

# ARMY LOGISTICIAN

JULY-AUGUST 1996



## Guardsmen Execute Key Logistics Missions

—Story on page 4



# ARMY LOGISTICIAN

PROFESSIONAL BULLETIN OF UNITED STATES ARMY LOGISTICS

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## ARTICLES

- 4 **National Guard Succeeds With Maintenance Initiatives**  
—The Honorable Robert M. (Mike) Walker
- 8 **MQS and Company-Grade Officers**—Colonel Paul D. Bransford
- 12 **Reorganizing Movement Control**—Kathryn M. O'Neill
- 14 **Combat Health Support Planning**—Captain Stephen D. Sobczak
- 18 **Redeploying From Haiti**—Captain G. Todd Spencer
- 21 **Changes in Light Infantry Logistics**  
—Lieutenant Colonel Andrew T. Chmar
- 24 **Finding a Needle in a Haystack**  
—Randall McClure and Thomas J. Kershaw
- 29 **Hints for Survey Officers**  
—Chief Warrant Officer (W2) Michael J. Long
- 30 **SSA Run by—Transporters?**—First Lieutenant Jason K. Graaf
- 32 **Barging Ahead**—Colonel Jimmy S. Martin
- 34 **Mortuary Affairs in the Theater**—Major James C. Bates
- 36 **Support With Forward Logistics Elements**  
—Captain Edward F. Cole, Jr.
- 38 **ODCSLOG and CASCOS Get New Leaders**—Staff Feature
- 40 **Operation Quick Lift**—Corenthia V. Libby
- 42 **Army Logisticians at Work**—Staff Feature

## DEPARTMENTS

### 1 Emphasis

### 2 Log Notes

### 44 Digest

**Mission:** *Army Logistician* (ISSN 0004-2528) is an official bimonthly Department of the Army publication, prepared at the Army Logistics Management College and published by the Army Combined Arms Support Command, Fort Lee, Virginia. Its mission is to publish timely, authoritative information on Army and Defense logistics plans, programs, policies, operations, procedures, and doctrine for the benefit of all logistics personnel. Its purpose is to provide a forum for original, creative, innovative thought on logistics support.

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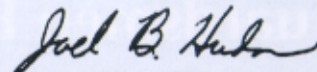
Technicians from the 732d Maintenance Company (General Support), North Carolina Army National Guard, reassemble a rebuilt Detroit 8V92TA engine at the National Maintenance Training Center (NMTC), Camp Dodge, Iowa. Assistant Secretary of the Army Robert M. (Mike) Walker describes the NMTC in his article on Army National Guard maintenance initiatives beginning on page 4.

This medium is approved for the official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

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# Coming in Future Issues—

- Deploying for Joint Endeavor
- Joint Endeavor's Class I Support
- Army Assault From a Navy Carrier
- Convoy Lane Training
- BSA Defense in Cap-Haitien
- Rear Area Operations in Korea
- Maximizing MEDEVAC
- Determining Truck Unit Capability
- PLS: Not Just Another Truck
- Battle Staff Drills for Logisticians
- Retrograding Equipment From Panama
- Aviation Maintenance From the Trenches
- Is Battlefield Distribution the Answer?
- Logistics on the Hoof—Motor Transport in the Balkans
- Sealift Capacity and Logistics Readiness
- Redeploying an MSB
- Soldier-Supported Computer Maintenance Concept
- Multilinear Warfare?
- New Tools for Army Data
- DPAS: DOD's Property Accountability System
- Text, Lies, and Inspection Checklists

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OFFICIAL BUSINESS



## VICE CHIEF SAYS IMPLEMENT VELOCITY MANAGEMENT

General Ronald H. Griffith, Vice Chief of Staff, told Army commanders in a March message, "I want each of you to implement the velocity management program, which was initiated in January 1995." Citing the fact that the Army remains under resourced, the Vice Chief said, "...We have asked our logistics community to come up with significant but very real efficiencies that can serve to pay other pressing Army bills across the FY 98 through FY 03 program objective memorandum."

He told commanders that logistics is one area where rapid cost reductions are possible and the Army cannot afford to wait to implement logistics efficiencies. He discussed velocity management's three major components—reduced order and shipping time, reduced repair cycle time, and reduced authorized stockage and prescribed load lists—and pointed out ways to reduce investments and increase efficiencies in these areas.

Major General Thomas W. Robison, commander of the Army Combined Arms Support Command (CASCOT), Fort Lee, Virginia—the Army's executive agent for velocity management—published articles detailing elements of the program in the May-June 1995 and March-April 1996 issues of *Army Logistician*.

The Vice Chief concluded his message, telling commanders—

We must bite the bullet and get on with it. If you have serious readiness concerns, either now or as you implement velocity management in your organizations, let me know. If you need assistance with your process action teams, the CG, CASCOT, as the Army's velocity management executive agent, as well as HQDA, DCSLOG [Deputy Chief of Staff for Logistics], will provide that support.

General Griffith asked commanders to provide him their assessments of the program and give him monthly progress reports "...until we are all moving together." He also urged major commands to enhance their information-sharing efforts.

Velocity management points of contact are—Lieutenant Colonel Glenn Harrold for the Army Staff, at (703) 614-6760, DSN 224-6760, or e-mail, harrogj@hqda.army.mil; and Chief Warrant Officer 4 Daniel Parker, HQ CASCOT, at (804) 734-0253, DSN 687-0253, or e-mail parkerd@lee1-emh2.army.mil.

## ARMY LEADERS PRESENT FY 97 POSTURE

In the Army's posture statement for fiscal year 1997 (FY 97), Secretary of the Army Togo D. West, Jr., and Army Chief of Staff General Dennis J. Reimer reported to Congress that "America's Army today is the best land force in the world." However, the Army faces "a complex global environment, diminishing resources, and more and expanded missions." The leaders observed that "since 1989, the Army's budget has decreased by 38 percent in constant dollars, while personnel strength has decreased by 35 percent." During the same period, the Army has experienced a 300-percent increase in operational deployments.

In this environment, the Army is "transitioning from an industrial-age, threat-based, Cold War Army to an information-age, capabilities-based Army." The leaders testified that the Army faces three major tasks: "maintaining readiness, gaining stability in the force, and becoming more efficient."

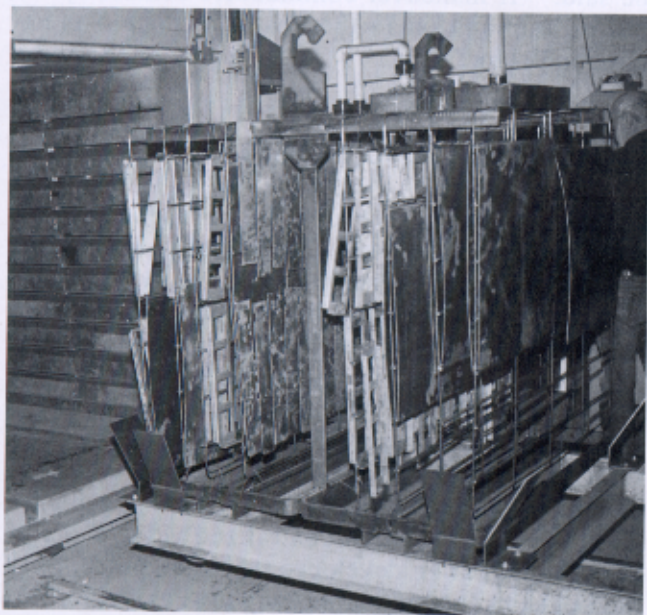
Increasing efficiency is of particular importance to logisticians. The Army's leaders cited total asset visibility and integrated sustainment maintenance (ISM) as examples of "cost-saving programs and initiatives already instituted by the Army [that] are now coming to fruition." For example, an expanded ISM demonstration currently is "evaluating procedures for expanding ISM across major Army commands and establishing the roles and functions of national level sustainment management." Plans for implementing ISM throughout the Army are expected to be presented to senior Army leaders for their approval this year. Logisticians also are affected by "the fundamental redesign of our institutional forces" that the leaders highlighted as one of the Army's major efficiency initiatives.

The leaders noted that "all major Army commands are working on reengineering and redesign initiatives that will institutionalize a high quality approach to managing organizational change." The Army has the only two reinvention centers designated in the Department of Defense (DOD)—one each in the Army Training and Doctrine Command and the Army Forces Command. The designations allow the commanders of those organizations broad authority to establish reinvention labs, waive regulations, and co-



ordinate directly with DOD on legislative changes.

The Army is preparing for the challenges of 21st century warfare through Force XXI, a process that will produce an Army characterized by "quality soldiers, flexible doctrine, tailorability and modularity, joint and multinational connectivity, versatility, and shared situational awareness." Important Force XXI projects include horizontal technology integration, which will insert "emerging technologies into different weapon systems and support platforms that work together"; digitization of the battlefield, which will "reduce the 'fog of war' and decrease decision-making time"; battle labs and advanced warfighting exercises; and the experimental force, which will conduct a brigade-level exercise next February and a division exercise in November 1997.



□ A rack of aluminum alloy instrumentation brackets for a UH-60 Black Hawk helicopter is loaded into a hardening oven at Tobyhanna Army Depot, Pennsylvania. The oven is part of a custom-designed aluminum heat treating system that treats aluminum and aluminum alloys to improve strength, hardness, and service life. There are only four such systems in the world, and Tobyhanna's is the most automated. In this system, aluminum is heated to a temperature that makes it pliable enough to form the required shape. The metal is then cooled in a tank filled with a solution that keeps distortion at a minimum. After being rinsed and inspected, the parts are hardened to the required level. Except for the inspection, the system is operated by computer so that operators are not exposed to intense heat and heavy equipment. The enhanced capability allows Tobyhanna to accept additional Defense work loads.

## DEFENSE DEPARTMENT LOOKS TO PRIVATE SECTOR FOR MORE SUPPORT

Three reports recently delivered to Congress indicate that by contracting with private industry to perform some depot functions, all depot maintenance work can be performed and essential wartime capabilities can be maintained at a reduced cost. The reports are early products of the work being done by the Department of Defense's (DOD's) privatization integrated policy team. The team was established by Deputy Secretary of Defense John P. White to explore ways to privatize military functions, including materiel management, finance and accounting, education and training, housing, data center operations, and depot maintenance.

The three reports to Congress are "Improving the Combat Edge Through Outsourcing," "Depot Level Maintenance and Repair Workload," and "Policy Regarding Performance of Depot Level Maintenance and Repair." The reports describe depot maintenance policy and repair work loads, the DOD outsourcing (privatization) initiative, and the methods used to establish core depot maintenance requirements. The work load report recommends adoption of DOD's proposed method to identify the minimum essential "core" capabilities that must be retained by the military to support military requirements and maintain sound business practices.

Dr. White said that sizing military depots to provide core or high-risk mission-essential capabilities is more effective and efficient than arbitrarily requiring them to perform a minimum of 60 percent of the work load, as now required by law. "Such restrictions prevent DOD from taking full advantage of private sector opportunities and are counter to good government and managerial principles," White said.

The Department of Defense and the military services are performing a systematic review of support activities to determine where outsourcing could improve readiness and generate savings. Private sector experience with outsourcing has demonstrated that the practice not only saves money and improves efficiency, it also enables private corporations to better focus on their primary business and improve service quality and responsiveness. Most Defense agencies already are taking advantage of outsourcing and competition and, as a result, have reduced annual operating costs by about 31 percent.

"The Department is committed to ensuring future modernization, maintaining readiness, and improving the quality of life for its forces. To meet these pressing requirements, we must find more efficiencies and savings in our internal operations through outsourcing," White said.



## FORCE XXI DIVISION REDESIGN STREAMLINES LOGISTICS

The Army's design for the heavy division of the future, called the Division XXI Interim Division Design, envisions a streamlined logistics structure that centralizes support functions at the division level. The design calls for removing more than 2,600 logistics troops from the combat arms battalions and adding more than 1,100 to the division support command. This change reduces the overall authorized size of the mechanized infantry division from 18,632 to 15,820 troops.

The division redesign replaces the aviation brigade's maintenance battalion with an aviation maintenance company in the division support command, and the division's chemical company is eliminated. In the new design, combat service support troops and assets that are currently assigned to combat arms battalions (mechanized infantry, armor, field artillery, and combat engineers) are centralized in the division support command. The change anticipates that logisticians in the rear, using digital communications, will be able to track combat units' use of supplies and replenish them through preplanned sustainment of the right item at the right time every time.

The design was developed by the Army Training and Doctrine Command (TRADOC). General William Hartzog, commander, noted that, "while the boxes on the wiring diagram of the division may not seem very different, what happens within those boxes will be substantially different. I've had to put the same box down here [in the design] that's called a division, but it doesn't do business the same way that it did before, nor is it organized the same way internally."

Lieutenant General Paul Blackwell, Deputy Chief of Staff for Operations and Plans, said—

Not only should the new design create savings in personnel and dollars, it should avoid the need for the sort of 'iron mountains' of supplies in rear areas that characterized the Army's logistics system in the 1991 Gulf War. The changes in the division's logistical system are the most crucial aspect of the redesign. The greatest challenge . . . and the greatest payoff comes with the information application for logistical functions. If we do what we talk about, . . . we will revolutionize the logistics structure of organizations.

The design will be used to build the 1st Brigade, 4th Infantry Division (Mechanized), known as the

Experimental Force (EXFOR), at Fort Hood, Texas. EXFOR will participate in the March 1997 Task Force XXI Advanced Warfighting Experiment at the National Training Center (NTC), Fort Irwin, California. For the experiment at NTC, EXFOR also will include one armored battalion, one mechanized infantry battalion, and one light infantry battalion.

General Hartzog noted that the experimental logistics system will require "considerable trust" on the part of maneuver commanders used to being in charge of their own resupply. He pointed out that there was no guarantee the new logistics system would continue beyond the March 1997 experiment. The experiment should provide a basis for an Army decision on adoption of the system. "I don't know if we'll end up buying this system," he said. "If maneuver commanders constantly run out of ammunition in the desert, it'll be a pretty good indicator."

## SINGLE STOCK FUND DECISION MADE

After reviewing several options presented by the Army single stock fund (SSF) executive steering group, Lieutenant General Johnnie E. Wilson, then Department of the Army Deputy Chief of Staff for Logistics, opted for placing wholesale, installation, and corps reparable exchange assets in the supply management, Army (SMA), business area of the Defense business operations fund (DBOF). The remaining corps and below stocks are funded by operation and maintenance, Army (OMA) accounts.

The SSF, also called centralized asset management, is a program developed under the guidance of the Logistics Integration Agency in Alexandria, Virginia, a field operating agency of the Office of the Deputy Chief of Staff for Logistics. The SSF will merge the installation retail stock fund with the Army Materiel Command wholesale stock fund as directed by the Department of Defense in the materiel management regulation, DOD 4140.1-R, January 1993. The goals of the SSF are to reduce inventories, procurement costs, and costs of providing secondary items to the Army. (See "Primer on the Single Stock Fund," by Donna Shands and Janet Baralli, *Army Logistician*, May-June 1994.)

The alternative selected will use the capabilities inherent in the standard Army retail supply system-objective (SARSS-O) to redistribute OMA excess stocks within divisional and nondivisional authorized stockage lists. Phase 1 of the SSF implementation, which includes briefings to the major Army commands, revision of credit policy, obtaining initial



funding, development of an incremental fielding schedule, and the initial in-process review, is expected to be completed by 1 October. Phase 2 involves revision of financial and supply policy; automation revisions; validation of the automation, supply, and finance link; two in-process reviews; and fielding of the system. This phase should be completed by 30 September 1998.

## **SOLDIER ENHANCEMENT PROJECTS FUNDED**

The soldier enhancement program (SEP) executive council met in March and voted to fund 15 new projects and 13 continuing programs in fiscal year 1997. Last August, the Army Training and Doctrine Command System Manager-Soldier, Fort Benning, Georgia, requested proposals for projects that would help meet SEP goals. The SEP was established in 1990 to help soldiers become more effective and efficient on the battlefield by providing them with lighter loads and improved equipment.

The following project proposals are set for funding beginning in October: heavy sniper weapon system; M249 feed tray cover; M249 flexmount; M4 improved buttstock; weapon flashlight; sling, close quarters battle, for M4 carbine; shoulder holster for 9-millimeter pistol, left or right handed; pistol belt extender; improved underlying insulating layers for extreme cold weather clothing system; alternate wear hot weather boot; extreme cold weather boot; ballistic and nonballistic face and body shield; cooler, beverage and canteen cup; fuel bar; and physical fitness uniform.

Programs to be carried over include stabilized binoculars; improved chemical and biological protective glove; enhanced incendiary grenade; lightweight chemical overgarment; stun hand grenade; individual soldier radio; optic sight, M249, M60, M240G; mid-sized riot control disperser; 40-millimeter less-than-lethal grenade; shin and knee guards, riot control; antireflection device; compression sack; and less-than-lethal 5.56-millimeter cartridge.

## **'NOAH' SIMPLIFIES PROPERTY TURN-INS**

Fort Carson, Colorado, has a lightweight, portable computer system that can be used on site to research and process property information. The post directorate of logistics developed the non-network, onsite assisting hardware (NOAH) to research, verify, and process turn-ins resulting from the recent inactivation of the 4th Infantry Division (Mechanized).

To support the inactivation, the inspection and

classification branch of the directorate of logistics had to receive, research, inspect, verify, sort, determine condition of, process documentation for, and dispose of thousands of supply items. Usually this process would involve collecting information at remote sites and carrying it to an office for processing on a desktop computer with compact disk-read only memory (CD-ROM) capability. The directorate of logistics, looking for a way to save time and effort, designed NOAH, a self-contained, compact system that can perform all of the required research on site. With NOAH, Fort Carson personnel researched and processed large quantities of property data in remote customer sites and directed the items from there to storage, transportation, or disposal sites.

The NOAH is portable, easy to use, and operates on any electrical power source as well as vehicle batteries. Because it has CD-ROM capability, the system can access FED-LOG, ARMYLOG, or other commercial CD software required for property research and verification. It can be used to access the Army master data file (AMDF), master cross-reference list (MCRL), master list consolidated (MLC), and identification list (IL) for property research and verification. The system, which is packed in two small briefcases, has unlimited potential for use in remote environments.

For more information, call Sal Hernandez at (719) 526-5984 or DSN 691-5984 or Stephen McCoy at (719) 526-5504 or DSN 691-5504.

## **PM-SOLDIER SUPPORT OFFICE ESTABLISHED**

The Product Manager (PM)-Soldier Support, recently established at the Army Soldier Systems Command, Natick, Massachusetts, will be responsible for acquisition of soldier support systems and equipment. Soldier support items include field feeding equipment, showers, rigid and soft wall shelters, latrines, heaters, field laundry systems, and air delivery systems. Materials and services that directly support the soldier individually or collectively in a tactical, operational, or administrative environment will be managed by this office. PM-Soldier Support will identify and address warfighting requirements and ensure efficient use of resources while providing the best possible product.

PM-Soldier Support will begin managing funds for soldier support systems development in October. The office will oversee more than 30 programs and serve as the command's advocate to keep traditionally underfunded items on an equal level with larger weapon systems. The office seeks to add value in the acquisition process while avoiding duplication of efforts.



