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United States General Accounting Office
Washington, DC 20548

December 18, 2003

The Honorable Jerry Lewis
Chairman
Subcommittee on Defense
Committee on Appropriations
House of Representatives

Subject: *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom*

Dear Mr. Chairman:

Operation Iraqi Freedom (OIF) is one of the largest logistics supply and support efforts that the U.S. military has ever undertaken. For example, of the $28.1 billion that the Department of Defense (DOD) has obligated for OIF, the services and the Defense Logistics Agency have reported that $14.2 billion is for operating support costs and $4.9 billion is for transportation costs. This operation required the movement of large numbers of personnel and equipment over long distances into a hostile environment involving harsh desert conditions.

You asked us to study a number of issues related to logistics support to deployed forces. In April 2003, shortly after the onset of OIF, we began work that focused on DOD's accountability and control over supplies and equipment shipped to that theater of operation. Based on the early results of this work, we subsequently broadened our scope to include other logistical issues, such as the deployment of support units and the transportation of supplies and equipment.

At the outset of this assignment, we agreed to keep you periodically informed of the status of our work. On November 6, 2003, we provided your office with a briefing on our preliminary observations of the effectiveness of logistics activities during OIF. As we emphasized at the briefing, these observations are based on the limited work we have done to date. As requested, we are transmitting the briefing (enc. I) in this report. In conducting our preliminary work, we relied on data gathered through our visits and interviews with military logistics personnel deployed to the theater of operations. We visited logistics support activities in Kuwait, Bahrain, and Qatar, but we did not visit activities in Iraq. We also met with senior officials at DOD and military service

headquarters and logistics support activities in the United States and Europe. We also reviewed the military services' and DOD's "after-action" reports, "lessons learned" studies, and other similar documents. The scope of our work included all types of supplies and equipment used during OIF, including such items as repair parts, food, clothing, and construction material.

Although we have done some limited analysis, we have not verified all of the data and plan to more fully address the issues identified in this briefing in subsequent work. We expect to complete our work and issue a report, including recommendations for executive action, during 2004. In addition, we are planning to provide DOD with a short letter of inquiry concerning a serious condition we came across relating to the return of materiel from units in the theater, which we believe warrants DOD's immediate attention. A copy of the draft letter will be provided to you, and the response from DOD will also be provided.

Summary

Although major combat operations during the initial phases of OIF were successful, our preliminary work indicated that there were substantial logistics support problems in the OIF theater, as evidenced by

- a backlog of hundreds of pallets and containers of materiel at various distribution points due to transportation constraints and inadequate asset visibility;
- a discrepancy of $1.2 billion between the amount of materiel shipped to Army activities in the theater of operations and the amount of materiel that those activities acknowledged they received;
- a potential cost to DOD of millions of dollars for late fees on leased containers or replacement of DOD-owned containers due to distribution backlogs or losses;
- the cannibalization of vehicles and potential reduction of equipment readiness due to the unavailability of parts that either were not in DOD's inventory or could not be located because of inadequate asset visibility;
- the duplication of many requisitions and circumvention of the supply system as a result of inadequate asset visibility; and
- the accumulation at the theater distribution center in Kuwait of hundreds of pallets, containers, and boxes of excess supplies and equipment that were shipped from units redeploying from Iraq without required content descriptions and shipping documentation. For example, at the time we visited the center, we observed a wide array of materiel, spread over many acres, that included a mix of broken and usable parts that had not been sorted into the appropriate supply class, unidentified items in containers

that had not been opened and inventoried, and items that appeared to be deteriorating due to the harsh desert conditions.

We noted a number of factors that, in combination with other conditions, may have contributed to the logistics support problems we identified. Such factors include the following:

- **Poor asset visibility.** DOD did not have adequate visibility over all equipment and supplies transported to, within, and from the theater of operations in support of OIF. For example, although the U.S. Central Command issued a policy requiring, whenever feasible, the use of radio frequency identification tags to track assets shipped to and within the theater, these tags were not used in a uniform and consistent manner.[1] In addition, units operating in the theater did not have adequate access to, or could not fully use, DOD's logistics and asset visibility systems in order to track equipment and supplies because these systems were not fully interoperable and capable of exchanging information or transmitting data over required distances. Furthermore, DOD and military service personnel lacked training on the use of radio frequency identification tags and other tracking tools, which also adversely affected asset visibility.

