; and, over $1 billion for which the Department holds more than 100 years of supply. It costs the American taxpayer close to $100 million a year just to pay for the storage of this material.

Mr. Chairman, the Pentagon's 1996 budget was 243 billion dollars. The Department controls over one trillion dollars in assets. This massive budget requires rigorous oversight, which hopefully this hearing will help to supply. The General Accounting Office has been reporting on serious problems in DoD's inventory management for at least a decade. Yet despite these repeated calls for improvement, the problem doesn't seem to be getting any better.

$41 billion in wasted resources is unexcusable. That amount could fund the National Parks Service for thirty years. It could provide meals for children in the School Lunch Program for ten years and fund Head Start for 12 years. It could also house military personnel for more than ten years.

This is a problem we must address now. I am drafting legislation which would require the Department of Defense to begin testing various new "best business" practices as a first step in addressing this problem. I welcome the opportunity to work with the Chairman and Ranking Democrat to craft serious, bipartisan legislation in this area.

Thank you Mr. Chairman.

Mrs. MALONEY. I would just like to mention that last spring, along with several of my colleagues, Congressman DeFazio, then Congressman Durbin, and Senator Harkin, we had requested a GAO investigation about this problem, and they have complied and come forward with really, I think, a very excellent and timely report. I would like to compliment them on that report, entitled "Defense Logistics: Much of the Inventory Exceeds Current Needs." The report really documents, I think, a national travesty—$41 billion in unneeded inventory, $14.6 billion in inventory that will never be used, and over $1 billion for which the Department holds more than 100 years of supply.

It also documents that it costs the American taxpayer over $90 million a year just to pay for the storage of this materiel, and I just feel that this needs to be changed. Mr. Chairman, the Pentagon's budget was $243 billion, and the Department controls over $1 trillion in assets. We really do need to exercise very rigorous oversight of this budget, and I am glad that the chairman has called up several hearings, several oversight hearings on this issue.

I would like to say that I would love to work with the chairman and the ranking member on legislation that would require the Department of Defense to begin testing various new best business practices as a step in addressing this problem.

I have great respect for the American armed services and for the Pentagon. We have the best and the bravest men and women in the military, and we have the best weapons, and we have the best defense in the world. I find it unusual that an agency that is so good at so many things has been so slow to respond to GAO recommendations that began in 1991, specifically recommending, and then again in 1994, that DOD test the application of prime vendors for personnel items.

Also, could you just describe some of the major areas where the DOD has been successful in applying these practices and how much has DOD saved? I would just like to know why is it taking so long. I think the first report was in 1991.

Earlier this year, they gave a draft report to us that showed that there was $36 billion in unneeded inventory. I thought that the draft, which was circulated to you, would mean that you would sort of start addressing this problem. Then the draft came back with a final report, and instead of the inventory, excessive inventory going down, it went up. I would just like to know what steps you are taking to address this problem.

Granted, you do have to have some inventory, but $41 billion is quite a lot of money, and we could use that money in more constructive ways, both in the military and in the private sector and in the fighting forces. So I would just like to know why is it taking so long and specifically the response to my question. I would also like to ask the chairman if I could submit, along with the ranking member, a series of questions in writing to be responded to.

I am on another committee, the Joint Economic Committee, and Alan Greenspan is testifying, and they have beeped me and asked me to come over for a quorum.

Mr. SOUDER. Without objection, so ordered.

Mrs. MALONEY. Thank you.

Mr. EMAHISER. OK. Let me, first of all, we do not agree with GAO, as I have said earlier, on the $41 billion dollar number, and I have run through that reasoning already.

In fact, the Army has instituted a number of what we would call commercial best practices into how we do our business. I mentioned Prime Vendor. Prime Vendor, in fact, has been a fact of life now for several years. It just did not start. The idea of the Virtual Prime Vendor was kicked off in January 1997, with the Air Force and is being embraced by the other services, the Army, and Navy. Again, not an effort that can start overnight, but it has been embraced now by the Department.

Direct Vendor Delivery, in fact, has been embedded in the Department for a great number of years. I mentioned the Army's expertise with using commercial tires for its vehicles. That program has been around for over 3 years now.

So I think that, in fact, the Department has embraced the movement to best commercial practices.

Mrs. MALONEY. How much have we saved in the test for best commercial practices that you have implemented? How much have you saved by moving to these practices? Do you have any numbers on that?

Mr. EMAHISER. I do not have any numbers off the top of my head. Jeff.

Mr. JONES. I have numbers, Mrs. Maloney. In the areas that we manage in pharmaceuticals, we have saved several hundred million in inventory reductions, but let me make sure that we are clear on the meaning of the word "save." When we started off with Prime Vendor in pharmaceuticals, we had a large inventory. We consumed that inventory, and to the extent that we were able to consume the inventory, through the use of the Prime Vendor, we avoided future expenditures. We did not save money in the sense of being able to turn that money into something else; we consumed the inventory in place.

That is a very important thing to keep in mind when we talk about these large values of inventory. They do not have much value unless you can consume them. They have no value in disposal whatever. So we have several hundred million dollars there, and I can get exact figures.

We are implementing the same methods in subsistence, and I did not bring the figures with me right here, but, again, several hundred million dollars' worth of inventories have been reduced at the wholesale level and at the consumer level. In addition to that, I think if you go to some of our customers, you will hear other things as well, such as they are taking people who used to work at the installation managing food and storage and using them for other purposes or simply not needing them in general.

So we can document the savings in inventory pretty well for the items that we are managing in the Defense Logistics Agency, and I believe the services could do the same for those items that they are managing.

Mrs. MALONEY. But, still, that is very, very important. Granted, it is not dollars that we turn in to the Treasury, but it is dollars that we do not have to turn out of the Treasury.

Mr. JONES. Oh, I agree with you completely.

Mrs. MALONEY. Because several hundred million in inventory in pharmaceuticals is quite impressive. I would like to get all of this in writing. I think that it is important really to document your own success that you have had so far, and I know that change is hard, particularly in large bureaucracies.

I would also like—I see my time is up, but maybe I would like to know what are some of your other plans for expanding these concepts in other areas for savings.

Mr. JONES. Mr. Chairman, if you would like, we could respond to some of those right now.

Mr. SOUDER. Go ahead.

Mr. EMAHISER. I would just like to go back to one of the initiatives that has really taken off in the Department, and that is the use of purchase cards, credit cards. We now utilize purchase cards, credit cards for procuring up to $2,500 per item. That saves going through the entire procurement system, and, in fact, there has been documented savings, with the Navy reducing its budget by $20 million just through the use of purchase cards.

Also, documented by the Army Audit Agency has been a savings of $92 per purchase utilizing the purchase card, so that, in fact, has major impacts on the overall utilization of reducing costs, reducing inventory brought into the system. You go down and buy it. It is given to you over the counter, direct vendor-delivered to you, and the utilization of that has grown from about $800 million per year to $1.4 billion over the last year.

Mrs. MALONEY. Thank you, Mr. Chairman; and as I said, I have to run to this other meeting, but I would like to submit, and maybe the majority would like to join us in a series of questions really documenting the successes of the Department in writing. Thank you.

Mr. SOUDER. Are some of the purchases that are made that result in a larger excess inventory? Are they at all related to the question of keeping certain of the suppliers in business because of the nature of what they make, and if you lose the engineering capability or the backgrounds of the lines, you will not have the supply source if you have a need?

Mr. EMAHISER. That is a tough story for me to respond to from a departmental point of view. I would rather do some research in that to provide some kind of an answer for the record on that one.

[The information referred to follows:]

The DoD does purchase some inventory that will not be used right away in order to maintain supplies of uniquely military materiel and repair parts. For example, the Defense Supply Center Columbus purchased $5.4 million of inventory in FY 1996 that was designated as diminishing manufacturing source inventory (the last manufacturer having alerted the DoD that item will no longer be produced after a given date). This categorization of stock precludes automatic disposal.

The DoD currently holds $167.1 million in diminishing manufacturing source inventory.

Mr. SOUDER. I would appreciate that. The 60/40 rule that says that 40 percent, I believe, of maintenance——

Mr. EMAHISER. No. The 60/40 rule has——

Mr. SOUDER. That is not related to the previous question; it was another question.

Mr. EMAHISER. I understand, but I understand the 60/40 rule. The 60/40 rule really pertains to depot maintenance, which is a

supplier of inventory back to the Department of repairable items, but the 60/40 rule basically says that no more than 40 percent of depot maintenance should be contracted out, that is, given to the private sector.

Mr. SOUDER. Are there security reasons for the 40 percent? In other words, was it felt that that would make the Government—what is the reason for capping at 40 percent? Are you at 40 percent?

Mr. EMAHISER. That is codified in law.

Mr. SOUDER. You do not know the history of that? Is that——

Mr. EMAHISER. Well, I think the history was, candidly—Emahiser's opinion, Emahiser's opinion—let me say it that way—was to assure that we maintain the depot base, the repair system base in order to assure a supply of items and to have a surge capacity available if we went to war.

Mr. SOUDER. Are you currently at 40 percent outside?

Mr. EMAHISER. In the depot maintenance arena, I believe that we are well below the 40 percent at the DOD level as well as the services, but I can get you a better number, if you like.

Mr. SOUDER. Have you been moving that number up? Are you seeking to come closer to the 40 percent of outside which would bring you more flexibility?

Mr. EMAHISER. You are really getting outside my area of expertise now. We can provide that for the record, if you would like.

[The information referred to follows:]

For FY 1996, the dollar totals for maintenance performed by each Military Department and the public/private breakout were:

Army—$1.241 billion with 68% public and 32% private
Navy—$5.345 billion with 65% public and 35% private
Air Force—$3.956 billion with 71% public and 29% private
Total—$10.542 billion with 67.6% public and 32.4% private

Mr. SOUDER. Do you have any further questions? All right.

I thank you very much for coming. What I think we are going to do is go vote. We will come back for the second panel. So with that, we will recess the hearing at this point.

[Recess.]

[The information referred to follows:]

QUESTION FOR THE RECORD
HOUSE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
SUBCOMMITTEE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE
"IMPROVING DEFENSE INVENTORY MANAGEMENT"
MARCH 20, 1997

Question No. 1

Mr. Hastert: To what extent does DoD purchase inventory which is likely to be unused or unneeded, in order to keep important suppliers in business so that the U.S. production base or capacity for uniquely military supplies and repair parts is maintained in peacetime?

Mr. Emahiser: The DoD does purchase some inventory that will not be used right away in order to maintain supplies of uniquely military materiel and repair parts. For example, the Defense Supply Center Columbus purchased $5.4 million of inventory in FY 1996 that was designated as diminishing manufacturing source inventory (the last manufacturer having alerted the DoD that item will no longer be produced after a given date). This categorization of stock precludes automatic disposal.

The DoD currently holds $167.1 million in diminishing manufacturing source inventory.

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Question No. 2

Mr. Hastert: What were the original justifications for the "60/40" rule? Do those justifications still apply in today's national security environment?

Mr. Emahiser: The "60/40" rule was an early attempt on the part of Congress to establish a minimum depot maintenance floor. Since that time the DoD has developed a core policy. We have developed a standard methodology that identifies the core capability requirements and then identifies the depot-level workload necessary to sustain that core capabilities. The DoD has asked for relief from this statute several times.

QUESTION FOR THE RECORD
HOUSE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
SUBCOMMITTE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE
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MARCH 20, 1997

Question No. 3

Mr. Hastert: Regarding the "60/40" rule, what are the actual current percentages of DoD maintenance performed by private contractors versus maintenance performed at government depots or other facilities?

Mr. Emahiser: For FY 1996, the dollar totals for maintenance performed by each Military Department and the public/private breakout were:

Army -- $1.241 billion with 68% public and 32% private
Navy -- $5.345 billion with 65% public and 35% private
Air Force -- $3.956 billion with 71% public and 29% private
TOTAL -- $10.542 billion with 67.6% public and 32.4% private

QUESTION FOR THE RECORD
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Question No. 4

Mr. Hastert: What kinds of defense inventory activities should be privatized or outsourced? On the other hand, what kinds of defense inventory activities are "inherently governmental" and should never be privatized? Please give specific examples.

Mr. Emahiser: The DoD materiel management community is pursuing privatization/outsourcing initiatives in several areas. For example, the Defense Logistics Agency (DLA) has announced that Defense Reutilization and Marketing Offices will be subjected to public/private competition on a geographic basis. Furthermore, efforts to outsource sales related functions are being accelerated. These functions, involving the reutilization, transfer, donation, and sale of excess military equipment, lead the list of DoD materiel management activities that lend themselves to privatization and outsourcing.

As to what kinds of DoD inventory activities should never be privatized due to their "inherently governmental" nature, the DoD continues to review all materiel management functions and has not ruled out any specific functions as never appropriate for privatization/outsourcing.

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Question No. 5

Mr. Hastert: For depot-level maintenance activities, how much can DoD's average turnaround time be improved, and how will this be accomplished? How much money can be saved on inventory and inventory management as a result of improving turnaround time?

Mr. Emahiser: The DoD is sponsoring initiatives to reduce repair cycle times and costs by revising repair cycle metrics, improving repair cycle performance measurement, and increasing the responsiveness of repair actions to customer requirements. Based on a sample of the Military Services' reparable items in 1995, the actual average depot repair cycle time was 60 days; the average repair cycle times used to compute inventory requirements was 57 days; and the average depot maintenance repair cycle standard was 36 days. If the repair cycle time could be reduced to meet the established standards through initiatives such as achieving better parts support and reducing batch sizes, the repair cycle inventory requirement potentially could be reduced by 21 days (37 percent), or $1.6 billion. However, reductions in repair cycle requirements do not result in an immediate proportional inventory reduction or savings. One-time savings which result from eliminating the need to repurchase or repair items in stock are realized over a number of years and vary by Inventory Control Point, the size of the reduction, the asset position in relation to the requirements, and the mix of serviceable and unserviceable assets. Some annual recurring inventory cost reductions associated with lower inventories are also realized.

All the Military Services are actively pursuing initiatives to reduce depot repair cycle times and have incorporated significant savings in their budgets in expectation of continuing improvements. Progress is being made. For example, the Air Force, which owns the largest inventory of repairable items, indicates that they have reduced their average depot repair cycle time by 15 days since the 1995 sample was taken, and have set a goal of reducing their average repair cycle time by another 15 days by the end of FY 1999. A DoD-wide Executive Steering Group and Process Action Teams are continuing to promote and monitor repair cycle reduction efforts across the Military Services.

QUESTION FOR THE RECORD
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MARCH 20, 1997

Question No. 6

Mr. Hastert: a. For each and every type of combat aircraft currently being used within DoD, please provide the following information:

(i) the number of aircraft currently in service;
(ii) the number of additional or spare engines for that type of aircraft currently in the DoD inventory; and
(iii) the number of those additional or spare engines which are currently fully operational.

For our purposes, it is sufficient to break down the data by major aircraft type, i.e. C-130, and thus it is not necessary to go into aircraft subtypes, i.e. C-130J, KC-130F, LC-130F, EC130Q, etc.

b. Please provide the numbers, types, and operational status of all aircraft engines within DoD inventory which are not used by any combat aircraft currently being used by DoD, along with an explanation of why those engines are still being held by DoD.

Mr. Emahiser: For the Air Force, the number of aircraft currently in service for each type of combat aircraft follows:

A10	B1	B2	B52	F15	F16	F117	U2	C130	F111	OA10	RC135
235	95	19	94	736	1513	54	32	21	37	140	19

All other requested information for the Air Force is at TAB A. All requested information for the Navy is at TAB B.

Response to Congressional Inquiry

Answers to the questions below are provided for USAF engines only.

Question:
6. a. For each and every type of combat aircraft currently being used within DOD, please provide the following information:

(i) the number of aircraft currently in service;

(ii) the number of additional or spare engines for that type of aircraft currently in the DOD inventory; and

(iii) the number of those additional or spare engines which are currently fully operational.

b. Please provide the numbers, types, and operational status of all aircraft engines within DOD inventory which are not used by any combat aircraft currently being used by DOD, along with an explanation of why those engines are still being held by DOD.

Response:

6.a.(i) - Is not being provided by this office.

6.a.(ii), 6.a.(iii), and 6.b - The attached table lists the data for USAF aircraft engines (as of Mar 97). USAF aircraft are combat coded at the base level based on war plan taskings. USAF engine inventory data systems do not distinguish between combat and non-combat aircraft down at the base level. The engines are managed as a fleet. The data shown is for the fleet of each engine TMS.
Definitions of table headings:

Aircraft MDS -	Aircraft Model Designation Series
Engine TMS -	Engine Type Model Series
Quantity Per Aircraft -	Number of Engines Per Aircraft
Installed Active -	Number of Engines Installed in Active Aircraft
Uninstalled Active -	Number of Engines in the Supply Pipeline (In-Work, Awaiting Maintenance, Engines Not Mission Capable Supply, and Serviceable)
Inactive (Additional) -	Engines Installed in Aircraft at AMARC + Retained Engines
Total Engines -	Sum of Installed Active Engines + Uninstalled Active Engines + Inactive (Additional) Engines
Net Serviceable Spares -	Engines Which Are Fully Operational

TAB A

Engine Inventory

	A	B	C	D	E	F	G	H	I
1	Aircraft MDS	Engine TMS	Quantity Per Aircraft	Installed Active	Uninstalled Active (Spares)	Inactive (Additional)	Total Engines	Net Serviceable Spares	Remarks
2	B-1B	F101-102	4	376	77	0	453	24	
3	KC-135R / T	F108-100	4	1592	107	0	1699	96	30 Serviceable Uninstalled Engines Held For Re-Engined Aircraft
4	F-16C / D	F110-100	1	659	135	4	798	19	
5	F-16C / D	F110-129	1	186	53	0	239	29	
6	B-2A	F118-100	4	48	18	0	66	5	
7	T-33A	J33-35	1	1	41	60	102	14	Contractor Facility
8	NKC-135 / B-52G	J57-43	4 / 8	4	14	12	30	13	Installed Active Engines At Contractor Facility
9	KC-135Q	J57-59	4	20	14	184	218	8	Aircraft Held For FMS PDM and Sales
10	QF-106	J75-17	1	30	6	28	64	2	Drone Program
11	F-105B	J75-19	1	0	14	0	14	0	
12	F-105D	J75-19W	1	0	40	1	41	0	
13	F-4C / RF-4C	J79-15	2	19	217	926	1162	29	On-Going Disposal Program
14	F-4D / E	J79-17	2	142	189	580	911	0	Drone Program and On-going Disposal Program
15	F-111A / E	TF30-103	2	37	182	87	306	41	Holding For Potential FMS Reclamation
16	FB-111A / F-111G	TF30-107	2	0	18	56	74	13	Subject To FMS Program
17	EF-111A	TF30-109	2	90	116	100	306	19	Potential FMS Program
18	F-111F	TF30-111	2	0	75	150	225	8	Potential FMS Program
19	E-3B/C	TF33-100	4	132	37	0	169	24	
20	C / NKC / KC-135	TF33-102	4	640	182	0	822	68	
21	C / EC-18	TF33-102A	4	26	6	0	32	2	
22	E-8	TF33-102B	4	16	36	0	52	36	Spares Held For New Production Aircraft
23	RB-57F	TF33-11	2	0	0	7	7	0	Held For NASA Program
24	B-52H	TF33-3/103	8	752	117	0	869	39	
25	TC / RC / OC / WC / C-135	TF33-5	4	87	52	4	143	38	
26	C-141B	TF33-7	4	864	273	117	1254	82	Reclamation Program In-Process
27	NKC / RC / EC-135	TF33-9	4	76	43	13	132	24	

Engine Inventory

	A	B	C	D	E	F	G	H	I
1	Aircraft MDS	Engine TMS	Quantity Per Aircraft	Installed Active	Uninstalled Active (Spares)	Inactive (Additional)	Total Engines	Net Serviceable Spares	Remarks
28	A-7D	TF41-1	1	6	8	4	18	1	
29	F-15A / D	F100-100	2	896	263	378	1537	70	178 Engines Declared Excess And Will Be Disposed Of
30	F16A / B	F100-200	1	93	46	455	594	13	348 Engines Installed In Aircraft At AMARC. Excess Engine Computation In-Process
31	F-15C / D /E	F100-220	2	444	84	0	528	13	
32	F-16C / D	F100-220	1	564	106	28	698	6	28 Aircraft With Installed Engines At AMARC Are On Hold For FMS Sale
33	F-15E	F100-229	2	152	37	0	189	0	
34	F-16C/D	F100-229	1	54	8	0	62	6	
35	C-5A / B	TF39-1C	4	504	161	0	665	37	
36	T-38	J85-5	2	1066	125	192	1383	61	SAF/AQ Directed Hold For DOD Drone Program
37	T-37B	J69-25A	2	920	117	202		-5	Potential FMS Program
38	A-10A / OA-10A	TF34-100A	2	568	163	330	1061	52	41 Engines Retained To Support Aircraft At AMARC. 289 Engines Installed In Aircraft At AMARC. Excess Engine Computation In-Process
39	C-17	F117-100	4	132	53	0	185	42	24 Engines At Aircraft Manufacturer's Facility For New Aircraft
40	U-2S	F118-101	1	29	13	0	42	9	2 Engines Managed By USAF For NASA ER-2S
41	U-2R	J75-13B	1	8	9	0	17	9	
42	C-130	T56-7 / 1	4	2816	475	254	3545	148	Excess Engine Computation In-Process
43									
44									
45									
46									

6.(a)(i) **QUESTION:** the number of aircraft currently in service;
ANSWER: The TMS (Type/Model/Series) and Active Inventory is provided in attachment A under the heading, 'AIRCRAFT, ACT /INV'. The data in attachment A is as of February 1997. Note, the A-6E, J52-P-8B and F-14A, TF30-P-412A inventory reductions are in progress.
6.(a)(ii) **QUESTION:** the number of additional spare engines for that type of aircraft currently in the DOD inventory; and
ANSWER: The number of spare engines, both RFI (Ready For Issue) and NRFI (Non RFI), is provided for each TMS in attachment A under the heading, 'ENGINE INVENTORY, SPARES, RFI and NRFI'. Also, the aircraft engine requirement is displayed under the heading, 'ENGINE, ACFT / FW' (Aircraft Firewalls). The 'TOTAL' Engine Inventory is comprised of 'STORED, ACTIVE, and RFI (Ready For Issue) and NRFI (Non RFI) SPARES'.