## COMMAND TO MANAGE STOCKS

The Army Combat Equipment Command (Provisional), Rock Island Arsenal, Illinois, established 1 March, will manage the Army's worldwide war reserve stocks. The one-star command is subordinate to the Army Industrial Operations Command, also at Rock Island. The new command will oversee Combat Equipment Group-Europe (CEG-E), Kerkrade, the Netherlands, and CEG-Asia (CEG-A), Charleston, South Carolina (formerly the Strategic Mobility Logistics Base). The CEG-E is responsible for war reserve stocks in Europe, with four facilities in the Netherlands and one each in Belgium, Italy, and Luxembourg. The CEG-E stores pre-positioned equipment for distribution to units that are deployed to Europe from the United States. The CEG-A is a new organization responsible for war reserve stocks in Korea and Southwest Asia. CEG-A also is responsible for war reserve ammunition and equipment aboard pre-positioned ships stationed in the Indian and Pacific Oceans.

## LAND WARRIOR IS A 'GO'

Land Warrior, the Army's first integrated soldier system, will outfit soldiers for the 21st century battlefield. It will consist of protective clothing and individual equipment, integrated helmet assembly, computer radio, software, and weapon system. The Army Soldier Systems Command, Natick, Massachusetts, and the Army Infantry School, Fort Benning, Georgia, are working to develop and field Land Warrior by the year 2000. Other project participants are the Office of the Assistant Secretary of the Army for Research, Development and Acquisition; the Army Training and Doctrine Command, Fort Monroe, Virginia; and several subcontractors led by Hughes Aircraft.

## PEACEKEEPERS HONE SKILLS

U.S. forces in Bosnia will be able to sharpen their basic combat skills during their projected 12-month deployment with simulation systems provided by the Army Simulation, Training, and Instrumentation Command (STRICOM) in Orlando, Florida, through worldwide support contracts with several defense contractors. Equipment being considered for deployment to Bosnia includes: three Janus systems to train platoon and company leaders in tactics and decisionmaking skills; Guardfist tank and artillery training systems; four mobile armored gun training systems and tank weapons gunnery simulation systems-precision gunnery systems for the M1 Abrams tank and M2 Bradley fighting vehicles; additional video disk gunnery systems for the M1 tank, M2 Bradley, and combat logistics vehicles; and additional engagement skills trainer systems for marksmanship training for small arms and machine guns.

*(Continued on page 48)*



## **ALOG** **EMPHASIS**

*(Continued from page 1)*

### **CALL WOLF FOR REPAIR DATA**

The work order logistics file (WOLF), maintained by the Army Materiel Command's Logistics Support Activity (LOGSA), Redstone Arsenal, Alabama, now provides easier access to maintenance data to assist with analysis and repair of fielded equipment. The upgraded WOLF is a user-friendly, menu-driven system that provides easy access to historical maintenance data using a terminal and modem. WOLF stores data on cost and time for repairs, reasons for maintenance actions, and repair parts consumption for all equipment items. For more information, write to—Executive Director, USAMC LOGSA, ATTN: AMXLS-RRS (WOLF), Redstone Arsenal, AL 35898-7466; call (205) 955-9709 or DSN 645-9709; fax (205) 955-9700 or DSN 645-9700; or send e-mail to—lcantu@logsa1-emh2.army.mil.

### **SOUTHCOM HQ TO RELOCATE**

Construction of a new U.S. Southern Command headquarters building has begun in the WestPointe Business Park in Miami, Florida. The 154,848-square-foot building should be completed in the summer of 1997. "As the gateway to Latin America and the Caribbean and the preeminent location from which to support regional security cooperation in the Americas, Miami will position us to engage more effectively with Latin America," said Rear Admiral James B. Perkins III, acting SouthCom commander in chief. Current planning calls for moving the headquarters by September 1997 so SouthCom will be in position to direct final withdrawal of U.S. military from Panama by 31 December 1999, as cited in the Panama Canal Treaty of 1977.

### **FM 54-40 REVISED**

Revised FM 54-40, Area Support Group, describes the missions, functions, organization, and operations of area support groups. Area support groups provide maintenance, supply, and field services support to units in a particular area of the theater. The manual is a guide for commanders and staffs assigned or attached to an area support group.

### **AORS XXXV SCHEDULED**

The 35th annual Army Operations Research Symposium (AORS) is scheduled for 13 and 14 November at Fort Lee, Virginia. The Army Materiel Systems Analysis Activity, Aberdeen Proving Ground, Maryland, will sponsor the symposium, which will be co-hosted by the Army Combined Arms Support Command and the Army Logistics Management College, both at Fort Lee. Special sessions will address Army analyses completed recently or in process, including Force XXI and battlefield digitization studies. Papers are being solicited for a variety of topics. For more information, call Glenna Tingle at (410) 278-6576 or DSN 298-6576.



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# National Guard Succeeds With Maintenance Initiatives

by The Honorable Robert M. (Mike) Walker

The National Maintenance Training Center and the RETROEUR program are two ways in which the Army National Guard is improving Army maintenance and contributing to the success of America's Army.

**W**ith the collapse of the Iron Curtain, force structure drawdowns, Operations Desert Shield and Desert Storm deployment and redeployment, and budget reductions, the Army was left with thousands of vehicles and hundreds of millions of dollars' worth of other equipment that needed to be retrograded to the continental United States (CONUS). Europe alone had 55,000 excess vehicles that needed to be returned to CONUS, brought up to technical manual (dash) -10/-20 standards, and redistributed as needed to units of America's Army. The reserve components—the Army National Guard (ARNG) and the U.S. Army Reserve (USAR)—play an integral role in successfully meeting these challenges.

Because of the force structure drawdowns and the combat role of the active component, sustainment cannot be accomplished without the vital partnership of the reserve components. Reducing the massive backlog of equipment maintenance and correcting the shortfall in maintenance training on modern weapon systems, experienced by some maintenance units during the Desert Shield and Desert Storm callup, are examples where the reserve components can play a significant role. I believe the reserve components have met this challenge proactively as a key part of the sustainment leg of the Total Army logistics community. The ARNG has done an exceptional job in several areas and, in fact, has taken the lead in developing some key maintenance initiatives. I'd like to discuss two of these initiatives.

## National Maintenance Training Center

The first ARNG maintenance initiative is the establishment of the National Maintenance Training Center (NMTC), located at Camp Dodge, Iowa, and run by the Iowa National Guard. The term "national

maintenance training center" was coined by General Edwin H. Burba, USA (Ret.), former Commander of the U.S. Forces Command (FORSCOM), when he was touring the General Support (GS) Equipment Maintenance Center-CONUS (EMC-C). General Burba felt that "national maintenance training center" best described the unique collective training being conducted at the GS EMC-C and the individual training provided by the Regional Training Site-Maintenance (RTS-M), also located at Camp Dodge and operated by the Iowa National Guard.

Since General Burba's visit, the National Guard Bureau and the Iowa National Guard have expanded the EMC-C beyond GS to include a direct support (DS) maintenance training capability. This DS maintenance training expansion was made possible with the assistance of General Dennis J. Reimer when he served as the FORSCOM commander before becoming the Army Chief of Staff. During a visit to Camp Dodge, General Reimer demonstrated his strong support for the establishment of the ARNG's DS maintenance training capability by providing 24 active-duty senior instructors. These instructors were integrated not only into the DS maintenance training staff but also into the GS and RTS-M training operations, thereby providing a total team effort for instructor training support.

I recently visited the NMTC at Camp Dodge and was briefed on its overall operation. I was impressed by the fact that at one location (Camp Dodge), the ARNG has created a capability to provide one-stop maintenance training for both individuals and units. The mission of the GS/DS EMC-C is to provide a dynamic training environment for both active component and reserve component GS and DS maintenance units. The EMC-C gives GS and DS maintenance



unit commanders the opportunity to train their units collectively and be in control of their maintenance operation. There is no other facility available at this time in the Army to accomplish this mission.

At the EMC-C, maintenance units train on force modernization equipment—including M1 Abrams tanks; M2/M3 Bradley fighting vehicles; heavy, expanded-mobility, tactical trucks (HEMTT's); and high-mobility, multipurpose, wheeled vehicles (HMMWV's)—and on system components that are based on wartime trace guidance. Using a "turn key" approach, commanders need only bring their soldiers and personal equipment. Components; end items; tools; sets, kits, and outfits; test equipment; and technical manuals are provided by the Center. Training for each unit is conducted according to the tenets of FM 25-100, Training the Force, and FM 25-101, Battle Focused Training.

### NMTC Facilities and Operations

Since the GS EMC-C was activated at Camp Dodge on 1 October 1991, its inception focus and mission have evolved into an NMTC comprised of three components: the RTS-M, the GS Maintenance Training Center, and the DS Maintenance Training Center.

The RTS-M is a 26,000-square-foot facility that opened in 1987. It provides individual maintenance training for military occupational specialty (MOS) qualification, transition, sustainment, advanced and basic (phase II) noncommissioned officer courses, unit-level logistics system-ground (ULLS-G), and other required DS- and GS-level maintenance training. Highly technical "hands-on" training is emphasized throughout all courses, which feature more than 70 programs of instruction. During training year (TY) 1995, the RTS-M conducted 153 courses and trained 1,072 soldiers. The RTS-M was accredited by the Army Training and Doctrine Command in 1990. It is only one of three RTS-M's that specialize in DS and GS maintenance training, and it was the first school outside of Redstone Arsenal, Alabama, to qualify soldiers in MOS 27E, Tow/Dragon Missile Repairman. The RTS-M's individual hands-on maintenance training, conducted in a first-class environment, challenges more than 1,000 ARNG, USAR, Active Army, and Department of Defense civilian students annually.

The EMC-C for GS is a 53,000-square-foot facility that opened its doors on 25 July 1992. A total of 41 GS maintenance units (an average of 13 rotations per year) have been trained so far. Two active component maintenance companies conducted training in TY 95, with other AC units scheduled in TF's 96 and 97. A 4-year rotation plan for all GS maintenance

units (both active component and reserve component) has been developed extending into the year 2000.

The DS Maintenance Training Center is a 48,000-square-foot facility that opened in July 1995. Two DS units have trained at the facility, with 10 additional units scheduled for TY 96. A 4-year rotation plan for DS maintenance units is now being developed.

The combination of the three collocated training facilities allows America's Army to take full advantage of the maintenance training environment and focus on leader, individual, and collective skills required for a wartime commitment. A byproduct of the NMTC is the ability to return repaired components and end items to the wholesale supply system at a considerable cost avoidance to the Army.

A significant milestone during TY 95 was the integration of General Reimer's active component Regional Training Detachment of 24 instructors. The 24 officers, senior warrant officers, and noncommissioned officers work side by side with the Iowa Army National Guard cadre at the NMTC to create a unique



□ Two soldiers from the 732d Maintenance Company (GS), North Carolina ARNG, complete final assembly of a Cummins NHC 250 engine. The engine was rebuilt by their company during annual training at the GS Equipment Maintenance Center-CONUS (EMC-C), part of the National Maintenance Training Center at Camp Dodge, Iowa.



and rewarding experience for all maintenance units conducting training. During my visit to the NMTC, I had the opportunity to speak to many of the instructors. It was apparent that they were very proud of the training program and their roles as instructors. Unit commanders whose units have trained at the NMTC continually report in their after-action reviews that the EMC-C provides the best maintenance annual training their units have ever had.

### **Lanes Maintenance Training**

One of the keys to the success of the NMTC is that the Iowa Army National Guard is home to the "lanes maintenance training concept (LMTC)," which has become the cornerstone for effective and progressive maintenance training. LMTC is a process for training soldiers on a collective task through execution of predetermined individual and leader tasks. The tasks are derived from soldier manuals and technical manuals. The lanes training concept prepackages and pre-positions all resources required to execute the lane, including the component or end item to be repaired, all technical manuals, repair parts, special and organic tools, and stands and lifting devices.

The LMTC has been adopted by many maintenance units throughout the United States and has proven to address the maintenance training needs within the Total Army maintenance community. The training a maintenance unit receives at the NMTC is unequalled anywhere in the world and is considered truly a one-stop maintenance training experience by senior Army and Defense leaders who have visited Camp Dodge and observed what the NMTC provides.

The NMTC is meeting the expectations of the individual soldier and the goals of DS and GS maintenance units. Because of this, America's Army is experiencing a win-win situation with the NMTC. All of the Army's components (ARNG, USAR, and active component) have a tremendous maintenance training opportunity in what Camp Dodge offers in facilities and instructor support. In the future, all components should take full advantage of the training opportunities the NMTC affords.

### **RETROEUR**

The second initiative I'd like to tell you about is the ARNG's participation in the Retrograde of Equipment from Europe (RETROEUR) program. This program has been a tremendous success, with the ARNG operating 7 of the 11 RETROEUR sites in CONUS.

The Secretary of the Army directed the ARNG to take the lead in the RETROEUR program. The ARNG's mission is to receive approximately 75 percent of the vehicles and equipment returning to

CONUS from Europe and to repair and redistribute this valuable equipment. Examples of the equipment being returned for repair and redistribution are M1A1 Abrams tanks, M2/M3 Bradley fighting vehicles, M113 armored personnel carriers, M88 tank retrievers, armored vehicle launched bridges, engineering equipment, and a variety of electronics equipment.

The ARNG was assigned the RETROEUR mission in 1993 as a result of a plan approved by General Gordon R. Sullivan, USA (Ret.), who was then Chief of Staff of the Army. The plan drew upon experiences gained in repairing equipment returned from Operations Desert Shield and Desert Storm. The ARNG plan incorporated labor economies and efficiencies that enable the ARNG to keep labor expenses for the RETROEUR program at a significantly lower rate than other equipment repair operations would have cost. The general plan drew upon the experience of trained ARNG personnel from combat service support maintenance units in maintaining their units' equipment in existing ARNG facilities.

In addition to the benefit of significantly lower labor rates, the ARNG gained an opportunity for added training in developing and sustaining logistics skills in its units. This program provides a "real-world mission" for ARNG members, who have reaped tremendous benefits from it. The RETROEUR program is providing training time and management experience for maintenance, administrative, supply, and quality assurance and control personnel.

There are six ARNG RETROEUR repair sites across the country, located at Santa Fe, New Mexico; Fort Riley, Kansas; Piketon, Ohio; Camp Shelby, Mississippi; Fort Indiantown Gap, Pennsylvania; and Camp Withycombe, Oregon. These sites had received and processed more than 8,400 vehicles as of the end of January this year. To date, 3,960 vehicles have met the Army maintenance standards, with 3,426 of them shipped to using units. The Oregon site alone has received more than 17,000 pieces of communications and electronics equipment; approximately 4,000 of those items have been repaired, and 2,841 have been shipped to units.

In addition to the six repair sites, the ARNG is operating a unique classification and redistribution center at Blue Grass Station, Kentucky. The mission of this site is to receive, classify, and redistribute non-rolling stock equipment to America's Army. The equipment arrives at the site in 40-foot freight containers. As of 31 January, the Blue Grass Station site had received 1,340 containers, holding equipment valued at more than \$386 million, and had redistributed equipment, primarily in CONUS, with a value in excess of \$278 million.

The ARNG sites are paying additional benefits by





□ Soldiers from the 732d Maintenance Company (GS), NCARNG, reassemble a rebuilt Allison X1100-3B M1 tank transmission output housing. M1 Abrams tanks are among the force modernization equipment on which maintenance companies train at the EMC-C.

providing short-notice responses to contingency missions around the world. Using equipment stocks that are on hand as a result of RETROEUR, the Army has directed shipments to Panama; Guantanamo Bay, Cuba; Haiti; and now Bosnia.

The ARNG's role in RETROEUR is also having a positive economic impact on the communities where the sites are located. The sites range in size from 50 to 100 employees. Of the 400-plus employees working in the program, 70 percent are Army National Guard members.

The ARNG RETROEUR sites were projected to operate for 2 years. However, because of the larger-than-expected work load, some sites will operate beyond the 2-year period. Four of the seven ARNG sites are scheduled to close during fiscal year (FY) 1997, one will close in FY 98, and the last in FY 99.

The ARNG's role is meeting the objectives of RETROEUR and improving equipment onhand readiness for America's Army by providing a cost-effective way to receive, process, repair, and redistribute equipment being returned to CONUS. An example of RETROEUR's cost-effectiveness is the Blue Grass Station site, where the Army experienced a 12-to-1 return on the total cost of operation from 31 January to 31 July 1995. In other words, for every \$1 invested in the operation, the site was able to redistribute \$12 in equipment.

The RETROEUR program improves readiness by allowing the Army National Guard to gain experience for its logistics work force by performing real missions in support of the active component, while pro-

viding a quality product that saves the American taxpayer money.

I have described only two key logistics and combat service support missions being carried out by the Army National Guard. There are many others equally important that indeed best describe why the ARNG is a critical and integral partner in America's Army. These initiatives provide tangible proof of the ARNG's success in supporting the total effort needed to meet America's Army's goals and missions in support of wartime operations, peace enforcement, peacekeeping, and humanitarian relief. The Army National Guard is indeed a full partner in a Total Army team effort.

**ALOG**

*The Honorable Robert M. (Mike) Walker became Assistant Secretary of the Army (Installations, Logistics, and Environment) in March 1994. He has responsibility for oversight, policy development, and coordination of supply, maintenance, and transportation programs and logistics readiness. He also is responsible for installations, housing, environment, safety, occupational health, commercial activities, and installation management. Mr. Walker attended the University of Tennessee in Knoxville and served in the Tennessee and District of Columbia Army National Guard. He is a member of the Society of American Military Engineers and of Army Logistician's Board of Directors.*



# MQS and Compa

Military qualification standards are key to the professional development of junior officers.

**L**eadership development is the cumulative education, training, and experience that occurs throughout an officer's career. It starts with precommissioning training, continues through branch education and operational assignments, and stops only when the officer completes military service. Military qualification standards (MQS) are useful tools that support leader development.

MQS has three levels. MQS I is a precommissioning program. MQS II provides a framework for developing company-grade officers into effective leaders who are prepared to accomplish their wartime tasks, qualified for promotion, and ready to step into positions of greater responsibility. MQS II applies to all company-grade officers, whether in the active Army, Army National Guard, or Army Reserve. MQS III provides guidance for the continued professional development of field-grade officers.

The leader development process depends on three pillars for its success: institutional training, operational assignments, and self-development (see chart next page). MQS II helps integrate the efforts of these three pillars. I'd like to focus on the second and third pillars, operational assignments and self-development, which take place concurrently in an officer's career. Company-grade officers and their commanders at all levels should understand how they can use MQS II as the foundation for implementing a leader-development program.

## Commander's Role

The operational assignments pillar of leader development is one of the commander's primary responsibilities, because his subordinate leaders ultimately become his legacy to the Army. Although the commander is inherently involved with the operational assignments pillar, he also must provide structure and substance to the self-development pillar and monitor subordinate officers' progress toward pro-

fessional development.

It is not surprising that commanders have greater influence in the development of subordinate officers than does a school commandant or even the officers themselves. Commanders have direct, daily interaction with their subordinate officers and generally have them in their command longer than the school commandants have them in school. Commanders provide leadership training and opportunities for junior officers so they can put into practice the skills and knowledge they acquired in resident instruction at the schools. Commanders also provide tangible examples of the Army's professional ethic and values for their subordinates.