- **Insufficient and ineffective theater distribution capability.** DOD did not have a sufficient distribution capability in the theater to effectively manage and transport the large amount of supplies and equipment deployed during OIF. For example, the distribution of supplies to forward units was delayed because adequate transportation assets, such as cargo trucks and materiel handling equipment, were not available within the theater of operations. The distribution of supplies was also delayed because cargo arriving in shipping containers and pallets had to be separated and repackaged several times for delivery to multiple units in different locations. In addition, DOD's lack of an effective process for prioritizing cargo for delivery precluded the effective use of scarce theater transportation assets. Finally, one of the major causes of distribution problems during OIF was that most Army and Marine Corps logistics personnel and equipment did not deploy to the theater until after combat troops arrived, and, in fact, most Army personnel did not arrive until after major combat operations were underway. In addition, logistics personnel

[1] Radio frequency identification (RFID) tags are used to track shipping containers and pallets and their contents while in transit. These tags identify what items are in a container or pallet and continuously transmit that information through radio signals, which can be read electronically using hand-held scanners or fixed interrogators placed at various points along supply routes.

were not adequately trained in various logistics functions, such as operating material handling equipment and managing theater distribution centers.

- **Failure to apply "lessons learned" from prior operations.** The failure to effectively apply lessons learned from Operations Desert Shield and Desert Storm and other military operations may have contributed to the logistics support problems encountered during OIF. Our prior reports, as well as DOD and military service after-action reports and other studies of prior military operations, have documented some of the same problems that appear to be occurring in OIF. For example, our September 1992 report concluded that accountability and asset visibility were lost during Operation Desert Storm due to the lack of container documentation and an inadequate transportation system to distribute these supplies.[2] DOD's April 1992 report to Congress on the conduct of the Persian Gulf War reported that, in addition to a lack of asset visibility and poor materiel distribution, the logistics effort was weakened by the long processing time for supply requisitions, which resulted in the loss of confidence and discipline in the supply system, the abuse of the priority designation process, and the submission of multiple requisitions.[3] In addition, DOD's after-action report from the more recent operation in Kosovo concluded that military leaders had limited visibility over supplies because the communications support needed to fuse data from multiple collection points was inadequate.[4] Based on the preliminary observations from our current work, it appears that the same or similar problems continue to exist in OIF.

- **Other Logistics Issues.** DOD and military service officials raised a number of other logistics-related issues with us during our review. Although these issues need to be explored further, they are included in this report because they may have contributed to the recent logistics problems. There were indications of the following:

  - At times there were shortages of some spares or repair parts needed by deployed forces. Military personnel we spoke with noted shortages of

[2] U.S. General Accounting Office, *Operation Desert Storm: Lack of Accountability Over Materiel During Redeployment*, GAO/NSIAD-92-258 (Washington, D.C.: Sept. 23, 1992).

[3] Department of Defense, *Conduct of the Persian Gulf War: Final Report to the Congress* (Washington, D.C.: April 1992).

[4] Department of Defense, *Kosovo/Operation Allied Force After-Action Report: Report to the Congress* (Washington, D.C.: Jan. 31, 2000).

items such as tires, tank track, helicopter spare parts, and radio batteries. As a result, units resorted to cannibalizing vehicles or circumventing normal supply channels to keep equipment in ready condition.

- Army prepositioned equipment used for OIF was not adequately configured to match unit needs. For example, parts inventories contained in the prepositioned stocks were not sufficient to meet the needs of the units that relied on them.

- DOD contractors used for logistics support during OIF were not always effective. For example, we were told that some commercial shippers were unable to provide "door-to-door" delivery of supplies to units in the theater, as was required by their contracts.

- Physical security at ports and other distribution points in the theater was not always adequate to protect assets from being lost or taken by unauthorized personnel. For example, Army officials noted cases where vehicles and expensive communications and computer equipment had been lost from various distribution points in Kuwait.

