Quartermaster

PROFESSIONAL BULLETIN

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LOGISTICS WARRIORS

Headquarters, Department of the Army

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25th Quartermaster Company soldiers move supplies across a stream in New Georgia, August 1943.

Autumn 1993 Theme: Quartermaster Support To Light/Dismounted Forces

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Logistics Warriors

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From The Quartermaster General

Major General Robert K. Guest

Quartermaster Support to Light/Dismounted Forces

A sudden telephone call and the lightfighters are moving on a rapid deployment. The Logistics Warrior is right with them! Providing fuel, food and repair parts for the high-speed lightfighter on the modern battlefields and training areas are great tests of a logistician's skills and abilities. The logistics leader who can anticipate and predict the diverse needs of the light soldier can meet the critical leadership requirements of the light/dismounted forces. As we reshape into a Force Projection Army, the need for quick response inherent in light forces will be of vital importance. Successfully employing the five logistics imperatives of Anticipation, Integration, Continuity, Responsiveness and Improvision will continue to be the prime learning objective for all professional logisticians supporting light/dismounted forces.

Terrific Support

In this edition of the *Quartermaster Professional Bulletin*, we are saluting the terrific support Logistics Warriors have given to light/dismounted forces in the past and in the present. Providing these fast-movers with logistical support has always been a challenge and will continue to be as we reshape the Army of the future. From articles on **Supporting an Assault Helicopter Task Force to Airdrop to Light Units and Resupplying the Force by Air**, Logistics Warriors throughout the Army have kept the light divisions moving!

Reserve Component

Reserve Component happenings are highlighted in our professional bulletin as a standard entry. This edition also contains interesting articles covering a wide variety of topics to include **Major General Robert M. Littlejohn - Chief Quartermaster in the ETO, QMOBC - A Civilian Among Us, Haitian Relief *Operation Safe Harbor*,** and a timely piece on **Mortuary Affairs Support in Somalia.** We need more articles from our noncommissioned officers and junior soldiers and will take them in draft form.

Exceptional Logisticians

As your 43d Quartermaster General, I would like to say that it's an honor serving the Corps. I look forward to meeting and working with our great Quartermaster Logistics Warriors of all ranks, Active, Reserve Component, supply career (program) civilians and our retired community. I would like to thank Brigadier General John J. Cusick for his outstanding service as the 42d Quartermaster General of the U.S. Army. General Cusick is an exceptional logistician and served our Corps with distinction across the U.S. Army. The Quartermaster Corps is grateful for his service. I know he will do great things for our Army as the Director of Supply and Maintenance, Office of the Deputy Chief of Staff for Logistics (ODCSLOG).

Once again, it's an honor serving with you.

Major General Robert K. Guest, 43d U.S. Army Quartermaster General, has held a wide variety of command and key staff positions. His previous assignments include Deputy Chief of Staff, Logistics, U.S. Army Europe and Seventh Army; Commander, 3d Corps Support Command, Wiesbaden, Germany; Director of Logistics Management, U.S. Army War College, Carlisle Barracks; Commander, Division Support Command, 101st Airborne Division (Air Assault); Chief, Supply and Maintenance Policy Division, Office of the Deputy Chief of Staff for Logistics; Commander, 1st Supply and Transportation, 1st Infantry Division.

Fewer Soldiers, Higher Standards

Command Sergeant Major Milton B. Hazzard

Downsizing, Restructuring, End Strength, The Delta, Force Projection, Battle Focus, and Multifunctional.

These old words have been given a new focus and importance in the vocabulary of the soldier. It seems that wherever the strategy of how to achieve modernization is addressed, one of these words or phrases will be used to help determine the "How To." Modernization is heavily influenced by events taking place in the world order. Therefore, one can conclude that the status of world order has an effect on the military vocabulary, training concepts, unit structures and personnel matters.

The process of modernization can impact on Logistics Warriors in all ranks. The end strength for the U.S. Army has the potential of being reduced below the currently published number. Yet, the demand for rapid and quality support has not reflected very much of a decrease. Logistics Warriors must increase their individual skills and be able to perform several military occupational specialty (MOS)-related tasks with a high level of expertise. Logistics Warriors must be multifunctional and battle focused.

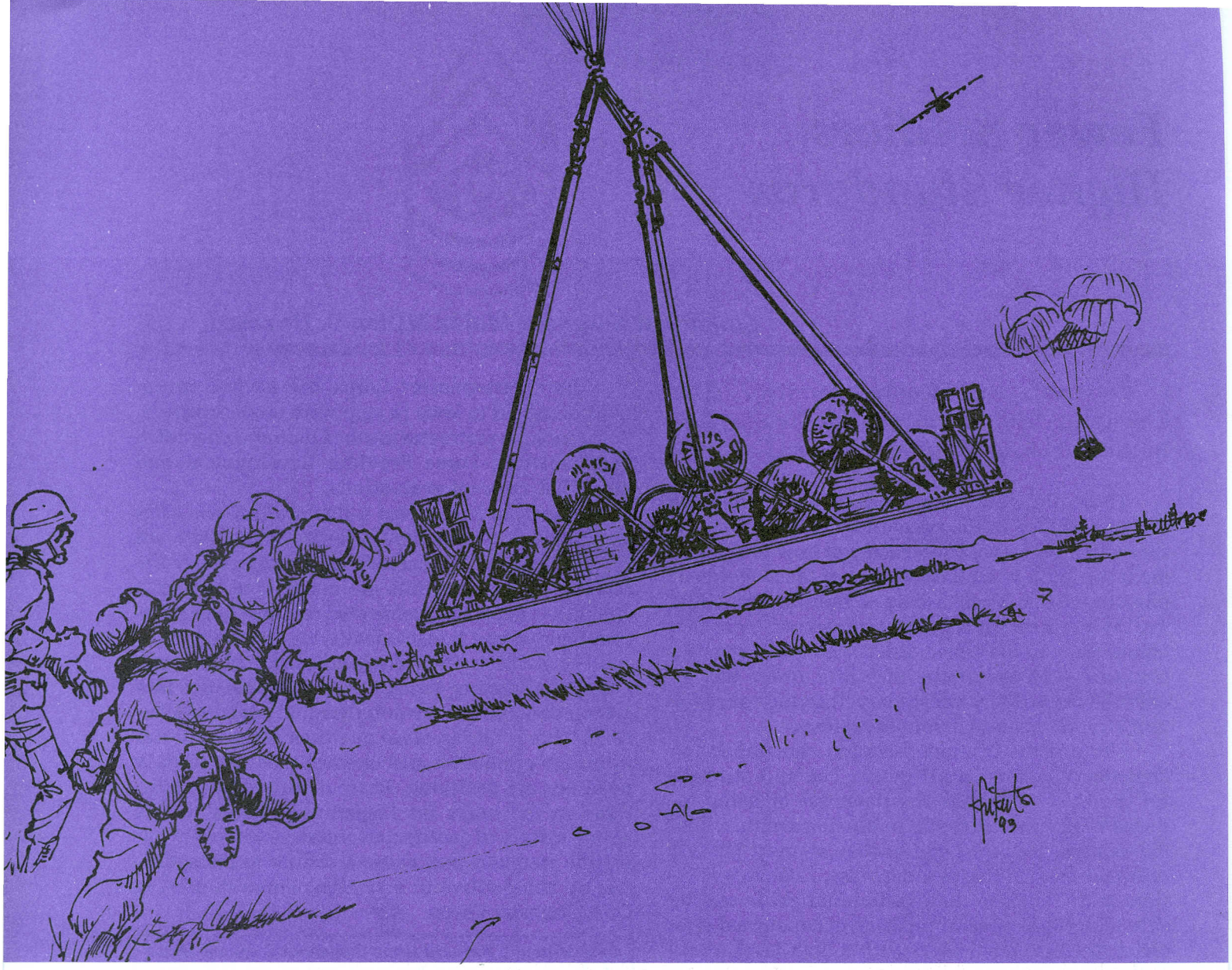
The Quartermaster Corps has several initiatives designed to keep in step with modernization. Some include restructuring the Quartermaster MOS configuration, Force Provider development and Battle Lab concept evaluations.

Following Korea was a demobilization. After Vietnam was a reduction in force. Today the word is "downsizing." Whatever the terminology, the result is the same. Units are inactivated. The end strength is constantly subjected to lower authorization figures, and budgets lose a lot of weight.

My point is this: modernization, in the scenario challenging today's Army, translates into greater demands on fewer individual Logistics Warriors. This is taking place at a time when opportunities for promotion and upward mobility in duty positions are declining. There continue to be positions in the ranks for Logistics Warriors with a strong history of quality performance. Simply meeting the standard may cause a soldier to be insufficiently competitive in a smaller, Force Projection Quartermaster Corps.

CSM Milton B. Hazzard is the Command Sergeant Major of the Quartermaster Regiment and of the U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

Army modernization means greater demands on fewer Logistics Warriors.



Just What the Light Forces Ordered: Aerial Resupply of Forward Area Refueling Equipment

Airdrop to Light Units

CPT Jordan S. Chroman

As the lightfighters leave their helicopters and prepare to continue their mission, their logisticians head toward a small, secluded drop zone. Waiting for them are several Container Delivery System (CDS) bundles with much-needed supplies for a successful combat operation. The supplies were actually on the drop zone before combat forces arrived.

Light forces rely on stealth, surprise, and their ability to strike hard and quickly. Rapid movement through difficult terrain is often their keystone of combat effectiveness. Movement by road marches is the norm, and the fully integrated use of combat systems is critical to success. Light logisticians must anticipate needs and move as quickly as the combat forces to properly supply them.

Vehicles are few, and helicopters often transport soldiers into remote areas. Light forces are normally deployed in the first echelons of an assault to secure areas for follow-on forces. How can logisticians properly supply their combat forces in this environment? Aerial delivery is an ideal way to resupply light forces in a remote area.

Aerial delivery well suits light forces because they do not use the huge amounts of supplies that heavy forces do. They do not have massive petroleum requirements. Most of their weapon systems do not require large-sized munitions, and they need much smaller quan-

tities of spare parts for maintenance.

The aerial delivery process can deliver practically anything to soldiers on the ground. Most light units have either CDS bundles or aerial delivery platform loads at their disposal.

Light forces most commonly use the CDS bundle for aerial resupply. With the CDS bundle, supplies are configured to fit into an A-22 canvas cargo bag. A cargo parachute is then attached. The entire bundle, including the accompanying load, must weigh 501 to 2,200 pounds. The bundle must not exceed 83 inches in height. CDS is an incredibly versatile method of resupply. Almost any item that will fit into an A-22 cargo bag will work. Items ranging from ammunition to medical supplies can be dropped.

CDS bundles can be assembled almost anywhere in practically any environment. The only necessity is a forklift to load the fully rigged bundles onto a truck or aircraft. Parachute Riggers must oversee both the rigging of the CDS bundle and the Joint Airdrop Inspection (a quality control check) before the load goes into the aircraft. However, the rigging procedures are relatively simple. With quality rigger supervision, a non-rigger detail can rapidly assemble CDS bundles. Using the Center Line Vertical Restraint (CVR) method for dropping CDS, 16 bundles at a time can be dropped from a C-130 aircraft, and 40 bundles can be dropped from a C-141 aircraft.

Light forces may need supplies that require rigging on an aerial delivery platform. Basic components of these types of loads are the Type II or Type V aluminum platform, paperboard honeycomb (a shock-absorbing material configured to fit the load being dropped), the load itself, the parachute extraction system, the cargo parachutes, and the extraction parachutes. These loads can weigh up to 42,000 pounds. (Tests are underway with new systems that will allow loads to weigh up to 60,000 pounds.) Items such as mass quantities of supplies, high mobility multipurpose wheeled vehicles (HMMWVs), and tanks are dropped with this method of resupply. Four rigged HMMWVs, for example, can be dropped from a C-141 aircraft. A C-130 can be used to drop other rigged loads such as two forward area refueling point systems (complete).

Platform Loads

Platform loads are more ponderous and difficult to rig. They require the use of cranes and large sized forklifts. However, with the correct equipment, rigger personnel with a non-rigger detail of workers can quickly rig platform loads in austere sites. Riggers must conduct the Joint Airdrop Inspection for platform loads as well.

Resupplying an Infantry battalion operating in a remote area is one of the many missions that logisticians could select as a prime candidate for aerial delivery. With a minimal-sized drop zone, the entire battalion could be resupplied with approximately 25 CDS bundles. These bundles would contain a three-day resupply of Meals, Ready to Eat (MREs), potable water, ammunition for all battalion weapons including anti-armor weapons, sundries and medical supplies.

Most light units either have organic rigger detachments or have them attached. The 7th Infantry Division (Light) has five riggers. They are assigned to the U.S. Army Garrison (USAG), Fort Ord, CA, but are attached to the Headquarters and Headquarters Company (HHC), Division Support Command (DISCOM) 7th Infantry Division (Light). Authorized are one sergeant first class, one sergeant, and three specialists. They maintain at least 50 to 100 A-22 containers for CDS at their location at all times. Also, they have 100 to 200 prerigged CDS bundles containing a variety of classes of supply at Tooele Army Depot, Utah, as contingency stockage. These contingency bundles are inspected and maintained for serviceability and combat readiness. The riggers also pack and maintain personnel parachutes for the Division Scouts.