Junior officers quickly and easily become absorbed in the daily duties of leading their platoons, commanding their companies, or directing their staff sections and often neglect self-study. Commanders can provide structure to the self-development pillar by ensuring that their subordinates learn the correct tasks to the correct standard and by eliciting feedback that will help them correctly assess the officers' progress. However, each junior officer ultimately must accept responsibility for self-development that will enable him to meet the high standards the Department of the Army has established for its leaders. That is why junior officers must understand MQS II and insist on a quality officer leader development program in their units.

## Professional Development 'Bible'

There are two core elements of MQS II. The common core is contained in Soldier Training Publication (STP) 21-II-MQS, Military Qualification Standards II, Manual of Common Tasks. The branch-specific core is in an STP peculiar to each branch. Company-grade officers should regard the common tasks manual and the appropriate branch task manual as their professional development "bible."



# ny-Grade Officers

by Colonel Paul D. Bransford

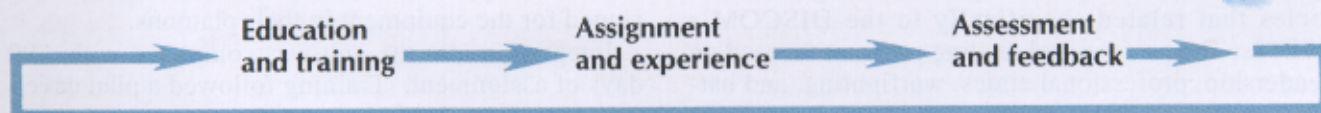
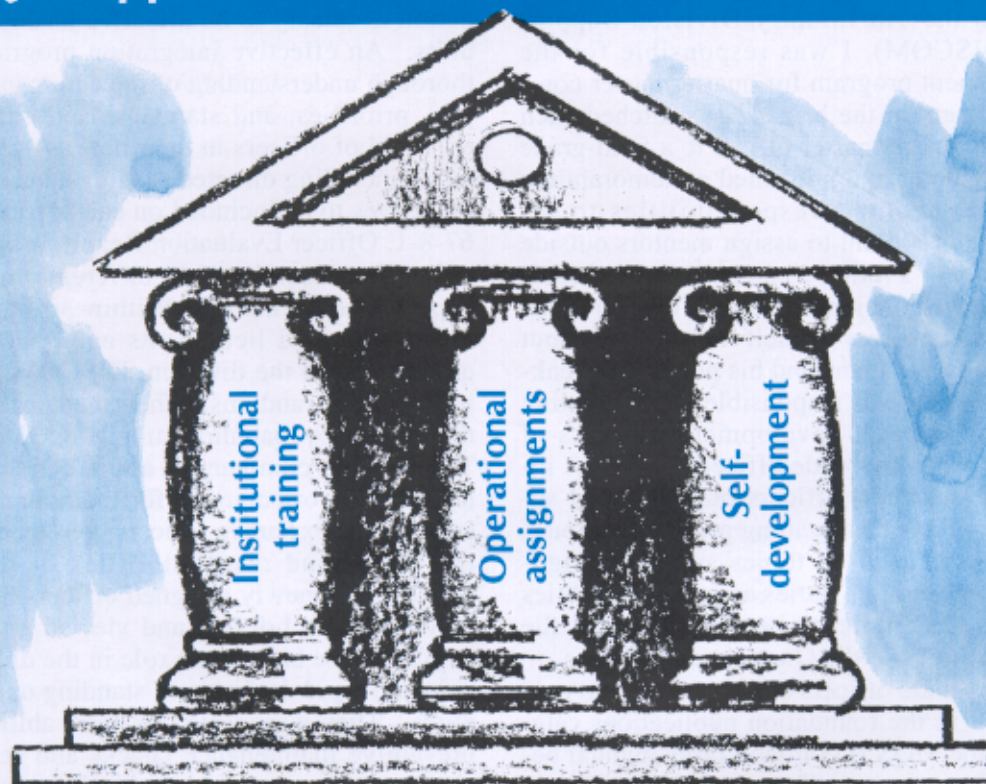
Appendix B of the common tasks manual clearly explains the commander's role and responsibilities as the primary trainer for officers assigned to his unit. The MQS system works best when commanders use it to support their unit training program. The system recognizes some basic facts of unit life: no two units are the same, and no unit has enough time or talent to train on everything. MQS II manuals provide menus of battle-focused warfighter tasks with supporting conditions, standards, performance measures, and references. The commander can select only those

tasks that support his unit's mission-essential task list (METL) and unit training program; he is not required to teach his officers those tasks that are not directly related to the unit METL. MQS II complements unit training and yields greater dividends from the efforts devoted to training junior officers.

## Leader Development Matrix

The Center for Army Leadership, Fort Leavenworth, Kansas, suggests that commanders use a matrix similar to the one shown in the chart at the top of

## MQS Supports the Pillars of Leader Development





page 11 to focus their leader development programs and relate MQS II tasks to their unit's METL's. Across the top, the commander lists his unit's METL. Down the left side, he lists the MQS common and branch tasks that apply to his unit. The tasks that are not directly related to the METL become a part of the junior officers' self-development programs. Commanders should encourage subordinates to develop their own matrices, listing the MQS and unit-specific tasks for which they are responsible.

### **Field-Grade Officer Mentors**

A mentor relationship between company- and field-grade officers of the same branch or specialty is also an essential part of junior officer professional development. Field-grade officers serve as role models as junior officers' attitudes regarding their chosen profession broaden and mature. By their example, field-grade officers promote the ethical development of junior officers and instill in them the attitudes consistent with the values of the military profession.

Because I was the only quartermaster battalion commander in the 7th Infantry Division Support Command (DISCOM), I was responsible for the leader development program for quartermaster company-grade officers in the brigade. I matched each company-grade quartermaster officer to a field-grade quartermaster mentor and published a memorandum outlining each mentor's responsibilities to his charges. I made it a point to assign mentors outside of the junior officer's rating chain and chain of command. This allowed the junior officer a comfort zone in which he could express himself more freely about career aspirations and plans and his perceived weaknesses. Each mentor was responsible for facilitating and monitoring the self-development progress of seven or eight company-grade officers. Mentors informally counseled their officers quarterly and supervised their professional reading programs. Counseling sessions focused on topics such as assignments, career progression, duties and responsibilities of company-grade quartermaster officers, and the history and traditions of the Quartermaster Corps.

All company-grade officers are encouraged to read 10 of the books in the foundation publications category found in the MQS II common tasks manual before promotion to major. To supplement this requirement, I developed a required reading list of articles that related specifically to the DISCOM's METL. The professional reading program focused on leadership, professional ethics, warfighting, and bat-

tlefield logistics. Each officer was required to read an appropriate article from the DISCOM list each quarter, and two books, one from the branch reading program list and one from the common skills reading list, each year. After completing each of the readings, the officer discussed them with his mentor, either individually or as part of a group. The discussions, which coincided with quarterly counseling, focused on lessons learned from the readings and their application to a contemporary quartermaster officer's career. Counseling was documented on DA Form 4856, General Counseling Form, and reflected the date the informal counseling occurred, the reading completed by the officer, and any other pertinent information.

### **Starting Off on the Right Foot**

Another aspect of junior officer leader development is appropriate reception and integration of newly assigned officers into the unit. This starts the newly assigned officers out on the right foot, helps them to feel welcome, and quickly provides the foundation necessary to be effective leaders in their new units. An effective integration program provides a thorough understanding of the commander's philosophy, priorities, and standards and outlines what is expected of officers in their new assignments. MQS tasks, including directed readings, become goals and objectives to be included on each officer's DA Form 67-8-1, Officer Evaluation Report Support Form.

I used a checklist of 20 different junior officer reception requirements. Within 30 days of arrival, newly assigned lieutenants and captains were required to read the division, DISCOM, and battalion policy memorandums. They made office calls with their company, battalion, and DISCOM commanders. The brigade commander and I conducted separate newcomers' orientations for them, and the battalion and brigade executive officers presented a briefing on the duties and responsibilities of the staff duty officer. The newly assigned officers received a battalion mission briefing and viewed a videotape that explained the battalion's role in the division's readiness and rapid deployment standing operating procedures. They were tested on their ability to perform preventive maintenance checks and services on the equipment assigned to their platoons and then licensed to operate it. They then inventoried and signed for the equipment in their platoons.

Integration into the unit was completed within 90 days of assignment. Training followed a plan devel-



# Armor Officer, First Duty Position, Tank Platoon Leader

Unit Mission-Essential Task List	Conduct tactical road march	Occupy assembly area	Conduct a hasty attack	Conduct a defense	Conduct combat service support operations
<b>MQS Common Tasks</b>					
Install communications hotloop		X		X	
Prepare platoon or company combat orders	X	X	X	X	X
Supervise preventive maintenance checks and services	X	X			X
<b>MQS Branch Tasks</b>					
Perform a map reconnaissance	X	X	X	X	X
Conduct a hasty attack			X		
Occupy assembly area		X			

## ☐ Sample leader development program matrix.

oped by the battalion staff and included a qualification test on 11 different basic leadership skills: safety, reenlistment, the universal code of military justice, enlisted promotions, battalion tactical and division readiness standing operating procedures, awards, training management, leave and earnings statements, the MQS II Manual of Common Tasks, and the conduct of small unit operations according to the laws of war. The junior officers also were required to conduct a risk assessment for company-level training, administer military justice at platoon level, conduct subordinate counseling, and explain the professional Army ethic to their company commanders.

Start using the MQS system now. It is the key to effective company-grade officer professional development. When properly developed and implemented, MQS II is an effective unit training enhancer. It provides the structure necessary to integrate the three pillars of the leader development process—

institutional training, operational assignments, and self-development.

Ultimately, the commander is responsible for all that his unit does or fails to do. The effectiveness of the company-grade officer professional development program depends on how well the commander understands MQS II. How effectively he uses it becomes his legacy to the Army. **ALOG**

*Colonel Paul D. Bransford is assigned to the Operational Test and Evaluation Command in Alexandria, Virginia. He has a bachelor's degree from Middle Tennessee State University in Murfreesboro and a master's degree in logistics management from the Florida Institute of Technology in Melbourne. He is a graduate of the Army Logistics Management College's Logistics Executive Development Course, the Army Command and General Staff College, and the Industrial College of the Armed Forces.*



# Reorganizing Movement

New organizational structures will improve the ability of to command and control the flow of personnel and mater

**M**ilitary actions such as the Persian Gulf War and Operation Restore Hope, while great successes, have highlighted substantial shortcomings in a vital logistics function. That is the ability of movement control organizations to manage the flow of units and sustainment materiel into, through, and out of a combat theater. This is a critical problem, especially for an Army that is increasingly committed to a force-projection posture. If our force commanders lack adequate movement control, they will not be able to manage and control the movements of units or cargo in the theater.

At the operational and tactical levels in a combat theater, the critical movement control units are the movement control battalion, which operates at echelons above corps (EAC); the corps movement control center (MCC), which operates within a corps; and an assortment of movement control teams. The teams are organized either by a specific function they perform or an area they will serve and work for either the battalion or the MCC.

Most of the shortcomings identified in the Army's movement control capabilities are caused by organizational structures that do not reflect current Army doctrine, capabilities, plans, or anticipated employments.

## Current Movement Control Organizations

The headquarters for the EAC movement control battalion is a contrived organizational structure that does not exist officially—there is no table of organization and equipment (TOE) that specifically defines such a headquarters. Instead, it is based on a generic battalion headquarters TOE that is augmented by a regional movement control team. This organizational structure is awkward at best.

The corps MCC has a precisely defined TOE, but it is very austere. An MCC commander performs the same functions and has the same responsibilities as any other battalion commander. But he has to perform his duties without the support of a battalion staff, because such a staff is not documented in the MCC TOE. So MCC commanders tend to draw per-

sonnel from assigned movement control teams to create an ad hoc S-staff. That helps to solve the MCC's command and control problems, but it decreases the number and capability of the available movement control teams.

The Army's existing movement control detachments date from the Vietnam War era. Some of them are organized by function, while others are generic. Some of them are capable of working around the clock, while others can work only a single shift. The Army has eight detachments, plus a terminal operations team that actually performs movement control work (specifically, cargo documentation).

To resolve these organizational deficiencies, the Army Transportation School, at Fort Eustis, Virginia, and the Army Combined Arms Support Command, at Fort Lee, Virginia, have developed a concept that significantly reconfigures the movement control battalions, corps MCC's, and movement control teams into more functionally capable organizations. This concept does not change current movement control doctrine; movement control tactics, techniques, and procedures at the division, corps, and EAC levels remain the same. But the concept does alter substantially the internal structure of the existing organizations, so all of them can function around the clock, and it provides all of the internal command, control, and supervisory capabilities the units need to perform their intended functions.

## New Movement Control Organizations

The new movement control concept creates new organizational designs for a headquarters and headquarters detachment (HHD) for the transportation movement control battalion (with two variants—one for EAC and one for the corps level) and for five functional movement teams. The two battalion variants are fully staffed to perform battalion-level operations. All five movement teams can be employed at the EAC, corps, or division levels, and all of them are able to function around the clock.

*HHD, transportation movement control battalion (EAC).* This variant of the movement control battal-



# Control

by Kathryn M. O'Neill

## movement control units iel into and within theaters.

ion headquarters normally will be assigned to the theater movement control agency (TMCA), though it is capable of providing command and control of movement control elements in a developing theater without the TMCA. It commands, controls, and supervises movement units and operations in its designated geographical area, the size of which is determined by the density and type of activities requiring transportation support. It will coordinate movement programming, highway regulation, and transportation support throughout its area of responsibility within the EAC. When augmented by appropriate movement control detachments, it also will provide a central headquarters to execute these missions and maintain intransit visibility of tactical and nontactical moves within the EAC.

*HHD, transportation movement control battalion (Corps).* This variant of the movement control battalion headquarters will be assigned to the corps. It will perform the same functions as the EAC headquarters, but in the corps area of operations. When augmented by appropriate movement control detachments, it will provide a central headquarters to execute those functions, provide asset visibility, and maintain intransit visibility of tactical and nontactical moves for the corps.

The five new movement control detachments are the—

- **Port movement control detachment.** This detachment will coordinate and expedite movements of units, cargo, and personnel into, through, and out of airports or seaports. This detachment is the first step in providing intransit visibility in theater and is key to force closure. This detachment can be assigned to a movement control battalion at the corps or EAC level.

- **Area movement control detachment.** This detachment will coordinate transportation support for divisions, major supply centers, or customers in a given geographical area. It also can be assigned to a movement control battalion at the corps or EAC level.

- **Division support movement control detachment.** This detachment, which is assigned to a corps and

attached to a division, will augment the division transportation office (DTO) to perform movement programming, highway regulation, and transportation support for the division. It will enable the DTO to provide asset visibility and maintain intransit visibility of tactical and nontactical moves for the division.

- **Movements regulating detachment.** This detachment's mission has not changed; however, it has been reorganized to provide additional command and control. The detachment will be capable of operating four locations. It will operate on main supply routes and other designated controlled routes to regulate convoys and serve as the eyes and ears of its parent movement battalion (either corps or EAC). It will observe, assess, and report the progress of tactical and nontactical transportation movements along main supply routes and adjust movement schedules as necessary to coordinate the flow of authorized traffic.

- **Movement control cargo documentation detachment.** This unit will perform the documentation required to transship cargo from one mode to another. The design of this detachment currently exists as a terminal operations detachment. That detachment provided a good basis for the structure of the cargo documentation detachment because its normal function is related more to movement control than to terminal operations.

The new movement control unit designs have been approved in the force design update process. The development of TOE's and allocation rules for the new units is underway. The first opportunity to apply the new movement control unit designs into the force structure will be Total Army Analysis 2005, which will be developed this year and next.

These new organizations provide fully capable battalion and team structures to manage the full spectrum of movement control operations from theater down to division. All of them are around-the-clock capable and support force-projection movement requirements. This reorganization is strongly supported by the field because the new units will provide movement control commanders with the command and control capabilities and force structures that they need to do their jobs.

**ALOG**

*Kathryn M. O'Neill is a logistics management specialist in the move branch of the Logistics Concepts Directorate, Army Combined Arms Support Command, Fort Lee, Virginia. She has a bachelor's degree in mathematics from the Montana College of Mineral Science and Technology in Butte and a master's degree in transportation management from the Florida Institute of Technology in Melbourne.*



# Combat Health Support P

Synchronizing combat health support is often a low priority. But failure to plan adequately for casualties creates a tremor

**W**hen the tactical decisionmaking process for a brigade task force begins, what priority is assigned to combat health support (CHS) planning? Is it conducted concurrently with planning for all other battlefield functions, or is it assigned a low priority within the brigade staff estimate process? How does CHS get synchronized into the maneuver plan? Is it necessary to do so? Or is CHS an area in which everything is perceived as fine until something bad happens—a vehicle accident or a squad ambush—and then everyone discovers that the casualty evacuation plan has not been rehearsed or synchronized?

What happens when CHS is not synchronized into the maneuver plan? One answer is provided by a casualty evacuation study of Army exercises conducted by the BDM Management Services Company and dated April 1994. According to this study, "A significant factor determining the effectiveness of casualty evacuation (CASEVAC) planning was reported to be the commander's guidance and involvement in the process." However, the comments of observer-controllers interviewed for the study revealed that commanders at all levels rarely placed emphasis on CASEVAC planning. Deficient command emphasis in turn influenced the amount of staff oversight of medical support. Inadequate involvement by brigade and battalion commanders and lack of comprehensive staff planning resulted in an overall lack of detailed planning at all echelons. CASEVAC planning was a low-priority task; when a large number of casualties did occur, CASEVAC was conducted as a contingency operation rather than a carefully planned part of the mission.

After-action reviews from all of the combat training centers confirm what the BDM study found—CHS planning at the brigade task force level often occurs after the maneuver plan has been decided upon. CHS often is not synchronized as a battlefield operating system. This lack of planning for CHS creates a tremendous risk for soldiers—a disaster waiting to happen. CHS planners must be part of the tactical decisionmaking process. Here are some planning tools for accomplishing this task effectively





# Planning

by Captain Stephen D. Sobczak

in the brigade planning process.  
endous risk for the soldier.



and efficiently.

## Involvement—From the Start

Several officers are responsible for synchronizing CHS, including the forward support medical company commander, the brigade surgeon, the forward support battalion (FSB) support operations officer, the forward support medical evacuation (or MEDEVAC) team leader, and the health service support officer in the FSB support operations section. FM 8-55, Planning for Health Service Support, provides valuable information on CHS.

CHS planners must understand the tactical commander's plan, intent, and concept of operation in order to provide the right support at the right time. They must be an integral part of the tactical decisionmaking process from the beginning in order to effectively and efficiently synchronize support. A technique for ensuring that this occurs is to place a liaison officer (possibly the brigade surgeon or the health service support officer) with the brigade staff during the staff planning process.

CHS planners gain from participating in tactical decisionmaking. Helping to develop the mission analysis and course of action (COA) gives high visibility to the CHS planners and arms them with the information they need to conduct the CHS estimate.

## CHS Estimate

The CHS estimate for the brigade task force uses the same format as that used at the division or corps levels, with a few exceptions. FM 8-55 outlines the CHS estimate.