Scope and Methodology

In developing these issues for this briefing, we held discussions with officials from key DOD and military service organizations responsible for logistics support and materiel management policies and procedures in the United States, Europe, and the OIF theater of operations in the Middle East. Our audit work primarily focused on Army and Marine Corps operations. In the theater of operations, we visited logistics support activities in Kuwait, Bahrain, and Qatar, but we did not visit activities in Iraq. We also reviewed policies, procedures, and processes in place to maintain accountability and control over materiel as it moved to, within, and from the theater of operations. In addition, we reviewed lessons learned reports and other assessments of logistics support for Operations Desert Shield and Desert Storm and other military operations, including OIF. We performed our review from April 2003 through December 2003 in accordance with generally accepted government auditing standards.

Agency Comments

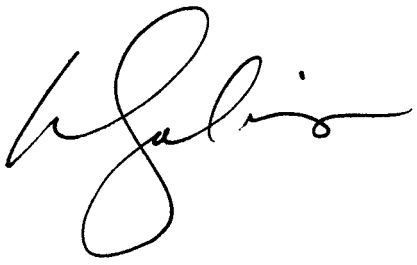
In providing oral comments on the briefing slides, DOD representatives from the Office of the Assistant Deputy Under Secretary of Defense (Supply Chain Integration) and other military logistics officials stated that they generally concurred with the observations we presented. They pointed out that the problems we identified were ones that they were also familiar with and noted that DOD was already taking a number of actions

that address some of them. For example, they stated that the Secretary of Defense has designated the Under Secretary of Defense (Acquisition, Technology, and Logistics) as the Defense Logistics Executive with the authority to address all logistics and supply chain issues. In addition, the Secretary of Defense designated the U.S. Transportation Command as a single distribution process owner to address problems with the distribution process that hampered DOD's ability to optimally support deployed forces. Finally, the DOD representatives noted that, in October 2003, DOD issued a policy directing the use of radio frequency identification technology as a standard business process across the department to address visibility problems.

We are sending copies of this report to the Chairmen and Ranking Minority Members of other Senate and House committees and subcommittees that have jurisdiction and oversight responsibilities for DOD. We are also sending copies to the Secretary of Defense and the Director, Office of Management and Budget. Copies will also be available at no charge on our Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8365 or e-mail me at solisw@gao.gov. Key contributors to this report were Kenneth Knouse, Cary Russell, Gerald Winterlin, Jason Venner, Kenneth Daniell, Tinh Nguyen, and Nancy Benco.

Sincerely yours,



William M. Solis
Director, Defense Capabilities and Management

Enclosure

Enclosure I

Preliminary GAO Observations on Effectiveness of Logistics Activities during Operation Iraqi Freedom

Briefing to the Subcommittee on Defense, House Appropriations Committee

November 6, 2003

Briefing Outline

- Objectives, Scope, and Methodology
- Department of Defense (DOD) Organizations Visited
- Background
- Preliminary Results of Our Work

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Objectives, Scope, and Methodology

- Our initial objectives focused on the accountability and control of equipment required for military operations for Operation Iraqi Freedom (OIF). To do this, we
  - reviewed existing policies, procedures, and processes used to maintain control over equipment as it moved to, within, and from the OIF Area of Operations;
  - reviewed lessons learned from Operations Desert Shield and Desert Storm and other military operations to determine if there were improvements that could be applied to the current operation; and
  - met with officials from key organizations responsible for logistics and equipment management policies and procedures (see next slide).
- Based on early results of our work, we subsequently broadened our scope to include other logistics issues, such as the deployment of support units and the transportation of materiel.
- We began our work in April 2003.

