

MILITARY DEPLOYMENT and Commercial Transportation Services

Survey of an Evolving Partnership

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Loading vehicles and equipment onto the U.S. Naval Ship *Pollux*, a large medium-speed roll-on, roll-off vessel, Corpus Christi, Texas, February 2004.

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At the Summer Ports and Waterways Conference in Portland, Oregon, July 2003, the Transportation Research Board's Military Transportation Committee convened a group of military and commercial freight transportation experts to review the effects of deployment on U.S. transportation providers and their customers. Under the guidance of Committee Chair Arlene L. Dietz, Director of the Navigation Data Center, U.S. Army Corps of Engineers, program participants reviewed lessons learned in the Desert Shield—Desert Storm operations, as well as actions and programs to improve the military—commercial partnerships and transportation efficiency in peacetime and in national emergency. Panelists evaluated transportation performance in Operation Enduring Freedom and Operation Iraqi Freedom.

Supporting the Warfighter

Frank Galluzzo, Director of the Distribution Analysis Center of the Surface Deployment and Distribution Command (SDDC) formerly known as the Military Traffic Management Command reviewed the mission of managing distribution and services globally to meet national security objectives in peace and war. One of three component commands of the U.S. Transportation Command (USTRANSCOM), SDDC coordinates shipments to deploy and sustain warfighting units.

On one of the busiest days in the global war on terrorism, SDDC managed more than 515 air missions, more than 157 ships on ocean missions, and more than 10,000 ground shipments, Galluzzo reported. From April to July 2003, SDDC shipped more than 59 million MREs or Meals Ready to Eat.

In shipping equipment, one goal is to reduce the

need for assembly in the theater of operations, delivering combat capability to the battlefield. Among the new business processes instituted for both deployment and sustainment was total asset visibility the electronic identification and tracking of surface movements. One main benefit was avoiding stacks of containers like those that had mounted in the theater of operations during Desert Shield—Desert Storm.

SDDC and USTRANSCOM are integrating supply and transportation to support the warfighter. External and internal initiatives are under way to address the transformation of SDDC to support U.S. forces.

Trucking: Achieving Balance

Daryl Deel, Chief Executive Officer of R&R Trucking Company, examined the experience of the trucking industry in support of military transportation. Deel also chairs the Surface Committee of the National Defense Transportation Association (NDTA) and the Government Traffic Committee of the American Trucking Associations.

The 29 percent increase in shipment volume for 2002 exceeded the 15 percent increase in truck capacity, presenting problems in meeting commercial customer needs while supporting military requirements. Planning, prioritization, and coordination for military shipments add to the industry's problems. Shipping delays at one military installation can cause a domino effect on a carrier's ability to meet other military shipment requirements.

Motor carriers must achieve a balance between meeting the Department of Defense's (DoD) shipping demands for deployment and maintaining financial viability. Enhanced security increased transit time and has raised problems in gaining driver



Commercial truck drivers consult on delivery of military vehicles to port.



Bridging equipment arrives by rail in Charleston, South Carolina, for transport to Iraq on U.S. Naval Ship *Bob Hope*, October 2003.

clearances, entering military installations, and responding to requirements for security in transit.

After deployment, motor carriers and DoD may benefit from a review, to identify lessons learned and corrective actions to be taken, Deel advised. For example, funds should be appropriated to reimburse motor carriers for DoD-mandated security technology. A new program should review and identify driver safety issues.

Rail: Building Discipline

Five major rail carriers Burlington Northern Santa Fe Railway, CSX Transportation (CSXT), Union Pacific, Kansas City Southern Railway, and Norfolk Southern account for the majority of U.S. rail revenue, and all provide support for the military. The challenges for rail carriers in meeting military transportation demands are resource planning, peacetime traffic opportunities, and equipment utilization with declining rail fleets.

Jon S. Meyer, Senior Account Manager for CSXT, presented the rail experience in supporting military transportation. CSXT operates 23,000 track-miles serving 70 ocean, lake, and river ports with an average of 1,600 trains daily.

During Operation Iraqi Freedom, rail deployment went well, except for early problems with port congestion at Corpus Christi, Texas, and Blount Island, Florida, Meyer reported. The rail car ordering process needs a more disciplined approach despite generally good availability, spot shortages of rail cars arose, along with instances of poor utilization of equipment. Motor carriers often had to support and supplement the rail operations.

Daily conference calls, improved information flow, daily rail status reports, and improved in-transit visibility effected an evolution in SDDC's rail traffic management process and procedures. Problems were encountered with port calls that were

Photographs courtesy of Surface Deployment and Distribution Command.