6.(a)(iii) **QUESTION:** the number of those additional spare engines which are currently fully operational.
ANSWER: The number of spare engines in operational status, i.e., RFI, is provided in attachment 1 under the heading, 'ENGINE INVENTORY, SPARES, RFI.

6.(b) **QUESTION:** Please provide the numbers, types, and operational status of all aircraft engines within the DOD inventory which are not used by any combat aircraft currently being used by DOD, along with an explanation of why those engines are still being held by DOD.
ANSWER: Attachment 2 is a list of all obsolete engines and the associated aircraft. These engines are candidates for Foreign Military Sales, RILOP (Reclamation In Lieu Of Procurement), and Disposal.

ATTACHMENT 1 to TAB B

AIRCRAFT		ENGINE		ENGINE INVENTORY					
	ACT		ACFT				SPARES		
TMS	INV	TMS	FW	TOTAL	STORED	ACT	RFI	NRFI	NOTES
FA-18E/F	1	F414-GE-400	2	21		12	6	3	
FA-18A/B/C/D	761	F404-GE-400/-402	1522	2051	120	1425	213	293	
F-14B/D	130	F110-GE-400/-400A	260	343		219	43	81	
F-14A	168	TF30-P-412A/-414A	336	891	144	325	96	326	
AV-8B	191	F402-RR-406/A/-408A/B	191	342	5	182	31	124	
A-6E	18	J52-P-8B/C	36	848	422	42	51	333	
EA-6B	111	J52-P-408/-408A	222	510	56	205	81	168	
S-3A/B	133	TF34-GE-400/A/B	266	469	38	205	36	190	
P-3A/B/C/D/E/J	281	T56-A-10/-10W/-14	1124	1630	246	1107	46	231	
C-130A/F/G/R/T	108	T56-A-15/-16/-423	432	515		422	21	72	
E-2C//C-2A	118	T56-A-425/-427	236	415	26	235	44	110	
C-9	29	JT8D-9/-9A/-217	58	69		58	11		1
E-6A//TC-18F	18	CFM56-2A2/AO2	72	83		72	5	6	3
C-12B/F/M	80	PT6A-41	160			178			2
T-44A	55	PT6A-34B	110	119		110	9		1
T-34C	291	PT6A-25	291	318		298	20		1
T-38A	11	J85-GE-5H/J/K/M/N	22	16		13	3	0	
T-2	110	J85-GE-4/-4A	220	379	98	199	40	42	
TA-4J	59	J52-P-6B/C	59	260	111	59	22	68	
T-45A	66	F405-RR 400/-401	66	92		68	13	11	
AH-1W	180	T700-GE-401	360	524	4	404	47	69	
SH-2G	14	T700-GE-401	28	SEE AH-1W					
H-60A/B/F/H/N	297	T700-GE-401/-401C	594	774		559	103	112	
CH-53D/E	246	T64-GE-416/-416A/-419	684	1146	86	693	120	247	

ATTACHMENT 1 to TAB B

H-1N	133	T400-CP-400/-401	133	315	50	126	13	126	
CH-46E	233	T58-GE-16	466	682		448	42	192	
H-3A/F	58	T58-GE-8B/-8E/-402	116	642	56	280	95	211	
H-46D	82	T58-GE-402	164	SEE H-3A/F					
H-3	18	T58-GE-400B/-402	36	SEE H-3A/F					
H-57	120	T63-GE-54	120	136		127	9		1
MV-22A		T406-AD-400+	0						
TOTALS	**4120**		**8386**	**13590**	**1462**	**8071**	**1220**	**3015**	
Notes:									
1. Commercially maintained; spares status TBD									
2. No Govt owned spares; commercially maintained									
3. Commercially maintained (TC-18F); Data TBD									

ATTACHMENT 2 to TAB B

OBSOLETE ENGINES		
CANDIDATES FOR FMS, RILOP AND DISPOSAL		
Engine	Aircraft	Curr Inv
F110-GE-100	F-16N	19
F402-RR-402	AV-8A	42
F402-RR-404	AV-8A	5
F402-RR-406	AV-8A	2
F405-RR-400	T-45A	2
J52-P-409	EA-6B	5
J57-P-10	A-3	54
J57-P-420	F-8	30
J60-P-3A	T-39	30
J60-P-6	T-2	28
J65-W-16A	A-4	8
J65-W-20	A-4	34
J65-W-420	A-4	13
J79-GE-10	F-4	4
J79-GE-10A	RA-5C	18
J79-GE-8B/C/D	F-4	248
MK529	TC-4C	18
O470	T-34B	26
R2800-52W	C-131	50
T53-L-11D	H-1	14
T53-L-13B	H-1	11
T56-A-10	P-3A/B	292
T56-A-426	C-2	46
T56-A-7	C-130	20
T58-GE-8F	SH-2F	211
T64-GE-6B	CH-53A	89
T76-G-418	OV-10	18
T76-G-419	OV-10	20
TF30-P-408	F-14A	69
TF41-A-2B	A-7	23
TF41-A-2C	A-7	17
TF41-A-402D	A-7	315
		1781

QUESTION FOR THE RECORD
HOUSE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
SUBCOMMITTE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE
"IMPROVING DEFENSE INVENTORY MANAGEMENT"
MARCH 20, 1997

Question No. 7

Mr. Hastert: GAO has recommended that DoD test prime vendors or a supplier park concept for hardware supplies like maintenance and electronic items. Could you describe the areas where DoD has applied these practices and how much DoD has saved? What are DoD's plans for expanding these concepts?

Mr. Emahiser: The DoD is moving to maximize use of commercial logistics support capabilities for maintenance depot requirements for weapons system repair support. Known as "Virtual Prime Vendor," this initiative solicits private sector proposals for enhanced supply support to depot maintenance activities by employing "best practices" from the commercial world. The pilot site is the Avionics/Electronic Warfare Shops at Warner Robins Air Logistics Center, which initiated Virtual Prime Vendor in January 1997. Contractor proposals are being requested for other Air Logistics Centers as well as Army and Navy maintenance activities. Virtual Prime Vendor offers the Department the opportunity to thoroughly test and assess the most advanced commercial logistics practices and determine their applicability throughout the DoD logistics system. Estimates of savings are not yet available.

QUESTION FOR THE RECORD
HOUSE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT
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MARCH 20, 1997

Question No. 8

Mr. Hastert: GAO has also recommended that DoD test several key practices that have been used in the private sector to significantly reduce the costs associated with managing reparable items. What has DoD done to date to test (1) third-party logistics services, (2) cellular repair centers, (3) integrated supplier programs, and (4) repairing items promptly after they break?

Mr. Emahiser: The Virtual Prime Vendor initiative discussed above is an integrated supplier program with the potential to incorporate third party logistics services if those services are recommended by the contractor as the most applicable private sector "best practice" for specific DoD requirements. The Navy has moved to a third party logistics provider in its "Power by the Hour" initiative, which provides powerplant maintenance support to Government-owned aircraft engines in return for payment of established fees generated from the use of that engine. Services available from the commercial provider may take the form of any combination of logistics, engineering, technical and maintenance support. The Army is moving to a cellular maintenance shop arrangement for some repairs at Tobyhanna Army Depot as well as piloting a rapid retrograde, repair and return program for circuit cards between Tobyhanna and Fort Bragg.

Mr. SOUDER. The hearing is back in session. The second panel from GAO has already come forward. It is composed of Mr. Henry Hinton, the Assistant Comptroller General; Mr. Kenneth Knouse—is that correct——

Mr. KNOUSE. Yes, sir.

Mr. SOUDER [continuing]. An Assistant Director; and Mr. Robert Repasky, a senior evaluator. If you will stand and raise your right hand for our oath; we do this for all committee witnesses.

[Witnesses sworn.]

Mr. SOUDER. Let the record show that the witnesses responded in the affirmative.

Mr. Hinton, will you go ahead and proceed.

STATEMENTS OF HENRY L. HINTON, JR., ASSISTANT COMPTROLLER GENERAL, GENERAL ACCOUNTING OFFICE; KENNETH R. KNOUSE, JR., ASSISTANT DIRECTOR, GENERAL ACCOUNTING OFFICE; AND ROBERT L. REPASKY, SENIOR EVALUATOR, GENERAL ACCOUNTING OFFICE

Mr. HINTON. Thank you, Mr. Chairman. With your permission, I would like to submit my printed statement for the record.

Mr. SOUDER. Without objection, so ordered.

Mr. HINTON. I am pleased to be here today to discuss defense management issues, and as you recognize Mr. Knouse and Mr. Repasky, two of my colleagues, and in the back of my printed statement are a host of reports that they have been heavily involved in in the early 1990's up to the present that have been looking into the concept of best practices and its applicability to the Department of Defense.

In 1990, GAO began a special review to look at and report on the Federal program areas. Its work is identified as high risk because of the vulnerabilities to waste, fraud, and abuse and mismanagement. This effort, which was supported by the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight, brought a much needed focus on problems that were costing the Government billions of dollars. We identified DOD's secondary inventory management as a high risk area at that time because of the high levels of unneeded inventory and inadequate systems for determining inventory requirements.

Mr. Chairman, as requested, my testimony today will focus on, one, a brief overview of the problems; two, measures taken by DOD to improve inventory management; and, three, the actions we believe DOD needs to aggressively take to solve the longstanding problems that you have heard some discussion already.

Let me briefly describe the type of inventory that we are discussing. DOD's secondary inventory, which totals about $70 billion, is comprised of two types of materiel: repairable parts and consumable items. As shown in the chart to my left and your right, and for those in the audience, on page 27 of my printed statement, DOD holds about $50 billion worth of repairable parts; $40 billion of that is aircraft parts alone. These parts are generally the more expensive and complex items that can be repaired when broken and reused, such as landing gear on aircraft.

Consumable items, on the other hand, are generally inexpensive, common, and are not reusable, for example, medical supplies or nuts and bolts. DOD holds about $20 billion of these types of items.

Inventory management problems have plagued DOD for decades. A key indicator of these problems is that a significant portion of DOD's inventory is not needed to meet war reserve and current operating requirements. As shown in the second chart, we believe approximately $34 billion, or about half of DOD's inventory, is not needed to support war reserve or current operating requirements. There has been a lot of discussion this morning on that, and we can engage in a little Q&A, and I would like to explain that as we go through the process here today.

Recently, we issued a report to describe this unneeded inventory. We reported that about $14.6 billion of it did not have projected demands and, therefore, is likely never to be used and calculated that another $11.8 billion could last 2 to 10 years. Also, $1.1 billion could last at least 100 years.

Most of the problems that contributed to the accumulation of this unneeded inventory still exists, such as outdated and inefficient inventory management practices that frequently did not meet the customers' needs, inadequate inventory oversight, weak financial accountability, and overstated requirements. For example, recently, we reported that Navy managers did not have adequate visibility over $5.7 billion in operating materials and supplies on board ships and at 17 redistributionsites.

We estimated that because of the lack of oversight in the first half of 1995 alone, item managers ordered or purchased in excess of operating level needs. As a result, the Navy will incur unnecessary costs of about $27 million. That was a question you asked this morning, Mr. Chairman, and the answer to that is, yes, we are continuing to purchase items that we already have stocks of and that are in excess.

Because these problems and conditions persist in an area where DOD spends more than $15 billion a year in new inventory purchases, we continue to identify this as a high-risk area. To put this $15 billion into perspective, Mr. Chairman, DOD spends more annually in buying inventory than NASA's whole budget of $13 billion. If you follow the future years' defense plan, if we stay on the pace of spending $15 billion over the next 6 years, what we are talking about spending, from DOD's point of view, is about $90 billion to buy inventory. That is why this is a very important subject that we are talking about.

DOD recognizes that it needs to make substantial improvements to its logistics system. We continue to see pockets of improvement, such as DLA's re-engineering efforts where it has made significant strides in adopting best management practices for personnel items, which are medical, food, and clothing items. But these initiatives impact less than 3 percent of DOD's secondary items, or $3.5 billion of its $70 billion inventory.

In this area, DLA, to its credit, started with a strong, top-level management endorsement of best practices and established Prime Vendor programs that resulted in reduced inventory levels and associated operating costs. For medical supplies, this has meant inventory and other cost reductions of more than $700 million, an-

other question that you raised this morning, which in turn has freed up storage facilities for other uses. For example, at the Walter Reed Army Medical Center here in Washington, DC, DOD converted a medical supply warehouse into a national training center for radiology students. We have a photograph of that facility to my right.

DOD has made little overall progress, however, in correcting systemic problems that affect over $50 billion of DOD's inventory. Unless new and innovative solutions are applied to the management of these items, DOD will continue to buildup unnecessary inventory, provide slow service to the DOD customer, and require the unnecessary expenditure of resources.

We believe the key to fixing these systemic problems is aggressively focusing on changing DOD's management culture and adopting new, leading-edge business practices.

To effectively address these issues, DOD must adopt a strategy that includes both short- and long-term actions. In the short term, DOD must continue to emphasize the efficient operation of its existing logistics systems. In the long term, DOD must establish goals, objectives, and milestones for changing its culture and adopting new management tools and practices.

A key part to changing its culture should be an aggressive approach to adopt best management practices from the private sector. From our discussions with more than 50 private sector companies, we identified best practices that address the entire logistics chain, which if applied in an integrated manner—and I am going to put emphasis on the word "integrated"—could help streamline DOD's logistics operation, potentially save billions of dollars, and improve support to the military customer.

Let me highlight the four best practices we have recently discussed in our reports on the Air Force, the Navy, and our soon to be released report on Army's logistics pipelines for aviation parts.

First, third-party logistics services can assume warehousing and distribution functions, provide rapid delivery of parts, and state-of-the-art information systems that would speed the shipment of parts between the depots and field locations, another point that you raised about this morning.

Second, eliminating excess inventory and quickly initiating repair actions can reduce the amount of time parts are stored, improve the visibility of production backlogs, and reduce the need for large inventory to cover operations while parts are out of service.

Third, cellular manufacturing techniques can improve repair shop efficiency by bringing all the resources, that is, tooling, support equipment, needed to complete repairs to one location, thereby minimizing the current time-consuming exercise of routing parts to different work shops located hundreds of yards apart.

Fourth, innovative supplier partnerships can increase the availability of consumable parts, minimize the time it takes to deliver parts to mechanics, and delay the purchase of parts until they are needed to complete repairs. Our fourth chart illustrates that applying this concept to the traditional DOD system for consumable items could reduce or eliminate the need for wholesale and much of the retail inventory layers currently maintained by DOD.

Just in this one concept, DOD could significantly reduce the need to purchase and store inventory worth hundreds of millions, if not billions of dollars. You can see where the "X's" are on the bottom part. They are the levels that fall out when you are able to bring some of the best practices techniques to DOD's processes.

In our opinion, DOD has not been aggressive enough in pursuing these practices. We strongly believe that if they were adopted, the amount of time associated with the purchase, storage, repair, and distribution of DOD's inventory would be dramatically reduced, lowering its inventory requirements and bringing the decision point of what to buy—a very important point—bringing the decision point of what to buy, when to buy it, and how much to buy closer to the point at the time the item is needed. That is very key, and it is part of the explanation that I will get into why DOD and we disagree.

This in turn will enable DOD to make better purchasing decisions and would minimize the purchase of unnecessary inventory.

Mr. Chairman, that completes my statement. I and my colleagues would be more than happy to respond to anything you would like to ask of us.

[The prepared statement of Mr. Hinton follows:]

Statement by Henry L. Hinton, Jr., Assistant Comptroller
General, National Security and International Affairs Division

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss defense inventory management issues. We have identified defense inventory management as 1 of our 25 high-risk areas in the federal government because of vulnerabilities to waste, fraud, and abuse.[1] As requested, my testimony will focus on (1) a historical overview of defense inventory management problems, (2) measures taken by the Department of Defense (DOD) to improve inventory management, and (3) the actions DOD needs to aggressively take, both near and long term, to solve longstanding inventory management problems.

BACKGROUND

DOD's secondary inventories include consumable supplies, such as medical, hardware, food, and clothing items, that are discarded after use rather than repaired. Secondary items also include reparable items that, if damaged or worn, can be fixed or overhauled for less than the cost of new items. Examples of these items are landing gear, hydraulic pumps, and avionics, which are essential to a weapon system's operation. In the past five years, we have issued a

[1]In 1990 we began a special effort to review and report on the federal program areas we identified as high risk because of vulnerabilities to waste, fraud, abuse, and mismanagement. This effort, which was supported by the Senate Committee on Government Affairs and the House Committee on Government Reform and Oversight, brought a much-needed focus on problems that were costing the government billions of dollars. We identified DOD's secondary inventory management as a high-risk area at that time because levels of unneeded inventory were too high and systems for determining inventory requirements were inadequate.

number of reports that address DOD inventory management problems related to these inventories.[2]

The private sector, driven by today's globally competitive business environment, is faced with the challenge of improving its service while lowering costs. As a result, many companies have adopted innovative business practices to meet customer needs and retain profitability. Since DOD is facing a similar challenge of providing better service at a lower cost, it has also begun to reexamine its business practices. With the end of the Cold War, the DOD logistics system must support a smaller, highly mobile, high technology force with fewer resources. Also, due to the pressures of budgetary limits and base closures, DOD must seek new and innovative ways to make logistics processes as efficient and effective as possible.

To address fundamental management problems in the federal government, the Congress enacted landmark legislation[3] in the 1990s to establish broad management reforms within the federal government. These reforms, if implemented successfully, will help resolve high-risk problems such as inventory management and provide greater accountability in many government programs and operations. Through these reforms, the Congress has laid the groundwork for the federal government to use proven best management practices that have

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[2]See Related GAO Products.

[3] These laws include (1) the expanded Chief Financial Officers Act of 1990 to prepare financial statements that can pass the test of an independent audit and provide decisionmakers reliable information, (2) the 1993 Government Performance and Results Act to measure performance and focus on results, and (3) the 1995 Paperwork Reduction Act and the 1996 Clinger-Cohen Act to make wiser investments in information technology.

been successfully applied in the private sector. The administration has embraced these management reforms and made their implementation a priority.