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DOD Organizations Visited

CONUS

- Office of the Secretary of Defense, and the Joint Staff (J-4), Washington, D.C.
- U.S. Central Command Headquarters, Tampa, Fla.
- U.S. Transportation Command, Scott Air Force Base, Ill.
- Defense Logistics Agency (DLA)
  - Headquarters, Ft. Belvoir, Va.
  - Defense Distribution Center, New Cumberland, Pa.
- U.S. Army
  - Headquarters, Washington, D.C.
  - U.S. Army Central Command, Atlanta, Ga.
  - Army Materiel Command, Alexandria, Va.
  - 3rd Infantry Division, Ft. Stewart, Ga.
  - Forces Command, Atlanta, Ga.
  - Combined Arms Support Command and Army Distribution Management Team, Ft. Lee, Va.
- U.S. Air Force Headquarters, Washington, D.C.
- U.S. Navy Headquarters, Arlington, Va.
- U.S. Marine Corps Headquarters, Arlington, Va.

Germany

- U.S. Army Europe, Heidelberg
- U.S. European Command, Stuttgart
- Defense Logistics Agency—Europe, Wiesbaden
  - Defense Distribution Depot—Europe, Germersheim
- 21st Theater Support Command, Kaiserslautern
- U.S. Air Forces Europe, Ramstein
- 3rd Corps Support Command, Wiesbaden

OIF Area of Operations

- Kuwait (see next slide)
- Army Materiel Command, Qatar
- Coalition Forces Land Component Command, Qatar
- Army Central Command, Qatar
- U.S. Central Command Air Forces, Qatar
- U.S. Naval Forces Central Command/Commander Task Force-53, Bahrain
- Defense Logistics Agency
  - Defense Energy Supply Center, Bahrain
  - Defense Distribution Depot, Bahrain

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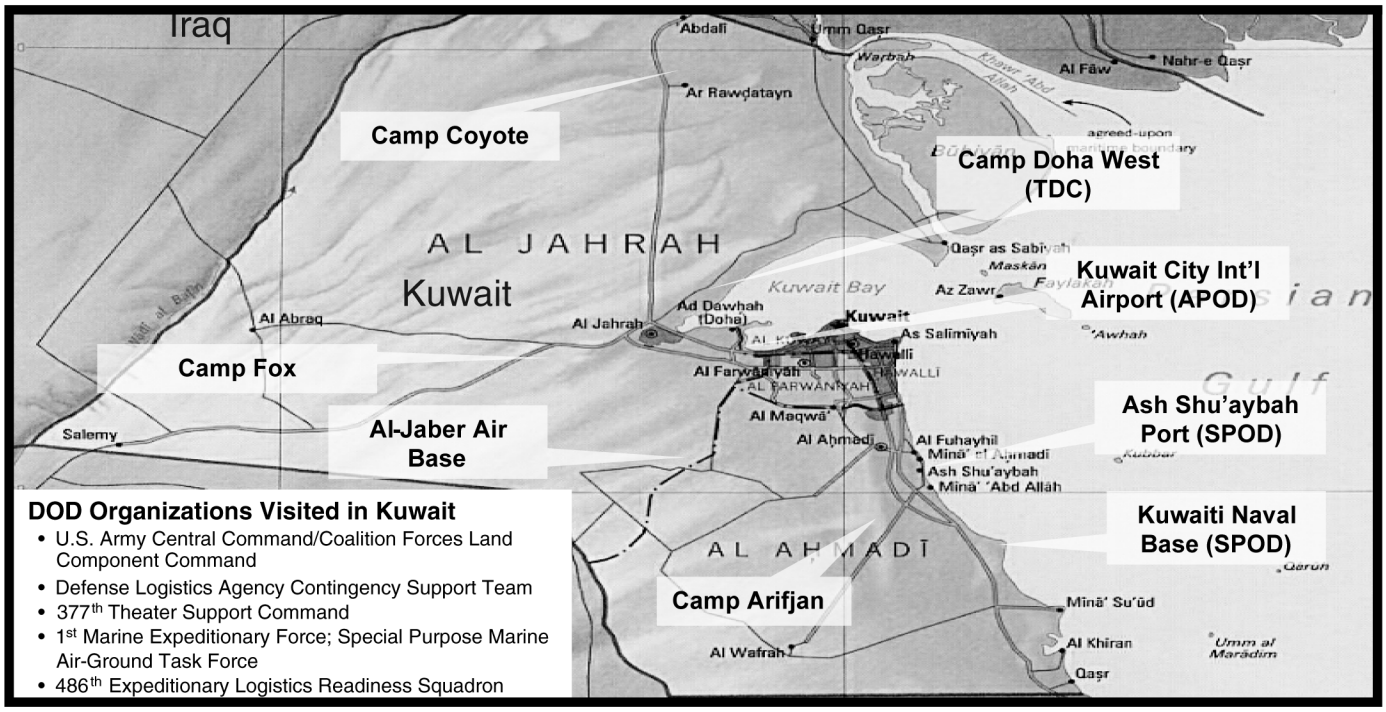
DOD Organizations Visited