The first paragraph of the CHS estimate is the *mission*. The CHS planner must analyze the maneuver brigade's mission from a CHS perspective. This paragraph forms the basis for the CHS concept of support and the brigade CHS annex.

The second paragraph is *situation and consideration*. This section focuses on the enemy situation, the friendly situation, the characteristics of the area of operations, the strengths to be supported, and the health of the command. The CHS planner must con-

sider all of these areas and analyze their impact on the CHS mission.

## CHS Analysis

The third paragraph is the *CHS analysis*. This paragraph determines the support required to accomplish the mission. The planner must consider the type of operation being conducted, patient densities, lines of patient drift, assets available (including those available from unit attachments), nonstandard evacuation assets, surgical team assets, nuclear-biological-chemical (NBC) decontamination teams, class VIII (medical materiel) resupply, and similar factors. By taking this information into consideration, the planner develops COA's that support the maneuver COA. The key is to provide the right stuff at the right time and not hinder the maneuver plan.

The number of COA's considered should be manageable. How much time is available for planning will dictate how many should be developed. COA's should also meet the commander's intent and concept of operation. The COA is the "what, when, where, why, and how" of the operation.

The first step in developing CHS COA's is to array the friendly and enemy forces. This should be easy, because the brigade S2 already has provided this information at the brigade COA development briefing. The analysis will indicate areas of patient density and the best locations for CHS assets. Each COA must be significantly different; significant difference is defined as a difference in task organization, use of assets, time-phased force deployment, or location of assets on the battlefield.

The second step is to develop a concept of support. This is a narrative description of how the unit will accomplish the commander's intent. It should address points or areas within the area of operation and indicate times when decisive actions may occur. The planner must also array the CHS assets at this time to include primary and alternate positions.

Step three determines the command and control mechanisms for the CHS function. At a minimum, command and control must be established for



CHS MATRIX					
ITEM \ PL	Assembly Area	Cross LD	Cross PL Red	Cross PL Blue	Secure OBJ
Enemy Action	Enemy monitors movements Continue defensive prep		Fights from 1st belt posn	Fight from 2nd belt posn	Res move to ATK
Friendly Action	Move to LD	Hot refuel	Penetrate 1st belt	Penetrate 2nd belt	Secure OBJ Dallas/Boston
Medical Evac (Ground Amb)	Two M113 AMB W/TF 1-12, Three Corps Ground	AMB SQD at FSMC	M113 AMB W/TF 1-14,		
Medical Evac (Air Amb)	Three UH-60 Maint @ AVN BDE	MEDEVAC @ FSMC, refuel @ FARP # 3,			
AXP'S	AXP 1 & 2 @ H-2	AXP 1 & 2	AXP 1 & 2	AXP 1 & 2	AXP 3
Medical Evac Non Standard	Two each 5T backhaul	CGO @ AXP # 1, CL V HEMMT stop	@ AXP's on		Two CH-47 O/O for MASCAL
Class VIII			CL VIII pushpack # 1 w/UH-60 to BAS		
Surgical Treatment	Surgical TM at	FSMC @ H-5	MASH @	MA 876547	
Medical Treatment	Treatment TM w/TF 1-12 @ H-4	One treatment tm @ AXP # 1			FSMC FLE to MA 123456

□ A CHS synchronization matrix like this can provide the information needed in the CHS annex to the brigade operation plan.

MEDEVAC requests (for both air and ground evacuation), forward medical treatment, class VIII supply, security of CHS assets, the brigade mass casualty plan, NBC operations, and the CHS communication plan.

The fourth step in developing CHS COA's requires the CHS planner to prepare a COA statement and sketch. This step provides the "how" of the operation. The sketch includes a generic graphic representation that may include, but is not limited to, the following: ambulance exchange points, evacuation routes, forward treatment sites, and forward support medical company and main support medical company locations. This sketch will become the CHS overlay in the brigade operations order when the latter is published.

#### Evaluation and Comparison of COA's

Paragraph four of the CHS estimate is *evaluation and comparison* of COA's. This step determines which maneuver COA can best be supported from a

CHS perspective. In order to do this, screening and evaluation criteria must be defined. Screening criteria are used to screen out unsatisfactory and impracticable COA's.

Evaluation criteria are used to further evaluate COA's for suitability, feasibility, and acceptability. Some examples of evaluation criteria, as well as criteria definitions, include—

- Evacuation: the COA represents the best use of assets for evacuating casualties.
- Command and control: the COA provides unity of command.
- Location: the COA provides suitable locations for CHS assets.
- Combat service support: under this COA, non-standard evacuation assets are used efficiently.
- Treatment: the COA provides for the best use of the treatment surgical squad.
- Risk: the COA imposes minimal risk on unit personnel.
- Security: the COA provides the best security



posture for CHS assets.

- Class VIII resupply: the COA promotes ease of resupply.

- Airfield location: under this COA, an airfield is within close proximity of the forward support medical company.

The CHS planner has to determine if the maneuver COA's are supportable. For each of the evaluation criteria, a plus (+) value, minus (-) value, or neutral (0) value can be recorded on a chart. A plus rating indicates that the criteria being evaluated facilitate a COA. A minus rating indicates that the criteria impede a COA. A neutral rating indicates that the criteria do not impact on the COA. The criteria selected for evaluation depend on the situation.

### Decision Matrix

Once the most supportable COA has been determined, the CHS planner must determine how best to support the maneuver plan. A decision matrix is a systematic technique for doing this. Facts and assumptions from paragraph 2 (situation and consideration) of the CHS estimate provide the information needed to complete paragraph 4 (evaluation and comparison).

An objective definition of the criteria is important. Thresholds for each criteria should be established in order to differentiate advantages and disadvantages. An example of a threshold for evacuation is having an attachment of three corps MEDEVAC helicopters. More than three is an advantage; less than three is a disadvantage.

A decision matrix provides the CHS planner with a tool for evaluating COA's. It is a graphic illustration of the evaluation process. The CHS planner may desire to emphasize particular criteria by assigning weights to each criterion based on its relative importance. The scores are totaled to provide a "best" COA. The CHS planner may find it useful to enlarge and laminate the decision matrix for use in tactical environments.

### Incorporating CHS into the Brigade Plan

After evaluating and comparing COA's, the CHS planner will join with the brigade staff to present COA recommendations to the commander at the decision briefing. The commander will decide on a COA at that time. After the decision has been reached, the CHS planner prepares the CHS annex to the brigade operation plan and order (or provides the same information to be published in the personnel annex or service support annex).

One technique for providing the information for the CHS annex in an understandable manner is a synchronization matrix and a CHS overlay and CHS

concept of support sketch. An example of a CHS synchronization matrix is shown at the top of the opposite page.

The tactical decisionmaking process may seem overwhelming for the CHS planner. The members of the brigade CHS planning cell have a difficult job, because they are responsible for synchronizing CHS into the maneuver plan. If the CHS planners are an integral part of the brigade staff planning process, their knowledge, experience, and creativity will increase the probability of achieving synchronization. However, if CHS planners are not included in the brigade planning process, then synchronizing CHS is left up to luck and the hope that nothing significant requiring CHS occurs.

The brigade task force rehearsal is conducted after the plan has been briefed to the brigade commander. The integration of a CHS planner and the forward support MEDEVAC team (FSMT) leader into the rehearsal is critical to the success of the operation. The combat service support portion of the rehearsal lends itself to CHS integration. The FSMT leader rehearses the air evacuation plan and communication plan, while the CHS planner drills the ground evacuation plan. This ensures that task force members understand the plan.

The rehearsal also serves to highlight significant problems. For example, the suppression of enemy air defenses plan or the gun target line may conflict with the MEDEVAC flight routes, or the mine and obstacle plan may obstruct the ground evacuation plan. Casualty evacuation, both ground and air, is a combat operation that has to be integrated into the plan from the start and understood by everyone. If time and the situation allow, the forward support medical company commander and task force medical platoon leaders should "wargame" the CHS concept of support.

CHS requires extensive planning, preparation, battlefield initiative, and coordination. The effectiveness of CHS influences a unit's morale and combat effectiveness. Commanders must ensure that their CHS planners are involved in the tactical decision-making process from the start. A proactive CHS planner is also required. Effective CHS may never have been the cause of victory; however, ineffective CHS may lead to bitter defeat in battlespace. **ALOG**

*Captain Stephen D. Sobczak is an instructor for the Army Medical Department Officer Advanced Course at Fort Sam Houston, Texas. He previously served as forward support medical company commander and forward support battalion S3, 101st Airborne Division (Air Assault), Fort Campbell, Kentucky.*



# Redeploying From Haiti

by Captain G. Todd Spencer

The 710th Main Support Battalion met the challenge of preparing and moving its equipment to the port for shipment home.

**W**hen the initial stage of Operation Uphold Democracy began winding down in Haiti and the bulk of the large U.S. military contingent began heading home, logisticians faced a new challenge: redeploying their units' equipment from an overseas theater. The 710th Main Support Battalion (MSB)—part of the 10th Mountain Division (Light Infantry) at Fort Drum, New York—had to move over 400 pieces of rolling stock, 135 MILVAN's, and 11 other systems requiring movement assistance from the battalion's main base to the seaport of Haiti's capital city, Port-au-Prince.

To accomplish this redeployment, the battalion had to surmount several challenges. They included—

- Finding appropriate vehicles for moving MILVAN's from the battalion's main base to the seaport.
- Obtaining enough rough-terrain cargo handlers to support the operation.
- Navigating Army vehicles, many pulling trailers loaded with materiel, through the civilian traffic normally found on the roads of Port-au-Prince.
- Coordinating with a Government contractor for transportation support.
- Finding ways to move key personnel after the battalion's organic vehicles had been sterilized for shipment.

The concept of operations for the redeployment had two phases: preparation and movement. The preparation phase began immediately after the battalion received its first warning order to get ready for redeployment. The timeline for this phase had to be flexible, since hard dates were not set until approximately 1 week after the warning order was received. The movement phase of the operation originally was planned for completion in 10 days, starting when the first MILVAN was loaded on a trailer for transport from the main base to the port and ending when the last MILVAN or vehicle was staged at the port.

The equipment to be moved came from six subordinate units of the 710th MSB, including the ord-

nance company; quartermaster company; transportation company; aviation intermediate maintenance company; test, measurement, and diagnostic equipment (TMDE) detachment; and an attached field artillery battery.

## Preparation

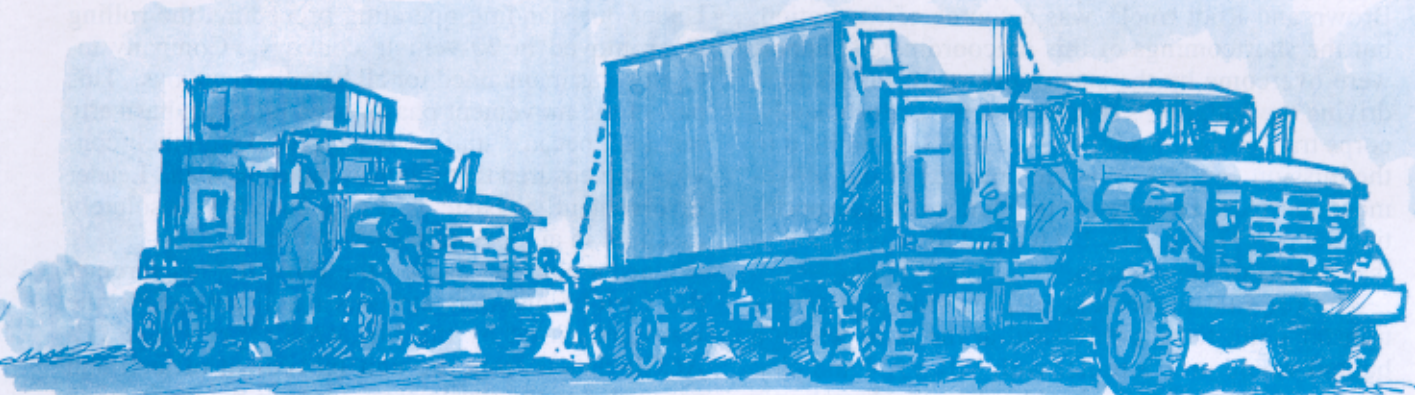
A successful preparation phase was absolutely critical to the success of the movement phase and the overall operation. Preparation involved the hardest work by the most soldiers; it also required critical coordination between the battalion and higher headquarters, between battalion and customer units, and among the battalion's internal staffs and sections.

The first step was loading and preparing the MILVAN's. This required us to shut down the missions of the battalion's subordinate units, and that of course affected the battalion's primary mission of customer support. Coordination of mission shutdown was handled by the battalion's support operations officer. Once a company or section was given the order to shut down its mission, it could begin packing its organic equipment and authorized stockage list (ASL) items.

As the battalion S4, I was responsible for central control of the operation and was assisted by the movement control noncommissioned officer (NCO) from the support operations section. The unit movement officers from each company were subordinate to this ad hoc "movement headquarters." Timely and clear communications, as well as individual initiative, proved essential to achieving a smooth operational flow amidst a sea of changing truths, times, and resources.

Arrangements were made with U.S. Customs Service personnel in Haiti to inspect the battalion's MILVAN's soon after they were loaded. Eight separate inspections were conducted at the battalion's three sites in and around Port-au-Prince in the 2 weeks leading up to the movement phase. The battal-





ion's ordnance, quartermaster, and medical companies and the field artillery battery were located at Muleskinner Base on the north side of Port-au-Prince International Airport; the aviation intermediate maintenance company and TMDE detachment at Falcon Base on the southeast side of the airport; and the transportation company at Bowen Military Airfield. (The medical company was not redeploying at this time; it would stay in Haiti until January to provide regional medical support.)

This inspection procedure eliminated the need to inspect the MILVAN's at the fixed customs site at the port support activity (PSA), located at Bowen Airfield, and thus prevented creation of a bottleneck at the PSA. Once the MILVAN's were inspected and sealed, they were ready for transport. The only remaining task before staging the MILVAN's at the port was to wash their exteriors at the PSA.

While individual sections of the 710th MSB shut down their missions and packed MILVAN's (in some cases simultaneously), the unit movement officers prepared their deployment equipment lists and transportation coordinator-automated command and control information system (TC-ACCIS) labels for their companies' equipment. Two labels had to be prepared and printed for every MILVAN and piece of rolling stock to be redeployed. These labels were prepared in advance to avert bottlenecks at the PSA and ensure a smooth flow of the massive volume of battalion equipment passing through the PSA.

Assembling the trailer fleet needed to move the 135 MILVAN's in an efficient manner proved to be a difficult task. We determined that a minimum of 30 trailers would be needed to maximize the use of the bobtail trucks that would assist in the MILVAN move. We planned to have a MILVAN always loaded on a trailer and ready for hauling through the PSA for cleaning and to the port for final downloading. We hoped to avoid having a bobtail without a trailer for any amount of time, and for the most part

we were successful.

Because there was no centralized control of trailers in the theater, assembling the required fleet at our primary unit location (where the supply support activities and the lion's share of MILVAN's were located) called for supreme initiative and ingenuity by the movements NCO. Finally, he was able to acquire about 34 trailers in time for the proposed starting time of the MILVAN move. Once the trailer fleet was assembled, we could begin uploading the packed and sealed MILVAN's.

The 548th Corps Support Battalion and a U.S. contractor, Brown and Root Services, Inc., provided rough-terrain container handler (RTCH) support for this operation. RTCH's were in short supply, and we often had to engage in intensive, personal management to ensure they weren't diverted to other missions by other units. RTCH's are arguably the most important piece of logistics equipment in a tactical theater; and their shortage in Haiti, as in the early months of our deployment in Somalia, seems to reflect a systemic Army problem. Our experience in Haiti led the 710th MSB to seek approval for adding an RTCH to the battalion's modification table of organization and equipment.

### **Movement**

The trailer fleet was uploaded in time for the movement phase to begin as planned. On the night of 17 November 1994, the first wave of MILVAN's was hauled by Brown and Root bobtail trucks. Coordination of the Brown and Root assets was critical to the success of the operation. The Brown and Root trucks were used at night, when traffic in the city was light. The 12 bobtails organic to the battalion were used primarily during the day, except when a driver was available for nighttime operations.

The move of MILVAN's and heavy trailers continued for the next 3 days and nights, with between 7 and 17 Brown and Root trucks hauling 1 to 3 serials



each night. The inconsistent performance of the Brown and Root trucks was a source of frustration, but the shortcomings of this precoordinated support were overcome by the superb efforts of the soldiers driving the battalion's organic assets. Unfortunately, corps transportation support was never committed to the mission and had to be factored out of our movement matrices. Despite the problems, the transportation support provided by Brown and Root was vital to the success of the mission.

The original movement plan called for a trailer transfer point to be established at the port, where a bobtail would drop a trailer with MILVAN and pick up an empty trailer for backhaul to the battalion's base; there, the empty trailer would be dropped in favor of a loaded one. Early into the operation, however, a couple of drivers recommended that the trailer transfer at the port be abolished because the port operations people were downloading trailers faster than a bobtail could drop one and hook up to another; this recommendation was adopted and the transfer point was eliminated. The efficiency of the port operations was a great help in completing our mission on time.

The overall cycle of a bobtail truck followed this pattern. A bobtail would pick up a trailer loaded with a MILVAN at the battalion's main base. By using an RTCH, we ensured that a trailer was always uploaded to minimize bobtail queuing. The bobtail then would travel approximately 5 miles to the PSA at Bowen Airfield over roads shared by local civilian traffic. (For strategic reasons, a secured, military-only supply route was never established in Haiti. However, the fact that we operated in a relatively nonhostile environment simplified the security demands on our movement operations.) At the PSA, the bobtail was allowed to proceed directly to the washrack, where the dirty MILVAN and trailer were dropped and a clean MILVAN and trailer picked up.

Another bobtail, operating as a "yard dog," then hauled the dirty MILVAN's through the washrack and staged them in the clean area for pickup. Once hooked to a clean MILVAN, and after receiving a TC-ACCIS label from the owning unit's movement officer, the bobtail proceeded approximately 3 miles to the port, where the MILVAN was downloaded and staged for loading on a ship or barge.

The bobtail then traveled approximately 5 miles back to the main base with the empty trailer, dropped that trailer, picked up a loaded one, and started the cycle all over again. This operation worked with surprising efficiency and, despite numerous snags, was completed nearly 4 days ahead of schedule.

The movement of rolling stock took place in the midst of the battalion's MILVAN move. The battalion's rolling stock was called forward to the PSA by

the movement control center (Haiti) on 19 November. Under our standing operating procedure, the rolling stock moved in 20-vehicle convoys. Company integrity was maintained for all battalion convoys. This part of the movement phase, once initiated, basically ran itself because unit leaders traveled with their convoys and ensured that things went as planned. Leader involvement, as basic as it may sound, is absolutely essential in an operation such as this.

Once a convoy reached the PSA, it went through the various customs stations (including the same washracks used by the MILVAN's), received TC-ACCIS labels from the unit movement officer, and proceeded to the sterile area. Once in the sterile area, the vehicles and trailers waited in ship sets until called forward to the port. At the port, after a final rinse, the equipment came under the control of the port operations unit for loading aboard the ship.