RESULTS IN BRIEF

Inventory management problems have plagued DOD for decades. Despite numerous efforts on DOD's part to correct these problems, we continue to consider inventory management a high-risk area because it is vulnerable to fraud, waste, and abuse. We recently reported that, as of September 30, 1995, about $34 billion, or about half of DOD's $69.6 billion secondary inventory, was not needed to support war reserve or current operating requirements. Most of the problems that contributed to the accumulation of this unneeded inventory still exist, such as outdated and inefficient inventory management practices that frequently do not meet customer demands, inadequate inventory oversight, weak financial accountability, and overstated requirements. Because of these problems, we believe DOD's annual expenditure of approximately $15 billion for additional inventory is at risk.

DOD recognizes that it needs to make substantial improvements to its logistics system. While we continue to see pockets of improvement, as evidenced by each service's and the Defense Logistics Agency's (DLA) reengineering efforts, DOD has made little overall progress in correcting systemic problems that have traditionally resulted in large unneeded inventories. DOD top management needs to continue its commitment to changing its inventory

management culture so that it provides its forces with necessary supplies in a timely manner while avoiding the accumulation of unnecessary materials.

To effectively address its inventory management problems, DOD must adopt a strategy that includes both short- and long-term actions.

-- In the short term, DOD must continue to emphasize the efficient operation of its existing logistics systems. This includes reducing and disposing of unneeded inventory, implementing efficient and effective inventory management practices, training personnel in these practices and rewarding the right behavior, improving requirements data accuracy, and enforcing existing policies and procedures to minimize the acquisition and accumulation of unnecessary inventory.

-- In the long term, DOD must establish goals, objectives, and milestones for changing its culture and adopting new management tools and practices. A key part to changing DOD's management culture will be an aggressive approach to using best practices from the private sector. From our discussions with more than 50 private sector companies, we identified best practices which, if applied in an integrated manner, could help streamline DOD's logistics operations, potentially save billions of dollars, and improve support to the military customer. In our opinion, DOD has not been aggressive enough in pursing these practices. Recent DOD reengineering efforts have

not incorporated some of the most advanced practices found in the private sector for reparable parts, and they have been slow to adopt best practices for hardware items.

OVERVIEW OF DOD'S INVENTORY MANAGEMENT PROBLEMS

We have reported over the last 20 years on numerous problems dealing with DOD's secondary inventory management. We reported that much of DOD's unneeded inventory was acquired because of outdated and inefficient inventory management practices. For consumable items, DOD holds inventory in as many as four different layers to ensure items are available to end users when needed--a philosophy some private sector companies have moved away from in recent years. For reparable aviation parts, DOD's depot repair process is slow and inefficient. As a result, each of the services can spend several months or even years to repair the parts and then distribute them to the end user.

Much of DOD's Inventory Is Unneeded

As of September 30, 1995, DOD held inventories valued at a total of $69.6 billion, of which about $34 billion was not needed for war reserve or current operating requirements (see fig. 1). After a detailed analysis of DOD's inventory records, we reported in February 1997 that some of DOD's inventory could last for decades or may never be used. For example, we identified about $14.6 billion of inventory that did not have projected demands and therefore

is likely never to be used. We calculated that another $11.8 billion of inventory could last 2 to 10 years and $1.1 billion of inventory could last at least 100 years.

To illustrate, as of September 1995, the Air Force had invested about $472,000 for 4,177 wiring harnesses used on the airborne radio communication system. Of these, 4,152 were not needed to satisfy war reserve and current operating requirements. On the basis of projected demand data, we determined that the unneeded harnesses represented 277 years of supply. According to the item manager, demand for the harnesses decreased as modifications to the radio system were made. However, some of the harnesses are being retained to support the military services, the Coast Guard, and foreign military sales and to reconfigure other radios. The item manager informed us that 3,822 harnesses have been recommended for disposal.

In another example, DLA had 127 motor blower brakes on hand as of August 1996. The brakes are used on the B-1B aircraft. Inventory records showed that 101 brakes, valued at $4,110 each, were unneeded and represented 101 years of supply. According to the item manager, 100 brakes were expected to be needed for fiscal year 1996. However, September 1996 records showed that only one had been used in the past year. The item manager believed that the demands for the brakes are cyclic because the contractor repairing the B-1B periodically orders the parts in bulk.

To store and distribute this large inventory, DOD operates a worldwide logistics system. In the United States alone, DOD operates about 25 distribution depots and other storage

locations. Much of this storage space is occupied with unneeded inventory. We reported in May 1995 that DOD uses about 130 million cubic feet of storage space to store inventory that is not needed to support current operations or war reserve requirements. DOD estimated it took approximately 205 warehouses, each the size of over 2 football fields, to provide this space, at an estimated cost of $94 million per year.

Downsizing of the military forces has contributed to some of DOD's excess inventory. However, we have also reported that DOD has wasted billions of dollars on excess supplies. This problem resulted because inherent in DOD's culture was the belief that it was better to overbuy items than to manage with just the amount of stock needed. The problems that have contributed to billions of dollars of unneeded inventory still exist, such as inadequate inventory oversight, weak financial accountability, and overstated requirements. If DOD had used effective inventory management and control techniques and modern commercial inventory management practices, it would have lowered its inventory levels and it would have avoided the burden and expense of storing excess inventory. Because these problems still exist, we believe DOD's annual expenditure of approximately $15 billion for additional inventory is at risk.

Outdated Logistics System for Consumable Items

Of DOD's $69.6 billion inventory, about $19.2 billion is consumable inventory stored at wholesale and retail facilities (see fig. 2). DOD's large inventory of consumable items reflects

its philosophy of relying on large stock levels to readily meet customer needs. As a result, DOD stores inventory in as many as four different layers to provide items to end users when needed. The first layer of inventory is the wholesale supply system. The $14.5 billion inventory stored by DOD at this level can, in some cases, satisfy the needs of the services for years. For example, we estimated that DLA wholesale inventory for hardware items could last an average of about 2 years, based on fiscal year 1995 demands.

At the retail level, the services hold additional inventory valued at about $4.7 billion. This inventory is stored in three different layers close to where the items are used--base warehouses, central storerooms, and end-user locations. As reported in August 1995, service facilities we visited had retail stock on hand sufficient to last from 1 month to over 5 years.

Despite this large investment in inventory, DOD's supply system frequently fails to meet the needs of its "customer." For example, at one Army repair depot we visited, the base warehouse failed to fully satisfy customer orders 75 percent of the time during the first 11 months of fiscal year 1996. Also, as of February 1996, the Navy had almost 12,000 broken aircraft parts, valued at $486 million, that it stopped repairing because parts were not available to complete repairs. These items, which had been packaged and moved to a warehouse next to the repair facility, had been storage for an average of 9 months.

Inefficient Logistics System for Reparable Items

DOD's depot repair pipeline for reparable parts is slow and inefficient. Several factors contribute to these conditions. These factors are (1) broken reparable parts move slowly between field units and a repair depot, (2) reparable parts are stored in warehouses for several months before and after they are repaired, (3) work processes at repair depots are inefficiently organized, and (4) consumable parts are not frequently available to mechanics when needed. As a result, each of the services can spend several months or even years to repair and distribute a repaired parts to the end user.

The amount of time required by the logistics system is important because DOD must invest in enough inventory to resupply units with serviceable parts during the time it takes to move and repair broken parts. As of September 30, 1995, DOD's reparable parts inventory was valued at about $50 billion, of which about $41 billion was for aircraft component parts. If DOD's repair time were reduced, inventory requirements could also be reduced. For example, an Army-sponsored RAND study noted that reducing the repair time for one helicopter component from 90 to 15 days would also reduce inventory requirements for that component from $60 million to $10 million.

Additional Problems Contributing to Unneeded Inventory

Along with the outdated and inefficient practices discussed above, we found instances where DOD still lacks adequate oversight of its inventory, financial accountability remains weak, and requirements continue to be overstated. These additional problems have contributed to DOD's unneeded inventory. For example:

-- In August 1996, we reported that Navy managers did not have adequate visibility over $5.7 billion in operating materials and supplies on board ships and at 17 redistribution sites. We estimated that, because of the lack of oversight, in the first half of 1995 item managers ordered or purchased items in excess of operating level needs. As a result, the Navy will incur unnecessary costs of about $27 million.

-- We reported in March 1996 that the Air Force and the Navy budgeted $132 million more than was needed for aviation spare parts because of questionable policies concerning the determination of requirements and the accountability for depot maintenance assets. The Air Force did not consider $72 million of on-hand assets, and the Navy counted $60 million in depot maintenance requirements twice.

-- Regarding DOD's financial accounting process and systems, the Secretary of Defense, in his February 1996 annual statement of assurance required by the Federal Managers' Financial Integrity Act, identified inadequate internal controls and other significant

deficiencies, such as the use of a variety of non-integrated systems; inability of current systems to respond rapidly to change; lack of automated indicators that measure, or link costs, performance measurements, or other output measurements; difficulties with consistently valuing and reconciling physical inventories to financial account balances; and inaccuracies in the valuation of property, plant, and equipment.

DOD HAS MADE SOME PROGRESS IN REDUCING INVENTORY

DOD recognizes that it needs to make substantial improvements to its logistics system. In fact, DOD's goals, concepts, and top management commitment to reengineer its business practices closely parallel those we have seen in the private sector. Since fiscal year 1989 DOD has reduced secondary inventory levels by $22.9 billion. While this is a significant reduction, we believe much of it was the result of reduced force levels, which reduced overall demands on the logistics system. DOD has made little progress in developing the management tools to help solve its long-term inventory management problems.

DOD recognizes that it can no longer continue its current logistics practices if it is to effectively carry out its mission in today's environment. For example, Air Force officials stated that budgetary constraints in recent years have led to substantial reductions in personnel, leaving the remaining work force to deal with a logistics operation that has traditionally relied on large numbers of personnel. DOD has also recognized that, with the end of the Cold War, dramatic changes need to be made and goals, objectives, and processes

similar to those being used in the private sector need to be established. Aggressively pursuing these goals would fit into DOD's plans to reduce infrastructure and operations and support costs so that funds could be freed up to support its current weapons modernization efforts.

Prime Vendor Programs for Personnel Supplies

In response to our recommendations, DOD has adopted best practices to improve the management of personnel items, but these initiatives impact less than 3 percent of DOD's secondary items. Between 1991 and 1995, we issued a series of reports that identified and recommended ways DOD could apply best management practices to personnel items. These reports focused on improved partnerships between suppliers and DOD facilities, principally through the use of prime vendors. A prime vendor provides timely and direct delivery between customers and suppliers, and orders additional stock from manufacturers on short notice, with quick turnaround, to minimize inventory holding costs. This approach reduces the need for DOD to stock and distribute inventory from multiple locations.

Since 1993, DLA has taken steps to use prime vendors for personnel items. One of DLA's most successful initiative has been the implementation of a prime vendor program for medical supplies and pharmaceutical products. We reported in 1995 that approximately 150 DOD hospitals and medical treatment facilities were using prime vendors in 21 different geographic regions across the United States. The use of this program has allowed DOD to reduce stock

levels at both wholesale and retail locations. Reducing inventory levels has also enabled DOD to reduce the warehouse space needed to store these items. At one storage depot alone, DLA reduced the storage space used for medical and pharmaceutical items by about 40 percent over a 3-year period (see fig. 3).

We estimate that between September 1991 and September 1996, DOD reduced its pharmaceutical, medical, and surgical inventories and associated management costs by about $714 million through the use of best practices, such as prime vendors. The majority of savings has resulted from the issuance of medical supplies to military customers without having to replace inventories through the purchase of additional stocks. Similar prime vendor programs are being implemented for food and clothing items.

The prime vendor program also enables DOD hospitals to reduce inventory costs. For example, we reported in August 1995 that the Walter Reed Army Medical Center, in addition to a $3.8 million reduction in pharmaceutical inventories, saves over $6 million a year in related inventory management expenses by using a prime vendor. In addition, as a result of the elimination of inventories after the prime vendor program was established, Walter Reed was able to convert a former warehouse holding medical supplies into a medical training facility. (see fig. 4).

Services' Initiatives for Improving Reparable Parts Management

Each service is developing initiatives to improve the management of its logistics pipeline for reparable aircraft parts to make their logistics processes faster, better, and cheaper. For example:

-- As we reported in 1996, the Air Force has described its "Lean Logistics" initiative as the cornerstone of all future logistics system improvements. These efforts, spearheaded by the Air Force Materiel Command, are aimed at dramatically improving service to the end user while simultaneously reducing pipeline time, excess inventory, and other logistics costs. In June 1996, the Air Force began testing certain practices through demonstration projects at each of the five Air Logistics Centers. In fiscal year 1997, the Air Force also plans to examine the application of an integrated supplier program and other logistics practices we have recommended.

-- Under its regional supply and maintenance initiatives, the Navy is identifying redundant capabilities and consolidating operations into regionally based activities. In one region, the Navy is consolidating 32 locations used to calibrate maintenance test equipment into 4 locations. The Navy believes that eliminating the fragmented management approach to supply management and maintenance will allow it to decrease infrastructure costs by reducing redundancies and eliminating excess capacity. The Navy also believes that moving away from highly decentralized operations will

better position it to improve and streamline operations Navy-wide. The Navy has also established an initiative looking at ways to reduce the amount of time it takes a customer to receive a part after placing an order to the logistics system. We reported in July 1996 that these initiatives were in the early phases, so broad-based improvements had not yet occurred.

-- The Army developed the "Velocity Management" program to speed up key aspects of the logistics system and reduce the Army's need for large inventory levels. The Army established the program with goals, concepts, and top management support that parallel the improvement efforts found in private sector companies. The overall goal of the program is to eliminate unnecessary steps in the logistics pipeline that delay the flow of parts through the system. Under this program, the Army has established Army-wide process improvement teams for the following four areas: ordering and shipping of parts, the repair cycle, inventory levels and locations, and financial management. Also, the Army is establishing local-level site improvement teams under this program to examine and improve the logistics operations of individual Army units.

Because these programs have only recently begun, they have had limited impact in improving DOD's overall logistics operations.

AGGRESSIVE ACTIONS ARE NEEDED TO RESOLVE LONG-STANDING PROBLEMS

On the basis of the work we have done comparing DOD and private sector logistics practices, we believe substantial opportunities exist for DOD to build on its current improvement efforts. Overall, DOD has been slow in adopting new management practices for hardware items, and has not incorporated some of the most advanced practices found in the private sector for reparable parts. From our discussions with more than 50 companies, we identified best practices that, if applied in an integrated manner, could help streamline DOD's logistics operations, save billions of dollars, and improve support to the military customer. In the short term, however, DOD must continue to emphasize the efficient operation of its existing logistics systems. In the long term, DOD must establish goals, objectives, and milestones for changing its culture.

Short-Term Solutions

In the short term, DOD needs to continue emphasizing the efficient operation of its existing inventory systems. As previously reported, this includes committing to improved inventory management by top management's emphasis on (1) inventory indicators that highlight reduction and disposal of unneeded inventory, (2) implementation of efficient and effective inventory management practices, and (3) training personnel in those practices and rewarding the right behavior; improving the accuracy of data such as requirements and the quantity,

condition, and value of inventory items managed through current logistics and financial systems; and aggressively enforcing existing policies and procedures that will minimize the acquisition and accumulation of unnecessary inventory.

Long-Term Solutions

In the long term, overall solutions include mapping a strategy for completing its culture change initiatives; setting aggressive goals, objectives, and milestones for identifying and implementing viable and more cost-effective commercial practices for supplying its forces; establishing goals, objectives, and milestones for determining where outsourcing logistics functions represents a cost-effective and efficient alternative to traditional methods; and providing inventory managers with the automated, integrated accounting and management systems necessary to manage its inventory in a world-class manner. These long-term solutions will address systemic problems that have contributed to DOD's accumulation of unneeded inventory.

Organizational Culture Challenges Facing DOD

To address and resolve the issues we have discussed today, DOD faces major challenges as it pursues efforts to institutionalize a reengineered logistics system. The "corporate culture" within DOD has been traditionally resistant to change. Organizations often find changes in operations threatening and are unwilling to change current behavior until proposed ideas have

been proven. This kind of resistance must be overcome if the services are to expand their concept of operations. DOD's top management needs to continue its commitment to changing its inventory management culture so that it provides its forces with necessary supplies in a timely manner while avoiding the accumulation of unneeded materials. We believe that the adoption of best practices is key to changing DOD's inventory management culture.

DOD Has Been Slow in Testing Best Practices for Hardware Items

While DLA has taken steps to improve its logistics practices and reduce inventories, such as through long-term contracting, direct vendor delivery, and electronic commerce, more aggressive steps could provide better customer service while reducing logistics costs. DLA has not made enough progress with its $5.7 billion inventory of hardware items because it still has large amounts of items, such as bolts, valves, and fuses, that cost millions of dollars to manage and store. We estimate that this inventory could satisfy DOD's requirements for the next 2 years, assuming demands remain constant. In contrast, some private sector companies we visited maintain inventory levels that last only 90 days. These companies have achieved these lean inventory levels and saved millions in operating costs by developing innovative supplier partnerships that give established commercial distribution networks the responsibility to manage, store, and distribute inventory on a frequent, regular basis.

Although we recommended in 1993 that DOD pursue innovative partnerships with its suppliers to reduce logistics costs, DOD is only now in the initial stages of testing this type of

partnership through its "Virtual Prime Vendor" program for hardware supplies. If successfully implemented, this concept could enable DOD to improve service to its customers and reduce overall logistics costs. In our opinion, this program is close to those efforts we have observed in the private sector and provides DOD with an excellent opportunity to achieve greater inventory reductions by minimizing the need to store inventory at wholesale and retail locations (see fig. 5). If DOD were able to achieve similar performance from this effort as those in the private sector, hardware inventories and related management costs could be reduced by billions of dollars and parts needed to complete repairs would be more readily available to the end user.

DOD Has Not Tested Most Advanced Inventory Practices for Reparable Parts

In addition to the opportunities to improve the management of hardware items, there are even greater opportunities to improve DOD's management of reparable parts. As of September 30, 1995, DOD held more than $50 billion worth of these parts, but its efforts to streamline its logistics system for them have not included key best practices we have identified. Over the past 13 months, we have reported on the various problems with the DOD's pipeline for reparable parts and on the substantial improvement opportunities available to DOD. For example:

-- In 1996, we examined 24 different types of Army aviation parts, and calculated that the Army's logistics system took an average of 525 days to ship broken parts from

field units to the depot, repair them, and ship the repaired parts to using units. We estimated that all but 18 days (97 percent) was the result of unplanned repair delays, depot storage, or transportation time. We also calculated the Army uses its inventory six times slower than a major airline, British Airways. That airline had developed a process to move parts through its repair pipeline much faster. For example, one part we examined had an Army repair pipeline time of 429 days; in contrast, British Airways was able to complete this process in 116 days. (see fig. 6).

-- In July 1996, we reported that the Navy's repair process can create as many as 16 time-consuming steps as parts move through the depot repair pipeline. Component parts can accumulate at each step in the process, which increases the total number of parts that are needed to meet customer demands and to ensure a continuous flow of parts. By tracking parts through each of the 16 steps and using the Navy's flow time data, we estimated that it could take, on average, about 4 months from the time a broken part is removed from an aircraft to the time it is ready for reissue. Our analysis did not include the amount of time parts were stored in warehouses awaiting repair or issue to the customer.

-- In February 1996, we reported that using its current logistics pipeline process, the Air Force can spend several months to repair the parts and then distribute them to the end user. One part we examined had an estimated repair cycle time of 117 days; it took British Airways only 12 days to repair a similar part. (see fig. 7). The complexity of

the Air Force's repair and distribution process creates as many as 12 different stopping points and several layers of inventory as parts move through the process. Parts can accumulate at each step in the process, which increases the total number of parts in the pipeline.

In our reports we stated that DOD's improvement efforts were not as extensive as they could be because they have not incorporated the best practices we have seen in the private sector. These best practices have successfully reduced costs and improved logistics operations. We have recommended that DOD test these concepts and expand them to other locations, where feasible.

The four specific practices described below are key to the overall improvement of the reparable parts pipeline. For the companies we visited, they have resulted in substantial logistics system improvements and reduced costs. When used together in an integrated fashion, they can help maximize a company's inventory investment, decrease inventory levels, and provide a more flexible repair capability.

• *Third-party logistics services* can assume warehousing and distribution functions, provide rapid delivery of parts, and state-of-the-art information systems that would speed the shipment of parts between the depots and field locations.

• *Eliminating excess inventory and quickly initiating repair actions* can reduce the amount of time parts are stored, improve the visibility of production backlogs, and reduce the need for large inventory to cover operations while parts are out of service.