During a Joint Readiness Training Center Deployment last October, the rigger detachment dropped over 180 bundles with a variety of supplies to 7th Infantry Division (Light) soldiers, enabling them to fight and win on the light battlefield.

The Aerial Delivery Equipment Repair Section (Rigger) is assigned to the USAG, Fort Lewis, WA, although these soldiers work directly for the Director of Logistics at Fort Lewis. A warrant officer commands the 24-soldier detachment. They are responsible for rigger support to nine West Coast states: Washington, Oregon, California, Montana, Idaho, Utah, North Dakota, South Dakota and Arizona. Their main support goes to the 2d Ranger Battalion, Fort Lewis, the 14th Military Intelligence Scouts, Fort Lewis, and the 162d Infantry Division (Light), Oregon National Guard (all light units). The riggers drop approximately 20 CDS bundles and about four rubber boats for amphibious operations monthly to the 2d Ranger Battalion. They also pack between 1,500 and 2,000 personnel parachutes for the Rangers. Like the riggers at Fort Ord, they maintain over 300 prerigged CDS bundles with a variety of supply classes at Tooele Army Depot, as contingency stockage for the Ranger battalion and other units. They normally drop about 10, Type V platform loads and assorted CDS bundles to the 14th Military Intelligence Scouts monthly. During a field training exercise last July, the riggers were scheduled to drop four HMMWVs, three mass supply loads of assorted commodi-

ties, and 20 CDS bundles to the 162d Infantry Division (Light), Oregon National Guard. The 25th Infantry Division (Light) uses their riggers in much the same way, relying heavily on CDS to resupply the combat forces.

Aerial delivery missions can be tailored to fit almost any tactical plan. The level of aerial resupply is hindered only by the capability and amount of airdrop supplies maintained by the rigger detachment, the size of the drop zone, and the number of aerial delivery platforms or CDS bundles dropped.

As a logistician in a light unit or while working with light units (such as a heavy-light rotation at the National Training Center), think about aerial delivery when you need to get supplies to soldiers on the ground and normal types of transportation are inaccessible or when speed and stealth are imperative. It just may be the answer you were looking for.

CPT Jordan S. Chroman is a graduate of the University of California, Berkeley, with a degree in mass communications. He is also a graduate of Quartermaster Officer Basic and Advanced Courses, Airborne and Jumpmaster Schools, and the Aerial Delivery Materiel Officers Course. He was previously assigned to Hamilton Army Air Field, California, where he served as Team Member/Executive Officer, 3d Battalion, 12th Special Forces Group (A), U.S. Army Reserve. In addition to his Reserve duty, he served as Aerial Delivery Platoon Leader, Company Executive Officer, Assistant Battalion S3, and Commander (Forward) E Company, 407th Supply and Transportation Battalion, 82d Airborne Division, Fort Bragg, North Carolina.

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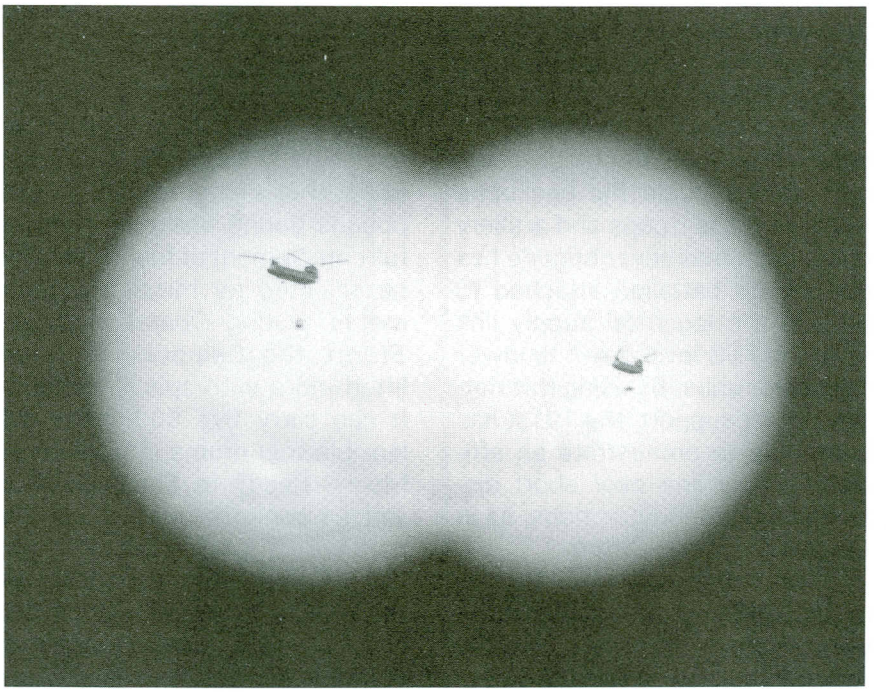
Resupplying the Force by Air

CPT Teresa B. Wolfgang

As a new second lieutenant assigned to a forward support company at Fort Campbell, KY, home of the 101st Airborne Division (Air Assault), I did not know what to expect. Light divisions, to include the 82d and the 101st were rarely discussed during the officer basic course. Now I found myself in a specialized division with its own unique capabilities. The division receives its primary support by air. Whether by fixed wing or rotary wing, this method of resupply has proven an efficient and expedient way of resupplying the force.



Slingloading equipment to forward areas

Sustainment

Resupply is a sustainment function that includes movement of equipment, supplies and personnel. With speed and flexibility, airlift is the main mode for moving routine, critical and time-sensitive items. Throughout the years, Army logisticians have engineered and improved ways to provide logistical support as far forward as possible in the best manner. Quartermaster soldiers know that if customers do not receive their logistical support in a timely manner, missions will fail. Using the concept of air mobility, commanders can move troops, supplies and equipment faster to forward-deployed locations down to the lowest level.

CH-47 (Chinook) preparing to internal load concertina wire

Chinook Battalion

Using helicopters as combat service support (CSS) assets is one way Army logisticians have provided logistical support over extended distances. The 101st uses helicopters to provide tactical mobility and flexibility during offensive and defensive operations. The 101st is the only division to employ a battalion of CH-47s (Chinooks). The Chinook is the backbone of the logistical support system within the division. The Chinook allows the main support battalion (MSB) and forward support battalions (FSBs) to reduce the turnaround time for all supplies and forward movement of personnel replacements. Chinooks are usually found at corps

level, moving logistical supplies from corps to division level.

The 101st uses its CH-47s with its UH-60s (Blackhawks) differently than other divisions. The Chinook battalion is task-organized to provide one CH-47 company to each of the three maneuver brigades. These aircraft move supplies from the MSB to the FSB for logistical support. For tactical support, they provide the backbone to move mass troops and artillery raids. Each maneuver brigade has one UH-60 battalion attached to provide the logistical supply link from the FSB level down to lower maneuver units. By using this network of air support, the 101st has been able to orchestrate an efficient supply line over short distances and deep operations, as in *Operation Desert Storm.*

The CH-47 and UH-60 elements assigned to each maneuver brigade comprise an Air Assault Task Force (AATF). In addition to these elements, an AH-64 (Apache) battalion and a slice of the air cavalry provide the firepower and cover for the brigade. The AATF daily pushes supplies, material and ammunition forward by air. Each of the supply companies within the FSBs have the ability to rig and receive sling load equipment.

Chinook Lifts

The Chinook is primarily used to resupply both the MSB and FSBs. It can externally lift 18,000 pounds during peacetime with a full complement of fuel, which can be adjusted for mission requirements. During *Operation Desert Storm*, the Chinooks routinely lifted more with special waivers. It can carry five 500-gallon collapsible fuel drums, 15 pallets of Meals, Ready to Eat (MREs) or various configurations of combat configured loads (CCLs). Internally, through the Helicopter Internal Cargo Handling (HICH) system, 463L cargo pallets or wooden pallets can easily be onloaded or offloaded. Both methods increase favoring aerial resupply over ground transport because of minimal offloading time.

In addition to transporting routine supplies, personnel and mail, the CH-47 can be used to rapidly move heavy outsized cargo, replacement vehicles, critical parts, and cumbersome items such as concertina wire with a maximum of speed, safety and minimal assets. When a maneuver brigade deploys, one to three days of supplies accompany the brigade to ensure an initial self sustainment. As weather and the enemy situation permit, the maneuver brigade is resupplied on a routine basis to keep supplies at a one- to three-day level. Resupply is by using one or two of the maneuver brigade's CH-47s as logistics aircraft or "log birds." When providing CSS to air assault operations, logistical planners must coordinate deeply with the aviation liaison officer (LNO). The air assault must be well-planned, organized and executed to support a rapid tempo in highly mobile and dispersed operations. Contingency plans are also developed in case emergency

UH-60 (Blackhawk) picking up bottled water in Saudi Arabia

aerial or ground resupply is needed on a last-minute basis.

When using the Chinook as a "log bird," an aviator is assigned to the maneuver brigade as an aviation LNO. This soldier must not only be knowledgeable in aircraft operations and limitations, but knowledgeable about the support needs of all units within the division and their respective standing operating procedures (SOPs). The LNO is usually a senior warrant officer (CW2 or CW3). This LNO is a key asset to successful operations and should be treated as a team member. A daily schedule is proposed 12 hours in advance, staffed through the division support command (DISCOM) S3, and approved to ensure maximum usage. The S3, LNO and DISCOM movement control officer (MCO) coordinate any missions from the MSB to FSB. If weather prohibits, the LNO advises the DISCOM MCO two hours before mission time to allow a transfer to ground transportation for continuity of flow.

Air Assault School

The key course that 101st soldiers attend is Air Assault School. It teaches individual skills needed for soldiers to successfully perform sling load operations. The school teaches individual soldiers air assault techniques such as hand and arm signals, internal and external load capabilities of all Army helicopters, rigging and derigging of equipment, pickup and landing zone operations, and rappelling from a UH-60A Blackhawk. All sling load crews must be familiar with procedures outlined in FM 55-450-1 (Army Helicopter External Load Operations) and the Air Assault Handbook. Skills and mission training are developed through intensive unit programs. Proficiency in these skills must be maintained.

Air mobility has numerous advantages. Helicopters can operate from confined or unimproved areas. They can ascend or descend at relatively steep angles. Cargo can be transported internally or externally and delivered to areas out of reach to ground transportation. With speed and high maneuverability, helicopters can fly safely using terrain for cover and concealment. With night vision goggles (NVG), aviators can make limited visibility landings or lift-offs with a minimum of light. When delivering supplies, helicopters have multiple avenues of approach to a supply site, where ground convoys are limited to only one or two routes.

Limitations

Helicopters also have limitations that may prevent them from flying. The high fuel consumption rate may affect distance and allowable cargo load (ACL). Helicopters may reduce the amount of fuel in their tanks to carry a heavier load. However, this reduces the range and on-station time of the aircraft. Weather is also a big factor in planning. Hail, thunderstorms and winds (30 knots or more) will limit the use of air support. The number of air crews required and aviator fatigue require detailed planning to ensure all air crews receive adequate rest. High demand for the CH-47s during both tactical and logistical operations requires much coordination. This is a team effort supported by the brigade and the LNO. The load-carrying capability of helicopters decreases with an increased altitude, humidity and temperature. The LNO will educate the logistician on the limitations of the aircraft for the area of operations. The LNO is a teammate. By working with and not against the LNO, mission success and safety will multiply.

CSS assets are playing greater roles in today's Army. In this so-called era of peace, the Army is not only training for war but also learning how to support operations other than war, such as *Operation Restore Hope* and Hurricane Andrew. In these important operations, sustaining the force by aerial resupply could mean the difference between mission success and failure. With the Cold War behind us and the Army's downsizing, logisticians are facing new challenges in supporting soldiers with less equipment and manpower. All logisticians must understand the concept and capabilities of aerial resupply. It is a proven method of delivering supplies, equipment and personnel down to user level. If air assets are available, use them.

CPT Teresa B. Wolfgang has a degree in sociology from Methodist College. She is also a graduate of the Quartermaster Officer Basic and Advanced Courses, Airborne, Air Assault, and Rigger Schools, Master Fitness Course, Strategic Deployability School, Petroleum and Water Officers Course, and Support Operations Course Phase II. Her previous assignments include Platoon Leader, B/426 Supply and Transportation Battalion; G4 Plans and Operations Officer; Division Class I Accountable Officer; and Division Class III Accountable Officer, 101st Airborne Division (Air Assault), Fort Campbell, Kentucky. She is currently assigned to the 1st USA Support Sinai, Egypt.

Supporting an Assault Helicopter Task Force

CPT Gregory R. McClinton

Before my assignment as the battalion S4 of an assault helicopter battalion, I was unsure of this type of unit's organization and operation. I had previously supported an assault helicopter task force (TF) as the executive officer of a forward support and service company. My relationship with the TF required me only to learn supply requirements. Two years as the S4 gave me an in-depth understanding of the unique support requirements of the assault helicopter battalion.