Most of the battalion's rolling stock was through the PSA and in the sterile area by sundown on 21 November. The last of the rolling stock to go through the PSA, at the completion of the MILVAN move, were the battalion's organic stake-and-platform trucks.

After our organic vehicles were sterilized, key personnel were transported on vehicles from the battalion's medical company. Without these vehicles, the MSB's overall effort would have been somewhat slowed by the inability of key personnel to be in the right place at the right time.

The successful completion of the 710th MSB's redeployment depended on several factors, including centralized control of the operation; coordination with U.S. Customs personnel in Haiti; coordination with the movement control center; intense involvement by individual unit movement officers; and, as always, soldier commitment.

Overall, the redeployment of the 710th MSB from Haiti was a smooth, efficient, and successful operation. Employment of basic leadership principles by key personnel and intensive coordination by officers and NCO's directly responsible for movements produced this success.

**ALOG**

*Captain G. Todd Spencer became S4 of the 710th Main Support Battalion, 10th Mountain Division (Light Infantry), Fort Drum, New York, while deployed in Haiti. He is currently assigned as the Materiel Readiness Officer, 8th U.S. Army G4, Korea. He received a bachelor's degree from the University of Cincinnati and is a graduate of the Infantry Officer Basic Course and the Combined Logistics Officer Advanced Course at the Army Logistics Management College, Fort Lee, Virginia.*



# Changes in Light Infantry Logistics

by Lieutenant Colonel Andrew T. Chmar

*The British action in the Falkland Islands, Israeli operations in Lebanon, and our recent success in Grenada confirm that credible forces do not always have to be heavy . . . It is important for all of us to recognize the geo-strategic value, as well as the battlefield utility, of the light infantry division concept.*

—General John A. Wickham, Jr.  
Chief of Staff of the Army  
White Paper, 1984

**G**eneral Wickham and his successors oversaw the greatest buildup of light infantry forces since World War II. With a peak strength of four active divisions, light infantry units participated in most Army operations of the last 10 years—from combat missions in Panama and Somalia to noncombat operations such as hurricane relief in Florida and Hawaii, civil disturbance control in Los Angeles, and peacekeeping in Haiti.

As quickly as they were constituted in the 1980's, however, light infantry forces have been reduced as part of the Army's drawdown in the 1990's; two of the four divisions have been inactivated. Yet it is significant, and a recognition of the truth of General Wickham's vision, that light forces (including airborne and air assault as well as light infantry) now make up a greater percentage of the Army's combat divisions than at any time in our history.

Perhaps nowhere has the utility of light forces been showcased better than in Haiti during Operation Uphold Democracy. The 10th Mountain Division (Light Infantry), from Fort Drum, New York, was originally tasked as only one unit in a larger invasion force ordered to wrest control of Haiti from its military dictators. But because of successful negotiations, its mission changed at the last minute—and for the third time in as many years the division found itself participating in a military operation other than war. Although it had not trained specifically for peacekeeping duties in Haiti, the division's inherent flexibility allowed it to change its mission without problem and successfully complete the assignment.

The division's success in Haiti exhibited the usefulness of light forces, but it also showed how far the

light infantry concept has evolved, especially in combat service support (CSS). Let's look at some of the CSS challenges and solutions in Haiti and compare them to what Army doctrine says.

## Light Divisions Become Heavier

Early doctrine for light infantry units emphasized the need for rapid deployment: light infantry divisions were to be quickly airlifted into operational areas using no more than 500 C-141 sorties or their equivalents. Equipment for any follow-on heavy forces would be transported by sealift.

But the rapid insertion of light forces well before the arrival of heavier units has its risks. At the beginning of Operation Desert Shield, for example, the 82d Airborne Division, Fort Bragg, North Carolina, might have been quickly overrun if Iraqi heavy forces had continued their push into Saudi Arabia. The limitations of light forces were again exhibited in Mogadishu, Somalia, where the absence of a heavier reserve force contributed to the deaths of 18 soldiers in October 1993.

While the original intent of quickly inserting light forces in operational areas through a limited number of airlift sorties made sense from a speed-of-execution perspective, the limitations of pure light forces in firepower and mobility have forced changes in both their organization and employment. Even at their lightest, light infantry divisions have never met the 500-sortie deployment requirement. To overcome their weaknesses, light divisions have actually gotten heavier, balancing speed of deployment with increased combat power and support capabilities.

Perhaps nowhere is the "heavying" of light infantry divisions more apparent than in the CSS elements, where the personnel and equipment of the division support command (DISCOM) have grown significantly in the past decade. Each increase in the size of the light DISCOM is a "necessary evil," resulting from either the increasing diversity of missions, the need to deploy with 3 days of supply to sustain the force, or the introduction of a greater density of equipment throughout the division. The DISCOM must support all of the requirements generated by these developments.

Equipment previously seen only in heavy divisions



is now being received in light infantry divisions, especially within the DISCOM. An example of this DISCOM "equipment creep" is the fielding of the palletized load system (PLS). With the addition of the PLS, light forward support battalions (FSB's) now have some of the heavier transportation assets in the Army inventory. In another example, the FSB's and the main support battalion (MSB) have recently been issued HEMTT (heavy, expanded-mobility, tactical truck) tankers and wreckers to replace or augment their tank and pump units and 5-ton wreckers, respectively. In many respects, it appears that the only restriction on light infantry division equipment is that it must roll on wheels rather than tracks.

### **DISCOM's Become Larger**

The original doctrine for the light infantry division assumed, and in fact required, that the division would receive immediate support from elements of a corps support group (CSG). But the availability of this support is not assured to the depth or dedication originally envisioned. As a result, an increasing number of corps "plugs" in the form of dedicated detachments are now found in the DISCOM's MSB. These include separate detachments providing direct support in Avenger missile maintenance, mortuary affairs, calibration, and water storage and distribution. Experience has shown that these detachments do not always deploy with the division—for example, air defense units were not deployed to Haiti and so the Avenger maintenance detachment stayed home. But the personnel and equipment of these detachments represent a significant increase in both the size of the deploying force and the complexity of its mission.

### **Haiti: Doctrine Meets Reality**

By examining a few of the 10th Mountain Division MSB's experiences in Operation Uphold Democracy, we can see how light infantry logistics has changed in the short period since the inception of the light infantry doctrine and how it continues to evolve.

The 710th MSB was alerted with the rest of the division to prepare for deployment to Haiti in mid-September 1994. For the first time in the battalion's history—perhaps the first time for any light infantry division MSB—the entire unit, including all equipment and supply stocks, was deployed.

The demise of one part of the original light infantry concept quickly became apparent. Doctrine stated that units should be able to move their materiel in combat-loaded organic vehicles—over 250 vehicles and trailers for the MSB. But the actual movement of the 710th MSB demanded more transportation assets than even the most pessimistic planner in the 1980's could have envisioned. Moving the MSB's materiel

to Haiti required an additional 103 20-foot MILVAN containers; over 40 of these containers were required just to move construction and barrier materials (class IV). Of greater concern was that the MSB had to use over one-third of the MILVAN's to carry organic equipment, even when every vehicle in the battalion was fully combat-loaded.

### **Working With MILVAN's**

The use of MILVAN's was essential but offered a great challenge to the MSB. Under current doctrine, a light infantry MSB is designed to stock a minimal amount of supplies. Resupply from the CSG flows either through or around the MSB to forward elements of the division. But the doctrine was written with a linear battlefield in mind; operations other than war are rarely linear, so traditional support relationships become moot. Even with the best intentions of planners and the supporting efforts of the CSG, light logisticians are uncertain of the size of their customer base and the extent of operational resupply they can expect. So they tend to increase stocks before and during noncombat deployments.

The movement and handling of additional supplies in the theater is also a problem. The light DISCOM, by design, is not capable of moving large numbers of containers within an operational area. With only eight tractor-type trucks to pull stake and platform trailers and no rough-terrain container handlers, the DISCOM's capability for moving MILVAN's is minimal. This shortfall increases dependence on corps support units, but those units are not prepared to move hundreds of containers for light divisions while performing their own doctrinal missions.

In Haiti's bare-base environment, with its marginal port facilities, the supplies in containers were critical to the 10th Mountain Division's ability to establish base camps, prepare defensive positions, and begin operations. But the initial theater movement priority was given to subsistence (class I) and other essential supplies. The last MILVAN was not delivered from the port until several weeks after the division's main body arrived. Meanwhile, the expectations of customer units that would receive immediate resupply were not being fully met.

In the absence of increased transportation authorizations or greater dedicated corps support, light forces may find that their initial operational resupply needs meet with some of the same delays experienced by heavier forces.

### **Demand for Bottled Water**

Other logistics missions assumed by the MSB highlight further changes in light logistics. The MSB is authorized six reverse-osmosis water purification



units (ROWPU's) so it can supply drinking water to divisional units when local potable water sources are unavailable. The MSB's ROWPU's began producing water in Haiti within 24 hours of the arrival of U.S. forces and continued to do so for the remainder of the operation. But the soldiers of the joint task force expected to receive bottled water; in fact, the availability of bottled water quickly became a morale issue. When local sources proved to be unsatisfactory, shipments of bottled water began. These shipments greatly increased the amount of bulk class I being moved into Haiti early in the deployment. The MSB's small class I activity was challenged throughout the operation with this additional requirement.

### Medics Become Riggers

Like many noncombat operations, Operations Uphold Democracy called for logistics resupply to occur over long distances. Because of Haiti's almost nonexistent road network, most throughput resupply outside of Port-au-Prince, the nation's capital and largest city, required aircraft or water vessels. For the MSB, this meant that supplies moving to forward operating bases had to be properly packed and rigged.

The small size of the MSB's supply support activities, coupled with its expanded storage and issue mission, meant that another part of the battalion—the medical company—had to assume responsibility for rigging. The medical company received that mission in early October, and the ambulance platoon leader and over 20 percent of company personnel quickly became proficient in rigging 463L pallets stacked with all classes of supply. Because of the volume of supplies, this team was used almost continuously throughout the deployment.

Future operations may not be as benign as the deployment to Haiti, so medical personnel may not be available for a necessary but unresourced mission like rigging. MSB commanders will need to consider from where they may be able to draw personnel to meet this requirement.

### Help From the Redlegs

Perhaps the most unusual aspect of the MSB's deployment to Haiti was the attachment of an artillery battery to the battalion. The absence of an artillery mission in Haiti permitted the division artillery commander to offer his soldiers for use by other units, and the DISCOM took advantage of the opportunity.

The MSB's previous experience in Somalia highlighted the need for dedicated convoy security in support of the battalion's transportation company. The availability of the artillery battery's soldiers and high-mobility, multipurpose, wheeled vehicles (HMMWV's) in Haiti permitted the MSB to achieve

adequate convoy security.

Other "redlegs" augmented the lean supply support activities and coordinated and conducted logistics base security. Overall, the presence of this battery proved critical to the success of the MSB. The absence of such augmentation in the future will increase the risks of the mission and compel light force commanders to choose between convoy security and full manning of direct support activities.

Logistics planning and execution during Operation Uphold Democracy were resounding successes. Even with minimal notice and a last-minute change of mission, logisticians in the theater met or exceeded all timelines established for CSS.

But the experiences of the 710th MSB in Haiti illustrate the changes that have occurred in light infantry divisions since their formation in the mid-1980's; they also demonstrate the challenges that light logisticians will face in the future, whether in combat or in military operations other than war.

With their smaller units, leaders of light infantry division support battalions face significant challenges, both doctrinal and nondoctrinal, in setting priorities for CSS and tactical missions. In extended combat operations, they will have to make formidable decisions. The use of MILVAN's for moving both organic equipment and supplies reduces the rapidity of deployment and increases the need for early reliance on corps assets. To reduce the division's dependence on MILVAN's, light logisticians must continually challenge the need for more supplies and equipment to perform the division's mission, especially early in an operation.

As the equipment of light infantry divisions becomes more complex and the missions assumed by these versatile units continue to broaden, the evolution of CSS units must also be examined to ensure that the proper balance between rapid deployment and organizational capabilities is maintained. As combat units quickly deploy to operations throughout the world, we must continue to ensure that the logistics tail properly supports the force. Even with its many unique challenges, the success of Operation Uphold Democracy shows that it can be done. **ALOG**

*Lieutenant Colonel Andrew T. Chmar commands the 710th Main Support Battalion, 10th Mountain Division (Light Infantry), Fort Drum, New York. He holds a B.S. degree from the United States Military Academy, an M.B.A. degree from Harvard Business School, and an M.A. degree from the Naval War College. He is a graduate of the Army Command and General Staff College and a senior service college selectee.*



# Finding a Needle in a Haystack

Locating a specific item in a specific container can be as hard as finding the proverbial 'needle.' New electronic technology offers a solution to the challenge of knowing what is where.



**T**he Persian Gulf War was a logistics success, but it taught us many lessons about the need to improve rapid deployment and support for the war-fighter. One of the most important lessons was that while the volume and flow of supplies to the Southwest Asia theater were adequate, the identification and expeditious routing of supplies within the theater were woefully inadequate. In fact, the Army had to open 22,000 of 40,000 containers at various supply and transportation points in Saudi Arabia just to determine their contents and intended recipients. We saw, once again, that the Army needed a system to accurately track and rapidly identify critical items as they flow "from the factory to the foxhole."

## Prepo Ships Support Rapid Deployment

The experience of the Marine Corps in the Gulf War demonstrated that pre-positioned (prepo) ships were one method the Army could use to better support its rapid deployment forces. The Marines offloaded prepo ships early in the conflict to give their fighting forces an immediate armor and sustainment capability. The Army, by contrast, had a rapid deployment force, the XVIII Airborne Corps, but no rapid sustainment capability. All initial sustainment supplies shipped by air had to compete with the deploying troops for space on the limited number of aircraft available. In the first months of Operation Desert Shield, battlefield commanders had to choose





ck by Randall McClure and Thomas J. Kershaw

□ The *SP5 Eric G. Gibson*, one of the Army's prepo ships, is loaded with intermodal containers filled with such commodities as food and medical supplies.

deployment to future war zones anywhere in the world.

Although prepo ships provide an improved sustainment capability, they cannot by themselves provide the battlefield commander or intheater logistician with a truly effective sustainment capability. As the Gulf War showed, getting required supplies to a destination quickly is only part of the solution. Once all 3,000 intermodal shipping containers from the *Titus* and *Gibson* arrive at a contingency area, the receipt process must be able to identify quickly which container has the right "stuff." Providing this ultimate total asset and intransit visibility capability will ensure rapid and effective sustainment of our fighting forces.

### Cargo Tracking Success in Haiti

At the time of the Gulf War, no military or commercial activity had the ability to locate remotely a specific commodity item in a specific container sitting in a container yard. To find a specific item, individuals had to open containers at random until they found the required item—a process that frequently took several days. Locating an intermodal shipping container holding a specific commodity item was an exercise in frustration.

During Operation Uphold Democracy in Haiti, radio frequency (RF) tags and fixed and handheld interrogators were used successfully to identify assets rapidly. The Army deployed fixed interrogators at critical chokepoints between continental United States supply depots and Haiti, including depot dispatch offices, airports, and transportation points.

At the depots, specialists affixed 8-kilobyte RF tags to air pallets destined for Haiti. Each tag was loaded with 80 bytes of transportation information that the fixed interrogators at each chokepoint could "read." The interrogators passed the data on the tags by telephone lines or satellite to a central computer data base. Commanders and logisticians then accessed this data base, called INTRANSIT, which was located at the Volpe National Transportation Systems Center in Cambridge, Massachusetts. Logisticians used the data base to monitor and identify the time and location of each shipment. The technology was rated a great success and provided a powerful new tool for the Army and Department of Defense (DOD) to use in gaining total asset visibility over their distribution systems.

While preparing final plans for loading its prepo

between feeding and sustaining their small force or rapidly deploying more combat troops to better deter further Iraqi aggression.

To capitalize on the Marine Corps' prepo experiences, the Army in March 1995 began loading two prepo ships in Charleston, South Carolina, with war stocks to support future rapid deployments. As part of this mission, Army and Defense Logistics Agency supply depots stuffed 3,000 containers with support items such as food, medicine, lubricants, barrier materials, common user repair parts, and a 100-bed hospital. These containers were loaded aboard the prepo ships *SP5 Eric G. Gibson* and *LTC Calvin P. Titus*, which will remain at sea prepared for rapid



ships in late 1994, the Army decided that radio frequency/identification (RF/ID) tag technology like that used in Haiti would aid in rapidly identifying the contents of containers deployed aboard the ships. After a series of feasibility meetings, the Army decided that soldiers could use handheld interrogators and RF tags affixed to shipping containers to locate quickly items packed in the thousands of containers arriving for a contingency. Handheld interrogators and RF tags manufactured by Savi Technology were selected for this task. Remarkably, this automatic identification technology could work even in an austere environment without computers or external power sources—exactly the conditions often found during the initial offloading of prepo container ships in an overseas theater.

### Which Shipping Container Has the Bandages?

During RF/ID feasibility meetings held in early 1995 to prepare for loading the Army's first prepo ships, action officers analyzed the potential of new product lines that track individual containers and identify their contents. Since the Haiti operation, new commercial products offered enhanced capabilities. For example, Savi Technology had introduced a new 128-kilobyte RF tag with significantly more data storage capability. At the same time, DOD action officers were meeting to standardize supply and transportation data elements for RF tag use within the military.

These advances will enable operators to use handheld interrogators and RF communications to conduct

ad hoc queries of multiple data files located on RF tags. Within minutes, an operator will be able to locate a specific commodity item in a specific container in a storage or transit yard containing hundreds of containers. By combining the Savi tag enhancements with DOD's data standardization for RF tags, the user will gain access to a wealth of information.

For example, a contingency force medical officer may have an immediate need for bandages. After the prepo ship's containers are offloaded in a war zone, the bandages will be in one of the many containers located in a container yard. The RF tag on each container will have a detailed listing of all enclosed commodity items. The operator, besides being able to read each RF tag data file with a handheld interrogator, will be able to interrogate multiple RF tag files by a specific commodity item data base field, such as nomenclature, document number, or stock number.

After conducting this data base interrogation of the RF tags to locate bandages, the handheld interrogator will receive an "answer" back from the RF tags on any containers holding bandages. This will all be done using the RF communications capability of the handheld interrogator. No electric power or computer will be needed. The operator then will use the handheld interrogator to locate physically the specific container. He will most likely do this by activating the container's RF tag beeper. If the RF tag on the container is out of the beeper's audio range, the operator will be able to use the interrogator's RF tag range finder to move nearer to the container until the RF tag beeper can be heard. This location process



□ A look at the Charleston, South Carolina, container yard shows the magnitude of the problem of finding a specific item in a particular container.





□ A soldier of the 7th Transportation Group attaches a Savi 128-kilobyte radio frequency tag to a prepo container.

will accomplish in minutes what was practically impossible to do before the advent of current RF tag technology.

#### Ad Hoc Query Capability

The plans for loading the Army prepo ships called for RF tags to be attached to each container. The Combined Arms Support Command (CASCOM), at Fort Lee, Virginia, assembled a small team to affix the tags to prepo containers for loading aboard the *Titus* and *Gibson*.