DOD Organizations Visited in Kuwait

- U.S. Army Central Command/Coalition Forces Land Component Command
- Defense Logistics Agency Contingency Support Team
- 377th Theater Support Command
- 1st Marine Expeditionary Force; Special Purpose Marine Air-Ground Task Force
- 486th Expeditionary Logistics Readiness Squadron

Source: U.S. Marine Corps map adapted by GAO.

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Background

- Operation Iraqi Freedom (OIF) is one of the largest supply and support efforts the United States has ever undertaken. For example, of the $28.1 billion DOD has obligated for OIF, as of July 31, 2003, the services and the Defense Logistics Agency reported[1]
  - operating support costs of $14.2 billion and
  - transportation costs of $4.9 billion.
- According to DOD officials, logistics operations for OIF were similar in many respects to Operation Desert Storm; however, there were some key differences.
  - A large amount of equipment and supplies was already prepositioned in the theater for OIF.
  - U.S. forces maintained only 5 to 7 days worth of supplies on hand during OIF versus 60 days during Desert Storm.
  - OIF combat operations lasted substantially longer than Desert Storm and have been followed up by a long period of sustainment operations.
  - Combat forces for OIF were spread out further into Iraq with longer supply lines than during Desert Storm.

[1] **Department of Defense, Defense Finance and Accounting Service (DFAS),** *Consolidated Department of Defense (DoD) Terrorist Response Cost Report as of July 31, 2003.*

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Background

Selected OIF costs reported by DOD as of July 31, 2003 (Dollars in thousands)	Army	Air Force	Navy[a]	Marine Corps	DLA	Total
Operating support costs						
Training	$873	$0	$13,672	$478	$10	**$15,033**
Operation OPTEMPO (fuel, other POL, parts)	1,935,274	351,180	877,318	202,053	623,932	**3,989,757**
Other supplies and equipment	1,700,824	1,014,205	185,486	579,223	25,578	**3,505,316**
Facilities/base support	1,603,326	198,501	41,656	131,903	618	**1,976,004**
Reconstitution	176,000	0	792,548	263,597	0	**1,232,145**
C4I	333,503	97,243	55,913	6,621	0	**493,280**
Other services/miscellaneous contracts	1,289,569	1,423,409	124,259	49,738	140,168	**3,027,143**
Total	**$7,039,369**	**$3,084,538**	**$2,090,852**	**$1,233,613**	**$790,306**	**$14,238,678**
Transportation costs						
Airlift	$501,850	$1,601,595	$608,980	$0	$710	**$2,713,135**
Sealift	855,678	22,587	215,773	0	0	**1,094,038**
Ready reserve force/fast sealift ships	0	0	0	0	0	**0**
Port handling/inland transportation	152,282	101,605	24,701	1,264	0	**279,852**
Other transportation	68,954	1	33,206	101,374	645,034	**848,569**
Total	$1,578,764	**$1,725,788**	**$882,660**	**$102,638**	**$645,744**	**$4,935,594**

Sources: GAO and DFAS. Data was not independently verified by GAO.

[a]Navy line item costs include data for the Navy and the Navy Reserve.

Preliminary Results of Our Work

Although major combat operations were successful, Operation Iraqi Freedom experienced a number of key logistics problems, as evidenced by the following examples.