The TF's mission is to rapidly deploy worldwide and conduct operations to support a maneuver brigade TF. The TF's makeup may include medium lift, assault, medical evacuation (MEDEVAC) and command and control aircraft. The TF also has internal and external support elements that create many challenges for the logistician. Challenges include where to locate the TF's aviation assets and support personnel, how to anticipate the high stockage levels of bulk Class III (petroleum, oils and lubricants), and where to place the supply locations and aviation intermediate level maintenance support locations. After rotations to the National Training Center and Joint Readiness Training Center and missions during *Operation Desert Shield/Storm*, flexibility and adaptability stand out as the keys to successfully supporting this type of TF.

The TF Class I (rations), II (general supplies), packaged III, and IV (construction and barrier materiel) requirements differ slightly from the maneuver brigade and its slice elements. Some unique requirements include contingency rations and the need for ChemLights. Many units require each aircraft or vehicle to maintain at least one case of contingency rations. Aviation logistics planners must ensure that support units know this requirement. Army regulatory accounting practices do not allow units to hold rations on a contingency basis during training. Therefore, planners must tailor support to fit this highly justifiable unit requirement.

When compared to the closely related attack helicopter TF, the assault TF has a less than significant Class V (ammunition) requirement. Weapons systems

within the TF are usually limited to small arms, M60 machine guns and a few .50-caliber machine guns. The key for the logistician is to be aware of the large number of M60D machine guns in the TF. This quantity can reach as high as 90 and thus make the requirement for 7.62 ammunition very high.

Critical Bulk III

Bulk Class III support is critically important to both the TF and its support element. Forecasting requirements, by using the projected flight time for the TF, gives the support element a good basis for tailoring its support package. Planners must also consider the storage equipment and capability of the TF. The TF can deploy with a storage capacity ranging from 40,000 to 50,000 gallons. This capacity often exceeds the capacity of the supporting unit.

Class IX (repair parts) (air) stands out as the final supply challenge to both the TF and the support element. The unique size and weight characteristics of parts such as engines and blades require large transportation assets for both aviation unit level maintenance and aviation intermediate maintenance (AVIM) elements. The TF aviation unit maintenance (AVUM) is capable and often deploys with its total Class IX (air) prescribed load list. The AVUM support company within the TF must support all the different aircraft within the TF. This creates a problem because the company has no direct relationship with the slice units in garrison. The division support command (DISCOM) AVIM support element must also be tailored to mission requirements. Tailoring the total package ensures support to all types of aircraft, while requiring as small a transportation requirement as possible.

A typical TF configuration consists of the parent assault helicopter battalion, a CH-47 company or slice, a UH-1 section, MEDEVAC section, command and control aircraft, and various other supporting slice elements. The headquarters and headquarters company and AVUM-level aircraft maintenance company within the parent battalion provide the primary organic support to the TF. The Class III platoon within the battalion is responsible for all organic refuel of the TF, including both air and ground. This platoon, consisting of 11 heavy expanded mobility tactical trucks (HEMMTs) and 9 forward area refueling equipment (FARE) systems, is included in all mission planning and execution to provide timely and flexible refuel forward of the TF assembly area. The TF AVUM company gives the TF the ability to fix aircraft as far forward as possible. The company repairs aircraft in the TF assembly area and conducts aircraft recovery by designating and pushing Downed Aircraft Recovery Teams (DARTs) forward during missions or as needed.

Quick Movement

Once deployed into an area of operations, the TF can go quickly to the supply source. The TF can transport all of its internal supply requirements, including bulk fuel. As noted earlier, the parent battalion of the TF is authorized nine FARE systems. This gives the TF a 500-gallon collapsible fuel drum storage capacity of approximately 13,500 gallons. The fuel drums can then be transported by sling load operations during the initial occupation of an area of operations. The TF ability to transport its own supplies from the support area of operations does have limitations. Daytime resupply operations, including those in low intensity conflict (LIC), present a severe challenge. Weather also imposes restrictions on the TF's ability to transport internal supplies. Logistics planners within the TF and support elements must ensure backup plans to provide this transportation when these restrictions are imposed.

Bulk Storage

The TF places heavy emphasis on its bulk storage capacity provided by HEMMT fuelers after occupying its assembly area. The assault helicopter battalion may be authorized as many as 11 HEMMT fuelers. After designating 1 HEMMT fueler for aircraft defuel operations, the TF may have a HEMMT storage capacity of approximately 23,500 gallons. The TF storage capacity may increase to 32,900 gallons or higher when augmented with fuel assets from its slice elements. This creates the problem of where the TF will get bulk Class III support. The DISCOM is faced with the questions of placing an extremely large volume of bulk Class III in the brigade support area (BSA), deploying portions of the Class III platoon forward or requesting support from corps. Regardless of where the support will come from, the DISCOM is faced with the question of location.

TF Placement

Though doctrinally based in the BSA vicinity, the TF's large size often limits its placement there. This creates extended lines of communication (LOC) for the TF. The support to sustain the force can be provided in many ways. Environment largely determines the way to provide support. Low threat/secure areas allow the TF to drive to the support location when a ground LOC is available. Tanker-to-HEMMT transfer can also be used between the TF and division/corps. Army sling load, Air Force airdrop, and helicopters hauling collapsible tanks or "Bladder Bird" delivery systems may be used in an nonsecured environment or where a ground LOC does not exist. Host nation support of bulk Class III is often the most practical means of support. The TF typically uses its internal assets to provide forward area refuel support. Refuel requirements within the BSA are generally for

emergency, MEDEVAC or small ship missions (usually one or two). A storage capacity of 2,000 gallons usually can provide this support.

An issue closely related to the bulk Class III location decision is the AVIM support package. The need to place the TF near its support elements and the maneuver brigade often creates the need to deploy at least a portion of the AVIM package forward. This ensures aircraft are fixed as far forward as possible and provides the vital link between the AVUM and AVIM (which may be collocated). Under this concept, however, planners face the problem of providing space, security and transportation of support equipment into the vicinity of the BSA. Though small mobile packages may be deployed forward, most of the AVIM package is best left in the initial staging base (ISB) when reasonably near the TF. This concept has proven workable at rotations to the Joint Readiness Training Center. AVIM support is best provided upon establishment of the division support area (DSA), as demonstrated during *Operation Desert Storm*. Establishing the DSA, however, does not eliminate the requirement to send some AVIM support assets forward.

The final problem associated with the TFs' unique location requirement is communications. Though the TF command and control can establish communications with the maneuver brigade, the TF S4 often cannot communicate with a maneuver brigade counterpart. A method commonly practiced in the past involved information passed forward to the maneuver brigade S4, to the Forward Area Support Coordination Officer (FASCO) or forward support battalion (FSB) support operations, and back to the division materiel management center (DMMC). When the TF is located near the DSA instead of the BSA, the requirement of having the TF report through the maneuver brigade S4 is best eliminated. The TF S4 then routes reports and requests directly to the DMMC as a separate customer. This eliminates the extended LOC for the TF S4.

Supporting the assault helicopter TF is a challenge for the logistics planner within the TF as well as the support element. By working closely together, the mission can be accomplished. Planning and an understanding of the unit supported are vitally important. Though decisions should be based on doctrine, the ability to be both flexible and adaptable will play a significant factor in the successful support of the TF.

CPT Gregory R. McClinton has a bachelor of arts degree in business administration from Towson State University. He is also a graduate of Quartermaster Officer Basic and Advanced Courses, Airborne and Air Assault Schools, and the Petroleum and Water Officers Course. His previous assignments include Company Executive Officer, B/426th Forward Support and Service Company; and Battalion S4, 9/101st Aviation Regiment and Task Force, 101st Airborne Division (Air Assault), Fort Campbell, Kentucky, and Saudi Arabia. He is currently assigned to the Petroleum and Water Department, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

1993 Philip A. Connelly Awards for Excellence in Army Food Service

An awards ceremony honored Active Army, U.S. Army Reserve and Army National Guard top food service managers and cooks last August in Maui, Hawaii. The Department of the Army and the International Food Service Executives Association cosponsors the awards annually. Following is a list of the 1993 winner and runner-up units:

Active Army Small Dining Facility Category

WINNERS	RUNNER-UPS
17th Area Support Group Camp Zama, Japan (USARPAC)	Military District of Washington 3d U.S. Infantry (The Old Guard) Fort Myer, VA (TRADOC)

Active Army Large Dining Facility Category

177th Fwd Spt Bn 177th Armored Brigade Fort Irwin, CA (FORSCOM)	Special Troop Battalion Consolidated Dining Facility Wiesbaden, Germany (USAREUR)

Active Army Field Category

HHC, 2d Bn, 72d Armd Regt, 1st Bde, 2d ID Camp Casey, Korea (8th USA)	A Co, 307th Sig Bn 1st Sig Bde Camp Carroll, Korea (USAISC)

National Guard Category

Co A, 1092d Eng Bn Gassaway, WV (REGION III)	12th Pers Svc Co Oahu, HI (REGION VI)

USAR Category

HHC, 412th Eng Cmd Vicksburg, MS (SOUTHEAST)	82d Field Hospital Omaha, NE (SOUTHEAST)

Disaster Relief: A New Combat Service Support METL Task

CPT Scott F. Kelley

Hurricane Iniki, the strongest hurricane to hit the Hawaiian Islands this century, slammed into the island of Kauai on 11 Sep 92. In the Hawaiian language Iniki means piercing wind, and no name was more appropriate. At its height, Iniki rated a Category 5 hurricane, packing winds up to 180 miles per hour. The destruction to the southwest coast of Oahu and the Island of Kauai will take years to rebuild.

When the Hawaiian Islands were hit by Hurricane Iniki, I was serving as the executive officer for the 40th Supply and Service (S&S) Company, 124th Transportation Battalion, 45th Corps Support Group, Schofield Barracks, HI. My job during the subsequent relief effort was to supervise the deployment of packages of support and field services from our company to Kauai. I was also to act as rear detachment commander to ensure the continued support of our daily customers.

Unexpected

As I helped to deploy our first section of support and later began dealing with the problems of the unexpected requirements, I realized we had problems with our deployment plans. We had not previously deployed to assist with disaster relief and were encountering some serious preparation, staffing and movement problems. As shown by the U.S. response to manmade and natural disasters such as the situation of the Kurdish refugees (*Operation Provide Comfort*), Hurricane Andrew and the riots in Los Angeles, combat service support (CSS) units have taken on a new mission: a mission we have not yet mastered. To ensure our ability to accomplish this new mission, CSS branches must plan and practice disaster relief operations to add to their mission-essential task list (METL).

Alert

Only hours after Iniki bounced off Oahu, the 40th S&S Company was alerted to prepare to provide relief to parts of the islands of Oahu and Kauai. The company became part of a massive task force composed of units from the 45th Corps Support Group and the 25th Infantry Division (Light). Their mission developed from simple water purification into a complex general support mission to provide Class III (petroleum, oils and lubricants (POL)) supply, water purification, laundry and bath services and arrival airfield control group (AACG) and departure airfield control group (DACG) operations.

The 40th S&S Company is a direct support supply and service company. Platoons in the 40th at the time of the hurricane were Class II (general supplies), packaged III, IV (construction and barrier materiel), VII (major end items), supply platoon, a water and POL platoon, a laundry and bath platoon (the 383d and 237th Quartermaster Detachments), the 87th Rigger Detachment and an organic maintenance platoon. At the time, water treatment specialists (77W10s), laundry and bath specialists (57E10s and 20s) as well as light-wheel vehicle mechanics (63B10s) were listed as critical shortages.

Kauai, the fourth largest island in the Hawaiian Island chain, has a population of about 40,000. Lying roughly 100 miles to the west-north-west of Oahu, Kauai is accessible only by sea and air. Because Kauai was essentially an undeveloped theater for the first few days of operations, communicating between Oahu and Kauai was extremely difficult. This made mission requirement assessment very sketchy. As a result, the 40th was deployed a piece at a time. We had practiced alerts and rollouts in the past. All deployed officers and noncommissioned officers (NCOs) understood their duties in the event the entire company deployed. We were also experienced with deploying small slices of support to operations such as *Cobra Gold* in Thailand and *Team Spirit* in Korea.

Deploy in Stages

The problem was this: we did not expect to deploy in stages. If we had known we would eventually deploy over 75 percent of the company and be providing all the company's services, we would have planned around the shortage of personnel. Since we did not know, we front-loaded the personnel to help with the water and bath mission and ended up short for the laundry and bulk refuel mission.

The concept of the operation developed into the following:

1 Laundry and Bath site	Barking Sands - support bulk of Infantry in the field and local populace.
1 Bath site	Kepa'a - support Infantry and local populace.
1 Bath site	Kaholo - support Infantry and local populace.
1 Power generation site	Support a water transfer station.

Center of operations	Lihue - Provide laundry and bath water purification and Class III resupply to the bulk of the task force from the 25th Infantry Division (Light) and the 45th Support Group.
AACG/DACG	Lihue Airport.