• *Cellular manufacturing techniques* can improve repair shop efficiency by bringing all the resources (tooling, support equipment, etc.) need to complete repairs to one location, thereby minimizing the current time-consuming exercise of routing parts to different workshops located hundreds of yards apart.

• *Innovative supplier partnerships*, as discussed earlier, can increase the availability of consumable parts, minimize the time it takes to deliver parts to mechanics, and delay the purchase of parts until they are needed to complete repairs.

SUMMARY

Substantial opportunities exist for DOD to improve the management of its $69.6 billion inventory as well as its $15 billion annual procurement of new parts. To do this, DOD needs to pursue both short- and long-term goals. In the short term, DOD needs to focus on improving the effectiveness of its current inventory management systems, such as those affecting requirements determination and inventory accountability. In the long term, DOD must focus on goals and objectives that will dramatically change its inventory management practices to provide a more cost-effective and efficient system while maintaining readiness

and sustainability goals. The key to doing this is aggressively focusing on changing its culture and adopting new leading-edge business practices. Recently enacted legislation sets an overall framework within which DOD can establish objectives and measures for achieving these short- and long-term solutions. Close congressional oversight will continue to be a critical element as DOD establishes plans, goals, objectives, and milestones for addressing its inventory management processes.

Mr. Chairman, this concludes my statement. I would be happy to answer any question you may have.

RELATED GAO PRODUCTS

Inventory Management: The Army Could Reduce Logistics Costs for Aviation Parts by Adopting Best Practices (GAO/NSIAD-97-82, estimated issue date is April 21, 1997).

High-Risk Series: Defense Inventory Management (GAO/HR-97-5, Feb. 1997)

Defense Logistics: Much of the Inventory Exceeds Current Needs (GAO/NSIAD-97-71, Feb. 28, 1997).

Defense Inventory: Spare and Repair Parts Inventory Costs Can Be Reduced (GAO/NSIAD-97-47, Jan. 17, 1997).

Logistics Planning: Opportunities for Enhancing DOD's Logistics Strategic Plan (GAO/NSIAD-97-28, Dec. 18, 1996).

1997 DOD Budget: Potential Reductions to Operation and Maintenance Program (GAO/NSIAD-96-220, Sept. 18, 1996).

Defense IRM: Critical Risks Facing New Materiel Management Strategy (GAO/AIMD-96-109, Sept. 6, 1996).

Navy Financial Management: Improved Management of Operating Materials and Supplies Could Yield Significant Savings (GAO/AIMD-96-94, Aug. 16, 1996).

Inventory Management: Adopting Best Practices Could Enhance Navy Efforts to Achieve Efficiencies and Savings (GAO/NSIAD-96-156, July 12, 1996).

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Commercial Practices: DOD Could Reduce Electronics Inventories by Using Private Sector Techniques (GAO/NSIAD-94-110, June 29, 1994).

Commercial Practices: Leading-Edge Practices Can Help DOD Better Manage Clothing and Textile Stocks (GAO/NSIAD-94-64, Apr. 13, 1994).

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

DOD Medical Inventory: Reductions Can Be Made Through the Use of Commercial Practices (GAO/NSIAD-92-58, Dec. 5, 1991)

Commercial Practices: Opportunities Exist To Reduce Aircraft Engine Support Costs
(GAO/NSIAD-91-240, June 28, 1991)

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Figure 1: Department of Defense Inventory (September 30, 1995)

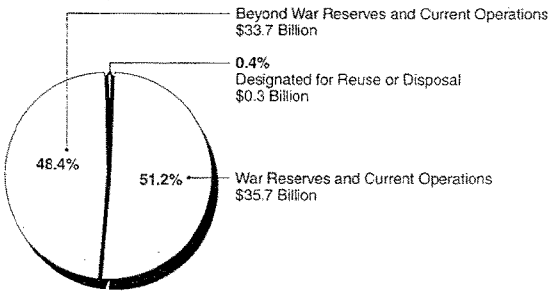


Figure 2: Department of Defense Inventory Composition (September 30, 1995)

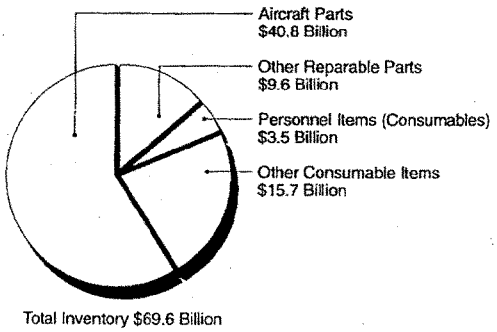
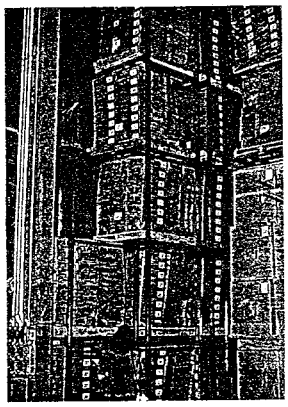


Figure 3: Vacated DLA Warehouse - 1991 vs 1994



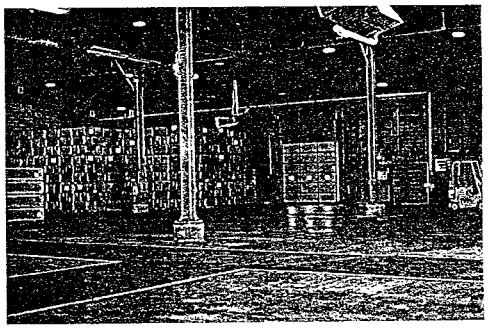


Figure 4: A Converted Warehouse at the Walter Reed Army Medical Center

Figure 5: Traditional DOD Logistics System Compared to Best Management Practices

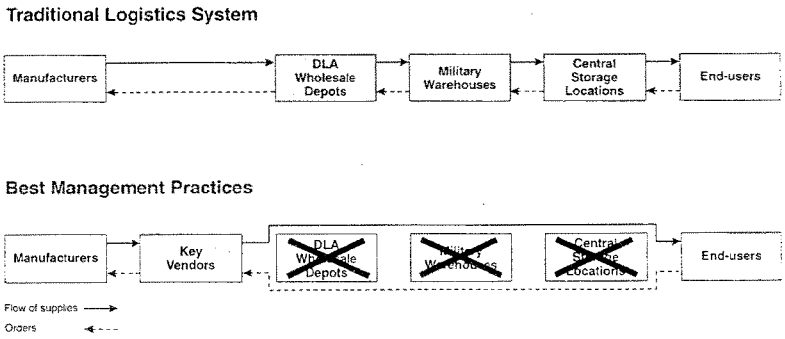


Figure 6: Comparison of British Airways' and Army's Repair Pipeline for a Gearbox Assembly

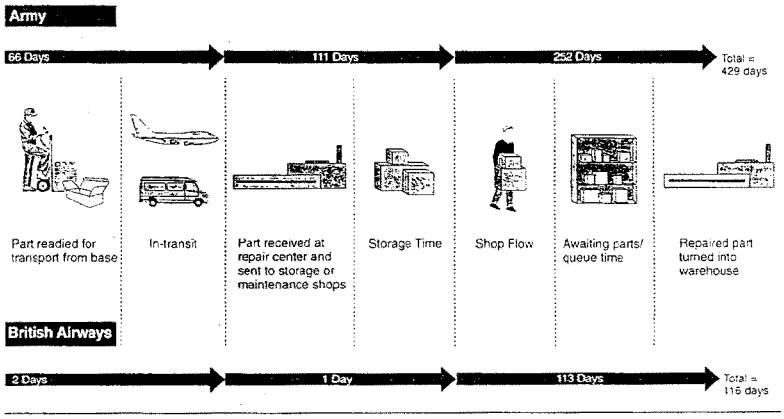
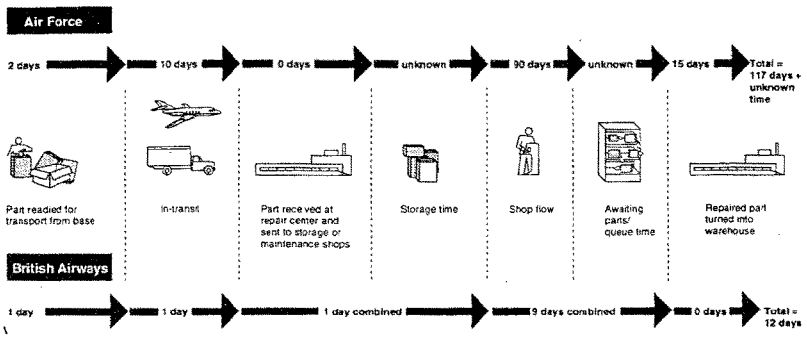


Figure 7: Comparison of British Airways' and the Air Force's Repair Pipeline for a Landing Gear Component



Mr. SOUDER. Why don't we start with the first thing that you correctly anticipated we were going to ask, which is, could you explain how you came up with half of their inventory being unneeded——

Mr. HINTON. Sure.

Mr. SOUDER [continuing]. And how you define it differently than they do?

Mr. HINTON. Sure. Matt, could you put that chart back up, please, and I can deal with that because I think that this is very important.

I emphasized right at the tail end of my statement what we are really stressing here is moving the buy decision closer to the period of time that you need inventory, and that is very key. Visualize two baskets, if you would, please. One basket is needed. That is your operating supplies, your war reserve requirements, your safety levels, your administrative lead times by which you place an order, and it is the time that the part arrives. This is about 2 years' plus of inventory that is in the "needed" category.

In the second basket that you have there, what that is are other levels that are built into DOD's equation that go out an additional 2 years out there, so there is more being bought than is really needed at that point.

Now, when you look at what is in there, and I made mention of a few things, there is $14.6 billion where there are no projected demands, and there are other parts of that that are in the 20-year supply. They are also in the 100-year supply of that, and when that does not happen and you do not have that demand that hits it, you are left with a lot of inventory. The point that we have been making, is that the closer you can bring that buy decision to when you would really need the parts would remove a lot of the unneeded that we have been having a debate with DOD about.

The reason why it is important now that DOD work hard and aggressively to change its business processes is not about the $70 billion that we have. This is stuff we have already bought; it is there. We have got it. It is looking at the $15 billion that we are going to be spending over the next 6 years over the future year defense program, and that is significant. Until we are able to change that culture, get DOD to move out and test some of these best business practices, what we are going to find out, we will be back here having another hearing along the same lines that GAO is going to be saying there is a lot of unneeded inventory out there.

So that is what we are trying to work with, encourage, and recommend to DOD, the need to move forward; and the areas where it needs to move forward, and as Mr. Emahiser this morning spoke to, was in the personnel area, largely in the medical and the pharmaceuticals. We were very instrumental in working with DOD to get them off on the right foot with that. We have had several reports back then that encouraged them to move forward to test that concept, and as I mention in my statement, DOD got on board, top down, and moved out, and it worked.

Where they have not moved forward is into the other parts of the inventory, to the tune of about $50 billion, and here is what we are talking about: hardware and repairable parts. What GAO is saying is, test it. Let's make sure it works. Let's make sure it does not in-

volve readiness, any readiness-related issues before we go because we do think, from all the best practices that we have seen, it has the potential to allow better response to the customer, potentially save significant dollars, and at the same time improve the efficiency of the system.

Mr. SOUDER. Is the 2-year a peacetime requirement, or does that have a wartime contingent?

Mr. HINTON. Pardon me?

Mr. SOUDER. Are the 2-year figures you are using, a peacetime requirement estimate, or does that have wartime——

Mr. HINTON. Peacetime.

Mr. SOUDER [continuing]. A wartime contingency?

Mr. HINTON. Right, and the basket that has the needed, the requirements for war reserves are built into that.

Mr. SOUDER. So it is a peacetime war reserve.

Mr. HINTON. We are not challenging anything around war reserves.

Mr. SOUDER. Let me—I want to come back. I have got a series of questions, but I have got some fundamental, entry-level questions here. The first is very explosive.

How much of the problem do you believe, and you are under oath in front of the committee, and you can tactfully say it if you want to tactfully say it—how much do you believe that this is being driven by jobs in Members' districts in Congress, and how much of it is actually resistance in the Defense Department, and and/or both?

Mr. HINTON. My answer to that would be both. You know, when I showed the chart over there that had the "X's" on it, what we are talking about there, this affects jobs. Any time you go through this process where you are going to change processes, you are going to become more efficient, and to become efficient, you might have to remove layers that are built into the current system. That affects jobs.

Similarly, as you mention, there is a considerable amount of service parochialism involved here that makes change very difficult in the Department. It is why we believe that you need to move forward, and I think if there is a way that we need to move forward might be to require, through legislation or some other part, that DOD move forward to test some of these. You put forth a plan that they will pick up these best practices, they will come up with a strategy for testing them, and they would have very good goals and measures to measure the results of the test pilots that they would do.

You could also have a reporting requirement back to the Congress and have DOD respond how well that is going, and then have us, third, come in as a check, and I think that goes a long way to breaking down stovepipes, the service parochialism that is out there, and that is what is needed.

That has been some of the frustrations that I think OSD has found in trying to move forward, not only in this area, but the same thing applies as it deals with infrastructure, base closures, that we, GAO, have been reporting on. That is a very difficult issue; it is a painful process.

Mr. SOUDER. I have a very unusual, uncomfortable, personal background experience with this. When I started as a staffer with

Congressman Coats and worked in the 4th District in basically trying to worry about us not just kind of shutting down and turning out the lights after International Harvester and others had closed down in the early 1980's. A lot of our auto parts manufacturers, who were clearly potential suppliers to the military, worked with ECSC out of Columbus in an experimental program to try to get more bidders on sole source and also for their supplies.

I remember they had several photographers who took pictures of all the parts that they buy, put together this great presentation to bring to Fort Wayne, and we held a conference where we brought a lot of suppliers in to bid. I remember, having come from a business background, my first two questions, one which was, "Well, how much do you usually pay for this part?" They said, "Well, we cannot say that."

They said it depends. I said, "Well, can you put the last three purchases' prices?" "Well, that would really be misleading because it might not be the same; it is a bid price." Then I said, "Well, how many do you buy?" They said, "Well, that depends. It depends on a lot of different variables, and there are different-sized purchase orders."

Then, they said, "You do not look very pleased," and I said, "Well, we are bringing in 120 businesses, and the first question they are going to ask is, how much do you pay, and how many are you going to make, that there is no way you are going to turn over a part of your factory to be devoted to this type of thing based on this kind of erratic flow."

Now, my question comes, that is in addition to the parochialism and the potential nobody likes to lose any jobs or any bases or any depots in their districts. There are some real concerns here, one of which is can they get their projections better and are they getting better at projecting what they need and where; or, in fact, do you, in effect, as a business have to have a certain committed supply even if it is being wasted, or you are not going to investigate in dealing with the Federal Government?

The corollary to that is, is that we are going to become dependent on foreign parts suppliers, that if we have some kind of a switchover in one of these foreign nations and all of a sudden we were buying our parts there, but our American manufacturers decided it is not worth doing business with the Federal Government, we do not have anybody supplying.

How much of those things are in this?

Mr. HINTON. Well, I think they are really relevant to this discussion in terms of how you think about buying things. When you go back to the original pie chart and you talk about the unneeded, when one predicts out and estimates out over a 2-year-or-more period as to what you want, things are going to change in that intervening period. Demands may not come about as you anticipated.

There could be extreme fluctuations in that; demands just do not materialize. Sometimes when they went out, they had a quantity of life buys where they bought all the parts that they needed and then found out that they were not needed ultimately in that intervening period.

I think the point that we are trying to make here is that there are better ways that we have seen in the commercial side, the pri-

vate sector side, of being able to go out and provide a means that can get a better grip on what your true requirements are through Prime Vendor programs to effect quick delivery and bring that customer and the end user, the supplier, closer together that can meet the needs in a more timely way.

Mr. SOUDER. Clearly, in the more egregious cases, that is—do either of you have any comments on what has been said here? If you want to join in, just——

Mr. REPASKY. I would just echo what was just said, that if you shorten the amount of time that you need to place your orders and receive those supplies, the chances of you being right increase and will reduce the likelihood that you would make purchases of items that you do not need.

I think that is really the bottom line, to shorten that process, and that is really what our work has focused on, is how do you shorten the repair cycle time, how do you shorten the pipeline time, and how do you bring that decision point closer to the time that you need the item? I think that is the key.

Mr. HINTON. Mr. Chairman, if I could ask Mr. Repasky, we have an example as it relates to the Army, and when you look across the Navy and the Air Force, it is akin to the same. But it is kind of like a before and after, and if I could have him walk that through, I think you could see a little bit of what we are trying to push and suggest to DOD as to why this is a good idea to move forward. It is in the repairable area that I am going to be talking about.

Mr. KNOUSE. Mr. Chairman, while they are setting that up, I would just like to add that the DOD logistic system is predicated on speed. How do you get what the military customer needs in as quickly a time as possible? By their own admission, DOD will tell you that time is the enemy of logistics. To the extent that you can take some of these processes that Mr. Repasky is going to talk about and condense them, you are not only increasing efficiency, saving money, but you are actually, I believe, enhancing readiness, peacetime readiness of the equipment that you have out there because you are getting it there much, much quicker than relying on the infrastructure that is now in place that takes a very long time at times to get this materiel to the end user.

Mr. REPASKY. OK. Let me just try to walk through. This is basically a before-and-after chart, and I know it is busy, and I will try to just hit the high points. This chart shows the present Army repair pipeline for aircraft parts. On the right side of the chart, from the top to the bottom, it depicts the process a part would go through from an operating base into storage and into the repair process, back into storage, and finally back to the end user at the operating base.

We did an analysis of 24 different types of parts that the Army uses for aviation parts and calculated, through a series of different analyses, that it took on average 525 days to go through that process for the items that we looked at. Flowing from left to right into that depot repair process is the flow of the nuts and the bolts and the small items that are needed to fix aircraft component parts.

Basically what that highlights is you have the manufacturers that produce the items that sell the materiel to the Defense Logistics Agency, who stores them in their depot system, and when the

military service, in this case, the Army, requests those items, the material is shipped into the retail, the Army's retail supply system.

Some key points that we have on this chart, that DLA wholesale system just for hardware items, currently we estimated they hold about $5.7 billion worth of these small-piece parts that are needed to satisfy the end user. That represents about 2 years' worth of inventory flowing into the retail supply system at one particular location that we visited for this analysis.

The Army held about another $46 million worth of the same kind of items, and eventually those items are shipped into the repair shops, where they are used by the mechanics. So that is basically the current system as it exists today and the time that is required by the process. The 525 days is one of the key points that we are talking about.

The next chart would show that if you applied the four best practices that we have highlighted today, how that would impact that process. Again, I will start with the pipeline on the right, flowing from the top to bottom. We have applied the potential application here of a third-party logistics provider to ship the item from the operating base into the repair depot. Applying the cellular manufacturing technique at the repair depot itself would streamline the repair process, bringing the resources that are needed into one location.

We found, for example, at this one Army depot we visited that a component part may travel up to over 2 miles through different shops before the repair process is completed, which is a very inefficient process compared to what we have seen in the private sector.

So applying the cellular concept would streamline that particular piece. Again, a third-party provider could serve the function of storing the repaired part and in finally distributing them back to the end user. In the private sector, the third-party provider service can be as quick as 1 or 2 days to move a part from one location to the next.

So, theoretically, applying those concepts to that repair pipeline, the 525 days could be reduced to maybe 35 days, a significant reduction in time. Likewise, applying the integrated-supplier concept which we have recommended in our recent reports, to the consumable flow would essentially, as we mentioned earlier, reduce or eliminate the need for the wholesale system and two of the three layers of the retail inventory system that moves that part of those piece parts from the manufacturer into the repair center, which minimizes the inventory investment DOD must make until the time that it is required, which again enables them to make better judgments as to what they need, how much they need, and when they need it.

So this is the "To-Be" model, if you will, of how those practices could apply to this entire pipeline.

One other point related to that is that these concepts should be applied in an integrated manner, as we mentioned earlier. For example, if you increase or improve the piece part support but do not improve the reputation of the repairable part from the operating base to the repair center or improve the flow of the parts into the repair center itself, you will have all of the parts that you need,

but the repairable items will be slow to get to the repair point and then slow to get back to the end user.

So these concepts have to be applied throughout the entire supply chain or in an integrated fashion to be most effective.