(Left) Closeup of radio frequency identification tag on container carrying Stryker vehicle support equipment and (right) worker checking the tag, port of Philadelphia, October 2003.



not in accordance with plans, that lacked priority rankings, and that were issued on short notice.

Some DoD installations do not use rail. Mechanical, ownership, and deployment issues must be addressed, Meyer advised. The majority of rail cars at military installations are empty, causing redeployment problems. USTRANSCOM and SDDC are working with rail carriers to address the problems with port calls, equipment utilization, and marketing.

Sealift: Joint Planning

The warfighter's sealift requirements during Operation Iraqi Freedom were met by U.S.-flag ships and their intermodal systems, and by the U.S. organic fleet, or active-duty force, noted Lou Lambremont, Director of Military Marketing for Maersk, Ltd. The organic fleet included 40 vessels from the Ready Reserve Force (RRF).

All vessels were manned by U.S. labor. Maersk reflagged four of eight vessels in the Suez Express service to the U.S. flag, Lambremont said. Since the completion of the surge phase, the vessels have been supporting sustainment of U.S. forces in the Middle East.

Joint planning was critical to the success of the Operation Iraqi Freedom sealift. The USTRANSCOM Joint Planning Advisory Group planned both the surge and the sustainment phases of the operation. Because the carriers with peacetime contracts provided adequate lift to meet military requirements, the Voluntary Intermodal Sealift Agreement (VISA) was not activated.

In-transit visibility and total asset visibility were successful, Lambremont noted. Operation Iraqi Freedom was the first contingency to use mandatory radio frequency tags to identify and track all containers carrying Class I (subsistence) and Class IV (construction and barrier material) cargo. A documentation rule required carriers to obtain a release from SDDC operations in Ft. Eustis, Virginia, before lifting a container.

The lessons learned from Desert Shield—Desert Storm resulted in significant sealift improvements for Operation Iraqi Freedom. Berthing assignments at in-theater ports, however, remained a problem. Because of draft restrictions, U.S.-flag vessels were limited to 50 to 60 percent of optimal capacity and did not receive priority in berthing assignments. Obtaining chemical, biological, and radioactive protection equipment and inoculations for merchant crews was difficult.

In-theater logistics used trucking assets inefficiently, the speaker said. Port terminals were unprepared for the surge volumes. Although in-transit visibility and total asset visibility were successful, electronic data interchange requires review and updating. The sustainment stage should be reviewed and improved. The Maritime Security Program is a vital element in U.S. strategic sealift and must be reauthorized, Lambremont stated.

Ports: Effective Transitions

In the early 1990s, base closures removed the military ports of Bayonne, New Jersey, and Oakland, California. As a result, according to Fred Stribling, Director of Marketing and Sales, South Carolina State Ports Authority, DoD cargo shifted to commer-

Big Lift

In February 2004, more than 40,000 U.S. troops moved into the Operation Iraqi Freedom theater of operations, and 35,000 departed for home. The rotation was the largest troop movement since World War II, according to Department of Defense officials.

The complex, multimodal transportation effort, directed by the U.S. Transportation Command, was comparable in scope to the World War II invasion of Normandy “in both directions,” according to a military logistics officer in Kuwait. The mission required a heightened focus on the synchronized movement of lift assets—that is, available vehicles and modes of transport—into and out of the theater of operations, noted Brigadier General David Rodriguez of the U.S. Army.

For the rotation, more than 50 vessels using 10 seaports carried more than 350,000 short tons of equipment to and from the theater, Rodriguez said. “More than 90 military aircraft and 20 commercial aircraft were involved daily in the transfer of personnel and equipment.”

cial port facilities, which had an effect on the commercial shipping business at the ports. Norfolk, Virginia; Charleston, South Carolina; Savannah, Georgia; and Jacksonville, Florida, support Operation Iraqi Freedom operations.

Waterfront property is limited. Marshalling and reprioritizing should not take place in the marine terminal, but nearby, Stribling noted.

Rail load capacity has increased at ports, but reception capacity has not. During periods of increased cargo flow, berthing constraints and the availability of labor with the required expertise become significant problems. Communication is key and must be established in peacetime to ensure that requirements for mobilization deployment are met.

The flow of both cargo and information from port to port must be optimized. On-time arrival is essential for military cargo. Stribling identified the following steps to ensure an effective transition from peacetime to wartime or to national emergency operations:

- ◆ Reinforcing the role of the local Port Readiness Committee;
- ◆ Investigating the availability of federal funds to enhance port terminal rail capacity;
- ◆ Developing secure, near-terminal marshalling areas; and
- ◆ Approaching problems with a can-do attitude.