First Package

The first support package to deploy was the entire water section and part of the bath section. The critical shortage of 77W10s was a problem. The solution was to take volunteers from other platoons throughout the company. At this point, we did not expect any further taskings. Approximately 12 hours after the first package deployed, we were tasked for laundry, Class III and more bath support. Most of the 57E10s and 57E20s went with the first package of support, leaving behind no one who knew how to deploy the laundry section.

Deploying the rest of the laundry and bath platoon became a serious issue. All 57Es in the company and battalion headquarters were tasked to assist in the deployment of the laundry and bath platoon. Once the equipment was deployed, the laundry and bath personnel already on Kauai would be reunited with their equipment to fulfill the mission. At this point the company commander, the company headquarters and a section from the platoon deployed. Personnel left on Oahu were the company executive officer, a skeleton crew of company headquarters personnel and the majority of the supply and maintenance platoons. The supply platoon was to continue normal operations while maintenance worked nearly around the clock to repair and prepare other equipment for deployment. Taskings continued to come from battalion for more equipment to go. Here is another problem we encountered: the unit was short of personnel but not equipment. Group and battalion headquarters were tasking for equipment, but there were not many personnel in the rear who could operate the equipment or prepare it for deployment.

At full operation, the company operated one laundry and bath site, two separate bath sites, one power generation site, assisted with the AACG and DACG operations and operated a general support site providing water purification and distribution, POL distribution, and laundry and bath services.

The greatest challenge faced by the 40th was not the actual support operation. Our greatest challenge and the most important lesson learned from Iniki is that though we could deploy the company as a whole, we were unpracticed in deploying in stages. Our solution was to add *Prepare For and Deploy in Support of Relief Operations* to our company METL. With the changing politics of today and the lack of a readily identifiable threat, we as Logistics Warriors must expect to deploy to support relief operations. The days of supporting solely the warfighters are over. The Quartermaster commander who recognizes this and who trains a unit for operations other than war will be the successful leader in today's Army. Most importantly, however, that leader's unit will be better prepared to support a wide variety of logistics missions successfully.

CPT Scott F. Kelley was a student in the Quartermaster Officer Advanced Course when he wrote this article. He is also a graduate of Infantry Officer Basic Course and was previously assigned to the 25th Infantry Division (Light), where he served as Aide-de-Camp to the Commanding General and most recently as Executive Officer, 40th Supply and Service Company, 124th Transportation Battalion.

New Water Division Numbers

The Water Training Division moved to Building 11523 at the the U.S. Army Quartermaster Center and School, Fort Lee, VA, and also changed telephone numbers. The new phone numbers are Commercial: 734-2993/2862/2980 and DSN: 687-2993/2862/2980. The division receives 70 to 80 percent of its calls from U.S. Army Reserve and National Guard units on training and technical questions.

A Rigger's Role in Operation Provide Comfort

LT Glenn M. Kallgren

Spring had finally arrived in early April 1991 in Karlsruhe, Germany. *Operation Desert Storm* was over, and soldiers deployed from the community began to return to celebrations. As a Class IX (repair parts) accountable officer in a maintenance company, I was proud of my platoon's long hours of work providing the supply support to ready and deploy many of our customer units. I was due to rotate from my position as a platoon leader to become an executive officer. Then, I found myself on an adventure in one of the largest airdrop missions in history.

On 10 Apr 91, still in Karlsruhe, my company commander called me into his office, told me to pack my bags and get on an airplane to Incirlik Air Base (AB) in Adana, Turkey. My battalion had virtually no idea of the deploying unit's mission, only that I needed to be there yesterday. My preparation was probably the biggest overkill in the history of the Army. I received six shots, started taking malaria pills, and packed every piece of equipment I could lay my hands on. I signed my Class IX account over to a fellow lieutenant, signed for my weapon, and headed for Rhein-Main AB for transport to Turkey. I boarded a C-141. Five uneventful hours later I landed in Turkey.

I was met at the airport and taken to the rigger shed for a quick tour of operations. I was amazed - here was a complete warehouse dedicated to the production of container delivery systems (CDSs). It had been almost two years since I had graduated from rigger school, so I barely remembered what CDS stood for, let alone how to build one. I met my new commander the next morning and learned my responsibilities: motor pool, supply, administration, and when all of that was done: rigging CDS. I performed my duties, caught the dreaded affliction "Turkey Trots," lost 25 pounds in 20 days, and finally managed to get some sleep at the end of it all.

The 5th Quartermaster Detachment, on 6 Apr 91, was ordered to assemble necessary airdrop equipment, gather personnel, and deploy to Turkey. Six hours later, after building 463L pallets, gathering all assigned personnel, and planning loads for two C-130s, the unit was ready to go. The unit soon was wheels up in two C-130s from Ramstein AB. After clearing customs, the unit set up a rigging facility; received Meals, Ready to Eat (MREs) and bottled water for rigging; and coordinated for forklifts.

We were ready to start rigging by 7 Apr. In a few hours, the Air Force dropped the first relief supplies to Kurdish refugees to kick off *Operation Provide Comfort*. The 5th Quartermaster Detachment established a 24-hour CDS production line to meet the critical need of relief supplies for the Kurds. After seven days of this, the unit moved to a larger facility and installed a roller conveyor assembly line which increased the unit's output to five times its doctrinal capability. The 5th Quartermaster Detachment was reinforced by many Army and Marine units.

All three methods of delivering CDS were used during the operation: low velocity (LV), high velocity (HV), and free drop. The following is a brief discussion of the advantages and disadvantages of each method.

LV was about 22 percent of the total airdrop. LV's major advantage is the ability to drop fragile items with a high probability of commodity survival. Items such as baby food jars and bottled water were dropped using this method and G- 12 parachutes. The disadvantages in using LV include increases in bundle height and decreases of allowable commodity weight because of parachute attachment. Other disadvantages included increased unit costs and increased production time for packing and rigging requirements.

By far the most common delivery method, HV constituted about 76 percent of the total airdrop. HV's advantages include lower cost per bundle, shorter packing time for ringslot parachutes, and increased weight capabilities over LV. This method was used for bulk commodities that were rugged but destructible, specifically, most foodstuffs. The

'My battalion had virtually no idea of the deploying unit's mission, only that I needed to be there yesterday. My preparation was probably the biggest overkill in the history of the Army.'

drawbacks include no ability to drop fragile items and restrictions on height.

Rarely employed, free drop contributed about two percent of the total airdrop. Free drop was a method of last resort when parachutes and related materials were not available. The advantages of free drop include minimized costs and increased production rate with fewer packing and rigging requirements. Free drop's major drawback was a low probability of destructible commodities, such as food, surviving in a usable form.

This mission entailed many areas of an airdrop mission which are not covered doctrinally. The many different problem areas that need to be addressed doctrinally for future operations include the following:

- The combined task force (CTF) constantly changed staff members, especially the J4 and J5, causing the loss of expertise and differing reporting and requisitioning procedures due to personal preferences.
- Air Force loadmasters were inconsistent about what constitutes an acceptable CDS bundle. Also, changes in supplies for rigging led to countless re-rigging of CDS bundles.
- Little or no command structure above the 5th Quartermaster Detachment caused confusion and duplication of taskings, reports and other missions.
- A "push" supply system resulted in no control, accountability or visibility of equipment. Items identified as critically short were in country but could not be easily located.

Despite these problems, the mission was a success. The 5th Quartermaster Detachment and the other rigger units had rigged over 7,600 CDS bundles and packed over 6,700 parachutes. After 25 days the airdrop portion ceased, except for 2 days, as other assets took over the mission to feed the Kurdish refugees. But our support to *Operation Provide Comfort* did not end with the airdrop.

On 1 May 91, we were ordered to move forward to Silopi, Turkey, to continue the relief effort. While under the operational control of the 66th Maintenance Battalion, we assumed the following three missions:

- Operate the heliport, to include internally loading aircraft.
- Control the passenger terminal.
- Augment external loading of helicopters.

All three missions are non-doctrinal for a rigger detachment, but all missions were performed successfully and without incident. We returned to Germany at the end of May, mission accomplished.

Of everything I learned in *Operation Provide Comfort,* flexibility remains the most important. We constantly changed our way of doing business (for example, when the Kurds required a special menu), performed different missions and invented new airdrop methods such as baby food jars. This impressed on me the need to keep an open mind, constantly modify operating procedures, and to adjust to change rapidly and without complaint.

LT Glenn M. Kallgren has a bachelor of science degree in industrial engineering from the University of Arizona. He is also a graduate of Quartermaster Officer Basic and Advanced Courses, Airborne and Rigger Schools, and the Materiel Supply Officers Course. His previous assignments include Class IX Platoon Leader/Accountable Officer, 517th Maintenance Company; and Executive Officer, 5th Quartermaster Detachment, Germany. He is currently assigned to the 13th Corps Support Battalion, Fort Benning, Georgia.

19th Annual U.S. Army Culinary Arts Competition

Preparations for the 19th Annual U.S. Army Culinary Arts competition have begun with regional team competitions and administrative updating. The static competition will be 9-10 Mar 94 at Fort Lee, VA. Teams will arrive February 26. Look for the application packets this autumn. Return completed applications to Culinary Skills Training Division, Army Center of Excellence, Subsistence by 21 Jan 94. For an application packet, first check with the installation food advisor. Then call Mr. Posser at DSN 687-3186/3281. The ACES fax number is (804) 732-7549.

Haitian Relief Operation Safe Harbor

LT Rebecca Dobbin

Operation Safe Harbor at Guantanamo Bay (GTMO) Naval Base in Cuba was one of the first operations other than war conducted by U.S. forces overseas from Autumn to Summer 1992. Almost 1,800 U.S. Army, Navy, Air force, Marine and Coast Guard members provided humanitarian assistance for about 12,000 Haitian migrants on U.S. ships offshore and at "Operation GTMO" camps set up on the 45-square-mile U.S. base separated from the rest of Cuba by a heavily fortified fence. The camps became a holding area and a last stop for Haitians on their way to the U.S. or back to Haiti.

For one Quartermaster, coming to the island of Cuba was like entering an underdeveloped theater of operations. In the following account, LT Rebecca Dobbin profiles support by the laundry and bath soldiers from the 289th General Supply Company at Fort Hood, TX.

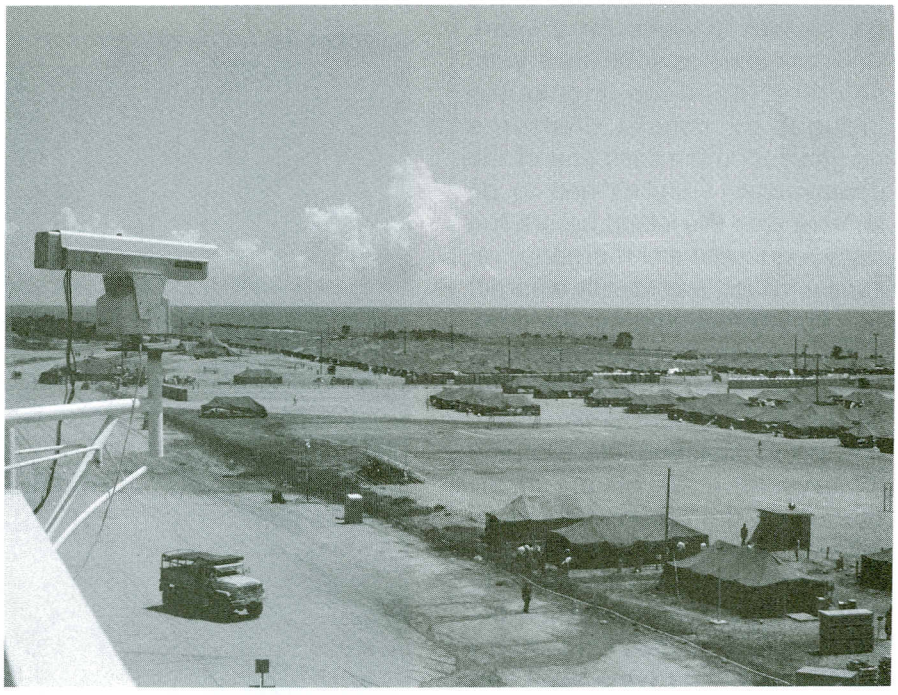
My platoon of 32 soldiers consisted of 30 laundry and bath specialists, 1 lightweight textile repair person, and 1 mechanic. Our mission included laundry for the Harvest Eagle Camp of 2,800 Joint Task Force (JTF) soldiers and a general support (GS) supply warehouse that supported approximately 12,000 Haitian migrants. The four laundry units at the work site, two U.S. Air Force and two marine deadlined when we arrived. Our initial priority was to get at least one washer, extractor and dryer functioning as soon as possible. The base was not able to handle the increase in laundry requirements because the JTF increased the base's laundry demand by one-third. One soldier worked nonstop with whomever and whatever we could find on the base until one unit was running and we began receiving laundry bundles.

Unlike a regular post, there was no unit down the street to ask for assistance or parts. Those resources were not available. The only laundry service on base was a civilian laundry. At one point while the USS Monongahela docked, the ship's chief came to our site, attempting to use the technical manuals from the digital shipboard machines on our manual units.