Mr. SOUDER. I have some other questions that I want to move to, but let me make one comment. This is to help think it through. One is to hold up an ideal system that is real logical that the private sector, under proper pressures, would do. Another is to say, and I realize you are not to give political advice, but you seem to—I heard quite a few things that this would be closed and that would be closed and this would be closed.

Any practical suggestions of a transition point or how the transportation systems could be used within existing resources would probably be helpful if the ideal is ever going to become a reality. Partly the budget squeeze is going to force some of this.

Mr. HINTON. Yes, sir, and I think where we have been coming from here, we have been suggesting to DOD that they need to test some of these and look at—precisely what you are raising to me right now, is what are the barriers out there, what are the things we need to worry about, what are the costs going to be, are there any potential readiness implications of changing the way we are doing it? What are the efficiencies, and what value can we achieve, savings in the system, by moving forward with some of these?

We are not suggesting that they go right out and just change everything. I think it is the point that what they proved by themselves, working in the personnel and the pharmaceutical area, if it is done right, thought through, implemented with a good strategy, it works. What we are trying to raise with DOD is you have only dealt with a small part of the inventory items, and there is a lot more that we think offers a lot of potential.

Until you go through the drill to lay out that strategy, test against it, and demonstrate it and look at the merits of it as well as the impediments to it, we are going to be saddled with the same system. You think back, in the private sector in the 1980's and the early 1990's they recognized a crisis was coming when they started thinking about the globalization of business and those types of things and how it may affect its profitability and also the question of survivability. They started re-engineering a lot of their processes, and with DOD, that has not occurred yet.

What has happened over the years is that we have been able to have sufficient moneys to keep an inefficient system going, which gets us to why we are here today, and unless we see some movement, the system is not going to change. I do agree with you. I think resources are getting tight, and maybe that crisis is looming within the Department and there is reception to the suggestions that we have been raising with DOD.

Mr. SOUDER. We see it often at the tail end of that, like in my district, the ITT Aerospace is there—they do the SINGARS radio—and finally all of the services are looking at the same kind of radio, but if you have different radios here or there—I remember when I worked for Sen. Coats, just even things like MREs, these meals, when the different services even have different meals, and you are customizing for different branches and different places they are going, not to mention just piling up the meals, is another question.

But clearly, there need to be changes, and hopefully—let me ask you a series of questions related to—you advocate they dispose of all the inventory that you classified as unneeded, and discuss a little bit how you would propose—right now it is handled by the Defense Reutilization and Marketing Service, which is—they had management problems. So if you can talk a little bit about how much of it would you dispose, who would you dispose it through, and why don't we start with those?

Mr. HINTON. Sure. We are not advocating disposal of all of it right now. We think DOD needs to go through and analyze what we are saying is unneeded inventory and look at for those items that are in that second basket that I was describing to you a while ago how much is it costing us to hold these that are unneeded, and does the cost, the holding cost, and at what point over a period of time does that exceed the price of the item? I think they need to go through that analysis and figure out which ones do they need to keep and which ones will be the low-hanging fruit that you would jettison or dispose of right away.

That analysis has not been done, and we think that is a prudent way to go about that, and we are not suggesting in any way, Mr. Souder, that they go and dispose of everything. You heard Mr. Emahiser this morning saying that 2½ percent on disposal, and we need to think this through, and the Department needs to think it through very well, is that while we might only get 2½ percent back, we really spent about $12 billion buying that in the beginning, which argues for a reason to really think through the efficiency of the current system.

Mr. SOUDER. What about who sells it?

Mr. HINTON. Pardon?

Mr. SOUDER. What about who sells it and how they are——

Mr. HINTON. Well, I think that would go through the general system that you just mentioned, through DR—what is it, DRMU, Defense Reutilization——

Mr. KNOUSE. Yes. Surplus and excess property goes through, after the services declare it as excess to their needs, then that property goes through the disposal process, which is managed by the Defense Reutilization and Marketing Service out of Battle Creek, MI.

Mr. SOUDER. In their reduced inventory, how much of that is due to the downsizing of the military and how much to their management practices?

Mr. HINTON. I think a large part of the reduced inventory has been because of downsizing. We are just buying less. The initiatives that Secretary Emahiser was talking about this morning are relatively new. Not enough time has elapsed that we can see the benefits of them, but as he described them, there was one in the Army, one in the Navy, one in the Air Force, one in the Marine Corps, and the point that we would raise is that while they are steps in the right direction, we think there are some more fundamental movements that need to take place to adopt some of the best practices that I have discussed and also have in the statement there.

Mr. SOUDER. One of the biggest problems and is helpful with what you are doing here, that Members of Congress have, particularly pro-defense, conservative Members of Congress, who also un-

derstand that if we do not manage the defense budget as a whole, we are going to lose our readiness component of it, is that many of the groups that are critical of expenditures are so hostile to the military that we do not know who to believe and who is not about what is waste and what is not.

When we read a report in the media or see some group saying such-and-such is waste, we do not know whether they are targeting somebody because they are from a certain party, and they want to embarrass them, and we do not know whether it is actually needed or not needed, and it becomes very hard. Because we have less money, the pressure is incredible in the defense portion of the budget.

We do not want to become foreign dependent; we want to be flexible to maintain our freedoms and at the same time manage the budget. So that has been helpful, too.

You mentioned about the pharmaceutical compared to the other parts. Could you compare and contrast the consumable, hardware, and repairable parts, just kind of recapsulate that and how they handle those?

Mr. REPASKY. The DOD has responded in different ways to each of those commodity groups. I think that, first, in the area of consumables they have been most aggressive in the medical supplies, and there was some discussion about that earlier today.

As a matter of fact, we estimate that as a result of their adoption of best practices, that there has been about a $700 million savings as a result of those new practices and reduced inventories. For clothing and textiles, they have also adopted similar, prime vendor programs, and I think Ken can provide some more details on that. For hardware items, they have not moved out, and hardware is the bulk of the consumable item inventory. That represents somewhere in the neighborhood of $6 billion.

DLA is one of the primary managers of those inventories for DOD, and their key initiative there that we think closely resembles what we have seen in the private sector is the Virtual Prime Vendor program. As Mr. Emahiser pointed out this morning, that initiative was kicked off in January of this year. We think there is a lot of promise to that one, but the jury is still out. They are still in the initial test phases for that program.

For the $50 billion worth of repairable parts that are currently in DOD's inventory, we have not seen an aggressive approach to using the best practices that we have outlined in our reports. We have issued those reports recently. I would say 1996 was our first report on the Air Force, February 1996. We followed that with a report on the Navy's repairable parts pipeline in the summer of 1996, and we are going to issue our report on the Navy's process within the next few months.

We think, though, that there is a significant opportunity there because of the long times that we saw in the repairable parts pipeline. Time is money; time is inventory, and as I outlined on my charts, that we think there is a lot of opportunity to reduce those times from hundreds of days to maybe months.

So, in general, that is the overall response by DOD at this point.

Mr. KNOUSE. The prime vendor project for food has just been completed. They did a test in the Southeastern United States. That

has just been completed. Our initial analysis indicated that they reduced their inventories just at a few test locations by about $24 million. DOD has believed that since that area of the United States was so successful, they are going to branch that out nationwide, so they are moving out on a nationwide basis, as they have with prime vendor medical. They are doing that for subsistence, food.

The other area is in the clothing area, and the last briefing that we got from DLA was very optimistic in terms of the prime vendor programs that they are going to adopt in that area. Right now, they have a test down at Lackland Air Force Base where they are looking at recruit items—socks, underwear, things like that—very, very common items that they can provide military recruits on a just-in-time basis.

What excited us was an estimate from DLA that over the next 3 to 5 years, once they implement those programs, they are talking about a billion-dollar reduction in those inventories, and we are going to be watching that very, very closely obviously, and to the extent that that comes about, that will be a credit to DOD in these Prime Vendor programs. So it just goes to prove what they can do when they really put their mind to it.

Mr. SOUDER. That billion dollars starts to add up to real money.

Mr. KNOUSE. Yes, sir.

Mr. SOUDER. Unless there is objection, I would like to have your full statement inserted into the record.

Mr. KNOUSE. Sure.

Mr. SOUDER. Also, if we do not get some questions asked, if there is no objection, I will probably send you some written questions as well.

Mr. KNOUSE. That will be fine.

Mr. SOUDER. I am now going to yield the chair back to the chairman, Mr. Hastert.

Mr. HASTERT. Thank you, Mr. Souder.

I have a couple of questions. In the history of the Defense Logistics Agency, their job is to purchase everything. Is that correct? Basically, everything——

Mr. HINTON. They largely purchase all the consumables. The service purchases things, too. DLA also does all the warehousing of everything that DLA purchases as well as the services.

Mr. HASTERT. They purchase lethal as well as nonlethal commodities. Is that right?

Mr. REPASKY. DLA does store some hazardous materials, if that is what you are referring to—not the weapons themselves, the missiles, the bombs.

Mr. HINTON. That is all done by the service.

Mr. HASTERT. Repeat that.

Mr. HINTON. That is done by the services.

Mr. HASTERT. It is done by the services.

Mr. HINTON. Right.

Mr. HASTERT. So, the planes and missiles and things like that are purchased by Defense Logistics.

Now, have you looked into the purchasing practices of DLA?

Mr. REPASKY. We have looked at the way DLA acquires those consumable items, and my work in particular has focused on com-

paring those purchasing methods and practices with the private sector for the similar, same type of items.

Mr. HASTERT. What have you found?

Mr. REPASKY. We have found that there is a significant difference between the two.

Mr. HASTERT. In what way?

Mr. REPASKY. First of all, DLA or the Department of Defense buys materials many years in advance of when they need them, compared to the private sector, which purchases those types of materials in many cases in a just-in-time-type environment or basis.

Mr. HASTERT. Even things that we would call commodities, kind of everyday?

Mr. REPASKY. Exactly. We are talking about, first of all, we are talking about medical supplies, the syringes and cotton swabs and things like that, all the way through nuts and bolts that are needed to repair aircraft component parts, as well as food and clothing items.

Mr. HASTERT. How do they purchase? Do they do regular bids like anybody else would go out and offer a bid?

Mr. REPASKY. Well, there is a variety of methods that they use. I do not have a detailed—I cannot provide you a detailed description at this time of that, but there is a variety of methods. A lot of it is basically bids and contracting, competitive-type contracting procedures.

Mr. HASTERT. Have you looked at that procedure?

Mr. REPASKY. Not in detail. Personally, on the reviews that I have conducted, we have not.

Mr. HASTERT. Is that something that you think, just from your cursory view, that we ought to look at?

Mr. HINTON. Contract management in DOD is a high-risk area, in our judgment, and it is one that we have not recently looked at, Mr. Chairman, but it is one that we worry about a lot because some of the oversight resources in DCAA and other activities like that are downsizing at a time when dollars are going to grow in the procurement accounts. DCAA and other agencies that oversee and audit and evaluate those need to think about reengineering their own activities to get the coverage. We have all been faced with that, as audit and evaluation activities, but it is an area I worry about as to whether we have got enough coverage.

Mr. HASTERT. One of the things in my limited experience that I have had is that they let a contract, canceled the contract, let the contract to another company, and then paid the first company for all the expenditures they made in a year in advance for the products, so they basically have paid for everything twice. Not very efficient.

Mr. HINTON. Right.

Mr. HASTERT. It was a relatively interchangeable piece of equipment that they bought. So the taxpayers not only lost once on this; they lost twice, and I think that is something that we need to continually look at. Not only do we have too much sometimes——

Mr. HINTON. Right.

Mr. HASTERT [continuing]. But we pay double for it before we ever get it into the inventory in the first place.

I want to change scope a little bit here. There is a real question about manufacturing specialized products for the military, and one of the things that the gentleman from Defense Logistics talked about is airplane engines. Obviously, the airplane engine that you use on an F–16 or—I am not conversant on all the engines and all the planes, but probably are not very interchangeable, especially would not have much sale on the domestic market. Is that true?

Mr. REPASKY. In some of the work that we have done in the past, one of the things that we did look at was aircraft engine operations and logistics systems.

Mr. HASTERT. I am using that just as an example, but go ahead.

Mr. REPASKY. There are some similarities between DOD and commercial hardware—engines, aircraft, whatever—but I would not say it is a very large percentage. I think it is pretty much military unique, military specifications.

Mr. HASTERT. So, in the manufacturing of these products, probably they would run a line, and I am using numbers off the top of my head, so I will try not to put any exactitude with anything here, but let's say you are making 1,000 planes of some description, and with that order was 1,000 replacement engines, and maybe in the long term they figured they would use 1,500 replacement engines.

For a company to put all their assemblage back in place to reproduce those 500 engines maybe 2 years down the road, is it usually taken into consideration what is the most efficient cost at the time of purchase and then repurchased? How does that work?

Mr. REPASKY. I think that the issue that you are talking about here is that tooling up for a certain manufacturing process is an expensive situation, and you want to maximize the production of your units while you have that tooling in place to minimize the unit cost of the items.

So, for example, when you are buying your aircraft, you buy as many spare engines as you can right up front to minimize that unit cost, or do you delay those purchases until later? It is the same dilemma that the airlines have to face when they buy the new Boeing Triple–7, for example, and there are some issues with initial spares. We have talked to some airlines on how they minimize——

Mr. HASTERT. Can I stop you right there, though?

Mr. REPASKY. Sure.

Mr. HASTERT. If you buy a, you know, 777 and you are ABC Airlines, you may want to make that purchase now for extra equipment, but probably that plane will be in production for a period of time. The engines and the hydraulics and the brakes and everything that would go on that probably would be purchasable 5 years in the future at probably not an extra cost to tool up. Is that right? So there would be a difference there. Right?

Mr. REPASKY. That is correct.

Mr. HASTERT. So it is not exactly the same decision that the private sector would have to make.

Mr. REPASKY. No, and I think that our work really is not focusing so much on the acquisition of determining how many initial spares that you need directly. The work that we have done focuses on how do you improve the efficiency of repairing those items once you have them, and if you can reduce the amount of time that it takes to repair that engine, then your up-front decision of how

many engines you have to buy is affected. That is really the relationship between best practices that we have seen and its application to the Department of Defense.

Mr. HASTERT. What I am trying to do here, I am not trying to string us out on a lot of esoteric stuff, but what I am saying, in some situations there has to be unique decisions that have to be made when you purchase X, Y, and Z and how it is used. Some of it is not really appropriated just in time. I mean, to get a certain turbine for a certain engine delivered, it is not going to be delivered just in time if a company has to retool——

Mr. REPASKY. Absolutely.

Mr. HASTERT. So we need to sort that out.

Mr. REPASKY. Absolutely.

Mr. HASTERT. In your testimony, of course, in your study I hope maybe we have sorted that out. So we really need to look at those things that are really kind of special, set-aside stuff. I do not know what the number was, but there was only a $30 million——

Mr. REPASKY. Basically—let me make one point here, is that when we place our recommendations to DOD, we do it in the sense that there is not one solution for their problems. We think that they really have to test a variety of concepts and apply them in a manner where they make the most sense. There is not one technique. Like just-in-time does not apply to all aspects of DOD logistics operations, including consumable items and repairable items.

We think there are areas where that would be the most effective, but it would not apply across the board.

Mr. HASTERT. But there is a real gap between what Defense Logistics today came in and said, you know, well it is tens of millions of dollars that we have in excess, and you are saying, well, maybe it is really tens of billions of dollars that you have in excess. Where do we start to find middle ground there?

Mr. HINTON. Well, as Mr. Souder was there, I was walking him through what we had there, and if you could visualize two baskets, Mr. Chairman. One is the needed inventory, and what is in that needed inventory is what you need for current operations, what you need for war reserve materials, what you need for safety levels, what you need for administrative lead times to place an order until that part comes back.

That is a fairly large basket of on hand inventory, if you will, that you need right now for current operational needs and war reserves, at least 2 years, and the safety level on just the administrative lead time alone. So over that, you have war reserves, and you have your current operation needs, and in our view, we are not raising any questions around the war reserves.

Now, if you go over to the second basket, which is your unneeded, that is where we have a difference with DOD, and it is how far out that you need to go to buy your inventory, and that is where we differ a little bit because what we have been trying to push DOD to do is bring their buy decisions a little closer to when they need it. What happens for us to characterize that they have this unneeded inventory in that second basket is that over a period of time what they expected to be a lot of demands for that inventory they bought does not occur. Some of the weapons systems may become obsolete, and they have a whole bunch of parts that are

there, and so the longer that they look out and buy that, it is a high-risk decision that some of those demands may not occur in the system.

Mr. HASTERT. Let's talk about obsolete weapons and the commodities that you buy to support those things. Let's look at a Huey helicopter that is mothballed and it is not there and they have engines and blades and all those things and turbines that go to support those, when that product—when that commodity or piece of equipment is mothballed or set aside, do we keep up the inventory for those?

Mr. HINTON. You will probably have some—you may not be buying those parts, but you may retain some of those parts until a later date, and they may be in our unneeded basket. You are retaining them, but you do not have a likely demand to come about it.

Mr. HASTERT. Let's say that those hulls, then, are given away or into another country and sold or whatever?

Mr. HINTON. Then you might be able to sell those parts as part of the package.

Mr. HASTERT. Those parts would normally then follow.

Mr. HINTON. Sure.

Mr. HASTERT. There is a reason to keep those, then.

Mr. HINTON. To the extent that we are successful in finding buyers for some of those old systems, there might be some rationale in that.

Mr. HASTERT. If you are a student of history at all, you find out that at the beginning of World War II, before we really got into the war in the late-1930's and very early forties, that we started to gear up for the war, and people went down in warehouses that were not too far from this building and started to look in them, and there was stuff that was literally there from the Civil War.

There really was not much relevance there, and one of the things that we do not want to have happen, and hopefully we will never have to gear up for a major encounter of any type, but to have that experience as well, not only the cost of the equipment that we probably could have rotated out at some savings, but also just the cost of storage.

Mr. HINTON. In the unneeded basket that we have been talking about it costs about $100 million to warehouse that unneeded inventory.

Mr. HASTERT. What price do you put at the unneeded inventory? Is that your $69 billion?

Mr. HINTON. Well, that is the total, and we would split that; that $35, $37 billion is unneeded in our analysis. Within that unneeded inventory that we have there is about $15 billion that DOD has no projected demands on that inventory. There is about a billion of it that has a 100-year supply.

Mr. HASTERT. That is the purchase price. Right?

Mr. HINTON. Yes.

Mr. HASTERT. If you cycled that out, do you have any idea——

Mr. HINTON. Well, the number that Mr. Emahiser had, 2½ percent, this morning, those that would go to disposal. On those 2½ percent his number was about $300 million that they had was tar-

geted for disposal. What it cost us to buy that $300 million was $12 billion.

Mr. HASTERT. How integrated are the various supply and information systems within the DOD inventory management?

Mr. HINTON. That is an area that GAO has been reporting on. Information management is also a high-risk area across the government. It is a key to the efficient running of any inventory operation, as well as a whole lot of the processes in Government, but in DOD it is not well integrated, particularly in the material management.

DOD was going through the processes of coming up with an integrated system. Once they identified the cost for that system, they changed strategy, and we are going with individual systems against various parts of the materiel management process right now, but we have not gone through—DOD has not gone through the drill of determining whether or not their plans are going to be the cost-effective solutions for what they ultimately want to achieve. We have a report on that.

I would be happy to make that a part of the record, and it is an area that is very key to having good information to make the decisions that we were talking about when Mr. Souder was here. What is at risk here, Mr. Chairman, is $15 billion. That is what DOD spends annually to buy inventory. So if we are talking over the life of the future-year defense plan, which covers 6 years, that comes to the tune of about $90 billion. To put the $15 billion in context, that is more than NASA's budget, which is $13 billion.

Mr. HASTERT. Let me ask one more question, and I would like to pass the time over to the gentleman from Arizona, but, you know, I have been around this Congress 10 years. Some people say maybe that is 10 years too long, but I remember having a discussion 10 years ago in this committee that, boy, we are not being very efficient on the inventory, and it was an issue when we had a lot more inventory as well as we saw the early slide of, those charts this morning. Some people said, at that time saying that we had defense inventory problems for 20 years. Well, now, it is 30 years. Why has change been so difficult, in your opinion?

Mr. HINTON. I think there is a lot of service parochialism in the Department that makes it very difficult to change over there. I think change itself is very difficult.