As these preparations continued, the Army's Deputy Chief of Staff for Logistics, in conjunction with the Strategic Logistics Agency (SLA [now the Logistics Integration Agency]), determined that the RF tags used in the prepo missions would require a data base format, rather than the more commonly used flat text file. A flat text file format would not make full use of Savi's RF technology because the unit receiving the containers would not be able to use the new handheld interrogators to conduct ad hoc queries of the data files located on the containers' RF tags. Instead, the unit would only be able to read each container's RF tag, one at a time.

By reformatting depot commodity data into a special Savi data base format, the receiving unit would be able to take full advantage of the data base and RF tag technology. But by this time the CASCOM team had already installed many of the RF tags on the shipping containers in Charleston, and loading operations were about to begin.

SLA solved the problem by tasking a defense contractor involved in Army systems integration work, the Unisys Corporation, to design and install a write (or "burn") data base. The new data base was then used to format the files that would be used with the RF tags on the prepo containers. Working with the 7th Transportation Group, CASCOM, and other contractors, the Unisys team modified its prototype application—the total asset visibility operational prototype (TAVOP) intransit processing station (TIPS) software—to add files to the tags on the containers by means of shortwave RF communications. Rigid quality control and precise operational procedures ensured that the right data, in the right data base format, were installed on the correct tags and containers.

The challenge of loading the data onto RF tags affixed to containers already stacked in the storage yard in Charleston was met by mounting an RF fixed interrogator on a pole in the back of a pickup truck. This procedure created an interrogator range of about 100 feet and provided the mobility needed to move among the nearly 2,000 containers in the 1/2-square-mile storage yard. The team operated the TIPS software from the cab of the truck with a Windows-based 486 notebook computer powered through the truck's cigarette lighter.

A four-step process was used to write data base files onto RF tags rapidly using the TIPS prototype application. First, the integration team processed flat text files from the supply depots using a visual basic application prepared by Unisys and preformatted those files into a Microsoft Access™ data base on the TIPS computer. The approved data element format followed the DOD military standard requisitioning and issue procedures (MILSTRIP) standard for materiel release orders.

Once the data were loaded in the TIPS data base, container numbers were retrieved or written to RF tags using RF communications. These tags identified the correct container for which the data were written. It took less than a minute for the TIPS application to identify the 300 or more containers that were in range of the fixed interrogator at any one time.

In the third step, the TIPS application correlated the depot data file in the data base with the appropriate RF tag on the container, using the specific container number. In the final step, the TIPS application rapidly wrote the data base files to the appropriate RF



tags using the TIPS automated burn process. This step took from 1 to 30 minutes, depending on the number of tags burned and the amount of data placed on each tag.

The TIPS system engineer monitored the application and RF communications operations during these steps. The automatic burn process was repeated several times to ensure that all tags within RF range had received the appropriate data base file. The TIPS software recorded the specific tags it already had loaded and provided reports that were used later to validate which tags had been loaded with which data base file.

From identification of the initial requirement on 28 February 1995 until completion of ship loadout on 24 May, the SLA and CASCOT team supported the prepo mission at Charleston and then in Oakland, California. Because of the extremely compressed schedules dictated by shiploading and sailing deadlines, the project was characterized by rapid planning; continually evolving functional requirements, data formats, and interfaces; and rapid application, development, and implementation of new technology. The result was a unique blend of functional requirements and state-of-the-art technology that came together to resolve a long-standing mission need.

Even with numerous functional, technical, and operational difficulties, the SLA and CASCOT teaming effort met all the challenges of the prepo mission in a

timely and professional manner. Ultimately the team, working with 7th Transportation Group soldiers, burned over 2,800 RF tags using the new data base format. The operation was conducted at both Charleston and Oakland without disrupting normal Military Traffic Management Command port operations.

### Future Applications of RF Technology

The Army's prepo mission was the first DOD effort to provide an ad hoc query capability using RF tags and handheld interrogators. Building on the success of this operation, the Army can apply RF tag technology to solving problems in other areas of DOD logistics. For example, permanent interrogator networks could be established at ports and other transportation hubs to gain real-time visibility over logistics operations, providing a true intransit visibility capability. This would permit logisticians at various echelons to connect remotely to interrogator networks and determine the real-time location and status of their cargo in a given distribution system. Furthermore, by exploiting the increased storage capacity of the advanced RF tags, units could put a wide assortment of data on tags affixed to principal end items; the tags could include maintenance, operational, and operator data.

There are numerous other RF tag applications under study and being tested. These include the use of RF technology in unit moves; at the National Training Center at Fort Irwin, California; in Europe and Korea; for other classes of supply (ammunition and medical); and in support of humanitarian assistance missions.

The Army prepo mission clearly demonstrates that RF technology not only has a productive place in the military environment but is here to stay. RF tag technology and its many applications provide the Army logistician with several new high-technology capabilities and tools needed to meet the future challenges of supporting a modern force-projection Army in the 21st century.

**ALOG**

*Randall McClure is a project manager for System Resources Corporation in Fayetteville, North Carolina. During the prepo mission, Mr. McClure, as a subcontractor to Unisys Corporation, led the team that completed rapid software application development and integration of Savi Technology RF tags.*

*Thomas J. Kershaw is a logistics management specialist in the Logistics Systems Division, Logistics Integration Agency, Alexandria, Virginia. During the prepo mission, he provided project oversight for the contractors developing the RF burn station software.*



□ A fixed interrogator mounted on a pickup truck is used to burn data on radio frequency tags attached to containers.



# Hints for Survey Officers

by Chief Warrant Officer (W2) Michael J. Long

**Y**ou are a newly assigned survey officer, and an item belonging to the Government has been damaged. What do you do? Where do you begin?

When Government property is damaged, lost, or destroyed, a Department of the Army (DA) Form 4697, Report of Survey, must be initiated by the accountable individual to determine the amount of loss to the Government. If the damage or loss was caused by negligence or misconduct, the person at fault must be identified and a decision made on whether he should be required to pay for the loss. In any case, the most cost-effective disposition of the property must be determined and included in the report of survey.

The investigation (recorded in block 11 of DA Form 4697) and findings and recommendation (block 26) are the most important parts of the report. These areas must be documented completely and accurately for the property accountability system to function properly.

As survey officer, you must plan your investigation. Start by determining what happened. Was someone at fault? From the first reading of the report of survey and accompanying exhibits, you should be able to form an idea of what happened and then decide what additional information you need. Remember that "Murphy's Law" rules, that "what can go wrong will." Plan questions to ask each individual involved, but remain flexible enough to exploit unexpected sources of information. Be sure that your efforts are directed toward the basic questions you must answer and that irrelevant information does not obscure the main issue.

Exhibits are critical to your report of survey. They may be statements from individuals or copies of pertinent documents and photographs. They must be properly constructed, marked, and labeled alphabetically starting with the letter "A." Each exhibit must have the report date, the monetary value of the property involved, and the name of the reporting unit clearly marked at the bottom. Additional exhibits added as the investigation proceeds should continue the labeling sequence started by the initiator. A copy of each exhibit must be forwarded with the report.

Use common sense when attaching exhibits. A few pertinent exhibits are all that generally are required to fully establish what has happened.

The most common type of exhibit is the sworn statement. The statement itself should be as straightforward as possible. Question-and-answer statements should be avoided unless the person making the statement is unable or unwilling to give a clear ac-

count of what happened. A complete report of survey should include a statement from anyone who has direct knowledge about the incident or who may be able to substantiate a questionable statement by someone else.

As the survey officer, you must inspect salvaged or destroyed property and include proof of its disposition with your report. If the property is salvaged, a copy of the turn-in document should be attached as an exhibit.

The reparability of damaged property must be determined by a qualified technical inspector. Any recommendations made by you regarding reparability of damaged property must be supported by the inspector's estimated cost of repairs. The estimate must be attached as an exhibit to the report of survey. In the case of a damaged motor vehicle, you must write a formal memorandum releasing the vehicle for repair before maintenance can be performed.

Your next step is to write findings that are factual and free of personal speculation, suspicion, or opinion not supported by evidence. This is the point where you must determine if an individual is at fault. After the opening statement in block 26 of DA Form 4697 (findings and recommendations), you must write a narrative account of how the loss, damage, or destruction actually occurred, referring to the exhibits.

The last step in preparing the report of survey is stating recommendations. Using your findings as a basis, you must recommend—

- Whether someone should be held responsible or that all concerned should be relieved of liability.
- That accountability be terminated if the property has been destroyed or is to be salvaged or that accountability for the property be reestablished if it can be repaired and returned to service.
- Ways to preclude systemic problems, such as stricter adherence to unit standing operating procedures, formal counseling, or training.

Using these steps can make your job as a survey officer easier and will produce more accurate findings.

**ALOG**

*Chief Warrant Officer (W2) Michael J. Long is assigned to the XVIII Airborne Corps G4, Fort Bragg, North Carolina. He has a bachelor's degree from the University of Maryland in College Park and a master's degree from Webster University in St. Louis, Missouri.*



# SSA Run by—Transporters?

by First Lieutenant Jason K. Graaf

Since March 1942, when the Transportation Corps was created from the Quartermaster Corps, the primary mission of wheeled vehicle operators (military occupational specialty [MOS] 88M) has been transporting the Army's "beans and bullets" through the battlefield to forward units. So what happens when a platoon of 88M's are called on to expand their logistics mission and operate a supply support activity (SSA)? Can the transporters do the quartermasters' job in a contingency?

The 44th Corps Support Battalion (CSB) at Fort Lewis, Washington, received a positive answer to those questions. It all began when the 24th Quartermaster (QM) Company received its warning order for deployment to Guantanamo Bay, Cuba. The 44th CSB then had to decide who would operate the Fort Lewis SSA in the quartermasters' absence. Several courses of action were considered: the mission could be assigned to a quartermaster company outside of the 44th CSB; a mixture of soldiers with different MOS's could be drawn from several units to fill the SSA's personnel requirements; or the CSB could give a transportation company the chance to show if its soldiers could operate an SSA. The CSB decided to keep the SSA mission in the battalion and give it to the 3d Platoon, 40th Transportation Company (POL [petroleum, oils, and lubricants]).

## Training the Transporters

On 3 January 1995, the soldiers of 3d Platoon began training side by side with their quartermaster counterparts to meet the challenge of operating an SSA. Many observers predicted that the experiment of "truck drivers" in an SSA would fail. Could the transporters meet the established Department of the Army (DA) objectives for supply support? Could they provide first-class customer service? Would they be able to serve the 189 nondivisional units designated under I Corps and Fort Lewis without disrupting daily operations? Could they quickly learn about the wholesale supply system and SSA operations in only 20 days?

After a quick familiarization tour of the SSA and a review of its mission, the 88M's concluded that no one should expect them to maintain the same standards as the 24th QM Company. In the SSA, they would be operating in a very different environment—not the one for which they were trained. Nonetheless, they undertook their new mission with determination

and energy.

The training was fast paced and challenging. The 24th QM Company's soldiers faced the dual task of training 33 truck drivers to run an SSA while preparing themselves for deployment to Cuba. The 88M's needed extensive training in supply policy below the wholesale level, familiarization with the automation equipment, and an understanding of the required forms and documents. The 24th QM Company's individual sections had to prepare the transporters for the challenge ahead.

The 24th QM Company would be deploying to Guantanamo soon, so the time available for training the transporters to run the SSA was short. All parties agreed that performance-oriented training would be the quickest and most efficient method of preparing the transporters. The QM Company tasked Chief Warrant Officer 3 Richard Detheridge and Sergeant First Class Diony Eligio to lead the training because of their technical expertise and experience in supply and SSA operations. Their assistance proved invaluable in integrating the 3d Platoon into the SSA and its operation.

On 1 February 1995, the 40th Transportation Company became responsible for operating the SSA. Following this significant event, a training plan was designed to cross-train each soldier so that all platoon personnel would have the technical knowledge needed to work in each section of the SSA. These sections included turn-in, local purchase, receiving, and stock control.

The SSA supports all class II (clothing and individual equipment), packaged class III (POL), class IV (construction and barrier materials), and class VII (major end items) supplies for the 189 nondivisional units of I Corps and Fort Lewis. The SSA also processes all local purchase items, such as computers, facsimile machines, and other locally manufactured goods. At any one time, the inventory controlled by the SSA ranges from \$30 million to \$80 million.

The SSA's primary concerns in conducting its work are accountability and attention. Managing such a magnitude of supplies requires a working knowledge of the automation programs that support the supply system. The SSA at Fort Lewis is currently one of the testing grounds for the standard Army retail supply system-objective (SARSS-O). This system is replacing the standard Army retail supply system-interim, which was introduced in



1985. SARSS-O combines the capabilities of SARSS-I and the direct support unit standard supply system (DS4).

The transporters' initial impression of SARSS-O was that it appeared to be complicated. But they quickly grasped the supply concepts and mastered the automation requirements needed for success.

### Success

During its first 3 months—February through April 1995—the transporter-operated SSA processed over 1,200 receipts, 1,400 issues, and 1,450 requests per month. The turn-in section was able to support successfully the simultaneous deactivation of the 3/11th Field Artillery Battalion, the 85th Maintenance Company, and the 54th Engineer Detachment. The SSA also prepared to receive over 12,000 M17, M25, and M40 (combined) protective masks, which were turned in when the new M40A1 protective mask was fielded.

Since those first months, the Retrograde Europe project has provided the SSA with a constant flow of equipment from Germany to fill modification table of organization and equipment (MTOE) and common table of allowances (CTA) shortages within I Corps and Fort Lewis units. The SSA is also issuing equipment received from the closure of Fort Ord, California, as part of the fielding of new AN/VDR-2 radiac sets; M1074 palletized load system; high-

mobility, multipurpose, wheeled vehicles; and heavy, expanded-mobility tactical trucks.

All the doubts and questions about the ability of truck drivers to operate an SSA have been answered. The performance and high standards of the SSA have not deteriorated. The success of the SSA under the transporters is demonstrated by their achievement of a receipt-processing time of 1.7 days and a request-processing time of 1.3 days, each below the DA objectives.

There were many lessons learned in this venture. Soldiers again demonstrated that, when given guidance and quality instruction, challenged, and given the opportunity to succeed, they will succeed. Integrating the transporters with the 24th QM Company's soldiers and providing them with performance-oriented training were key to a smooth and successful transition in SSA management. The knowledge and constant reinforcement provided by battalion and company leadership were also invaluable. Selecting a platoon that had already developed a high level of teamwork and camaraderie contributed greatly to reducing the time needed to make the transition. These factors made it possible for the transporters to quickly take over SSA operations while maintaining the expected level of service—and all despite a 37-percent loss of trained quartermaster supply personnel in the first 90 days of the operation.

When asked about the transition of SSA operations from quartermasters to transporters, Lieutenant Colonel Vaughn Barnett, commander of the 44th CSB, responded, "I am not the least bit surprised by the smooth transition and outstanding performance of the 40th Transportation Company. What the 40th is doing represents professional and competent soldiers and the potential evolution of logistics in Force XXI. This SSA operation is a form of multifunctional logistics at its best."

The ability to provide multifunctional logistics in today's Army is very important. Logistics officers often perform outside their specific functional branches, but rarely do enlisted soldiers and non-commissioned officers, let alone a whole platoon, receive the opportunity to work in a completely different MOS for an extended period of time. The experience of the 44th CSB should demonstrate the benefits of being multifunctional.

**ALOG**

*First Lieutenant Jason K. Graaf is a platoon leader and executive officer in the 40th Transportation Company, 44th Corps Support Battalion, 593d Corps Support Group, at Fort Lewis, Washington. He holds a B.S. degree in aviation management from St. Cloud State University in Minnesota and is a graduate of the Transportation Officer Basic Course.*



□ Soldiers of the 3d Platoon, 40th Transportation Company, learn the ropes of SSA operations.





# Barging Ahead

by Colonel Jimmy S. Martin

The Florida National Guard had to find a way to transport more than 880 vehicles to Louisiana. Not only was barge movement the most economical choice, it was the only option that would fit the training exercise schedule.

**F**orty-four hundred soldiers from the Florida Army National Guard (FLARNG) participated in a training exercise at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana, in June 1995. Guardsmen from the 53d Infantry Brigade (Light), Tampa; 419th Aviation Group (Attack), Jacksonville; and 50th Area Support Group, Miami, were flown from Florida to Louisiana by military and civilian aircraft, which was consistent with a routine deployment. However, this was no routine deployment. A way had to be found to transport more than 880 vehicles to the training site over 1,000 miles away. This is the story of how the vehi-



cle movement from Florida to Louisiana was accomplished.

Planning for the exercise began in December 1994. The first question to be answered was, "How do we get the ground tactical vehicles needed for the exercise to Fort Polk?" Comparison of barge, rail, and convoy movement costs revealed that the equipment of the three Florida state command task forces could be transported more economically by barge (\$1.2 million) than by rail (\$1.9 million) or convoy (\$1.3 million). While the cost of barge movement was just slightly less than that of convoy movement, only barge movement could be accomplished within the 15-day timeframe of annual training.

The next question was, "Where do we embark?" Although there are many suitable ports in Florida, embarking from the westernmost port on Florida's Gulf Coast would ensure the quickest transport at the lowest cost. That embarkation point would be close enough to Fort Polk that deployment by barge would fit JRTC training scenarios and unit schedules. The embarkation point also had to be close enough to deploying units that they could convoy their vehicles there during their last multiple unit training assembly (weekend drill) before their deployment to Fort Polk. This would eliminate the possible split deployment of drivers and their units and permit orderly development of a barge-loading plan. If the units needed more than 1 day to drive to the embarkation point, they would not be able to return to their home stations within the timeframe of a regular weekend drill.

Panama City, on Florida's panhandle, was the westernmost location of any of the deploying units. Since Panama City also had two excellent ports, it was chosen as the embarkation point for the FLARNG barge operation. Of the two ports, one civilian and one military, the pier at the Navy Coastal Systems Station (NCSS) was selected because it was less costly and offered a secure vehicle staging area. In addition, the NCSS could arrange billeting and subsistence for the guardsmen.

In the months before the deployment, the Transportation Division of the FLARNG's Directorate of Logistics (DOL) monitored and constantly updated the changing requirements of the exercise with frequent equipment reports from the units being deployed to the JRTC. The DOL used the transportation coordinator-automated command and control information system (TC-ACCIS) to provide Forces Command, Military Traffic Management Command, JRTC, and deploying units with detailed information on all equipment being transported, such as model numbers, square footage, and total count.

The Canal Barge Company, New Orleans, Louisiana, provided 46 open-deck barges for the move. The

Army Reserve sent a port support cell from the 1186th Transportation Terminal Brigade, Jacksonville, Florida, to provide vessel stow plans and documentation and supervise the loading of the barge by soldiers from the deploying units. During the barge-loading operation, the 316th Movement Control Detachment, FLARNG, from St. Augustine, coordinated traffic control for convoy operations and vehicle staging with local and state law enforcement agencies. Hazardous materials inspectors from the DOL inspected and certified vehicles transporting hazardous cargo.

The FLARNG relied on guardsmen from units all over the state for maintenance, loading, and security at the embarkation point. Where possible, each unit's equipment was loaded and stowed separately on the 154,475 square feet of deck space. The 743d Maintenance Company from Fort Lauderdale provided maintenance and refueling support as part of their annual training; these operations were conducted in the nearby Panama City National Guard Armory as an environmental safeguard.