We faced problems in locating repair parts for the machines in a purely Navy supply system environment. Personnel who were familiar enough with the machines to assist us with repairs were scarce and had to be found in roundabout ways. More than once we waited at the docks for a service ship to arrive so we could catch the chief before everyone came ashore.

We operated a supply warehouse that received, stored and issued supplies to seven Haitian camps. We were set up as a GS-level Army warehouse operating under a Navy depot-level system. The seven camps with GS support were then broken down into about four sections each. Each camp's supply personnel served those sections. The items stocked varied from assorted baby foods, diapers and toiletry items, such as toothpaste, soap, shampoo and razors, to canvas shoes, laundry detergent, sheets, blankets and condoms. The last items were often blown up by Haitian children and used as balloons.

On a weekly schedule, every Monday and Wednesday we issued canvas shoes for 400 to 600 migrants on their way to Miami, FL. The "sneakers" were all white, brown, black or blue. Haitians definitely preferred white. There was

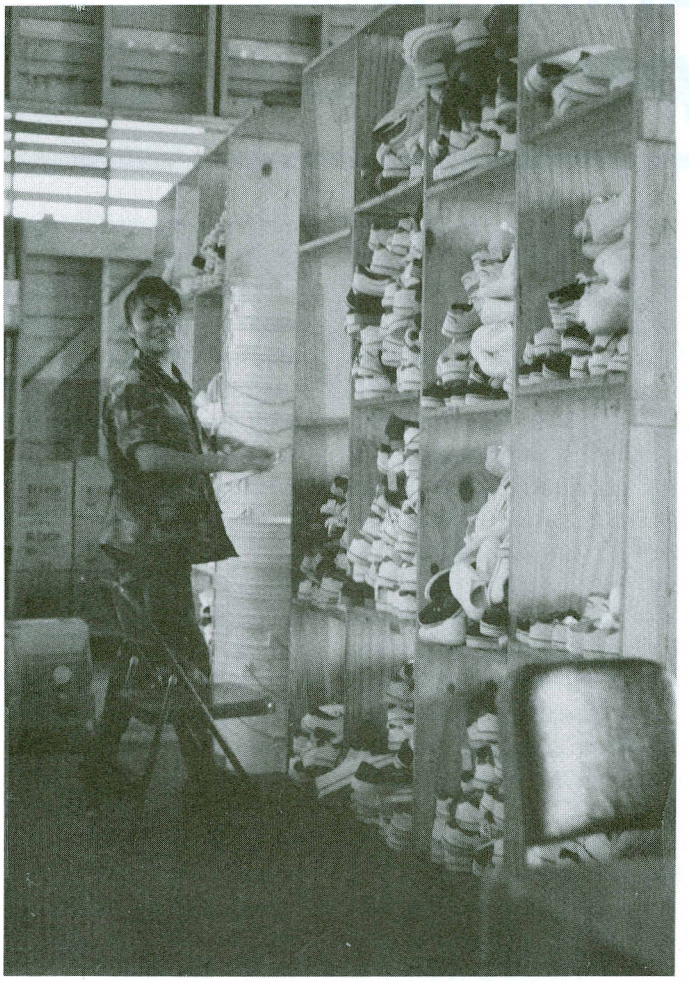


View of a camp at Guantanamo Bay, Cuba, with security camera at left of photograph

no way to issue only the white "sneakers." The shoes came in cases of 24 assorted color pairs. As the buses to the plane departed, the Haitians frequently would throw the brown, black, and blue shoes from the bus windows. The camp rule required wearing shoes to board the buses. Migrants were not required to ride the bus in the shoes. Soldiers always ended the issue by picking up the discarded shoes in colors other than white. Shoes, with a proper fit, and underwear could be issued to 400 to 600 people in less than two hours by a warehouse section consisting of two noncommissioned officers and five soldiers, all laundry and bath specialists.

There was no opportunity to local purchase items across the border with Cuba. When quantities ran low, the island went short until the next barge arrived, roughly every Thursday. The warehouse received some items from the base exchange (BX) such as toothpaste and soap. For example, a typical issue to a camp was 65 to 70 cases of baby food every other day. (Fifty cases of baby food would cause a back order to the BX system in Cuba for a year). With resupply as small as it was, soldiers relied on stockpiles brought by special chartered barges during the early part of the deployment. Supplies had to be short across the island before the Navy requested an emergency resupply, which was usually airlifted.

An interesting note: the computer systems in place for field expedient issues of supplies were not used during our deployment. The job of adapting the systems for Navy, Army and Marine supply actions on the different types of military forms was too difficult. Both Army and Navy switched to manual supply records at the beginning of the deployment. A few laptop computers were used, but they were not running programs for inventory records. Instead, the



Soldier in a general support warehouse stocks canvas shoes in white, the Haitians' preferred color

Line of Haitians waiting for free shoes required to board camp buses

systems were used to generate locally made forms to make mission accomplishment easier. This demonstrates an important need to maintain and carry supplies of paper forms on a deployment because computer use between military services may not allow computerized transfer of requests and issues.

In Cuba, the familiar self-serivce supply centers (SSSCs) were replaced by a Navy version called Servmart. For a purchase from Servmart, we filled out an Army form almost identical to a Navy form. A document number was assigned by logistics operations personnel. Along with a list of items for purchase, the form was signed and keypunched by the Navy comptroller. Then, soldiers could actually pick up the items approved on the list. The document number was closed out by the end of the next day by returning the receipt document to the logistics operations section.

A typical day included usually a four or five mile run, shoe issue for the warehouse section on Monday and Wednesday, pickup from the depot on Thursday, laundry processing to include receiving, sorting and washing the bundles of laundry, vehicle and laundry units maintenance, and meals in camp mess hall.

The Harvest Eagle/Harvest Bear Camps were the new unit deployment container systems with everything to set up a tent city for 5,000 personnel. The Logistical Task Force, from Special Troops Battalion 13th Corps Support command stayed in these "expando" tents. Soldiers also had containers that expanded into latrines and modular showers. The Air Force was in charge of running the camp for all JTF personnel. The nightly activities consisted of movies shown outdoors.

As Haitian populations grew smaller, my platoon worked on the breaking down of Camp McCalla, tearing down the tents as the Haitians and support troops left. They also took part in the rapid runway repair team, a team created to return the runway to its original condition after approximately 15,000 tent pegs had been driven into it. The team filled the holes made by the tent pegs with sand and then tapped in asphalt.

My platoon's soldier responsible for lightweight textile repair also was in charge of a team of six Haitians who went from camp to camp repairing tents. As a camp prepared to break down, the repair team patched the tents before they were taken down. The team also cleaned and repaired thousands of cots. Without the aid of a translator, the Haitians learned the tasks by watching the work.

The sheer numbers of Haitian migrants made all tasks monumental undertakings for the approximately 160 soldiers on the Logistical Task Force. From these soldiers came the cooks, fuel handlers, mechanics, water handlers, warehousers, launderers, and builders for Camp McCalla.

Our soldiers become more technically and tactically proficient in their specialties during operations other than war. With current military downsizing, Quartermasters played a critical role in day-to-day support of *Operation Safe Harbor.*

LT Rebecca Dobbin is a graduate of the United States Military Academy, West Point, New York. She is also a graduate of the Quartermaster Officer Basic Course. Her previous assignments include General Supply Platoon Leader, 553d Supply and Services Battalion, Fort Hood, Texas; Laundry and Bath Platoon Leader, 13th Logistical Task Force, Guantanamo Bay, Cuba; Executive Officer, 289th General Supply Company, Fort Hood, Texas. She is currently the Battalion S4, 169th Maintenance Battalion, Fort Hood Texas.

Quartermaster Professional Bulletin Objectives:

- Reinforce the training base.
- Reinforce skills.
- Introduce new concepts.
- Demonstrate the "how to."
- Provide a medium for professional dialogue.
- Stimulate professionalism.
- Encourage study and innovative thought.
- Provide a forum for commandants to communicate to the field.

Mortuary Affairs Support in Somalia

LT David B. Roath *SFC Frank Napoleon*

Operations other than war (OOTW)—a new term in the Quartermaster dictionary. Quartermasters have had some opportunities to define and explore this new support concept. With the Army's focus changing from forward presence to force projection, Quartermasters play exciting roles. These roles are defining and strengthening our soldiers' skills. Combat service support (CSS) soldiers can support operations anywhere in the world from the stateside Hurricane Andrew to overseas in Somalia, for *Operation Restore Hope.*

Largest in History

In December 1992, President George H. Bush ordered troops to Somalia in East Africa to establish eight humanitarian relief sectors. This was the largest humanitarian assistance mission in history: a joint and combined task force of over 38,000 personnel. The Unified Task Force Somalia in *Operation Restore Hope* rebuilt a major infrastructure, restoring roads, airfields, seaports and public utilities destroyed by two years of civil war. Through the intervention and leadership of Unified Task Force Somalia, relief efforts of over 60 different organizations and the support of 23 nations were focused to reverse a human tragedy of famine and disease claiming the lives of thousands each day.

The military objective was twofold: (1) provide security to the aid workers ensuring distribution of food to the outlying areas and (2) rebuild the country's infrastructure. As the Army planned for this operation, an advance team of mortuary affairs personnel deployed and set up mortuary support for forces in theater.

Personnel from the U.S. Army Quartermaster Center and School, Mortuary Affairs Center, Fort Lee, VA, deployed with members of the 54th Quartermaster Company from the 240th Quartermaster Battalion. The partial mobilization of the 54th required logistical planning before deployment for this peacetime operation.

Deployment 24 December

The detachment left Fort Lee on Christmas Eve, 1992 for Mogadishu, Somalia. Upon arrival, we quickly disembarked from a C-141 with our equipment: one high mobility multipurpose wheeled vehicle (HMMWV), one five-ton truck, and one 300- gallon water tank with one 5,000-pound pallet loaded with mortuary affairs supplies. Our point of contact was an Air Force major assigned to the Combined Joint Task Force (CJTF) J4 Deputy of Logistics Material and Services Branch. He was the mortuary liaison officer for the staff. The commander of Headquarters, U.S. Central Command, had operational responsibility for the theater. The CJTF was a subordinate command with assets from the Army, Navy, Marines and Air Force tasked-organized as a unified command. The 54th detachment was assigned to the 1st Marine Expeditionary Force Headquarter Supply and Services Company for administrative and logistical support. After meeting with the J4 staff, LT Roath was assigned the additional duty of joint theater mortuary officer.

Concept of Operations

Discussions with the mortuary liaison officer quickly showed us the need for a mortuary support plan for Somalia. Looking at the force projection of 38,000-plus troops assigned for this peacetime effort, we developed a two-phase plan. Our main objective was to completely recover, positively identify and transport (in a dignified and respectful manner to the final destination determined by the next of kin) the remains of deceased U.S. military personnel and others eligible by law or executive order. Also, our mission included separating non-U.S. dead, processing and returning the remains according to existing international agreements or Central Joint Mortuary Affairs Office (CJMAO) guidance.

Phase One

Mortuary affairs personnel at the Theater Mortuary Evacuation Point (TMEP) processed the remains at the Mogadishu airport, a major port of embarkation. Remains processed at the TMEP were evacuated outside continental U.S./continental U.S. (OCONUS/CONUS) mortuaries for additional processing. Statements of recognition and incident reports with identification tags and photographic identification cards were sent by the unit with the remains to the TMEP. The personal effects were inventoried by the unit and returned to the rear where a summary court officer was assigned to return them to the next of kin. The unit coordinated transportation of remains or requested air evacuation initiated by the G4. The mortuary affairs personnel at the TMEP received, processed, completed identification records and ensured a completed death certificate before shipping remains out of theater. If fatalities were more extensive, we would move into the next phase.

Under phase two, units brought remains to a collection point at a geographical point that supported forward-deployed units.

Three forward collection points located in Kisamaayu, Baidoa and Beledweyne were to be established. Each point was between 75 to 225 miles from Mogadishu. Seven to 10 mortuary affairs personnel at each point completed the preliminary processing and coordinated for evacuation to the TMEP. Fully staffed collection point operations required deployment of additional mortuary affairs personnel to Somalia. The TMEP conducted quality assurance checks and completed all required documentation before evacuating remains to OCONUS/CONUS mortuary facilities.

Somali Nationals

Developing procedures for handling Somali remains and then implementing those procedures was a sensitive and time-consuming task. Questions such as these came up: "What if our troops kill a Somali in a vehicle accident?" "Or shoot a Somali trying to get into a compound?" Even in a peacekeeping mission, accidents do occur. In most other countries, we rely on host nation support to process the dead. However, Somalia had no agencies, no established police force, limited hospital support and no host nation relief agency to process remains. To further complicate the situation, remains were found in our compounds, remains with no identification and decomposed beyond recognition.