- Hundreds of pallets and containers were backlogged at various distribution points because of transportation constraints and inadequate asset visibility.
- A $1.2 billion discrepancy existed between materiel shipped to Army activities in the theater and materiel acknowledged as received.
- There is a potential cost to DOD of millions of dollars for late fees on leased containers or replacement of DOD-owned containers due to distribution backlogs or losses.
- Vehicles were cannibalized and equipment readiness was potentially reduced due to unavailability of parts that either were not in DOD's inventory or could not be located due to a lack of adequate asset visibility.
- Many requisitions were duplicated and the supply system was circumvented as a result of inadequate asset visibility.
- Hundreds of pallets, containers, and boxes of excess supplies and equipment accumulated at theater distribution centers without adequate accountability or visibility.

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Preliminary Results of Our Work

Backlogged construction material at DLA distribution depots

← Germersheim, Germany →

← Germersheim, Germany

Bahrain →

Source: GAO.

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Preliminary Results of Our Work

Undeliverable shipments accumulating at the Theater Distribution Center in Kuwait

Source: GAO.

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Preliminary Results of Our Work

Boxes of excess materiel

Excess materiel returned to the Theater Distribution Center in Kuwait

Containers of excess materiel

Source: GAO.

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Preliminary Results of Our Work

Vehicle night vision equipment in open container →

← Chemical-biological equipment in packaging

Examples of excess materiel at the Theater Distribution Center in Kuwait

← Tank track

Unopened overnight delivery packages →

Source: GAO.

Preliminary Results of Our Work

Logistics problems were caused by a combination of conditions, including

- poor asset visibility,
- ineffective theater distribution capability,
- failure to apply “lessons learned” from prior operations, and
- other conditions, such as
  - insufficient quantities of certain items,
  - inadequate configuration of prepositioned inventory to meet Army unit requirements, and
  - ineffective management of shipping containers (both leased and owned).

Preliminary Results of Our Work — Asset Visibility

DOD did not have adequate visibility over materiel that was transported to, within, and from the OIF theater of operations because of the following reasons.

- Radio frequency identification (RFID) technology was not effectively used to track all materiel.
- Asset visibility and other logistics systems were not fully interoperable.
- Bandwidth and communications infrastructure were not adequate to allow access to asset visibility and other logistics information systems.
- Data was not entered into asset visibility and other logistics systems in a uniform and consistent manner.

Preliminary Results of Our Work — Asset Visibility (Cont.)

- Containers and pallets lacked content descriptions and proper shipping documentation.
- Units did not properly close out receipts of materiel in automated logistics systems.
- DOD personnel were not adequately trained on use of asset-tracking tools.
- DOD made decisions to “push” assets into and through the theater without units going through the normal requisition process, leaving limited in-transit tracking.

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Preliminary Results of Our Work — Distribution Capability

Distribution capability in the theater was insufficient for handling the amount of materiel deployed for the operation for the following reasons:

- DOD did not follow the normal Time-Phased Force Deployment Data (TPFDD) process for moving units and materiel into the theater.
- Transportation capacity within the theater was insufficient to move everything that needed to be moved.
- Cargo reaching the area of operations needed to be broken out and repackaged for delivery to multiple units in different locations.
- Ineffective prioritization system for cargo precluded the effective use of transportation assets.
- Military personnel were not adequately trained in various logistics functions, such as operating material handling equipment and operating theater distribution centers.
- Performance metrics currently in use do not sufficiently take into account the entire distribution process from source of supply to end user.

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Preliminary Results of Our Work — Lessons Learned

Lessons learned identified from Operation Desert Shield and Storm and other military operations have not been effectively applied in OIF.

- Historical data and published information from prior operations show weaknesses in logistics problems, including asset visibility and distribution.
  - GAO reports
  - After-action reports and “lessons learned”
  - Services’ audit agencies
  - Other literature and studies
- Similar problems appear to be occurring in OIF.

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Preliminary Results of Our Work — Other Logistics Issues

- Certain items were in insufficient quantities to meet needs of the deployed forces.
- Army prepositioned equipment was not adequately configured to match unit requirements or mission needs.
- The use of contractors was not effective in some cases.
- Management of shipping containers (both leased and owned) was inadequate.
- Physical security at theater distribution center and ports did not adequately protect assets from being lost or taken by unauthorized personnel.