When the first barge was ready to load, vehicles were called forward from the marshaling area 2 miles away. Equipment was organized by unit and type as it was staged near the vessel loading area. The port support cell identified each piece of equipment with automated marking and reading system stickers printed by TC-ACCIS and used ground guides to drive the vehicles onto the barges.

The loading was accomplished in three 10-hour work days. Safety was a paramount consideration; all soldiers working in the barge-loading area were required to wear hard hats and life jackets.

Tugs pushed the barges from Panama City on the Gulf of Mexico Intracoastal Waterway, up the Mississippi River to the Red River, and on to Alexandria, Louisiana. From Alexandria, the vehicles were convoyed to Fort Polk. The entire trip took 9 days and was well within the timetable for the JRTC exercise.

The operation enabled three FLARNG major commands to deploy, fight, and win in a realistic exercise at one of the Army's premier combat training centers. More importantly, the exercise proved that, in the event of hostilities, barge movement can be an expedient, cost-effective option for large-scale transport of tactical equipment to a mobilization station or area of operations.

**ALOG**

*Colonel Jimmy S. Martin is Director of Logistics for the Florida Army National Guard in St. Augustine. He has a bachelor's degree from Florida State University in Tallahassee and is a graduate of the Infantry Officer Basic and Advanced Courses and the Army Command and General Staff College.*



# Mortuary Affairs in the

Commanders at all levels must impart to their soldiers the importance the American people place on the recovery, respectful handling, and return of the remains of their loved ones.

**A**lthough the United States did not experience the casualties in Operation Desert Storm that some analysts had predicted, we must never forget that the potential for our Armed Forces to suffer mass fatalities in future conflicts still exists. It is during wartime that the importance of mortuary affairs operations comes to the forefront.

Exercise Prairie Warrior '95, conducted 6 through 14 May 1995 at Fort Lee, Virginia, and Fort Leavenworth, Kansas, raised a number of questions about mortuary affairs operations among tactical commanders and their staffs—questions such as—

- How are search and recovery teams assembled and trained?
- Are remains ever cremated?
- How are remains and personal effects safeguarded?
- How are contaminated remains treated?
- When are temporary interments authorized?

To answer to these questions, let me present a brief overview of the responsibilities of unit commanders in the theater in the event of casualties.

## Joint Oversight by the Army

The Army is the executive agent for the theater mortuary affairs support program, and its Joint Mortuary Affairs Office provides mortuary affairs oversight. The 54th Quartermaster Company at Fort Lee is the Army's only active-duty mortuary affairs com-

pany and normally serves as the corps collection company. It consists of five forward collection platoons, one main collection platoon, and one company headquarters platoon.

At the tactical level, unit commanders are responsible for the search, recovery, identification, and evacuation of soldiers killed in action. Although mortuary affairs specialists (military occupational specialty [MOS] 92M) may assist in these efforts, soldiers from the units of the deceased will be called upon to recover the remains of their fallen comrades and evacuate them to the mortuary affairs collection points.

## Search and Recovery

Unit commanders will organize search and recovery teams and ensure that they are properly trained. These teams are not MOS-specific but should include, if available, mortuary affairs and explosive ordnance disposal personnel. If nuclear, biological, or chemical (NBC) weapons have been used, the teams also should include NBC personnel.

Despite the importance of recovering remains, the safety of the search and recovery team is a primary concern. Recovery operations should be conducted in daylight only and when the tactical situation permits.

Mentally preparing troops to search for and recover the remains of their fellow soldiers is an integral part of the search and recovery mission. Soldiers must understand that they may be exposed to a grisly environment. Recovering remains from aircraft crashes, where body parts may be detached and scattered over a large area, can be an especially difficult sight to see and smell.

Despite such adversity, search and recovery teams must accurately record the exact locations of remains so more detailed searches can be made later. Global positioning devices and compasses should be used for this purpose.

Team members must be aware of the health concerns associated with dealing with the deceased. They should wear gloves and surgical masks at all times. And they should exercise caution when approaching remains to ensure that they are not booby-trapped and that all unexploded ordnance has been removed.

Search and recovery teams should take human remains pouches, plastic bags, zip-lock bags, and copies of DD Forms 565 (Statement of Recognition of the Deceased) and 567 (Record of Search and Recov-



# e Theater

by Major James C. Bates

ery) to the site. A search and recovery tag should be attached to all remains and portions of remains. Personal effects found on the bodies of the deceased should be placed in clear plastic bags and secured to the remains. Team members should not attempt to correlate body parts or unassociated personal effects with specific remains. Instead, any partial remains or personal items not easily correlated to a specific body should be placed in distinct bags and treated separately.

Draft Joint Publication 4-06, Operations (April 1994), states that it is Department of Defense policy that all service members' remains be returned to the continental United States. Cremation is not an option. Commanders at all levels must ensure that the remains of the deceased are treated with respect and dignity and must impart to their soldiers the importance of mortuary affairs operations. Receiving the actual remains and personal effects of their loved ones aids the grieving process of those who have lost service members. When families obtain the remains of soldiers previously listed as missing in action, the agony of not knowing what happened to them is resolved. The personal effects of their loved ones, such as rings, watches, letters written but not sent, and contents of wallets and purses can all have special meaning and deep sentiment to survivors. Next of kin are keenly interested in knowing how and where their loved ones died.

After remains are recovered, they should be placed soldier to soldier on the ground. Remains should never be stacked. Guards should be posted to prevent the theft of personal effects and equipment. Soldiers should maintain an attitude of reverence and respect for the dead. For example, remains should be covered at all times and should be transported in canopied vehicles. For the sake of unit morale, remains should be kept separate from troop areas and expeditiously moved to the mortuary affairs collection point. Remains are carried feet first at all times.

While awaiting transport, remains should be kept out of view and protected from the elements. Holding areas must be well ventilated, since human remains pouches are not gas proof. Remains should not be frozen; ideally, they should be stored at a temperature between 37 and 40 degrees Fahrenheit.

When use of chemical or biological weapons is suspected, NBC personnel should accompany a unit's search and recovery team. If chemical and biological agent monitors indicate contamination, the search and

recovery tags and personal effects bags must be annotated with the letters CHEM or BIO. Chemically or biologically contaminated remains and related personal effects and equipment are taken by unit personnel to the mortuary affairs decontamination collection point, where they are decontaminated using sodium hypochlorite solution. Chemical agent monitoring devices are used to ensure decontamination has been completed. Treated chemical or biological remains are then sent to the theater quality control station, where a final decontamination check is made.

All remains leave the theater from the theater mortuary evacuation point. They are sent in hermetically sealed transfer cases to one of two port-of-entry military mortuary facilities, which are located at Travis Air Force Base, California, and Dover Air Force Base, Delaware.

Temporary interments at unit level should be used only as a last resort for health, safety, sanitation, and morale reasons. All interments, except for commitment at sea, whether performed at the unit level or by mortuary affairs personnel, are considered temporary. Unit commanders must obtain permission from the theater commander to conduct temporary interment operations unless communication between the two is not possible. Temporary burial sites should be on high ground with good drainage. Individual trenches should be 3 1/2 feet deep, and remains should be placed side by side, never on top of each other.

Proper handling of the remains of deceased personnel sustains the morale of other soldiers and comforts surviving family members as they adjust to the ultimate sacrifice their loved ones have made. Our fallen comrades and their surviving family members deserve our very best efforts.

**ALOG**

*Major James C. Bates is the Task Force Eagle liaison officer to U.S. Army, Europe, in Hungary. He served previously as deputy G4 of the 1st Armored Division in Germany; Camp Doha's supply and service officer in Kuwait; and logistics plans officer for Army forces in Honduras.*

*The author thanks Tommy D. Bourlier, director of the Mortuary Affairs Center, Fort Lee, Virginia, for his assistance in preparing this article.*



# Support With Forward Logist

III Corps improved support for nondivisional units by using

**A** divisional forward support battalion (FSB) develops a habitual relationship with the maneuver brigade it supports. However, once the FSB is deployed, it also supports the unfamiliar needs of nondivisional units in the brigade sector—and those needs can quickly become substantial.

Security requirements, the terrain in the brigade sector, and the distances over which the units operate can further limit the FSB's ability to support a nondivisional force. The FSB is not structured to provide logistics support to a large density of corps units.

FM 54-30, Corps Support Groups, states that the forward corps support group (CSG) will augment or reinforce the FSB with materiel, personnel, and equipment to support the added demands on the FSB. But the corps' combat battalions and brigades can quickly overwhelm even an augmented FSB. Then, when the customer units leave that sector, the CSG's resources there will be underemployed.

Support to multiple nondivisional field artillery brigades posed exactly this kind of challenge in III Corps, which is headquartered at Fort Hood, Texas. But there is a solution: III Corps has found that the use of forward logistics elements (FLE's), either as direct support to or under the operational control of the field artillery brigades, gives the brigades the flexible and responsive support they need while relieving the FSB of its direct support burden.

## Supporting Nondivisional Brigades

Nondivisional combat brigades in the division area have only their basic loads and organizational support. They rely on the corps support command (COSCOM) for all direct support logistics. In the division rear area, the forward corps support battalion (CSB) provides that support. However, coordinating support rapidly becomes a challenge when the supported elements are both large and operate forward of the brigade support area.

III Corps usually deploys one artillery brigade with each committed division. Each brigade is organized with two multiple-launch rocket system (MLRS) battalions and one 155-millimeter self-propelled howitzer battalion. Although the battalions may operate in proximity, their missions typically require them to disperse across two or even all three brigade sectors.

These field artillery battalions possess three characteristics significant to logisticians: high-volume

firepower, high mobility, and the flexibility to operate across divisional boundaries. These characteristics, in turn, create three challenging support requirements: the battalions' daily replenishment of ammunition and supplies, responsive maintenance and supply support as they move, and continuous support when they cross brigade or division boundaries.

*Field artillery brigade daily replenishment.* When a field artillery brigade is in a defensive position, its typical ammunition resupply requirement is 1,943 tons of ammunition daily, or 97 M871 22.5-foot trailer loads. This represents 11 MLRS rocket pods or 225 155-millimeter rounds per weapon system. In the attack, the daily replenishment requirement decreases to 70 trailer loads, but daily fuel consumption increases to between 25,000 and 30,000 gallons.

Because of the distance between the CSB and the field artillery brigade, and the field artillery battalions' dispersion across brigade areas, the unit trains cannot readily draw supplies from the CSB. Because of the field artillery battalions' high mobility, unit distribution to the battalions' trains is not effective. The supplies must be throughput to a known and relatively stable location.

*Responsive support.* While the divisional FSB will provide all possible support, it is unable to cope with the added volume of ammunition needed by an artillery brigade; issuing that ammunition requires more personnel and the right equipment and terrain conditions. The authorized stockage list (ASL) of the FSB may support the maintenance requirements of the field artillery brigade's howitzer battalion, but it does not stock MLRS repair parts. Moreover, the field artillery brigade has six times more launchers than the division. The added fuel and water requirements of the brigade exceed the capabilities of the FSB. Because of the field artillery battalions' dispersion, the FSB's location may not be the best place to receive and distribute supplies for the brigade.

*Continuous support.* When the field artillery brigade crosses division boundaries—a movement of as little as 15 kilometers—the FSB cannot effectively support it. Over the past 3 years, division and corps battle command training program (BCTP) exercises have repeatedly demonstrated that the field artillery brigades change sectors rapidly, which limits the efforts of logisticians to provide proactive support. COSCOM logisticians must steadily develop new support arrangements to maintain continuity.



# ics Elements

g forward logistics elements.

by Captain Edward F. Cole, Jr.

## Solution: Forward Logistics Elements

III Corps, working with the 13th COSCOM and III Corps Artillery, has adopted the concept of FLE's to address this challenge. By using FLE's, III Corps has improved the integration, responsiveness, and continuity of logistics support to III Corps artillery brigades.

Doctrine briefly describes FLE's as the heart of a task force tailored to accompany corps forces in the covering force area or supporting a sister armed service or ally. The CSG or CSB assembles the FLE from available resources, using the personnel and equipment density lists from supported units to change the strength, composition, and location of the FLE. A CSB support operations staff officer accompanies the FLE to coordinate requirements with the CSB. He also coordinates terrain use, security, and support with the customer, the FSB, and the divisional brigade S3 and S4. The command relationship between the field artillery brigade and the FLE is usually direct support but may be operational control.

III Corps tactical standing operating procedure (TACSOP) outlines the minimum characteristics of a field artillery brigade FLE. FLE's provide ration, fuel, and ammunition supply support; a truck platoon and trailer transfer point; and system support teams for each field artillery battalion. Although not specified, an element from the COSCOM medical brigade could be attached to the FLE to provide essential medical support.

A tailored repair parts package meets most of the class IX (repair parts) needs of the field artillery brigade. To sustain maintenance support, the FLE should be organized around the maintenance company and the ASL that provides the brigade's home station support.

When a division also can provide support, the FLE can be very austere. When divisional support is not adequate, planners must consider giving the FLE the capabilities of a medical support element, a water supply point, a class II (clothing and individual equipment) and class IV (construction and barrier materials) push point, and a class IX supply support activity.

When minimally configured, the FLE provides the CSG a known location to which to push fuel and ammunition. The FLE positions itself in proximity to the field artillery brigade administrative-logistics operations center (ALOC) or conducts split operations

when unit dispersion requires it. The FLE obtains accurate and timely information from the brigade ALOC and coordinates any changes in requirements with the CSB. When the field artillery brigade moves across divisional brigade boundaries, the FLE follows and has supplies redirected along alternate supply routes. When the brigade moves across divisional boundaries, the support command reassigns the FLE elements to the CSB's and CSG's in the new area, thereby allowing the FLE to provide continuous support that responds to changing conditions.

Over the last 3 years, III Corps, 13th COSCOM, and III Corps Artillery have expended a great deal of effort during BCTP Warfighter exercises to resolve the challenge of supporting nondivisional field artillery brigades. By incorporating FLE support to the field artillery brigades in its TACSOP, III Corps has provided the CSG and the field artillery brigades a starting point from which to develop further maneuver and support plans. The 13th COSCOM-tailored FLE, tested during numerous BCTP exercises, has proven adequate for short Warfighter exercise campaigns. Making the FLE a more permanent organization to support each type of brigade will enhance training and support relationships.

III Corps uses FLE's to provide combat service support because they are responsive and effective support tools. As the Army implements the concepts of Force XXI, the FLE becomes a powerful tool that capitalizes on modular design and battlefield distribution to project responsive and continuous logistics support for nondivisional combat units. **ALOG**

*Captain Edward F. Cole, Jr., is an ordnance officer currently assigned to the Army Ordnance Center and School, Aberdeen Proving Ground, Maryland, as a Combined Logistics Officer Advanced Course small group instructor. He recently served as logistics plans officer and maintenance officer for III Corps Artillery, Fort Sill, Oklahoma. He is a graduate of Vanderbilt University in Nashville, Tennessee, and the Logistics Executive Development Course at the Army Logistics Management College, Fort Lee, Virginia. He is pursuing a master's degree in management from the Florida Institute of Technology, Melbourne, Florida.*



# ODCSLOG and CASCOM Get New Leaders



Lieutenant General John G. Coburn



Major General Thomas W. Robison



Major General Robert K. Guest

**L**ieutenant General John G. Coburn became the Army's 37th Deputy Chief of Staff for Logistics (DCSLOG) on 3 April. He was Deputy Commanding General (DCG), Army Materiel Command (AMC), Alexandria, Virginia, at the time of his appointment. He served as Chief of Ordnance and Commanding General (CG), Army Ordnance Center and School, Aberdeen Proving Ground, Maryland, before his assignment to AMC. General Coburn also has served as DCSLOG, U.S. Army, Europe, and Seventh Army, in Heidelberg, Germany.

When *Army Logistician* asked how he viewed his new position, General Coburn responded—

I see it as a great opportunity to serve our soldiers and our Army; an opportunity to make a difference; an opportunity to make the

positive changes in logistics that will be necessary to support our Army in the 21st century; an opportunity to continue and enhance the world-class logistics support that our soldiers need and deserve.

General Coburn is a distinguished military graduate of Eastern Michigan University's ROTC program. His military career has taken him, his wife Janice, and their three sons to numerous places throughout the world. He has more than 10 1/2 years in a variety of AMC assignments. In addition to DCG, he was Deputy Chief of Staff for Procurement at AMC headquarters from 1989 to 1991. Before that, he commanded the Materiel Readiness Support Activity, Lexington, Kentucky. Other assignments include procurement officer in the Procurement and Production Directorate, and Executive Officer for the Bat-

tlefield Systems Directorate in AMC headquarters; plant-depot commander of the Taiwan Materiel Agency, AMC, in Taiwan; and special weapons platoon leader, Savanna Army Depot, Illinois.

Upon returning from his tour in Taiwan, he continued his education by attending the Army Command and General Staff College, Fort Leavenworth, Kansas, and then the University of Kansas at Lawrence where he earned a master's degree in political science. Aside from his logistics expertise, General Coburn possesses a rather unique ability for a logistician: he is a licensed attorney. Having graduated from the University of Missouri-Kansas City with a Juris Doctor degree, he has been admitted to practice before the Supreme Court, State of Michigan; Supreme Court, State of Kentucky; the District of Columbia Court of Appeals; the U.S. Court of Military Appeals; and the



Supreme Court of the United States.

From April to July 1991, he was DCG, 22d Theater Army Area Command (TAACOM), in Saudi Arabia. He is also a former commander of the 2d Armored Division Support Command, Fort Hood, Texas, and he commanded a Contract Management Area in South Bend, Indiana.

Among the major staff assignments General Coburn has held are Assistant Chief of Staff, G4 (Logistics), 2d Armored Division; Senior Advisor for Training and Personnel, Army Engineer District-Saudi Arabia, in Riyadh; Executive Officer, Defense Contract Administration Service Region, New York, New York; and Assistant G3 (Operations), II Field Force, Vietnam.

The Army Combined Arms Support Command (CASCOM) and Fort Lee, Virginia, say farewell to **Major General Thomas W. Robison** and his wife, Kitty. General Robison will retire from active duty in ceremonies at Fort Lee on 11 July.

*Army Logistician* asked General Robison, of the many logistics improvement initiatives begun under his leadership and the implementation of velocity management, what he would most like to see result from those initiatives. General Robison said—

I would like to see the total Army Logistics System streamlined from the national level to the foxhole so we can improve support to our troops at substantially less cost in dollars and force structure. To achieve this, though, will take modernization and reengineering strategy, which would mean

considerable up-front investments.

During his distinguished 35-year career, the Monroe, Georgia, native held many key logistics positions, including that of Assistant Deputy Chief of Staff for Logistics; Director of Logistics (J4), U.S. Forces Command; DCG, 22d TAACOM, during Operation Desert Storm; and staff officer in the Directorate of Logistics, Military Assistance Command, Vietnam. General Robison has served as chairman of *Army Logistician's* Board of Directors since July 1994.

He was commissioned from ROTC upon graduation from the University of Georgia in Athens and earned a master's degree from Tulane University, New Orleans, Louisiana.

**Major General Robert K. Guest** succeeds General Robison as DCG for Combined Arms Support, TRADOC; and CG, CASCOM and Fort Lee. He was the Army Quartermaster General; DCG, Fort Lee; and Commander, Army Quartermaster Center and School, at the time of his appointment.