We met with the senior Judge Advocate General (JAG) officer and officials from the International Committee of the Red Cross (ICRC), the Somali Red Crescent and officials from Digfer Hospital, a local Somali hospital. Local agencies knew the local customs and had a better chance of contacting the next of kin. Logistically we felt we did not have the "political status" or infrastructure to serve as the Somalis' mortuary service. Based on discussions with JAG and a memorandum from the Central Command (CENTCOM) judge advocate (JA), we had some legal responsibility, at least for deaths that involved us either accidental or as a result of hostile/nonhostile activities. The ICRC and Red Crescent did not commit themselves to picking up remains for two reasons:

- They had less logistical capability than the U.S. forces.
- Both are relief agencies unaligned with any of one faction or clan, and the U.S. was viewed as an occupying force. Neutrality is extremely important in Somalia, where clan structure has existed for hundreds of years. Clan affiliation, by its very nature, prevents political neutrality.

Our agreement with Somali nationals was a broad stroke approach to cover many circumstances. The plan had the following three basic parts:

- Remains recovered within Mogadishu were processed by U.S. mortuary affairs personnel. Then a case folder file went with the remains for transfer to Digfer Hospital morgue. The ICRC contacted the next of kin to collect the remains or hospital personnel buried the remains.
- Remains outside of Mogadishu were handed over to a family member, clan elder or anyone who claimed the remains. If no one came forward, the remains were buried. An incident report, along with the grid coordinates of where the remains were buried, was forwarded to the G4.
- Remains found as part of clearing or excavating operations were simply buried on site. The burial site would be marked for future disposition by local agencies.

Provide Relief

About four weeks into the operation, the Joint Task Force (JTF) Support Command G4 tasked mortuary affairs personnel to go to Mombasa, Kenya, to recover the remains of a soldier. We reported to the JTF Provide Relief Command, a separate humanitarian mission operating out of Kenya. After meeting with the JTF flight surgeon, we were tasked to develop a Mortuary Support Plan to "umbrella" their operation under the *Operation Restore Hope* mortuary plan. We then contacted the U.S. consulate to determine the appropriate jurisdiction and discuss possible legal details of evacuating remains from Kenya. With authorization from Kenyan officials, we set up a local contract to use a local mortuary for our operations. Our area of operations had now expanded into all of southern Somalia and Mombasa, Kenya. The mortuary affairs team again was called to Kenya to recover the remains of another soldier and to assist in a search and recovery mission of a CH-46 helicopter with three deceased Marines on board.

Atrocity Investigation

In another phase of our operations, we worked with the Criminal Investigation Division (CID) and the 86th Evacuation Hospital on questionable deaths or atrocity cases. We were contacted on 14 Jan 93 by the CJTF J4 and ordered to report to Kismayu where we would help investigate alleged atrocities. In two days 17 remains were disinterred, and evidence was collected. After mission completion, a Muslim cleric was contacted, and all remains were buried according to Muslim law.

On 4 May 93 *Operation Restore Hope* moved into the second phase under United Nations auspices as *Operation Continued Hope* under United Nations Somalia Phase II (UNISOM II). The United Nations took over the humanitarian mission, with the U.S. providing most of the logistical support. Under UNISOM II the mortuary affairs personnel wore blue hats and served under a

United Nations Command. The TMEP mission continued, but each country was responsible for processing its own fallen. Since no other country possessed a mortuary force structure, the U.S., specifically the 54th Quartermaster Company, provided this service.

Commanders should realize early that humanitarian missions will occur again and will involve operations with other nations. We must train our soldiers on the tasks they will perform in a peacekeeping-peacemaking operation. Commanders and soldiers need to be sensitized to cultural differences that may impact operations. Also, soldiers must always be sensitive that a death of a soldier is traumatic, regardless of the nationality of the soldier.

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SFC Frank Napoleon is a graduate of the Primary Leadership Course in Bad Toelz, Germany; graduate of the Basic Noncommissioned Officers Course and an Honor Graduate of the Advanced Noncommissioned Officers Course, both at Fort Lee, Virginia. His previous assignments include overseas Army Mortuaries; U.S. Army Escort Detachment, Dover Air Force Base, Delaware; U.S. Army Central Identification Laboratory, Hawaii, where he served as Noncommissioned Officer in Charge (NCOIC) of a Search and Recovery Team conducting missions for unaccounted personnel from the Vietnam conflict in Vietnam, Laos and Cambodia. He recently served as NCOIC of a Theater Mortuary Evacuation Point in Mogadishu, Somalia. During his career, SFC Napoleon has participated in the processing of remains from the bombing of the Marine barracks in Beirut, Lebanon; the Grenada invasion; and the remains from the air crash of members of the 101st Airborne Division in Gander, Newfoundland. He is currently an instructor and writer at the Mortuary Affairs Center, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

Quartermaster Training

Quartermaster soldiers being trained on proper exit procedures from a UH-1H (Huey) helicopter at the U.S. Army Quartermaster Center and School, Fort Lee, Virginia

Operation Provide Promise: The Airdrop Phase

CPT Brian L. Williams CW3 Ken K. Studer
CW2 Nancy E. Studer

Fighting in Eastern Bosnia-Hercegovenia (formerly Yugoslavia) between ethnic rivals has intensified. More and more civilians are being displaced. The populations of small, primarily Muslim townships are doubling and tripling as refugees flood in by the tens of thousands. These same towns are being shelled. The casualties are mounting. The food and medical stores are nearly gone. Combined with the harsh winter weather, that situation is producing about 20 fatalities each day.

Positioning a skid board, a rigger in the 5th Quartermaster Detachment (Airdrop Support) builds a container delivery system bundle out of Meals, Ready-to-Eat.

Winter 1993

It is late February 1993. The U.S. Air Force's 435th Air Wing at Rhein Main Air Base, Germany, is tasked to prepare for the possibility of humanitarian airdrops into Eastern Bosnia-Hercegovenia. On 23 February, the U.S. Army's 5th Quartermaster Detachment (Airdrop Support), the theater's air delivery asset, is dispatched for one day to Rhein Main Air Base to rig 90 container delivery system (CDS) bundles of U.S. Meals, Ready-to-Eat (MREs). Two days later, half the unit returns to prepare more MREs and 22 medical supply bundles.

The green light is lit on the night of 28 February for air dropping 27 MREs and three medical CDS bundles near the town of Srebrenica. Initially very skeptical, senior planners see the airdrop phase as a short-term mission. In response, the 5th Quartermaster Detachment deploys with all soldiers and necessary supplies and equipment for a two-week mission. The initial drops prove the only effective way to deliver the lifesaving supplies. This moves the mission past the two-week point.

Autumn 1993

The 5th Quartermaster Detachment is well into its seventh month of the operation in September 1993 with no end insight. The detachment had rigged more than 14,000 loads by late September, delivering nearly 10,000 tons of food and medical supplies to areas throughout Bosnia-Hercegovenia. The U.S. C-130 Hercules and German and French C-160 Transall aircraft had flown more than 1,200 sorties. The standard package varied little throughout the six-month period. Each

night, six C-130s carrying 12 CDSs flew with one German and one French C-160 carrying eight CDSs each. The C-160s carry less because they have a lower aircraft load limit. All aircraft fly at altitudes between 10,000 and 18,000 feet to make them less vulnerable to ground fire.

The Germans joined the effort on 16 Mar 93 and the French on 21 Mar 93. With their aircraft came teams of 10 German and 5 French riggers who work hand-in-hand with the 5th Quartermaster soldiers. The German soldiers are highly motivated, determined young men who work day after day in every phase of the operation. The French riggers, unlike the U.S. and German soldiers, are also aircraft loadmasters. They work beside the Americans and Germans in the morning, load their aircraft in the afternoon and fly that night. The allies rotate their teams periodically to spread experience throughout the forces. The spirit of cooperation and camaraderie is superb and a model of combined forces success.

Resupply

The Kaiserslautern Industrial Center (KIC) has been and continues as the only source of resupply for airdrop equipment (ADE), the primary source for foodstuffs and one of the sources for medical supplies. The Reserve Storage Activity Kaiserslautern (RSAK), a subordinate command within KIC, maintains a 30-day supply of each item of ADE. RSAK dispatches between two and four 40-foot trailers five days a week to resupply the operation. The 5th Quartermaster Detachment's supply section receives, accounts for and stores the supplies upon arrival at the rigging site.

Soldiers maintain three days of supply at all times to cover any mission shortages or unexpected problems with normal delivery. Additionally, the 5th Quartermaster rear detachment maintains one M818 tractor and a 40-foot trailer with a CONEX container mounted on it for emergency resupply.

Substitute Items

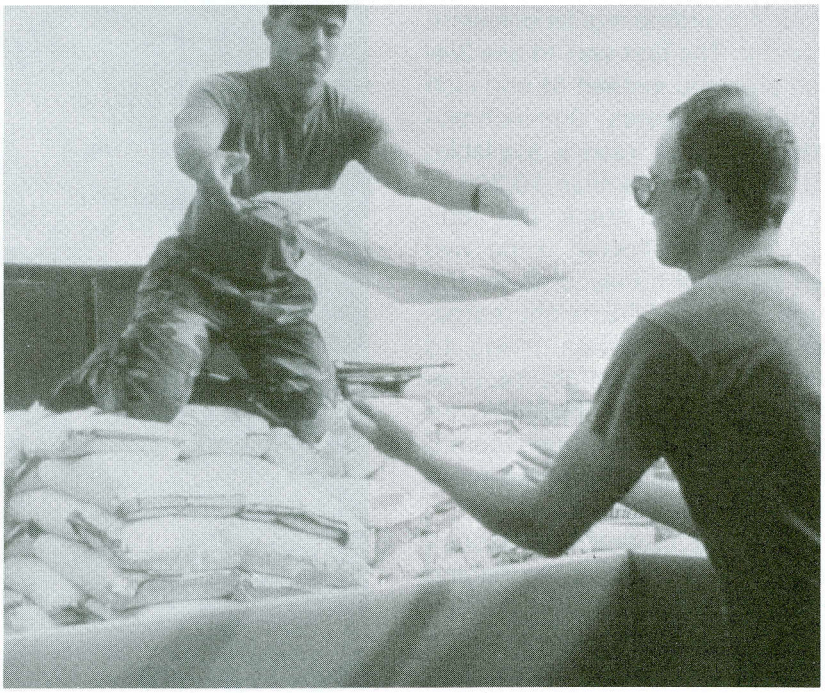
On-hand ADE is tracked and reported on a locally produced form. The form shows both the quantity of each item on hand and the number of bundles each quantity can make. Bundle capability is determined by airdrop technicians and periodically modified based on practical consumption. Several substitute items are used instead of some basic CDS components. Although less desirable, all are adequate and have been used during this operation.

The two types of airdrop during *Operation Provide Promise* are high velocity and free drop. The vast majority have been high velocity. This type of airdrop is the most effective way to deliver supplies from C-130 aircraft flying above 10,000 feet. Free drop is the less expensive method of airdrop but limited in the type and amount of supplies delivered.

CDS rigged for high velocity airdrop consists of a skid board of 3/4-inch plywood, five layers of energy-absorbing material (cardboard honeycomb), an A-22 cargo bag and a 26-foot ring slot parachute. The ring slot parachute is a stabilizing parachute attached to the top of the load. It keeps the load in an upright position during descent. The honeycomb is placed on the bottom to absorb the impact of the load upon contact with the ground. The load impacts at approximately 55 miles per hour. Free drop delivers non fragile items from an aircraft without the use of parachutes or energy-absorbing materials.

Numerous modifications to standard rigging procedures, new types of packing materials and even a new airdrop system are products of the operation. No rigging procedures existed for the vast quantity of food and medical items being dropped. The air drop technicians have developed over 200 different configurations to safely contain hundreds of types of food and medical items donated from countries around the world. The extreme diversity of food and medical supplies forces riggers to modify current rigging procedures. This has brought about the use of new packing materials and techniques never used before with high velocity or free drop.

An Air Force master sergeant and an Army rigger perform an afterloading joint airdrop inspection.