Coordinating Commands

As a retired U.S. Navy Rear Admiral and as an intermodal consultant with TranSystems Corporation, I provided a review of the Desert Shield—Desert Storm operations and the improvements in planning and coordination that DoD commands have implemented with the commercial carriers supporting military transportation.

USTRANSCOM is essential to the success of these operations. Originally the three subordinate commands SDDC, Military Sealift Command (MSC), and the Military Airlift Command came under military command only during war or national emergency. After Desert Shield—Desert Storm, the three commands were placed under USTRANSCOM at all times. This restructuring has improved preplanning, preparation, and coordination of intermodal transportation.

At the outset of Desert Shield—Desert Storm, the need for improvements in contracting and planning procedures and in the use of the intermodal container system became apparent. Actions were taken to strengthen partnerships and to provide capacity for reliable delivery. Problems arose with



trucking-in-country, the use of alternative ports, and identifying commodities.

I pointed to the following measures to strengthen the working relationship between the military and the commercial intermodal sector and to improve results in a national emergency:

- ◆ Develop a readiness-based procurement system to ensure that the merchant marine and its intermodal system can support military lift requirements immediately. Maintain a mobilization base within the merchant marine and its intermodal network. Develop an off-the-shelf, prenegotiated rate and cargo distribution system, along with other mechanisms to preclude lengthy negotiations and to deploy assets without delays.

- ◆ Develop a contingency planning process to anticipate logistics scenarios, including security clearances, so that military and industry can part-

First commercially booked maritime cargo unloading from vessel *Sima Tara* at Iraqi port of Umm Qasr, September 2003. The test validated use of the port to reduce supply lines for U.S. forces and to boost Iraqi economic growth and infrastructure development.

Equipment of 25th Infantry Division ready for loading onto U.S. Naval Ship *Piililau*, Pearl Harbor, Hawaii, for deployment to Iraq, December 2003.





Intermodal transportation demonstration, October 2003, at port of Philadelphia, which offers railroad track access (*left*) at riverside, adjacent to Landing Craft Utility Runnymede (*right*).

ner in planning and coordinating transportation.

◆ The container transportation company APL and other carriers should continue to work with TRANSCOM, SDDC, and MSC to demonstrate the full capability of the industry's integrated transportation and distribution systems. The military should use not only the ships but also the related intermodal and information systems of the U.S.-flag liners, including commodity identification and cargo tracking, as well as logistics expertise. For example, a contract for a percentage of the integrated system could ensure that the system would remain balanced and intact for military and commercial users and increase military efficiency and productivity. This approach is consistent with the strategic thinking that characterizes military planning.

◆ Plan to maximize use of the liner sector and its infrastructure during the surge phases of national emergencies, as well as during sustainment. Military and industry can work together to improve access to materiel that can be transported in containers.

◆ Address the regulatory barriers that deny industry the flexibility to redeploy assets quickly in response to military requirements.

◆ U.S. liner companies and military authorities need to have appropriate plans in place to allow liner companies to provide the benefits of their intermodal systems, even if needs arise in areas that do not have container-handling facilities. USTRANSCOM can take an active role in this process.

◆ Review RRF contracting procedures, as well as funding for maintenance and repair programs, to enable contractors to meet military activation schedules.

Since completion of Desert Shield—Desert Storm operations, USTRANSCOM has established

a partnership with commercial carriers and has worked with the three subordinate commands to strengthen the partnership. All of the problems experienced in Desert Shield—Desert Storm have been addressed. Information systems have undergone a major reorganization. The Joint Planning Advisory Group was established and is functioning effectively. VISA has worked as designed. NDTA has been effective in working with both military and industrial organizations.

Applying the Latest Lessons

The presentations at the meeting identified major problems in managing the intermodal system in time of war or national emergency. Scheduling is necessary to make the most efficient and effective use of transportation assets, such as ship terminals and berths, rail yards, and truck terminals, and to provide realistic transit times. Problems emerged at yards and terminals in the United States and overseas.

Solutions must consider the commercial requirements of transportation carriers and the requirements of the military in peace and war. Planning and coordination are required in peacetime, during the transition to emergency operations, and in wartime.

Operation Enduring Freedom and Operation Iraqi Freedom applied the lessons learned from Desert Shield—Desert Storm operations. Military and commercial transportation organizations must continue to address the newly identified problems and apply the lessons.



Longshoremen move shrink-wrapped OH-58 Kiowa helicopter onto U.S. Naval Ship *Sisler*, Port of Tacoma, Washington, October 2003.