One of the things that I think we have had that businesses in the private sector have not had, we have had a lot of money to keep an inefficient system running. It is not a question of we have got incapable people working in the system; what we have is an inefficient system. Over the years we continued to pay to run that inefficient system, and what we have been suggesting through our work, Mr. Chairman, is the need to change.

DOD has got to come forward, and that is our recommendation that deals with the high-risk report that we have issued, to think of a strategy for changing the culture over in the Department. A key part of changing that culture is adopting some of these best management practices that we have seen in the private sector, and it has got to be done from the top down. That is the way you overcome the stovepipes that are within the individual system—services.

Mr. HASTERT. Thank you very much. Mr. Shadegg, do you have any questions for this panel?

Mr. SHADEGG. Mr. Chairman, I do not. Thank you.

Mr. HASTERT. Thank you. Thank you very much, gentlemen. I appreciate your testimony, and I would be interested in discussing some of these things with you further, obviously.

Mr. HINTON. Sure. I would be happy to, Mr. Chairman. Thank you very much.

[The information referred to follows:]

RESPONSES TO QUESTIONS FROM THE SUBCOMMITTEE ON NATIONAL SECURITY, INTERNATIONAL AFFAIRS, AND CRIMINAL JUSTICE, HOUSE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT

1. To what extent has DOD applied the "Best Practices" recommended by GAO to managing DOD's $40 billion worth of aircraft parts?

Overall, DOD's application of the best practices GAO has recommended to enhance its reengineering efforts has been limited. DOD has been most aggressive in the area of developing new relationships with suppliers, which is one of the four areas we have recently highlighted in our reports on Air Force, Navy, and Army logistics practices. However, GAO first recommended that DOD test best practices in this area back in June 1993.

At the Warner-Robins Air Logistics Center, the Air Force and DLA started a test of the virtual prime vendor concept in January 1997. Currently, DLA is in the process of expanding the virtual prime vendor program to approximately 11 other DOD facilities. We believe the virtual prime vendor concept is very similar to the best practices we have observed in the private sector, and are encouraging DOD to aggressively pursue this concept.

The other three concepts highlighted in our recommendations--eliminating excess inventories and quickly repairing parts, using third party logistics services, and developing cellular repair centers--are not currently being tested in an integrated manner as we have recommended in our reports. We believe that an integrated test-case approach, where the benefits of each of these initiatives can collectively improve the overall efficiency and effectiveness of depot repair operations, will produce optimum results.

2. In the opinion of GAO, what kinds of inventory-related activities are "inherently governmental" and should never be privatized?

In its Policy Letter 92-1, dated September 23, 1992, the Office of Federal Procurement Policy provides guidance on the identification of inherently governmental activities. The Policy Letter defines the term as a function ". . . that is so intimately related to the public interest as to mandate performance by Government employees." The Policy Letter further states that these functions include ". . . those activities that requires either the exercise of discretion in applying Government authority or the making of value judgments in making decisions for the Government." The Policy Letter specifically states that inherently governmental functions ". . . do not include functions that are primarily ministerial and internal in nature, such as . . .facilities operations and maintenance, warehouse operations . . . (emphasis added)."

Some of the major types of DOD inventory-management activities include (1) ordering items from suppliers; (2) accepting deliveries of items, including inspecting the items for defects and insuring the order was otherwise satisfactorily filled; (3) handling and storing the items, including loading and unloading, as well as protecting and safeguarding items in the storage area from deterioration and theft; (4) processing orders from customers; (5) shipping the items to customers; and (6) taking periodic inventories of the items.

On the basis of the guidance set forth in Policy Letter 92-1, in our opinion, none of the DOD inventory management functions listed above appear to be so "inherently governmental" that they should never be privatized. We should point out, however, that there are certain other activities that are associated with inventory management, such as deciding what kinds of items are needed and the levels at which these items should be maintained, that may well be regarded as inherently governmental. These activities may fall within the definition of "core" logistics capability under 10 U.S.C. 2464, which is defined as the capability, including personnel, equipment, and facilities, to ensure timely response to a mobilization, national contingency, or other emergency requirement.

3. How does the "60-40" rule affect defense inventory management?

Several statutes influence the mix of maintenance work performed by the public and private sectors, including the extent to which depot-level workloads can be converted to private sector performance. One in particular (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. This statute has become known as the so-called "60/40" rule. Certainly, some of the functions usually considered to be part of the broad area of defense inventory management--such as the depot-level repair of aviation parts--would be affected by the rule. The extent of the impact of this rule on defense inventory is not fully known at this time.

4. How integrated are the accounting and information systems associated with defense inventory management?

These systems are not integrated very well at this time. In our 1995 high-risk report on inventory management, we reported that DOD needed to move aggressively to provide its managers with modern, automated accounting and management systems to better control and monitor its inventories. Today, we continue to find major system development projects that greatly exceed estimated costs, fall years behind schedule, and fail to achieve operational goals. These failures have left the Congress and the executive branch severely handicapped by the lack of reliable data. Moreover, huge opportunities have been lost to use technology to reduce federal operating costs and improve program performance.

We learned that DOD is embarking on the new strategy before taking a number of steps needed to ensure that the additional planned hundreds of millions of dollars to be spent on inventory management systems, as well as the appropriated monies already invested, bring positive results. Moreover, DOD is proceeding with deployments under the new strategy without accommodating the time required for testing the new systems. This greatly increases the risk that DOD will experience problems associated with shifting testing to system users and curtailing the levels of testing normally done. As a result, we reported that DOD is likely to incur substantial additional costs to operate and maintain current systems and to correct deficiencies with the new systems that surface after deployment as a result of delayed testing.

5. Are there any inter-service or inter-agency conflicts within DOD that are obstacles to reforming defense inventory management? If so, what can be done to address such conflicts?

There are major obstacles that stand in the way of DOD's efforts to institutionalize a reengineered inventory management system. The obstacles discussed below are in no way all inclusive, but merely illustrate some of the conflict with which DOD must deal.

- The "corporate culture" within DOD has been traditionally resistant to change. Organizations often find changes in operations threatening and are unwilling to change current behavior until proposed ideas have been proven. This kind of resistance must be overcome if the military services are to expand its radical new concepts of operations.

- One of the largest obstacles to speeding up repair times is the lack of expendable parts needed to complete repairs. With a new approach to better serve its military customers, the role of DLA as the traditional supplier of consumable items and as a storage and distribution service is changing. Until these new approaches are implemented, the services' ability to improve the repair process may be limited.

Changes in corporate culture must accompany efforts to transform operations if progress is to continue within DOD's reengineering efforts. However, the current mindset may hinder such efforts for several reasons. First, people find radical changes in operations threatening and, as is common in many organizations, resist efforts to change. Second, reengineering programs involve relatively new concepts, and personnel lack a thorough understanding of what it is and how it will improve operations. As a result, they are unwilling to change current behaviors until such concepts are proven. Third, reengineering programs do not yet have support from all of the necessary functional groups within various commands, each of the services, and DOD. This support will be needed if the full range of changes is to be carried out.

In June 1994, we convened a symposium on reengineering that brought together executives from five Fortune 500 companies that have been successful in reengineering activities (Reengineering Organizations: Results of a GAO Symposium, GAO/NSIAD-95-34, Dec. 13, 1994). The following principles for effective reengineering, reflecting panel members' views, emerged from the symposium:

- Top management must be supportive of and engaged in reengineering efforts to remove barriers and drive success.

- An organization's culture must be receptive to reengineering goals and principles.

- Major improvements and savings are realized by focusing on the business from a process rather than functional perspective.

- Processes should be selected for reengineering based on a clear notion of customer needs, anticipated benefits, and potential for success.

- Process owners should manage reengineering projects with teams that are cross-functional, maintain a proper scope, focus on customer metrics, and enforce implementation timelines.

Panel members at the symposium expressed the view that committed and engaged top managers must support and lead reengineering efforts to ensure success because top management has the authority to encourage employees to accept reengineered roles. Also, top management has the responsibility to set the corporate agenda and define the organization's culture and the ability to remove barriers that block changes to the corporate mindset. The panelists agreed that a lack of top management commitment and engagement is the cause of most reengineering failures.

To develop a corporate culture that is receptive to reengineering, the panelists emphasized the importance of communicating reengineering goals consistently on all levels of the organization, training in skills such as negotiation and conflict resolution, and tailoring incentives and rewards to encourage and reinforce desired behaviors. DOD needs to focus on goals and objectives that will dramatically change its inventory management practices and to provide a more cost-effective and efficient system while maintaining readiness and sustainability goals. The key to doing this is aggressively focusing on changing its culture and adopting new leading-edge business practices.

6. In your written testimony, you characterized the $15 billion per year that DOD continues to spend on inventory items as "at risk." Please provide us with an estimate of how much of that $15 billion DOD spends on unneeded inventory items.

DOD spends about $14.5 billion a year to purchase secondary inventory items–spare and repair parts, clothing, medical supplies, and other support items–to support its operating forces. At September 30, 1996, DOD had $8.6 billion under contract or on purchase request to buy additional inventory. Of this amount, we estimate that about $1.6 billion of the $8.6 billion exceeded current operating and war reserve requirements. Even using DOD's definition of needed inventory, which includes an additional 2-years worth of requirements, there would still be about $664 million of the $8.6 billion that would be classified as excess to current operations and war reserves. In a recent report (Defense Logistics: Much of the Inventory Exceeds Current Needs, GAO/NSIAD-97-71, Feb. 28, 1997) GAO noted that 145 inventory items had inventory valued at $28.4 million that represented 20 or more years of supply on hand and that had an additional $11.3 million on order. These items included circuit card assemblies, hydraulic pump linear valves, combining glasses, oscillators, and identification markers.

In a September 1996 report (1997 DOD Budget: Potential Reductions to Operation and Maintenance Program, GAO/NSIAD-96-220, Sep. 18, 1996), GAO reported that DOD's fiscal year 1997 operation and maintenance budget request could be reduced by $723 million because of potential unnecessary inventory purchases. Specifically, GAO noted that (1) a $188 million reduction could be taken because Army budget requests for spare parts were not based on accurate requirements data, (2) a $87 million reduction could be taken because the Navy and the Air Force used inaccurate data to determine requirements, (3) a $60 million reduction could be taken because the Navy counted depot level maintenance requirements for aviation spare parts twice, and (4) a $388 million reduction could be taken because the Air Force did not consider spare parts that were available for reclamation from aircraft and engines with no identified future use.

Given the above, GAO believes that this is strong evidence that DOD continues to buy inventory far beyond its requirements.

7. There is continuing disagreement between GAO and DOD over the amount of "unneeded" or "excess" inventory which was discussed briefly at the hearing. Please explain why this disagreement exists.

The disagreement really results from DOD being in a situation where, for whatever reason, it has more secondary inventory for certain items than are needed to meet its stated requirements for war reserves and current operations. Our work has shown that this occurs for a variety of reasons, such as requirements for inventory being less than originally anticipated because of military downsizing, parts becoming obsolete earlier than anticipated, parts being more reliable than originally anticipated, and, in some cases, errors in the purchasing process. We think DOD would agree that if events such as these did not occur they would have very little secondary inventory that exceeds its war reserves and operating requirements. That is because their system is not designed to purchase quantities beyond those requirements.

However, for the reasons we mentioned, DOD has found itself in this situation for at least the last decade. Recognizing this, DOD takes the position that it may need some of these items. Consequently, it has created several categories of inventory that are beyond war reserves and current operating requirements.

What we are saying is that, if DOD's inventory purchasing system was working properly and original requirement projections proved accurate, the items that DOD has beyond its war reserves and operating requirements would not be needed. In fact, DOD would have never purchased them. We agree with DOD that once the items are purchased they might have a future need. However, we believe that this decision should largely be driven a cost to hold analysis. For example, if the cost to hold an item is $100 a year and the item costs $400, then storing the item for more than 4 years does not make economic sense. Obviously, this is a simplistic example, but it illustrates the type of process DOD needs to use as opposed to its current approach that is based on years of supply.

The way that leading companies have dealt with this same type of issue--buying more inventory than is needed--is to use just-in-time-inventory practices. What they try to do is to get the decision to buy as close as possible to the time when the item is actually going to be used. This practice, for example, helps to mitigate the impact of requirement changes. That is why we believe the ultimate key to improving DOD's inventory management is to change DOD's business practices to ones that avoid purchasing inventory well in advance of projected needs.

Mr. HASTERT. I ask now the third panel if they would please come forward. It is composed of Dr. Jacques Gansler, vice chairman of the Defense Science Board; and Retired Admiral Luther Schriefer of the Business Executives for National Security, who is executive director of their Tail-to-Tooth Commission. Gentlemen, if you would please rise and take the oath, as required by the committee.

[Witnesses sworn.]

Mr. HASTERT. Let the record show that the witnesses responded in the affirmative, and Dr. Gansler, please proceed.

STATEMENTS OF JACQUES GANSLER, VICE CHAIRMAN, DEFENSE SCIENCE BOARD; AND ADMIRAL LUTHER F. SCHRIEFER (USN, RETIRED), EXECUTIVE DIRECTOR, BUSINESS EXECUTIVES FOR NATIONAL SECURITY

Mr. GANSLER. Mr. Chairman, members of the committee, at your request, I am here to report on the Defense Science Board's 1996 summer study. The title of it was "Achieving an Innovative Support Structure for the 21st Century Military Superiority." We subtitled it "Higher Performance at Lower Cost." It was dated November 1996, and I served as co-chairman of the study.

Before commenting on the study itself, I think it is appropriate to briefly note the role of the Defense Science Board. This board was established in 1956, actually in response to the Sputnik at that time, to provide an objective and an independent advice on technology and management issues to the Secretary of Defense, the Deputy Secretary, Under Secretary, and also to the chairman of the Joint Chiefs and the vice chairman. Currently, it is composed of 28 representatives from academia, industry, and research institutions. We meet three times a year for 2 days each.

It achieves its impact, though, through the various task forces that are put together from a combination of board members and outside experts that we bring in, and we look at specific problems of concern to the various senior DOD officials that it serves.

It has to be emphasized that the role of the DSB is simply an advisory one, and our recommendations and positions do not necessarily represent those of the Department of Defense. Rather, the board is perceived as a way for the secretary and his senior personnel to receive outside counsel and advice in areas that are critical to the future evolution of America's national security posture. I currently serve as vice chairman of that board.

Now, let me address the specifics of the 1996 summer study. As I said, that was on the innovative DOD support structure for the future. Our requested task was to address two critical issues. First, with the recognition that the Nation had essentially put off weapons modernization for the past decade and with a clear recognition that it is unlikely there will be a large increase in the defense budget in the coming years.

Thus, how is it possible to generate the tens of billions of additional dollars annually required for modernizing the forces? That is an action that is required to both replace the aging equipment and to update it to match the requirements of advanced technology; in other words, in order to meet the demands of the revolution in military affairs.

The second question we were asked: Since it will be necessary to generate these modernization dollars by a shift from within the overall level of current expenditures, particularly a shift from the support areas, will it be possible to maintain or even improve overall combat effectiveness while simultaneously significantly reducing the current levels of DOD's support costs and personnel?

To address this set of issues, a group of senior people, 28 of us, outside advisors, of whom 11 were DSB members, were assembled. They were assisted by an outstanding group of Government advisers who provided the interface with the DOD.

We began our analysis by looking at the current approximately $250 billion of annual defense expenditures, and our objective was trying to make a significant shift, tens of billions of dollars per year, from the over 55 percent of the dollars that are spent in the support area, and we wanted to shift these into the required combat and modernization areas.

So we focused on the approximately $140 billion a year that are spent in the areas typically referred to as support and infrastructure. These run the full gamut from medical and housing to school house training and base operations. They also consume a very large share of both the civilian and military 2½ million people that make up the active-duty and civilian work force.

I might note that only about 14 percent of the dollars are directly expended on combat operations, and only about 14 percent of the total personnel are actually in combat positions.

Now, since our objective was to increase the percentage of the dollars available for modernization and combat, we focused on finding savings in the support area. We took each of the various support areas and analyzed whether there could be performance improvements and/or cost reductions in each of them, and we did this through applying modern information technology and management principles, along with maximizing the use of competitive forces from the private sector.

Our conclusions, as described in detail in the report, are that there are dramatic performance improvements that are potentially made if you, in fact, make the simultaneous changes that we described here. By the end of, say, a 5-year period a shift of tens of billions of dollars per year can be made from the support area into the combat and modernization area.

Now, since your focus here today is on the DOD's logistic system, which is the largest of its overall support areas, let me briefly summarize our findings in that area. In 1996, the DOD expenditures for the overall logistics support were about $60 billion a year. Some of this was for direct battlefield support, but the vast majority of it was associated with the infrastructure, primarily that located within the continental United States.

Importantly, over one-half million, active-duty military personnel are involved in the logistics area. That is over 30 percent of the active-duty military, and approximately 300,000 of the DOD civilians are involved in this area. Now, recognizing the critical importance of this area to DOD's future, and that is from a performance as well as a budget perspective, we found that there have, in fact, been significant initiatives taken in the DOD to address the logis-

tics infrastructure area. In my prepared remarks, I listed those initiatives, and you heard those from the DOD today.

Now, these actions are all very commendable, and they have to be aggressively pursued. However, we found that there is still very significant room for improvement. For example, we found that the response times of the DOD logistics systems, in terms of distribution, repair, and procurement, are still dramatically higher than those achieved by world-class commercial organizations on similar, or in some cases identical, equipment.

In fact, we found these world-class benchmarks are measured in hours or, at most, in days, while the DOD performance tends to be measured more in weeks or months. For example, while Caterpillar delivers parts anywhere in the world within 1 to 4 days, or, in fact, if it is not within 4 days, they pay for it, the DOD, with these identical parts, took 40 to 60 days to be distributed during the Gulf War.

Essentially, the difference is that the commercial world has been moving to a totally re-engineered logistics system, one that relies on total asset visibility and rapid transportation. For the DOD to move from its historic what has been called just-in-case inventory system and supply system to achieve comparable high performance at dramatically lower costs, it will be necessary to totally reengineer the current system—some refer to that as a World War II system or, at best, a cold war logistics system—moving to one that focuses on a concept of on-demand, rapid, intermodal delivery right from the factory to the foxhole.

The changes in the DOD logistics system we envision are not small, incremental changes, but they are what the commercial firms have been forced to do to become competitive. These firms fully applied modern information technology to keep track of the availability of all inventory on a worldwide basis, including that in transit, and they take full advantage of rapid, worldwide transportation.

They also continuously improve the reliability of their parts and systems so as to minimize their down time and thus maximize their readiness, while simultaneously reducing the inventory and the repair costs.

Thus, the specific issue being addressed by this committee, namely, defense inventory management and repair parts, cannot be effectively addressed in isolation. It has to be seen simply as a part of a dramatically transformed and streamlined, overall DOD logistics system, one utilizing far fewer people, far fewer parts, and far fewer facilities, yet greatly enhancing the logistics performance.

This is the essence of our study findings. Clearly, the potential exists for dramatic improvements in DOD's support performance and a significant shift of resources from support to combat and modernization. However, the challenge is achieving the implementation of these changes that are required in order to realize these potentials.

I personally believe that the Secretary, the Deputy Secretary of Defense, as well as the chairman and vice chairman of the Joint Chiefs of Staff, and each of the service chiefs are now committed to achieving these changes. I also believe that the initial impact of

these changes will be reflected in the final results of the QDR process.

However, it has to be recognized that these will be extremely difficult changes to bring about, as they were in American commercial industry. Thus, achieving these changes will require the full cooperation of America's military and political leaders for its realization.

I believe you on this committee and the other Members of Congress can play a significant part in removing the barriers that currently exist for the required transformations that must take place within the DOD over the next few years. I think only in this way will America be able to modernize its forces in order to be fully prepared for military operations in the early 21st century. Thank you.

[The prepared statement of Mr. Gansler follows:]

Testimony by Dr. Jacques S. Gansler

At your request, I am here to report on the Defense Science Board 1996 Summer Study on "Achieving an Innovative Support Structure for 21st Century Military Superiority: Higher Performance at Lower Cost", dated November 1996. I served as Co-chairman of this study.