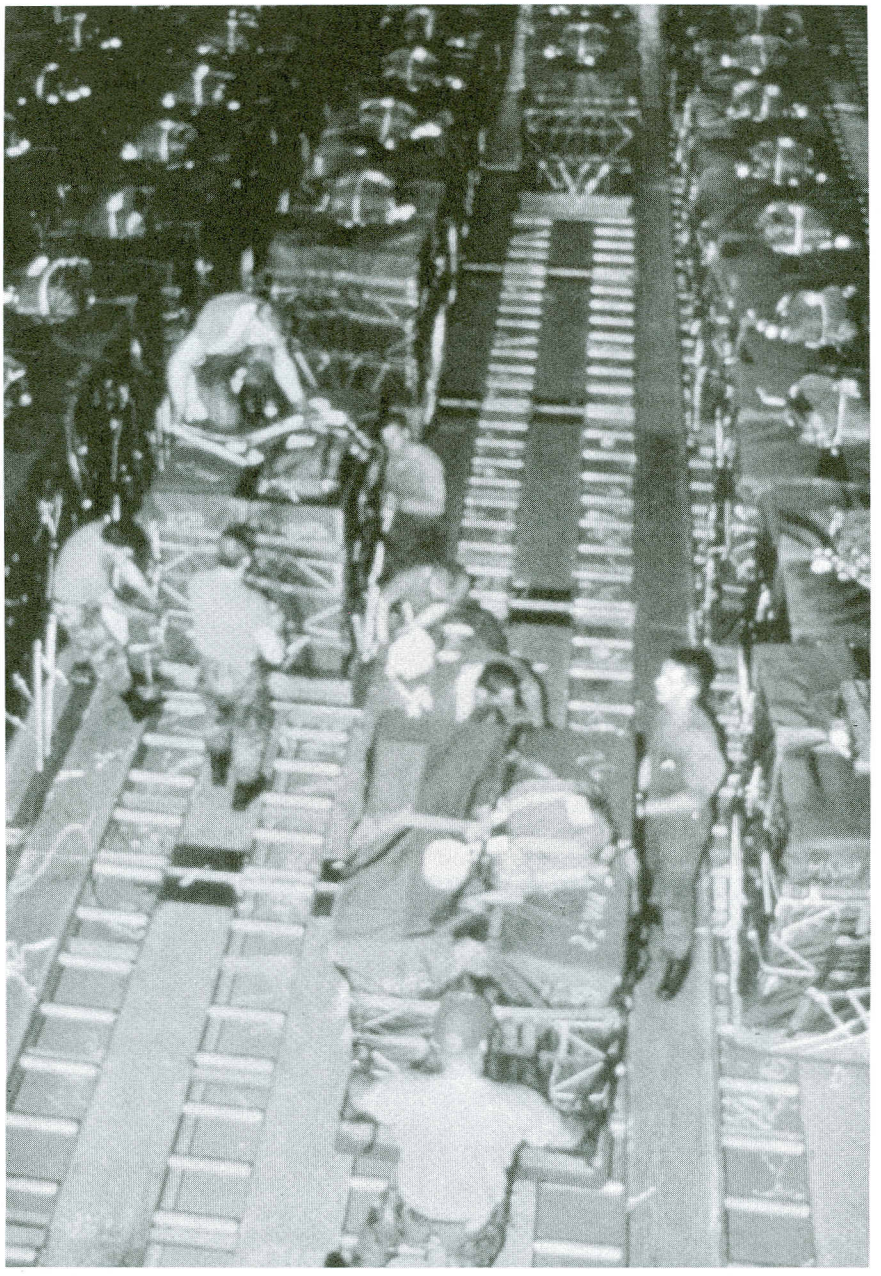
Soldiers from the 5th Quartermaster Detachment (Airdrop Support) prepared TRIWALL containers of Croatian corn, potato and onion seeds for rigging at Rhein Main Air Base, Germany, last May to support *Operation Provide Promise*.

Only Two Waivers

Fortunately, only two waivers to current airdrop regulations were required. The first was to use 3/4-inch plywood instead of one-inch for the skid boards. One-inch plywood was not readily available, but KIC had more than 10,000 3/4-inch boards in stock. The additional waiver allowed using two less layers of honeycomb for the medical loads. CDS height restrictions occurred when trying to meet minimum weight requirements. Bundles of blankets are substituted for the honeycomb, adding weight and replacing some of the cushion effects.

Airdrop technicians assess food items arriving at the rigging site for survivability. The technicians then determine how the food should be configured and contained for rigging in A-22 airdrop cargo bags. Food items are carefully arranged inlayers and then either held together on the pallet by plastic stretch wrap or contained in a large cardboard (TRIWALL) box.

Some food items, such as U.S. MREs, are used to help cushion other foods. One such configuration consists of six layers of U.S. MREs as a base, one layer of canned meat and one layer of biscuits placed on top. All eight layers are packed on a standard 4-foot x 3 1/2-foot shipping pallet and held together by plastic stretch wrap. The pallet of packed food is then placed in an A-22 cargo bag and rigged for airdrop. Bulk food is paced in large TRIWALL boxes. For example, a TRIWALL box is placed on a shipping pallet, nine 110-poundbags of flour are put into the box, one layer of honeycomb is set on top of the flour, and one layer of canned food rations is placed on the honeycomb. Before closing the box and placing it in a cargo bag, several small, empty plastic bags are placed in the box. These allow the refugees to break down the bulk food into smaller quantities for ease of handling. The plastic bags can also be used to recover any spills that may result from impact.



German, U.S. and French riggers deployed to Rhein Main Air Base, Germany, work hand-in-hand rigging TRIWALL containers.

Rigging medical supplies is particularly challenging. Most of the medical items air dropped would not be considered for low velocity airdrop, let alone high velocity. They range from bandages to fragile glass bottles of various medicines. TRIWALL boxes are essential in packing the medical supplies. For added shock absorption, each TRIWALL box is filled to one-third of its capacity with loose bandages or blankets, and the side walls are lined with three to six inches of more bandages and blankets. Starting with the heaviest, sturdiest items and going to the lightest, most fragile items, the medical supplies are then layered into the box. Each layer is separated by blankets. All glass bottles are taken out of original packaging and individually wrapped in plastic bubble, cushioning material. The prepared TRIWALL box of medical supplies

is placed on four large bundles of blankets for added shock absorption. Finally, both the TRIWALL box and bundles of blankets are secured together with plastic stretch wrap and enclosed in the A-22 cargo bag.

These methods of packing food and medical items have proven exceptionally effective and have resulted in resounding success. Contributing to airdrop success, CDS food bundle weights are intentionally limited to 1,500 pounds plus or minus 150 pounds. CDS bundles rigged with medical supplies weigh an average of 1,100 pounds.

Free Drop

The other method of airdrop used during *Operation Provide Promise* is free drop. Although the method is not uncommon to the rigging community, the technique used in the building of this particular system is. The system is called TRIADS (TRIWALL aerial delivery system). The birth of the TRIADS transpired during *Operation Provide Promise*. This method "rains" single MREs down to starving people in towns and villages, particularly benefiting the sick, elderly and children who are unable to travel to a CDS drop zone.

A TRIADS consists of a TRIWALL box filled with 40 boxes of individual U.S. MREs. The TRIWALL box edges are cut to within six inches of the bottom, and two lengths of webbing are secured around the box to hold it together. Over the drop zone, the box rolls out of the aircraft with the static line attached to the lengths of webbing elongating and the ties breaking as the box hits the slipstream. The box breaks apart, causing the MRE packets to scatter and fall to the ground.

This system is very effective and inexpensive compared to the CDS. However, TRIADS has drawbacks. The number of MREs delivered using one CDS is 768. The TRIADS delivers a total of 480 meals. The time it takes to build both systems is comparable, but the refuse generated from TRIADS and the time to dispose of the refuse is astounding. This makes the TRIADS very labor-intensive, both in the building and refuse disposal phases.

Feedback

Reliable information on the success of the airdrops is scarce and, in most cases, vague. The information usually covers the accuracy of the airdrop and the recovery of the CDS bundles of food and medical supplies. No information on the condition of the contents during recovery has been provided, with the exception of one special medical airdrop mission.

In one besieged city, hundreds of sick and wounded people were in urgent need of medical supplies. The only way to deliver the medical supplies was by high velocity airdrop. Tons of special medical equipment and supplies were delivered to the rigging site.

A copilot helps a loadmaster and an engineer offload relief supplies from a C-130 to be prepared for night airdrop over Bosnia last May during *Operation Provide Promise*.

The supplies included surgical equipment and 4,200 glass vials of penicillin, all extremely fragile. Riggers stressed concerns about the ability to successfully rig these fragile supplies for high velocity airdrop. The response was that "if only a fraction of the medical supplies survive, you will be saving people's lives." With that in mind, riggers used the best packing materials available, developed new packing procedures, and meticulously packed the medical supplies in TRIWALL boxes.

The United Nations Military Observers in the area assisted in the recovery of these urgently needed supplies. They reported that the drop was a complete success, and all medical supplies were recovered. They also reported that not one glass vial was broken. The packing procedures developed for this airdrop mission are now applied to all medical bundles.

Food Bundles

The food bundles initially weighed an average of 1,500 pounds. During the course of *Operation Provide Promise* more humanitarian aid began to arrive. This, coupled with a greater demand for food, caused riggers to increase the weights of the bundles. Concerned about the increased weights (up to 2,000 pounds), riggers asked the Joint Task Force (JTF) for information on the survivability of the heavier bundles. The JTF was unable to provide the necessary information. An alternate means to determine the survivability of CDS was needed. In coordination with the 37th Airlift Squadron, the military conducted two test drops. Several food bundle configurations were rigged. With the help of an engineer from the U.S. Army Natick Research, Development and Engineering Center, several different types of energy-absorbing honeycomb kits were tested.

Our goal was to have the food reach the drop zone with little to no damage. The two test drops revealed that the food items rigged in bundles weighing 2,000 pounds sustained significant damage. Bundles weighing 1,500 pounds sustained zero to five percent damage. The heavier bundles bounced five to six feet in the air after impact. Some flipped over and landed upside down, crushing some contents. The lighter bundles bounced much less and landed either upright or harmlessly on their sides. In view of the test results, food bundle weights were turned to an average weight of 1,500 pounds. The test drops confirmed packing procedures of bulk food items in TRIWALL boxes. Additionally, we discovered no data warranting changes to our current honeycomb kits.

It is now late September. The 5th Quartermaster Detachment is preparing for the winter months. The rain and the temperature are falling daily. The news reminds us that the fighting will continue, and the people of Bosnia-Hercegovenia will face a colder, even more bleak winter than last year.

CW3 Ken K. Studer is a graduate of the Quartermaster Warrant Officer Advanced Course. He is also a graduate of the U.S. Army Training and Doctrine Command Combined Arms Test Activity Test Officer's Course and has served in a variety of aerial delivery test support positions. His previous assignments include Airdrop Test Project Noncommissioned Officer, Test Officer of airdrop equipment and military free-fall tests, and Chief, Aerial Delivery Division, U.S. Army Airborne Special Operations Test Board; and Commander, Rigger Detachment, Special Operations Command, Fort Bragg, North Carolina. He currently serves as Operations Officer, 5th Quartermaster Detachment (Airdrop Support), Kaiserslautern, Germany.

CPT Brian L. Williams has a bachelor of arts degree from the College of William and Mary, Williamsburg, Virginia, and a master of science degree from Boston University. He is a graduate of the Field Artillery Officer Basic and Quartermaster Officer Advanced Courses, as well as Airborne, Air Assault, Petroleum Logistics and Rigger Schools. His previous assignments include Fire Support Officer and Battalion S4, 24th Infantry Division (Mechanized), Fort Stewart, Georgia; and Petroleum Logistics Officer, 200th Theater Army Materiel Management Center, Zweibruecken, Germany. He is currently the Commander of the 5th Quartermaster Detachment (Airdrop Support), Kaiserslautern, Germany.

CW2 Nancy E. Studer has an associate's degree from Methodist College, Fayetteville, North Carolina. She is a graduate of the Airdrop Systems Technician Course. Her previous assignments include two tours as an instructor at Fort Lee, Virginia; Noncommissioned Officer in Charge of Air Item Maintenance, Yuma Proving Grounds, Yuma, Arizona; Noncommissioned Officer in Charge, Rigger Detachment and Military Free-Fall Instructor at the John F. Kennedy Special Warfare Center, Fort Bragg, North Carolina. She is currently serving as the Airdrop Systems Technician at the 5th Quartermaster Detachment (Airdrop Support), Kaiserslautern, Germany.

Tracking NBC Defense Training at the FSB

CPT Karl R. Schelly

Prone, sleepless and cold in a hastily scooped-out foxhole 15 meters from Iraqi soil, I outlined my actions as battalion chemical officer over the next few days. For almost seven months in Southwest Asia, the unit had trained daily in realistic chemical environments. Skill levels were at a high. But who can predict the reaction of a soldier to actual nerve gas or to the death of a friend? By the evening of 22 Feb 91, I felt secure with the standing operating procedures (SOPs) and the support planning for any level of attack. What kept me awake were scenes of what might have happened if the battalion entered chemical warfare in August 1990 when we hit the ground in Saudi Arabia.

First NBC Use

While still in the United States, I had found myself scrambling to estimate the training level of my new battalion. Four weeks into my first stateside tour, we were preparing for the possibility of facing the first use of chemical agents since World War I. All around me soldiers were dusting off chemical detection equipment and practicing nuclear, biological, chemical (NBC) crew drills, without much confidence and uncertain of their own capabilities. Documentation of past NBC training was close to nonexistent. The steady influx of new soldiers to companies added more turmoil to already stressed training schedules. Division and brigade outlined the necessary training during the few days before deployment. Eventually, leaders and soldiers brought the unit to an amazingly improved level of common NBC skills. I hoped we would have the time in Saudi Arabia to practice not only the immediate lifesaving tasks, but also the follow-on tasks to decontaminate, reconstitute and prepare for continued fighting.

'Mother of All Battles'

Seven months later in the desert, tired and dirty on the eve of "the mother of all battles," I realized our good fortune in having time to prepare after we arrived overseas. No company commander should have to go through what ours did those first few months of FY 91.