General Guest, who is also a Georgia native, born in Royston, began his military career in June 1963, when he graduated from North Georgia College in Dahlonega, where he received a bachelor's degree in business administration and was commissioned a second lieutenant of infantry from the ROTC. He also holds a master's degree in business administration from the University of Georgia in Athens.

He and his wife, Catharine, have four children—Nathan, Colin, Emily, and Jocelyn.

His military education includes the Infantry Officers' Basic Course, the Airborne Course, the Petroleum Officer Course, the Parachute Riggers' Course, the Quartermaster Officers' Advanced Course, the Army Command and General Staff College, and the Naval War College.

General Guest has held a variety of significant command and staff positions, culminating in his new assignment. Other assignments include: Commander, 1st Supply and Transportation Battalion, 1st Infantry Division, Fort Riley, Kansas; Commander, 101st Airborne Division (Air Assault) Division Support Command, Fort Campbell, Kentucky; and DCG, 21st TAACOM, in Germany, the unit with which he deployed to Southwest Asia with the Third United States Army for Operation Desert Shield. It was later attached to XVIIIth Airborne Corps during Operation Desert Storm. He has also commanded 3d Corps Support Command, Wiesbaden, Germany; and served as DCSLOG, U.S. Army, Europe, and Seventh Army.

General Guest served two tours in Vietnam and a tour in Laos as the chief of procurement for the United States mission. He also has served as Assistant Chief of Staff, G4, 1st Infantry Division, Fort Riley, Kansas; Chief, Supply and Maintenance Policy Division, OD-CSLOG, Washington, D.C.; and Director of Logistics Management at the Army War College, Carlisle Barracks, Pennsylvania.

General Guest joins General Coburn, General Johnnie E. Wilson, and the Honorable Robert M. (Mike) Walker to comprise *Army Logistician's* Board of Directors and he will serve as Board chairman. **ALOG**



# Operation Quick Lift

by Corenthia V. Libby



## Military Traffic Management Command units in Germany to United Nations personnel in Croatia.

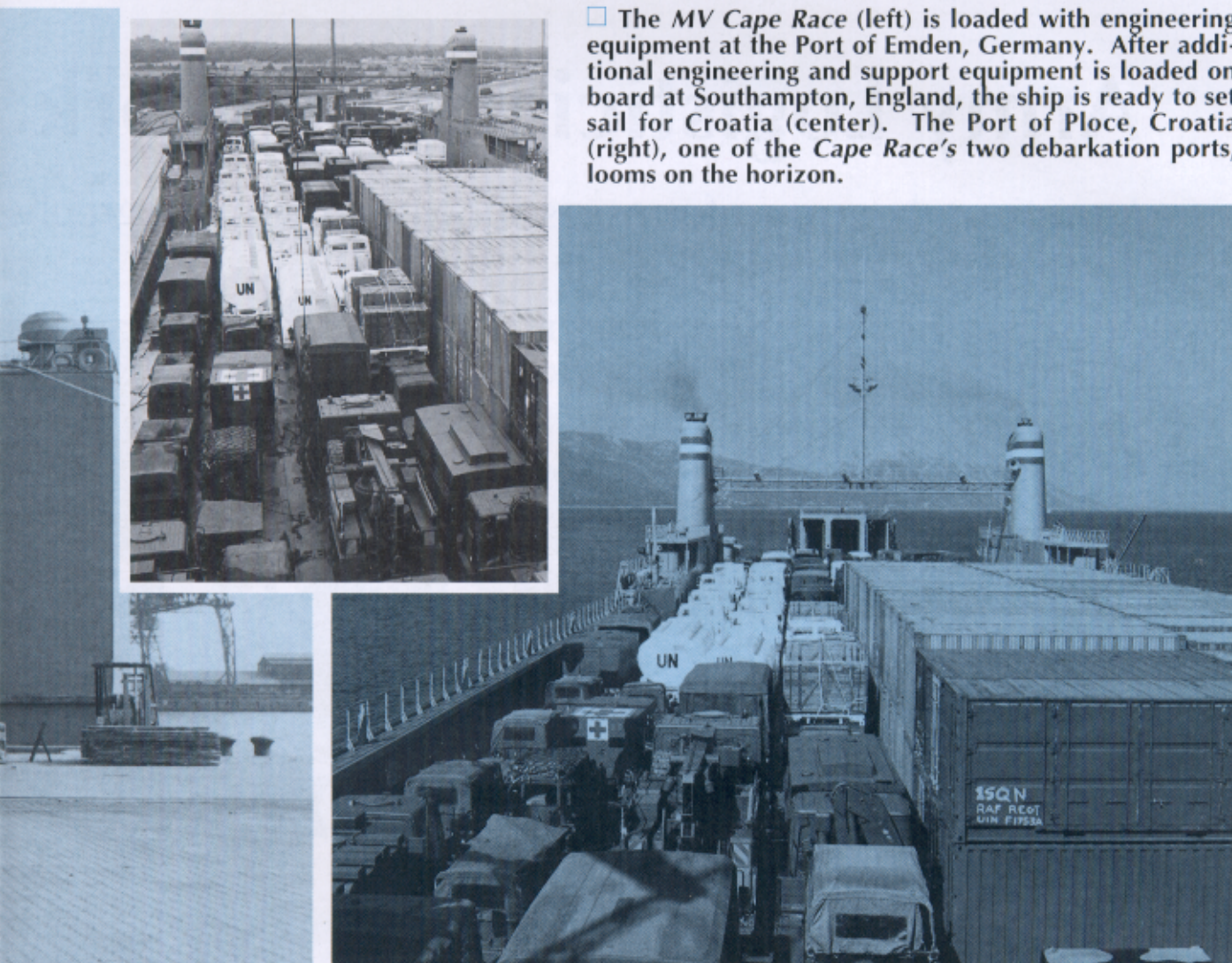
**M**ilitary Traffic Management Command (MTMC) Europe personnel joined forces with several European allies to support the United Nations mission in the former Republic of Yugoslavia. In the first movement under Operation Quick Lift, more than 600 pieces of rolling stock, 83 20-foot containers, and 1,703 pieces of breakbulk cargo were transported to Croatia aboard a Military Sealift Command vessel, the *MV Cape Race*, to support British and Dutch troops.

Personnel from MTMC Europe's 1325th Medium Port Command in Bremerhaven, Germany, provided vessel stow plans for British engineering equipment arriving at the port in Emden, Germany, by convoy

from British bases in Germany. After the equipment was loaded, the roll-on-roll-off ship sailed for Marchwood Military Port in Southampton, England, in July 1995, where personnel assigned to MTMC Europe's 1320th Medium Port Command in Felixstowe, England, loaded additional equipment for shipment to Croatia.

The two designated ports of debarkation in Croatia were the Port of Split and the Port of Ploče. When the *Cape Race* sailed for Croatia, a documentation team provided by MTMC Europe was on board with the equipment. Team members installed computers, printers, and modems in the radio operator's room on board ship to accommodate the worldwide port





□ The *MV Cape Race* (left) is loaded with engineering equipment at the Port of Emden, Germany. After additional engineering and support equipment is loaded on board at Southampton, England, the ship is ready to set sail for Croatia (center). The Port of Ploce, Croatia (right), one of the *Cape Race*'s two debarkation ports, looms on the horizon.

## any and England joined forces to provide sealift support

system (WPS) carry-away computer. While en route, the documentation team prepared an advance manifest for the loaded equipment using the portable carry-away computer system. They used an international maritime satellite terminal to communicate with the host WPS in Felixstowe.

"It was the first time a WPS office was set up on board a ship," said Lieutenant Colonel Peter H. Passchier, deputy commander, MTMC Europe. "The system worked well on board and at sea. Operation Quick Lift provided us an excellent opportunity to lay the groundwork on how U.S. and British armies can interact for joint operations in the future."

"The logistics support [provided by MTMC

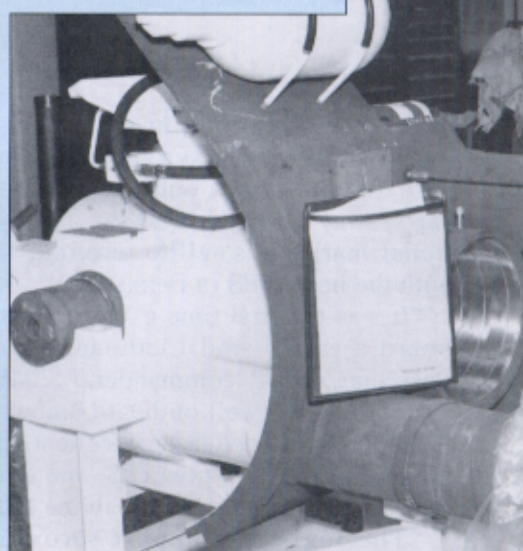
Europe] helped move essential United Nations reaction force personnel and equipment rapidly, and [the operation] was nearly flawlessly executed in just over a month," said General John M. Shalikashvili, chairman of the Joint Chiefs of Staff. "Operation Quick Lift was a clear indication of our leadership and resolve to support the United Nations mission..." **ALOG**

*Corenthia V. Libby is a public affairs specialist at Headquarters, Military Traffic Management Command, in Falls Church, Virginia. She has a bachelor's degree from George Mason University in Fairfax, Virginia, and attended the Army Advanced Public Affairs Course.*



# Army Logisticians At Work

Logistics takes many forms, as shown in the photographs





on these two pages.



*Clockwise from upper left:*

□ During peacekeeping operations in Haiti, a soldier passes a bag of food to a Haitian child.

□ Defense Distribution Depot Tobyhanna, Pennsylvania (DDTP), personnel prepare one of 23 specially designed air pallets bound for Dover Air Force Base, Delaware, for shipment to Germany to support the troops in Bosnia. After coordination with Dover Air Force Base and Defense Distribution Depot Susquehanna, Pennsylvania (DDSP), the packaging and transportation divisions at DDTP built and loaded the pallets on site instead of shipping supplies to DDSP for packaging. Transportation and handling costs were reduced by \$2,450, and movement of supplies was expedited.

□ This gun mount, marked with serial number 1 on its identification plate, is probably the first of its kind manufactured in 1957. Gun mount experts at Rock Island Arsenal, Illinois, believe it was manufactured as a prototype M127 gun mount and later was converted to an M178 mount and used on a M109 self-propelled howitzer. Rock Island is converting M178 gun mounts to M182's that will support more powerful cannons on M109A5 improved howitzers. The serial number 1 gun mount is shown here as it is being converted to an M182. It will undergo live fire testing at Yuma Proving Ground, Arizona.

□ Soldiers from the 411th Engineer Battalion (Heavy) take a break after pouring the floor for a semiprefabricated building at Camp Carroll in Korea. The reserve unit was first to use the Army's new MIC120 automatic building machine in a forward theater of operations. The training mission—construction of buildings used for equipment storage, housing, or hangars—supports wartime requirements for reception, staging, and integration. The KSPAN shown here is a semicircular, covered, ribbed structure that can be constructed in 3 days with a 15-man crew.



## Simplify Tool Replacement

I am new to supply operations in the Wisconsin Army National Guard, but I believe that the process for replacing expendable and durable tools in maintenance activities could be made simpler and less time-consuming. These are the steps a maintenance Guard unit goes through now to replace a tool—

- Receive an unserviceable item and give the hand-receipt holder (HRH) a DA Form 3161, Request for Issue or Turn-in.

- Check the item listing in the Armylog CD-ROM.

- Make or adjust a shortage annex.

- Make a DA Form 2765-1, Request for Issue or Turn-in, of item and log it in DA Form 2064, Document Register for Supply Actions.

- Make a DA Form 2765, Request for Issue or Turn-in, for replacement of the item and log it in the DA Form 2064 document register.

- Make a delivery receipt for the item to go to the United States Property and Fiscal Officer.

- Post a status sheet to the 2064 document register.

- Receive the replacement item, sign the DD Form 1348's, complete the 2064 document register, and return the item receipts.

- Issue the item to the HRH on a DA Form 3161 prepared as a hand-receipt change document.

- Update or complete the shortage annex.

This process is far too labor intensive. An alternative process could be—

- Turn in unserviceable items to organizational maintenance shops on a simple, two-part form.

- Servicing sales representatives (such as Snap-On™ or Matco™) would replace warranted tools.

- Replace a tool not under warranty by purchasing it, using the General Services Administration Impac card.

- Replace a tool that was lost or damaged through negligence as prescribed in AR 735-5, Policies and Procedures for Property Accountability, by purchasing it on the Impac card, but include a voucher from the unit commander.

With the downsizing of the Army National Guard, time-saving moves are going to be essential.

**SSG Kenneth E. Abrahamson**  
Portage, Wisconsin

## Objective Supply Capability

In the March-April 1996 *Army Logistician* article, "Objective Supply Capability" (OSC), a sentence appears in the fourth paragraph of page 37 that reads, "With OSC, a customer can submit a requisition directly to the depot in as little as 1 day." The Army Missile Command questions the validity of that sentence.

In the present Army logistics environment, if an item is not available for issue at the retail level, a requisition is routed to the wholesale item manager. The wholesale item manager then directs shipment from a designated depot via a materiel release order, as the article previously states on page 36.

If the statement refers to local purchase of a nonstocked item, the word "depot" is not appropriate. Request you clarify the statement with regard to the specific requisitioning capability of the OSC.

**MG James M. Link**  
Redstone Arsenal, Alabama

*Sir, your description in paragraph two of your letter on how the system currently works is 100 percent correct. In posing your question to one of the authors, he immediately responded that "depot" should have read, "national inventory control point." We apologize for any confusion this might have caused.—Ed.*

## Civil Affairs Is a Peacekeeping Multiplier

The article, "Logisticians Execute Peace Operations," by Lieutenant Colonel Calvin Pilgrim, in the January-February issue was an excellent article that addressed the increased role of the U.S. military in peacekeeping operations. Colonel Pilgrim is correct in stating that the unique skills and configuration of logistics organizations are well tailored to meet the challenges of peacekeeping operations. He has, however, overlooked a valuable force multiplier—civil affairs (CA) units.

Military operations throughout the operational continuum are more effective when they integrate CA assets into planning and conducting operations. CA units also are uniquely organized and have personnel who possess very specialized skills.

These skills range from cultural knowledge of the area of operations and linguistic capability to a basic knowledge of the area's government. CA soldiers are trained specifically to assure that local authorities have an understanding of U.S. military objectives. Additionally, CA soldiers are trained to identify local assets and materials that the U.S. military can use. This reduces the burden on U.S. military assets and integrates local efforts into U.S. military objectives.

The trend toward military operations lasting only short periods of time increases the need to rapidly integrate CA expertise into planning and conducting military operations. Long-term success depends upon the effectiveness and stability of the local government. CA integration into the plan ensures that long-term success.

The combined skills and unique capabilities of logistics and CA units provide an effective combined



force, enabling the U.S. military to meet its peacekeeping challenges.

### **CPT John F. Cuddy** **Operation Joint Endeavor**

#### **Need Back Issues**

For the past 3 years, I have been assigned to a job in the North Atlantic Treaty Organization (NATO). During that time, I did not see *one, single* issue of *Army Logistician*. The "withdrawal" symptoms were terrible.

Now that I am back into mainstream logistics as chief of the maintenance branch, G4, I Corps, I need to catch up on information I missed during my NATO assignment. In going through our professional library, I found no back issues of *Army Logistician*. Perhaps this was because they didn't have a copy to file.

Your great publication contains a wealth of logistics information that I and members of the maintenance branch need. For example, I picked up a copy of your September-October 1995 issue and found Mark Malham's super article, "Turbine Engine Diagnostics." It contains just the kind of information we need.

How can we get back-issue copies of *Army Logistician*? Can you help us?

### **LTC Howard Helton** **Fort Lewis, Washington**

*After such ego-building words about the value of Army Logistician, how could we not help? We retain a limited number of back-issue copies for just such needs as you outlined in your letter. By now, the available copies should be in your hands. Thanks for asking; and more so, thanks for using the information the issues contain. Providing that information is why we exist.—Ed.*

#### **This Logistician 'Hears' You**

Later this year, the Federal Government will recognize contributions made by individuals in the work force who have disabilities. I am a logistician who fits that category. I want to share information about a technology

that enables me and others like me to fully contribute to our Nation's defense.

I lost my hearing 24 years ago, and communications are essential to work effectively in system acquisitions management, as I do at the Army Aviation and Troop Command in St. Louis. Thanks to the Telecommunications Accessibility Enhancement Act of 1988 and to Federal and state relay services, I can talk by telephone with others pretty much as I did 25 years ago. My speech is still understandable, even after being deaf for so many years.

Deaf and speech-impaired individuals can "talk" to others using a text telephone (TT or TTY) and a relay service. When Missouri opened its relay in 1991, I began to call coworkers within my agency, but I was reluctant to make long-distance calls to hearing coworkers elsewhere until I learned that the Federal Information Relay Service (FIRS) will place official business calls without charge to my agency. I've used it ever since to communicate with project managers and logisticians in many locations.

One day a relay operator asked me, "Type, voice, or V-C-O?" I asked, "What does V-C-O mean?" She said, "Voice carry over." That meant I could talk to the other person, and the operator would type what that person said. "WOW, this will sure speed up my calls," I thought.

If you need FIRS or know someone in your agency or activity who does, information is available by calling (voice/TTY) 1-800-877-0996 for a brochure. To place a call using FIRS, (voice/TTY) dial 1-800-877-8339. Yes, you can communicate with a manager with a hearing or speech impairment on the phone almost as easily as you can with other managers.

### **Marvin D. Hunewell** **St. Louis, Missouri**

*Communicating with Mr. Hunewell by phone is "no problem" using FIRS, as I did in discussing his letter with him.—Ed.*

#### **Finds ALOG a Help**

I read your publication from cover to cover. I have a collection of

articles dealing with operations in the brigade support area (BSA) and refer to them especially when updating standing operating procedures or before battle command training program (BCTP) exercises. This is to satisfy knowing current changes in the way business is conducted in the BSA, since I have served as a brigade S4 since 1988.

I greatly appreciate reading ALOG Emphasis and have called the contacts frequently named in your articles to obtain information and expand the section's current library I maintain. The most recent success was obtaining the operation logistics plan, which we will test for BCTP in August 1996 as part of the 28th Infantry Division (Mechanized), Pennsylvania Army National Guard.

Please continue to provide your quality product to the field, and I extend best wishes for success with future issues.

### **MAJ Guy E. Gahres** **Harrisburg, Pennsylvania**

Log Notes is your column—a way for you to share your thoughts and ideas on a variety of logistics subjects. You may want to comment on articles we have published, take issue with something we've published or with something happening in the logistics arena, or just share a creative, innovative idea on a better way to do things. Your "note to the editor" is welcomed and offers valuable feedback. Your log note will be edited only to meet style and space constraints. All log notes must be signed and include a return address; but, if you request, your name will not be published. Mail log notes to EDITOR ARMY LOGISTICIAN, ALMC, 2401 QUARTERS RD, FT LEE VA 23801-1705; send them by FAX to DSN 687-6401 or (804) 734-6401; or e-mail them to [tspeight@almc-lee.army.mil](mailto:tspeight@almc-lee.army.mil).