Perhaps before commenting on the study itself, I should briefly note the role of the Defense Science Board (DSB). The Board was established in 1956 to provide objective and independent advice on technology and management issues to the Secretary of Defense, the Deputy Secretary, the Under Secretary (Acquisition and Technology), the Chairman of the Joint Chiefs of Staff, and the Vice Chairman. Currently it is composed of 28 representatives from academia, industry, research institutions, etc. who meet as a group three times a year for two days each. It achieves most of its impact through the various "Task Forces" that are put together from a combination of Board members and outside experts looking at specific problems of concern to the various, senior DoD officials that it serves. It must be emphasized that the role of the DSB is simply an advisory one, and their recommendations and positions do not necessarily represent those of the Department of Defense. Rather, the Board is perceived as a way for the Secretary and his senior personnel to receive outside counsel and advice in areas critical to the future evolution of America's national security posture. I currently serve as Vice Chairman of the DSB.

Now to the specifics of the 1996 Summer Study on an innovative DoD support structure for the future. Our requested task was to address two critical issues. First, with the recognition that the nation had essentially put off weapons modernization for the past decade and with a clear recognition that it is unlikely that there will be large increases in the budget in the coming years, how is it possible to generate the tens of billions of additional dollars annually required for modernizing the forces? -- an action required to both replace the aging equipment and to update it to match the requirements of

advancing technology, i.e., to meet the demands of the "revolution in military affairs". And, second, since it will be necessary to generate these additional modernization dollars by a shift from within the overall level of current expenditures -- particularly from the support area -- will it be possible to maintain, or, preferably, improve overall combat effectiveness while simultaneously significantly reducing the current levels of DoD support costs and personnel? To address this set of issues, a group of 28 senior, outside advisors (of whom 11 were DSB members) were assembled. They were assisted by an outstanding group of Government Advisors (to provide an interface with the DoD and to obtain information on all of the current activities underway in this area within the DoD)

We began our analysis by looking at the current approximately $250 billion of annual defense expenditures -- with the objective of trying to make a significant shift, i.e., of tens of billions of dollars per year, from the over 55% of the dollars that are spent in the support areas into the required combat and modernization areas. Thus, our focus was on the approximately $140 billion per year spent in the areas typically referred to as "support" and/or "infrastructure". These run the full gamut from medical and housing to school-house training and base operations. They also consume a very large share of both the civilian and military 2-1/2 million people composing the DoD active duty and civilian workforce. In fact, only approximately 14% of the dollars are directly expended on combat operations and only approximately 14% of the total personnel are in combat positions. Since our objective was to increase the percentage of dollars available for modernization and combat, we focused our attention on finding savings in the support areas. We took each of the various support areas and analyzed whether there could be performance improvements and/or cost reductions in each of them, through applying modern information technology and management principles, along with maximizing the use of competitive market forces from the private sector. Our conclusions, as described in

the report, are that dramatic performance improvements can be realized while simultaneously achieving -- by the end of, say, a five-year period -- a shift of tens of billions of dollars per year from the support arena into the combat and modernization areas.

Since your focus here today is on the DoD's logistics system -- the largest of it's support areas -- let me briefly summarize our findings in this area. In 1996 the DoD expenditures for overall logistics support were approximately $60 billion. Some of this was for direct battlefield support, while the vast majority of it was associated with the infrastructure -- primarily located within the continental United States. Importantly, over one-half million active-duty military personnel are involved in the logistics area -- over 30% of the active duty military -- and approximately 300,000 of the DoD civilian personnel. Recognizing the critical importance of this area to the DoD's future -- from both a mission performance and a budget perspective -- we found that, recently, there have been significant initiatives taken by the DoD to address the logistics' infrastructure area. For example:

- Inventory reductions and logistics "pipeline" reductions through the use of "prime vendor" and rapid transportation approaches.

- Greatly enhanced performance through the use of "total asset visibility".

- Reduced weapon system costs of ownership through investing in replacement parts reliability improvements and spares modernization.

- Cost reductions and improved performance through increased outsourcing and increased use of contractor logistics support.

- Overall, an improvement in logistics response times.

These actions are all commendable, and must be aggressively pursued. However, we found that there is still very significant room for improvement. For example, we found that the response times of the DoD logistic systems, in terms of distribution, repair, and procurement, are still dramatically higher than that achieved by world-class commercial organizations on similar equipment. In fact, we found these world-class benchmarks are measured in hours or days while the DoD performance still tends to be measured in weeks. For example, while Caterpillar delivers parts anywhere in the world within one to four days (or they pay for them), the DoD took 40 to 60 days for the identical parts to be distributed during the Gulf War. Essentially, the difference is that the commercial world has been moving to a totally re-engineered logistics system -- one that relies on "total asset visibility" and rapid transportation. For the DoD to move from its historic "just-in-case" inventory and supply system to achieve comparable high performance at dramatically lower cost, it will be necessary to totally re-engineer the current, World War II or, at best, Cold War DoD logistics structure to one that focuses on a concept of on-demand, rapid, intermodal delivery "from factory to foxhole".

The changes in the DoD logistics system we envision are not small, incremental changes; they are what the commercial firms have been forced to do to become competitive. They fully applied modern information technology to keep track of the availability of all inventory on a world-wide basis -- including that in transit -- and they take full advantage of rapid, world-wide transportation. They also continuously improve the reliability of their parts and systems so as to minimize the down times (and thus maximize the readiness) while, simultaneously, reducing inventory and repair costs.

Thus, the specific issue being addressed by this Committee, i.e., defense inventory management and repair parts, cannot be effectively addressed in isolation, but must be seen as simply a part of a dramatically transformed and streamlined overall DoD logistics system -- one utilizing far fewer people and far fewer parts and facilities, yet providing greatly enhanced logistics performance.

This is the essence of our study findings. Clearly, the potential exists for dramatic improvements in DoD support systems performance and a significant shift of resources from support to combat and modernization; however, the challenge is achieving the implementation of the changes required -- in order to realize these potentials. I believe that the Secretary and Deputy Secretary of Defense, as well as the Chairman and Vice Chairman of the Joint Chiefs of Staff, and each of the Service Chiefs are committed to achieving these changes. I also believe that the initial impact of these changes will be reflected in the final results of the QDR process. However, it must be recognized that these will be extremely difficult changes to bring about -- as they were in American commercial industry. Thus, achieving these changes will require the full cooperation of America's military and political leaders for its realization. You, on this Committee, and the other members of the Congress can play a significant part in removing the barriers to the required transformations that must take place within the DoD over the next few years. Only in this way will America be able to modernize its forces in order to be fully prepared for military operations in the early 21st century.

Mr. SOUDER [presiding]. Thank you very much for your thoughtful testimony. Admiral Schriefer.

Admiral SCHRIEFER. Mr. Chairman and members of the subcommittee, first of all, I want to thank you for inviting us today. Second, I would like to ensure that our written testimony we provided gets entered into the record.

I would like to talk a little bit about Business Executives for National Security [BENS] to make sure everybody understands who and what we are and why we are involved in this. Now, BENS is a national, nonpartisan organization of business and professional leaders that are dedicated to the idea that national security is everyone's business.

BENS members apply our experience and commitment to help our Nation's policymakers build a strong and effective, affordable defense and find practical ways to use and encourage that all these business practices become a reality, and that is really the crux of what our organization is about. We work with Congress. We work with the Pentagon and the White House to ensure that the changes we recommended are put into practice, and that is really why I am here today.

Before joining BENS, I had recently retired from 37 years of active duty in the Navy, and in that position I have really become familiar with the topic we are addressing this morning: improving defense inventory management. I have seen it from several perspectives, both in the Navy as a commander and observer of what we do, and also observing the best in the private sector of their inventory management practices. I can say that from my vantage point, American industry has much to offer and to teach and apply to the inventory practices of the Department of Defense.

I would like to talk about some of these methods today. As I said earlier, I want to not only thank you, but I want to commend you for addressing this, because I cannot think of anything that is more critical than the way we go about our business in the Department of Defense. That is the imbalance of the force structure-to-structure ratio, the problem of tooth-to-tail.

Too much of our limited defense dollars go to support areas, the tail, like inventory management. In fact, support and infrastructure now consume nearly 70 percent of the defense dollars. This type of excessive overhead is inexcusable when many war-fighting needs, the tail, go unmet.

In fact, BENS considers this problem so acute that we are standing up a Tail-to-Tooth Commission, and that word order is intentionally inverted so that we highlight the dangerous reversal in the resources we devote to the combat end of the national defense. When our commission's work is done, we can reverse that name, having restored the military resources to the ratio the United States needs to defend our interests and the ideals into the 21st century.

Your hearings, directed toward that same goal, will ultimately free the resources that can be directed at other, more critical defense needs.

As we heard this morning, the Pentagon has long suffered from deficiencies in its inventory practices. I took the liberty of tracing the history of the problem and found that GAO has studied this for

some 30 years. These type of supply deficiencies were costly annoyances during the cold war period. In today's era of rapid, come-as-you-are warfare, inventory problems could prove deadly.

To their credit, the military services do recognize this danger. Since Desert Storm, military experts have cited two capabilities as crucial to superior battlefield performance: intelligence collection on enemy plans and activities, and the ability to stand up logistics trains stretching 7,000 miles back to the warehouse and depots in the United States.

Management of our logistics inventory was a key to success in Desert Storm. In fact, since World War II, no other industrial nation has matched our ability to deploy and support military forces on a worldwide scale, but today our prowess has become our problem. At huge cost of national treasure—and we have seen that today—we have maintained stocks of supplies and equipment just in case they were needed. However, the end of the cold war and the squeeze on resources allocated to national defense has made just in case an unaffordable strategy.

Now, we have seen and witnessed the many past excesses of DOD inventory and to the incremental management improvements that have been made since the early 1900's. Now, we have also had some successes. For example, let me just mention one. The Air Force now uses the private sector to move materiel from depots to bases worldwide. In 1992, the Air Force Materiel Command operated its own air transportation system, called LOGAIR, to move high-value repair parts around the United States and overseas. It was costing $135 million a year and required nearly 200 full-time civil servants to run that program.

To get a benchmark, the Air Force went to Fed Ex to see how they ran their program. In the process, they asked one of the managers of the Fed Ex warehouse if he could move engines. He looked around and said, "Well, we are moving Mercedes automobiles, so I think we can move engines." Today, the Air Force saves nearly $50 million in that process.

The point which underlies this example is that inventory is a part of a complex problem, as well as the entire system. Piecemeal, step-by-step change will have long-term impact. Real reform requires creation of an entirely new system. As we just heard Dr. Gansler say, it needs to be re-engineered. It is a revolution, not evolution, and it must occur.

That was the lesson that our American industry learned in the 1980's. As recently as 10 to 15 years ago, many large corporations maintained inventory systems which resembled what the Pentagon does today. They were largely vertically oriented. They put key parts in warehouses, supplies and other items that had to be shipped around the world. These corporate structures are now something of the past. The reason simply is that American business simply had no choice.

Faced with that serious challenge from foreign suppliers and using sophisticated inventory systems and lean production teams, our U.S. firms were forced to change. They were, in fact, very successful.

Supply chain management is not just the latest management fad. According to the Department of Commerce, U.S. companies have

cut inventories 9 percent since 1980. That has freed up $82 billion. The savings are the other bonus. Not only do you get more efficient management, but you save money as well.

If supply chain management sounds like it is just in time, I want to insist that it does not. I have not mentioned just in time, because it may not make sense in many critical, combat-related cases. It makes sense in some industrial sectors, but in most cases customers remain uncertain about their future needs.

When a company's projections of future demand are too high, inventory grows; when too low, sales opportunities are lost, and may be a rare exception when used in the military, but for example, what Boeing is now doing with their new versions of the 737 could equally be applied to the Defense Department. An expanded spares distribution network and a reliable, critical parts delivery system can reduce the number of spares an airline has to keep on hand. Improved data analysis allows parts to be shipped closer to the dates when they will be needed for repairs.

Boeing has successfully tested this program with one airline. They predict the plan could reduce an airline's initial spares investment by up to 60 percent. That, in fact, could be applied to the Department of Defense. We need to look at several areas.

Lean thinking. Lean thinking means that management should spend its time looking at processes rather than at organizations and functions.

Asset availability. All firms must maintain a minimum level of inventory, but even this minimum level can be more effectively managed. Advanced software and parts management systems, pioneered by the aftermarket, retail parts industry, can help.

Inventory management, as we have heard today, is not an isolated event. It is part of the life cycle of a product, or in the Pentagon's case, an entire weapons system. You cannot suboptimize inventory management and hope to achieve an overall solution in the life cycle problem. The entire process has to be reformed.

The right amount of inventory varies by situation. Customers and soldiers in the battlefield do not always know in advance what they want or will need. What is important is how you manage that inventory. Inventory management to achieve corporate goals has been pioneered by the private industry. The most important lesson that the U.S. private sector can share with the Defense Department is that there is no need to benchmark a better way of managing inventory when you simply can hire a quality provider to perform a service for you. In short, benchmark not to emulate but to outsource.

Mr. SOUDER. Admiral, for time reasons, we are going to need you to summarize in the next minute or so.

Admiral SCHRIEFER. OK. I will summarize with the recommendations. The first one is that we have to focus on advances in inventory management software. Advances in inventory software have been revolutionary. Software is the tool that allows the entire supply chain to become visible and responsive to the inventory manager.

No. 2: Buy off the shelf. Buying commercial makes sense because it reduces contract costs and overhead.

No. 3: Plan for life cycle costs. For new systems, consider long-term contractor support and outsourcing maintenance as a first option.

Finally, centralized inventory management: A caution here, however, and I emphasize that centralized management is not an excuse for a large management headquarters, which is one of the biggest problems we have today. I thank you for the opportunity to present this.

[The prepared statement of Mr. McInerney follows:]

Thomas G. McInerney
Lieutenant General (USAF, Ret.)
President and CEO
Business Executives for National Security

Mr. Chairman, Members of the Subcommittee, thank you for inviting me to testify today. I am Thomas G. McInerney, President and CEO of Business Executives for National Security, BENS.

BENS is a national non-partisan organization of business and professional leaders dedicated to the idea that national security is everyone's business. BENS members apply our experience and commitment to help our nation's policy makers build a strong, effective, affordable defense, and find practical ways to prevent the use of even one nuclear, chemical, or biological weapon. We work with the Congress, the Pentagon and the White House to ensure the changes we recommend are put into practice. That is why I am here today.

Before joining BENS, I was Vice President of Command and Control for Loral Defense Systems-Eagan. And before that I spent 35 years as a pilot, commander, and strategic planner in the US Air Force. In my last assignment on active military duty I was the Assistant Vice Chief of Staff of the Air Force, and for most of that tour of duty, I also served as Director of the Defense Performance Review, the Pentagon's counterpart to Vice President Gore's National Performance Review.

I led the Defense Department's "Reinventing Government" effort, visiting more than 100 leading-edge commercial companies to assimilate their ideas about business re-engineering. Thus, I have seen the topic we turn to this morning—"Improving Defense Inventory Management"—from several perspectives: as an Air Force customer and commander, and as an observer of the best-in-class private sector inventory management practices. I can say from my vantage point that American industry has much that it can teach and apply to the inventory practices in the Defense Department. I want to talk about some of those methods today.

But first, Mr. Chairman, I want to commend you and the Committee for recognizing the criticality of correcting the imbalance in our force structure to infrastructure ratio—the problem of tooth to tail. Too much of our limited defense dollars go to support areas (the "tail") like inventory management. In fact, support and infrastructure now consume nearly 70% of all defense dollars. This type of excessive overhead is inexcusable when many warfighting needs (the "tooth") remain unmet.

BENS considers the problem so acute, that we are standing up a Tail to Tooth Commission. The word order is intentionally inverted so that we highlight a dangerous reversal in the resources we devote to the combat end of our national defense. When our Commission's work is done, we can reverse the name having restored the military resources to the ratio the US needs to defend our interests and ideals in the 21st Century. Your hearings, directed toward the same goal, will ultimately free resources that can be directed at other, more critical, defense needs.

THE PROBLEM

Mr. Chairman, you are well aware that the Pentagon has long suffered from deficiencies in its inventory practices. I took the liberty of tracing the history of this problem and found that GAO's first studies of this problem date back almost 30 years ago.

These types of supply deficiencies were costly annoyances during the Cold War period. In today's era of rapid "come as you are" warfare, inventory problems could prove deadly.

To their credit, the military services do recognize this danger. Since Desert Storm, military experts have cited two capabilities as crucial to superior battlefield performance: intelligence collection on enemy plans and activity, and the ability to stand up a logistics train stretching 7,000 miles back to the warehouses and depots in the continental US.

Management of our logistics inventory was a key to success in Desert Storm. In fact, since World War II, no other industrial nation has matched our ability to deploy and support military forces on a worldwide scale. But today, our prowess has become our problem.

At huge cost of national treasure, we have maintained stocks of supplies and equipment just in case they were needed. However, the end of the Cold War, and the squeeze on resources allocated to national defense, have made "just in case" an unaffordable strategy.

Other witnesses will provide many details to past excesses in DoD inventory—and to the incremental management improvements that have been made since the early 1990s. Let me mention just two first hand, from my Air Force experience:

The high Air Force sortie rates sustained during the air war in Desert Shield/Desert Storm were largely due to the strong funding received for aircraft War Readiness Spares Kit/Base Level Self-Sufficiency Spares (WRSK/BLSS) from 1984 through 1987. But shortages did occur. The F-15E experienced degraded support, but was kept in the action by the ingenuity and flexibility of the Air Force's maintenance and logistics professionals. Parts were "cannibalized" from non-deploying aircraft in the States, depot repair of exchangeables was surged, and arrangements made to borrow spares from allied air force F-15s. Probably the most useful innovation was opening an "overnight" air express channel from the US direct to Saudi Arabia. Interestingly, all these techniques are used in one form another by the commercial airlines on their worldwide routes every day.

Another example is the way the Air Force now uses the private sector to move materiel from its depots to bases worldwide. In 1992, the Air Force Materiel Command operated its own air transportation system, called LOGAIR, to move high-value repair parts around the US and overseas. It was costing $135 million a year and needed nearly 200 full-time equivalent civil service positions to run.

To get a benchmark from the private sector, we went down to Memphis , Tennessee, to see how Federal Express ran its overnight business. One of the concerns we had about the private sector system was if it could move very large pieces of Air Force gear—like engines. I asked the manager of the FEDEX warehouse if he could move engines. He looked around and said, "Well, we're moving Mercedes automobiles, so I guess we can move engines." We switched contracts, saving nearly $50 million in the process.

A few months later, I was visiting one of our units in Japan. I asked about parts delivery fully expecting to hear how "you guys in Washington don't understand our problems, etc." but instead the Colonel was ecstatic. He said that FEDEX had given him the software so he could track his part from the moment it left the depot in the US. He could follow its progress right up until it was delivered a day-and-a-half later.

LESSONS FROM INDUSTRY

The point which underlies these examples is that inventory is part of a complex process and system. Piecemeal, step by step change will have little long term impact. Real reform requires creation of an entirely new system. Revolution, not evolution, must occur. This was the lesson learned by American industry in the 1980s.

As recently as 10-15 years ago, many large corporations maintained inventory systems which resembled the Pentagon's current system. Large, vertically integrated conglomerates managed a host of separate divisions that warehoused key parts, supplies, and other items that would be shipped on a regular basis to various corporate divisions.

These corporate structures are now a thing of the past. Why? The short answer is that American business had no choice. Faced with a serious challenge from foreign suppliers who employed sophisticated inventory systems and lean production teams, U.S. firms were forced to change. Budget constraints present the same type of challenge to today's defense planners.

The process the private sector threw away, that is, "build to inventory," was replaced by the process of "build to order." To become world class, American manufacturers had to become first class at managing their **supplier chains**. These lessons are directly transferable to the Defense Department's needs.

Consider the example of the Chrysler Corporation.

Today the automaker is the best in its class in managing its supplier chain—60,000 items from over 1,100 different suppliers. In the last five years, the supply chain management concept has come into its own. The theory is simple: companies try to eliminate delays in moving materials and products through the production cycle, and cut the amount of resources tied up along the way.

By studying and streamlining its supplier base Chrysler trimmed its vendor pool by 36 percent in the last five years and plans to cut it another 25 percent by the turn of the century. Chrysler's best suppliers become team leaders in the design and manufacture of major automotive components. Chrysler then outsources entire processes to supplier teams. In the case of driver and passenger seats, time was Chrysler employees assembled them right on the line with components from 150 vendors. Today the company buys fully assembled seats from manufacturers like Johnson Controls, Lear, and Magna International. Overall, its "supplier cost-reduction effort" or SCORE has meant $2.5 billion in savings for Chrysler.

Supply chain management is not just the latest management fad. According to the Department of Commerce, US companies have cut inventories by 9 percent since the 1980s, freeing up $82 billion for other purposes. These savings are the other bonus. Not only do you get more efficient management, but you save money as well.

If supply chain management sounds like it leads to "just in time" inventory, I want to insist that it does not. I have not mentioned "just in time" or JIT because it may not make sense in many critical, combat-related cases.

JIT makes sense for some industrial sectors, but, in most cases, customers remain uncertain about their future needs. When a company's projections of future demand are too high, inventory grows. When projections run too low, sales opportunities are lost.

Unfortunately, faulty projections have more serious consequences when it comes to our nation's defense. If we project wrong, lives could be lost. So I am reluctant to recommend "just in time" as a model for all DoD inventory.

JIT is a rare exception. Many other industrial techniques will help us to improve inventory practices and can be easily transferred for military use. As one example, let me point to Boeing's new phased provisioning program for the spare parts in new versions of the 737.

Phased provisioning means that a full set of spares need not be "on the shelf" before a system, like the 737-600, goes into service. An expanded spares distribution network and reliable critical parts delivery system can reduce the number of spares an airline has to keep on hand. Improved data analysis allows parts to be shipped closer to the dates when they will be needed for repairs or overhaul.

Boeing has successfully tested the program with one airline. They predict the plan could reduce an airlines' initial spares investment by up to 60 percent.

Other interesting industry approaches include:

- **Lean Thinking.** Inventory cannot be studied in isolation. It is part of a process which matches the production of goods and services to customers. Lean Thinking means that management should spend its time looking at processes rather than at organizations and functions. Lean Thinking helps get your priorities straight. At Pratt & Whitney's jet engine factory, manufacturing schedules had long been organized around the need to keep its huge machines humming as continuously as possible. That led to production jams, massive inventories, and costly warehousing. By switching over to specific product runs on a timely basis, the company has cut manufacturing time by two-thirds and inventories by 70 percent.

- **Asset Visibility.** At some point, management streamlining reaches its theoretical limit. All firms must maintain a minimum level of inventory. But, even this minimal level can be more effectively managed. Advanced software and parts management systems, pioneered by the after-market retail parts industry, can help. Service parts planning has become a niche market for third-party vendors. These vendors already provided transportation and warehousing services for parts. Now they are developing software and planning systems that can be sold as complete parts planning solutions.

LESSONS LEARNED

These private sector experiences yield several important lessons that could help drive the Subcommittee's review process:

- **Inventory management is not an isolated event**. It is part of the life cycle of a product—or in the Pentagon's case, a weapon system. You cannot suboptimize inventory management and hope to achieve an overall solution to the life cycle problem. The entire process has to be reformed.

- **The right amount of inventory varies by situation**. Customers—and soldiers on the battlefield—do not always know in advance what they want or will need. What is important is how you manage inventory.

- **Inventory management to achieve corporate goals has been pioneered by private industry**. The most important lesson that the US private sector can share with the Defense Department is that there is no need to benchmark a better way of managing inventory, when you can simply hire a quality provider to perform the service for you. In short, benchmark not to emulate, but to outsource.

In some cases, the Defense Department should simply get out of the inventory business. Let me provide another example: In 1991, Eli Lilly, the pharmaceutical giant, embarked on a massive reorganization (known as "Strategic Sourcing") to streamline its procurement methods and tighten up its supply chain. Before Strategic Sourcing, each of Lilly's 28 plants handled purchasing independently. To give Lilly greater buying clout, purchasing was centralized and 12 commodity managers created with authority over all relevant details for the commodity. The centralized commodity approach led Lilly to outsource all printing for its bottle labels, boxes, and information pamphlets. Through Strategic Sourcing, Lilly expects to save $190 million a year by 1998.

AAR, Inc. of Chicago followed a similar path. AAR started out as Allen's Aircraft Radio, a purchaser of surplus aircraft electronics—like radios from the venerable C-47 Skytrain of "Over the Hump" fame in World War II. Today it is a $500 million company listed on the NYSE. It has been transformed from an aircraft parts trader into an inventory manager as airlines like successful Southwest Airlines turn to outsourcing to lower costs.

AAR buys entire spare parts inventories from major airlines and manages the inventory and supplies it as needed to the carriers. Airlines like AAR's system because it frees up capital. Today, it is estimated that $25 billion is tied up worldwide in reparable and spare parts for commercial planes. Of this sum, only $6 billion of inventory is used each year.

Cutting this idle inventory can reap huge savings. Aviation consultants estimate that a 25 percent cut in inventory would trim airline expenses by nearly $2 billion—a boon to an industry which only earned $1.5 billion last year. AAR figures to capitalize on the airlines' trend toward owning only the "name on the door." Of all the planes flying in the world today, 65 percent are leased. As airlines outsource to save capital, the vendor market for companies like AAR is expanding.

RECOMMENDATIONS

Outsourcing makes sense for much of the Pentagon's supply chain—stockage, transportation, issue, turn-in, repair, and disposal. Let me close with four specific recommendations for the Pentagon that reflect the best practices developed by the private sector for their inventory management challenge:

1. **Focus on advances in inventory management software**

Advances in inventory software have been revolutionary. Software is the tool that allows the entire supply chain to become visible and responsive to the inventory manager. The view of the "big picture" helps avoid choke points and enhances the entire logistics chain.

2. **Buy Off the Shelf**

Buying commercial makes sense because it reduces contract costs and overhead. It also helps reduce the need to maintain excess inventory. Commercial off-the-shelf solutions expand the supplier base and make the entire worldwide commercial distribution network available to Defense Department needs.

3. **Plan for Life Cycle Costs**

For new systems, consider long term contractor support and outsourcing maintenance and repair as the first option. Planning for the system's life cycle from the beginning promotes competition and lowers long term support costs.

4. **Centralize Inventory Management**

Centralized inventory management is desirable. Recall the Eli Lilly example. It leads to increased competition and buying clout. However, centralized management is not an excuse for large management headquarters. Information technology can pare the layers of administrative bureaucracy between the supplier, buyer and the user.

I thank the subcommittee for the opportunity to present BENS' perspective on this important part of our nation's defense infrastructure.

Business Executives for National Security (BENS) does not accept federal grants or contracts. No federal funds were received in the current or two preceding fiscal years.

Mr. SOUDER. I want to thank you, Admiral, and you, Dr. Gansler. I appreciate your testimony. You all have had to wait a little bit longer today and be here with us longer than you, I think, had originally anticipated. Because of this vote and because we have already lost our members on the minority side and because I am going to have to run to make the vote myself, what we are going to do is conclude the hearing at this time without any questioning, but ask you—advise you that we will submit written questions which we would very much appreciate your answering; and, Admiral, your full statement—each of your full statements will be made a part of the record.

Thank you very much, and with that, I will conclude. This hearing is adjourned.

[Whereupon, at 12:15 p.m., the subcommittee was adjourned.]

[Additional information submitted for the hearing record follows:]

Improving Defense Inventory Management

Follow-up questions to BENS testimony before the House Committee on Government Reform and Oversight, Subcommittee on National Security, International Affairs, and Criminal Justice. March 20. 1997.

1. Please compare and contrast "just-in-time" delivery with the use of "supplier chains."

The two inventory management concepts are alike in that they both focus on reducing the quantity of raw material and secondary inventory (parts and components) that sit idle awaiting their place in the production cycle. They differ in management scope and the type of product to which they apply.

Just in time, or JIT, deals primarily with timing the arrival of materials and supplies to their need on the production floor. It is more commonly used when production runs are based on known demand and can be predicted far enough in advance so that suppliers can time deliveries to meet the production deadline. Most "functional" products like prepared foods and personal care products (soup and toothpaste, for example) fit a JIT production schedule.

The concept of managing entire "supplier chains" is more comprehensive than JIT. It envisions extensive interaction and participatory problem solving between supplier and manufacturer. The supply chain management technique enabled the private sector to throw away its "build to inventory" method and replace it, aided by information technology, with the process of "build to order." Where demand is uncertain, or product life cycles are short, a supply chain management process makes more sense because it provides flexibility and responsiveness. Each supplier in the chain is kept "in the loop" on timing to respond to market demand. Innovative products like clothing (trend fashion) and high technology electronics benefit from supply chain management.

2. What kinds of modern commercial inventory management software could be useful for defense inventory management?

Many types of software solutions exist. The important concept for the Pentagon to take from the private sector regarding inventory management software is that world class companies have gone outside their own resources to secure inventory management systems and software solutions from private sector vendors who specialize in such operations. Outside management solutions can be hired—off the shelf—at far less cost, and be put in place in shorter time, than trying to develop application-specific solutions with contracts and consultants.

A business example of commercial software applied to "stream inventory management" is used at Eastman Chemical, a commodity plastics and fine chemicals manufacturing company in eastern Tennessee. Stream inventory management for the company's 1,500 different raw materials from 850 different suppliers requires gigabits of information. To handle the load, Eastman Chemical developed the Global Business Integrated Information System, or Globiis. Using software from Germany's SAP as a platform, Globiis is able to track inventories, worldwide, in real time. Once the on hand

levels are set, one person tracks the entire inventory stream from raw material to finished product.

3. What kinds of defense inventory activities should be privatized or outsourced? On the other hand, what kinds of defense inventory activities are "inherently governmental" and should never be privatized? Please give specific examples.

There is virtually no area of inventory management that cannot benefit from using private sector techniques and vendors. The most profitable may be in material management and transportation because the private sector has invested billions in a global network of distribution and transportation hubs. The Defense Department's innovative attempt to reduce its deployment "logistics footprint"—i.e., the amount of materiel that has to deploy forward with combat forces—increases the opportunities to use quality providers in the private sector to help it marshal and move its inventory when and where needed.

"Inherently governmental" refers to those activities which are solely the responsibility of government and cannot be further delegated. For example, providing combat forces is inherently governmental. Defense inventory activities are a support, not a combat, function. It makes sense for the private sector to provide effective and cost-efficient defense inventory management services so that the Pentagon can focus on providing combat forces.

4. What were the original justifications for the "60/40" rule? Do those justifications apply in today's national security environment?

Congress' rationale for imposing the so-called 60/40 rule on depot maintenance repair activities (specifically, 10 U.S.C. 2466 which 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.") is based on the conviction that national security requires a robust public sector capability for peacetime depot-level maintenance that also provides adequate wartime surge capacity. Underlying the rationale is a desire to protect jobs in the public sector by maintaining the status quo in the public depot system.

The 60/40 rule makes it difficult for the Defense Department to get best value by choosing either a public or private sector supplier for its depot maintenance dollar. Today's national security environment is resource-constrained and clearly requires that Congress extend the Defense Department's management flexibility by encouraging the savings and increased quality and efficiency that greater reliance on the private sector would bring. The "60/40 rule" is arbitrary and impairs the Pentagon's efforts to obtain best value for the defense dollar.

5. For depot-level maintenance activities, how much can DoD's average turnaround time be improved, and how will this be accomplished? How much money can be saved on inventory and inventory management as a result of improving turnaround time?

Competition, introduced by privatizing the depot maintenance system, would be the single greatest contributor to improving turnaround time. Reducing turnaround time for depot-level repair of systems and components gets to the heart of solving the inventory management muddle. Inventory is a process, not an isolated event. Shortening the repair pipeline requires that each step of the process be reorganized. The GAO reported (testimony of Henry L. Hinton, Jr., March 20, 1997, before the Subcommittee) that in separate Air Force and Army processes they studied, the private sector beat the military service depots by a factor of 6 or more in turnaround time.

As for cost, the 1995 Commission on Roles and Missions of the Armed Forces reported on over 200 public-private competitions at shipyards and aviation depots and five at aircraft depots. On average, the private depots showed savings of 30 percent. And, as BENS reported in its written testimony, the Air Force saved $50 million by outsourcing its airborne transport of spare and repair parts. Clearly, there is reason to investigate using private sector providers for some, if not all, depot-level inventory management.

6. Many of the defense inventory problems we are discussing today have been with us for at least 30 years. Why has change been so difficult?

A flurry of legislation enacted at the close of World War II and just prior to the Korean War established parameters that control the size and management of defense inventory today. Laws still on the books, such as the Strategic and Critical Stockpiling Act of 1946, the National Industrial Reserve Act of 1948, and the Defense Production Act of 1950, codified a "just in case" methodology of maintaining sufficient inventory to deal with the most stressing combat scenario. Changing this system is difficult because, for many years, the Cold War provided a strategic rationale for holding large inventories. Institutions sprang up, bureaucracies were built, and many jobs came to depend on maintaining the status quo.

Today's strategic environment and the constraints on defense resources demands that the defense establishment change the way its has done business for over 50 years. Old habits persist—the "60/40 rule", failure to close more bases, maintaining a 40 percent excess capacity in the defense depot system. To foster change, BENS believes that it makes sense to test proven private sector inventory management tools on the defense sector.

7. How many military and civilian jobs do you anticipate will be lost as defense inventory management is made more efficient? What is the best way to manage those job losses?

Estimates of job transitions vary from sector to sector and industry to industry. In the private sector, outsourcing an entire, non-core, function such as inventory frequently means that a company will transition the workload and the jobs to the new provider. In the US, job losses on the order of 10-15 percent generally accompany major transitions due to streamlining, economies of scale, and consolidation at the managerial level.

The key to overcoming job loss is confronting the problem head-on by combining the resources provided by Congress, the Defense Department, and local communities. BENS' decade of experience with base closings across the nation yields one overriding lesson: aggressively pursuing private sector redevelopment pays off in a more prosperous and stable local economy. Communities choose a risky strategy by clinging to public jobs in an era of declining defense resources. Political action often aids this shortsighted job protection policy. The private sector provides the best chance for a community to preserve and grow jobs.

Take, for example, the challenges facing the Air Force' maintenance depots. Today, the public sector employment base is shrinking. Tinker AFB in Oklahoma now employs 12,000—down from 18,000 in 1993—and its workforce is dependent on the amount of government work it can attract. Contrast this situation to Kelly AFB's 11,000 DoD jobs, 5,000 of which are being privatized and where commercial work may push employment to 21,000 over the next decade.

There is a shortage of skilled workers in the US today. With unemployment just over 5 percent in total, and much lower for skilled workers, the opportunities for Federal workers to make successful transitions to the private sector—especially with focused programs from government and local communities—are outstanding. Now is the time to move DoD's business activities into the private sector.

8. What Congressional action could assist in reforming defense inventory management?

Congress must continue to press the Defense Department to look for private sector solutions to its commercial activities. The private sector went through a painful decade of reorganization in the 1980s but emerged more efficient and competitive than any other economy in the world. Reforming the Pentagon's commercial activities should capitalize on the lessons of the private sector.

Congress should resist legislation that seeks to preserve the status quo simply for the purpose of protecting an installation, a function, or a small segment of the federal workforce at the expense of the efficiencies and savings that outsourcing and, in some cases, privatization of federal activities can provide.

9. What can groups like BENS do to assist in reforming defense inventory management?

BENS is uniquely positioned to help the Department of Defense make the transition from sole owner to world-class buyer of quality services and support from the private sector. BENS members, individually successful in their own companies and industries, can bring the recent experience of corporate America to bear on reengineering the business of defense. Inventory management is an area the private sector has totally revolutionized since the early 1980s. It would be surprising if none of the inventory management techniques pioneered by the private sector could help the Pentagon improve its performance.

Solving the commercial business practice challenges requires completely rethinking how the Defense Department organizes and manages its support and infrastructure activities. BENS is convening a Tail to Tooth Commission to undertake a

comprehensive review of these challenges. The Commission's goal is to inject best business practices into DoD operations so that funds for the warfighter's "teeth" can be freed up by cutting down and modernizing the Cold War era infrastructure "tail." BENS believes this approach offers the most promising way to remedy readiness concerns and free up resources to modernize fighting forces.

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DEFENSE SCIENCE BOARD

April 10, 1997

Rep. J. Dennis Hastert, Chairman
Subcommittee on National Security,
International Affairs, and Criminal Justice
Congress of the United States
2157 Rayburn House Office Building
Washington, DC 20515-5143

and

Rep. Thomas M. Barrett, Ranking Member
Subcommittee on National Security,
International Affairs, and Criminal Justice
Congress of the United States
2157 Rayburn House Office Building
Washington, DC 20515-5143

Dear Sirs,

In response to your letter (of March 27th) listing a set of six questions (as follow up to my testimony on March 20, 1997) here are my answers.

Question 1.: In general, there is no reason why all of the logistics and inventory activities of the Department of Defense that are contained within the continental United States cannot be done by the private sector. In addition, most of what is done in transportation and inventory management offshore can also be done in the private sector. The separation comes when we get to the actual battlefield environment. Here, in general, this is the domain of the work of the DoD that is "inherently governmental". It is important to emphasize that the purpose in making a shift (to greater logistics participation by the private sector) is first and foremost to greatly improve the responsiveness/performance of the overall DoD logistics and inventory management system, i.e., from "factory to foxhole"; then, to also make a dramatic reduction in cost to the government of the overall system (in both dollars and personnel).

Question 2.: The original reason for the large, organic depot system in the United States was that during World War II the private-sector industry was fully occupied in producing new weapons systems; thus, a separate capability was required for the repair and overhaul of the large number of systems in use during the extended-duration, high-intensity, conflict. This same rationale carried over into the early phases of the Cold War, where the defense budgets were still high and the principle scenario envisioned was a central European, high-intensity conflict. However, today, the nature of the likely conflicts has changed; the nation can no longer afford to maintain redundant capability in both the private and public sectors; and there are many defense industry firms who can no longer afford to stay in business working only on the engineering and production of the limited number of weapon systems being produced. Thus, these firms should have the right to bid on, and perform on, the large efforts (tens of billions of dollars/year) required to maintain the older weapon systems. Thus, to achieve overall efficiency and responsiveness, it is necessary to allow the DoD to run competitions for the most cost-effective and responsive maintenance systems possible -- regardless of whether they are in the public or private sector. In order for the DoD to modernize its forces (while maintaining its readiness), there are only two choices: either the DoD budget is to be increased to provide added resources for modernization or the current infrastructure within the DoD (including the organic depots) must be dramatically reduced -- thus, freeing up the dollars required for modernization.

Question 3.: World-class corporations today are achieving dramatic reductions in inventory and personnel while at the same time achieving dramatic improvements in the turn-around times for their logistics and maintenance activities. In fact, these world-class companies are measuring their responsiveness in hours or days, while the DoD responsiveness is measured in weeks or months. By utilizing the same techniques, i.e., of applying modern information technology to achieve total asset visibility and by utilizing rapid industrial and transportation systems (along with opening up the market to allow the utilization of the capabilities provided by the firms achieving these results) the DoD can similarly achieve such spectacular responsiveness. A key to this is achieving civil/military integration at the industrial level, so that the small volume of DoD peacetime requirements can be efficiently performed, and when surge is demanded the broad base is there to respond.

Question 4.: Achieving a shift of the DoD to such high-performance systems is resisted for a variety of reasons: by the military, because they have not yet fully developed the necessary "proof" of the fact that the systems will achieve the desired results on a dependable basis (something which

must be demonstrated in a wide variety of cases in order to build up this trust); by the government workers, who would be affected if the DoD were to shift to more of a private sector dependence; and by the politicians, who are concerned about the impact on votes in their district or state that might be affected by such a shift. Obviously, each of these areas must be explicitly addressed.

Question 5.: In order to achieve the savings potential, as well as the improved performance, offered by a shift to a modern logistics system, it is necessary to reduce the workforce in the logistics area -- both in terms of civilian and military personnel. The levels anticipated for reduction are less than the percent reductions actually realized during the 1994-1995 time period and thus they are both realistic and achievable. Naturally, there should be explicit programs set up to manage this downsizing in a fair and effective fashion.

Question 6.: There are a series of Congressional restrictions which currently greatly inhibit the required shifts to greater effectiveness and efficiency within the DoD's logistics (and other support) areas. These were identified in the Defense Science Board report on Outsourcing and Privatization on page 38. Unless these barriers are relaxed, it will be impossible for the DoD to modernize its forces without increased defense budgets.

I hope this information is of help to you, and I would be pleased to supply any additional data should you so request.

Sincerely,

Jacques S. Gansler

JSG:mds