A chemical officer for five years, I have trained and evaluated a variety of combat, combat service (CS) and logistics units in vastly different situations and environments. All offered unique challenges, but few as unique and important as the forward support battalion (FSB). My experiences with FSBs often showed that common NBC skills, reaction to attack, knowledge of NBC equipment and communications during the attack were better trained, executed and sustained than the same tasks in the combat elements. But the elements of the FSB did not receive the same level of sustained operations and decontamination training that the combat units planned and executed with almost every field training exercise (FTX). Whether due to the support load, time constraints or merely overlooking higher levels of NBC training, this is wrong and a critical shortcoming.

Logistics Warriors need to know more about the principles of NBC defense than their combat counterparts. Few logistical commanders will disagree with the assumption that an FSB is a major chemical weapons target on the battlefield or that future enemies will use chemical weapons as a battlefield multiplier. Threat doctrine points this out. However, few commanders will agree about the level of proficiency demanded of soldiers. If a combat unit is contaminated, CS and combat service support (CSS) units help decontaminate them and basically lead them through it. If a company in the FSB is contaminated, who decontaminates? The answer: everyone else in the FSB!

Post-Attack Phase

The post-attack period will be extremely active and requires advanced knowledge of protection, command and control, decontamination and medical activities in a contaminated environment. Who plans this type of training? How much do you need to know? Where do you find a guide? A systematic approach to planning higher levels of NBC training is the three-phase, NBC Task Menu.

As a Quartermaster lieutenant, you may have to plan and execute NBC training within your company. The NBC Task Menu is a leader's guide developed by you and the company NBC noncommissioned officer (NCO). The guide identifies, defines, tracks, and documents advanced NBC training within each section and platoon. Each menu, tailored to the mission of the specific platoon or section, gives the commander details of NBC training at each level, what the next step is, and how it integrates into training already scheduled. Phases II and III focus on particular aspects of a unit's mission, equipment or follow-on orders. See Figure 1 for an example of an NBC Task Menu for an Alpha Company (FSB).

Most units' Phase I menus will be basically the same. All Military Qualification Standard (MQS) I and Soldier's Manual of Com-

mon Tasks (SMCT) Level 1 tasks are incorporated, along with immediate tasks that fit the unit's current Mission-Essential Task List (METL). The unit does not need to break the tasks down to individual or combined tasks at this level. For example, an Armor platoon may prepare for attack or counterattack after achieving basic skills, but your Alpha Company in the FSB may immediately begin determining what equipment has been contaminated and begin preparing to move. The menu is geared toward persistent agent contamination but must contain different tasks for nonpersistent, vapor-only, biological and radioactive contamination. Adhere to the principles of contamination avoidance and protection.

Focus on METL

Phase II tasks begin to focus on the unit's METL and current disposition. They are based on the three most likely actions a contaminated unit will take: (1) continue the mission, (2) prepare for/conduct deliberate decontamination, or (3) relocate. If priorities for logistics support during/following an NBC attack are already in the unit's standing operating procedure (SOP), then the unit's Phase II menu should follow those guidelines. Phase II tasks, dependent on the success of Phase I tasks, are set according to type and extent of contamination. Phase II includes MQS II and III tasks and the various soldier's manuals by skill level and MOS. This should turn out to be your longest and most detailed menu.

Most Likely Action

Phase III tasks are determined by the most likely action your unit took in Phase II. They include decontamination if you moved or continued the mission, reconstitution/resupply, and continuing the mission if your unit is still mission-capable according to SOP and mission, enemy, terrain, troops and time available (METT-T). Phase III tasks are not always end results. The unit should prepare to redo some tasks if the situation calls for it.

How your NBC menu is set up on paper, what training objectives are to be met and the commander's training guidance all have an effect on how you use your menu. All commanders include NBC training in their guidance (some even in the unit's mission statement), but many find it hard to comply with and enforce. The easiest method of including NBC training is to attach NBC as a condition to training already scheduled. For example, a unit trained in setting up a tactical refueling point should practice set up in mission-oriented protection posture (MOPP) gear the next time.

It is unnecessary, though more realistic, to start with an NBC attack and go through Phase I tasks. Begin directly with the advanced phase and continue through to end results if the unit knows the basics. Often NBC training is cut short due to timelines, safety requirements and failure of Phase I tasks. Prepare an advanced scenario that tells the situation to that point, brief the soldiers and begin the task. The soldiers will begin this task motivated and curious if the briefing does not contain the same old grind.

Hands-On Training

When planning the next hands-on training, present the commander with the NBC menu and point out the current training level of the unit, the next level tasks, and how they can be applied to the unit's scheduled training objectives. A system of

ALPHA 'Gators' NBC Menu

PHASE I	PHASE II	PHASE III
Prepare for NBC attack at fixed site.	Check for contamination using M256 Kit, M8/9 paper, CAM and AN/VDR 2.	Prepare for decontamination support. Detailed decontamination.
Use M8/M9 paper to identify/locate chemical agent.	Mark a contaminated area. Mark contaminated supplies.	Supervise issue of contaminated stocks.
Decontaminate your skin and personal equipment.	Hastily decontaminate bulk supplies.	Detailed decontamination of personnel and equipment.
Prepare to operate the Chemical Agent Monitor (CAM).	Check casualty for contamination using CAM.	Check site for residual contamination.

(continued)

Figure 1. Sample From Alpha Company's Nuclear, Biological, Chemical Task Menu

documentation is also extremely helpful to commanders when presenting justification for training levels at Quarterly Training Briefs. See the example in Figure 2. If well documented, presented professionally and explained by a knowledgable NCO or platoon leader, your commander will be better prepared to maintain an efficient, mission-oriented unit on the contaminated battlefield.

Logistics units are often a lower priority for decontamination support and may have to guide themselves through the biggest challenge of their lives. Examine the higher levels of NBC training, train realistically, and be prepared to take the lead on a contaminated battlefield and survive to fight another day.

CPT Karl R. Schelly has a degree in journalism from Eastern Illinois University. He is also a graduate of the Chemical Officer Basic Course and the Quartermaster Officer Advanced Course. His previous assignments as a Chemical Corps officer include Decontamination Platoon Leader, Mechanized Smoke Platoon Leader, two tours as a Battalion Chemical Officer, and most recently as a Brigade Chemical Officer. He is now a Quartermaster officer assigned to the 25th Infantry Division, Hawaii.

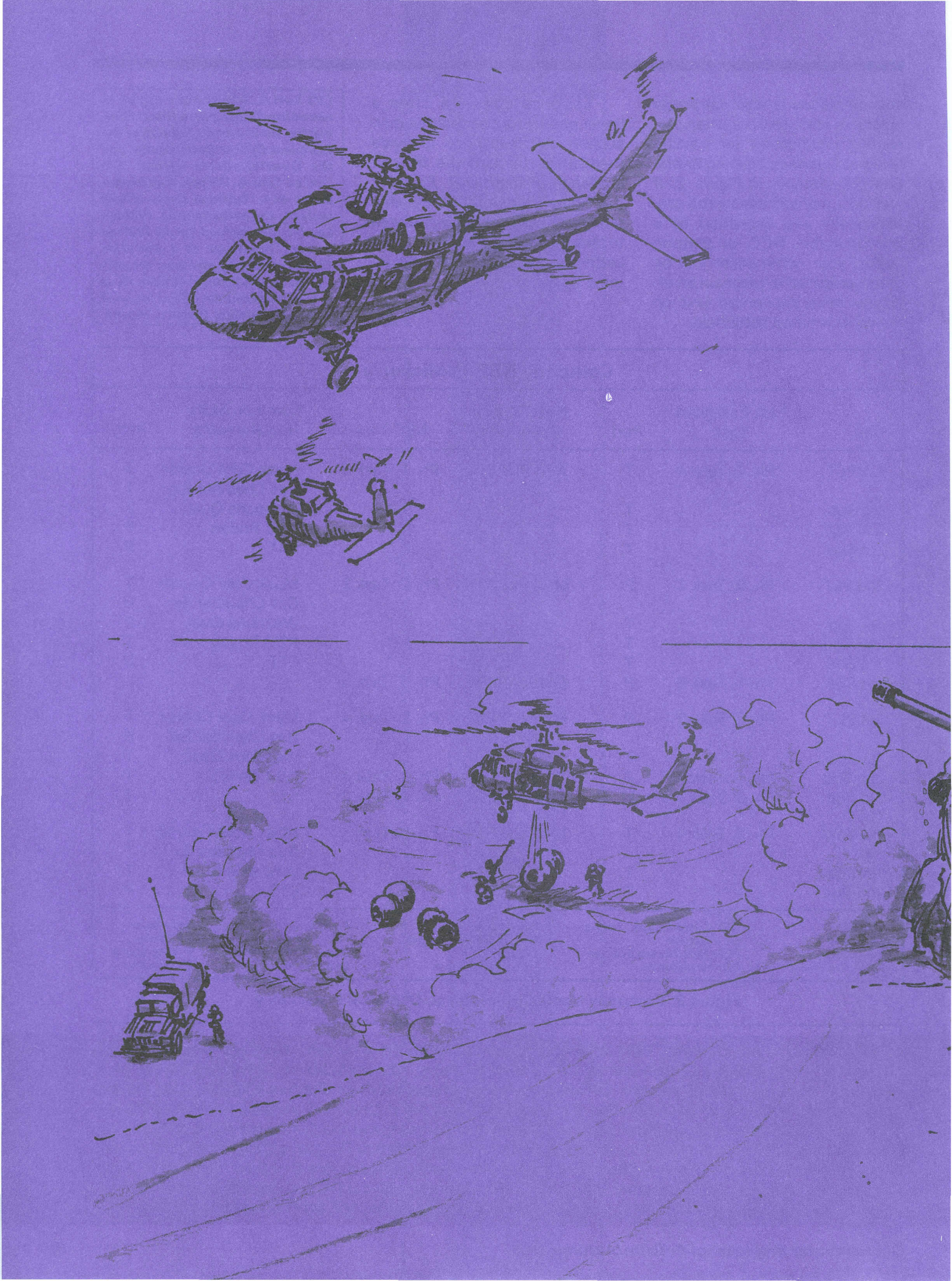
Company NBC Proficiency

Unit	Last Evaluated Task	Perf.	Next Training Opportunity	NBC Task	Common Skills Requirements	Perf.
1st PLT	Ph. 1, Task 4	T	APR PLT FTX	Ph. 1, Task 5	Mask Conf Course	T
					Gas Chamber Ex.	T
1st Sqd	"	T	"	"	Weapons Qual.	T
2nd Sqd	"	T	"	"	NBC Rodeo	P
3rd Sqd	"	T	"	"	CTT	P
2nd PLT	Ph. 2, Task 1	P	MAY PLT FTX	Ph. 2, Task 2	Mask Conf Course	T
					Gas Chamber Ex.	U
1st Sqd	"	T	"	"	Weapons Qual.	P
2nd Sqd	"	T	"	"	NBC Rodeo	T
3rd Sqd	"	T	"	"	CTT	U
4th Sqd	Ph. 1, Task 5	P	04100APR93	Ph. 1, Task 5		
3rd PLT	Ph. 2, Task 3	P	MAY CO FTX	Ph. 2, Task 4	Mask Conf Course	T
					Gas Chamber Ex.	P
1st Sqd	"	T	"	"	Weapons Qual.	T
2nd Sqd	Ph. 1, Task 4	P	"	Ph. 1, Task 4	NBC Rodeo	T
3rd Sqd	Ph. 2, Task 3	U	MAY CO FTX	Ph. 2, Task 3	CTT	T
HQ Sect.	Ph. 2, Task 4	T	MAY CO FTX	Ph. 2, Task 5	Mask Conf Course	T
					Gas Chamber Ex.	T
1st Sqd	"	T	"	"	Weapons Qual.	T
2nd Sqd	"	T	"	"	CTT	P

LEGEND:
APR - April
CO - Company
Conf - Confidence
CTT - Common Task Training
Ex. - Exercise
FTX - Field Training Exercise
HQ - Headquarters
Ldr - Leader
NBC - Nuclear, Biological, Chemical
Perf. - Performance
Ph. - Phase
PLT - Platoon
Qual. - Qualification
Sect. - Section
Sqd - Squad
T - Trained
P - Progressing
U - Untrained

Figure 2. Company Nuclear, Biological, Chemical Proficiency

CORRECTION: In our Summer 1993 edition, an incorrect author's biography appeared after the article "Fratricide: It's Everybody's Business" by CPT Robert R. Jones. We apologize to CPT Jones for the error. Here is the correct career information: CPT Robert R. Jones has a bachelor of science degree in psychology and a master of business administration degree from Texas A&M University at College Station. He is a graduate of the Field Artillery Officer Basic and Advanced Courses, and the Combined Arms and Services Staff School. He has served previously as a Firing Platoon Leader, Battery Executive Officer and Battalion Fire Direction Officer for 1/32d Field Artillery (FA), Hanau, Germany; Battalion Fire Direction Officer and Motor Officer, 3/18th FA, Fort Sill, Oklahoma; and Commander, A Battery, 3/18th FA, Fort Sill. He is assigned to the Directorate of Combat Developments, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.



Quartermaster Logistics for Light/Dismounted Forces

Major General Robert M. Littlejohn — Chief Quartermaster in the ETO

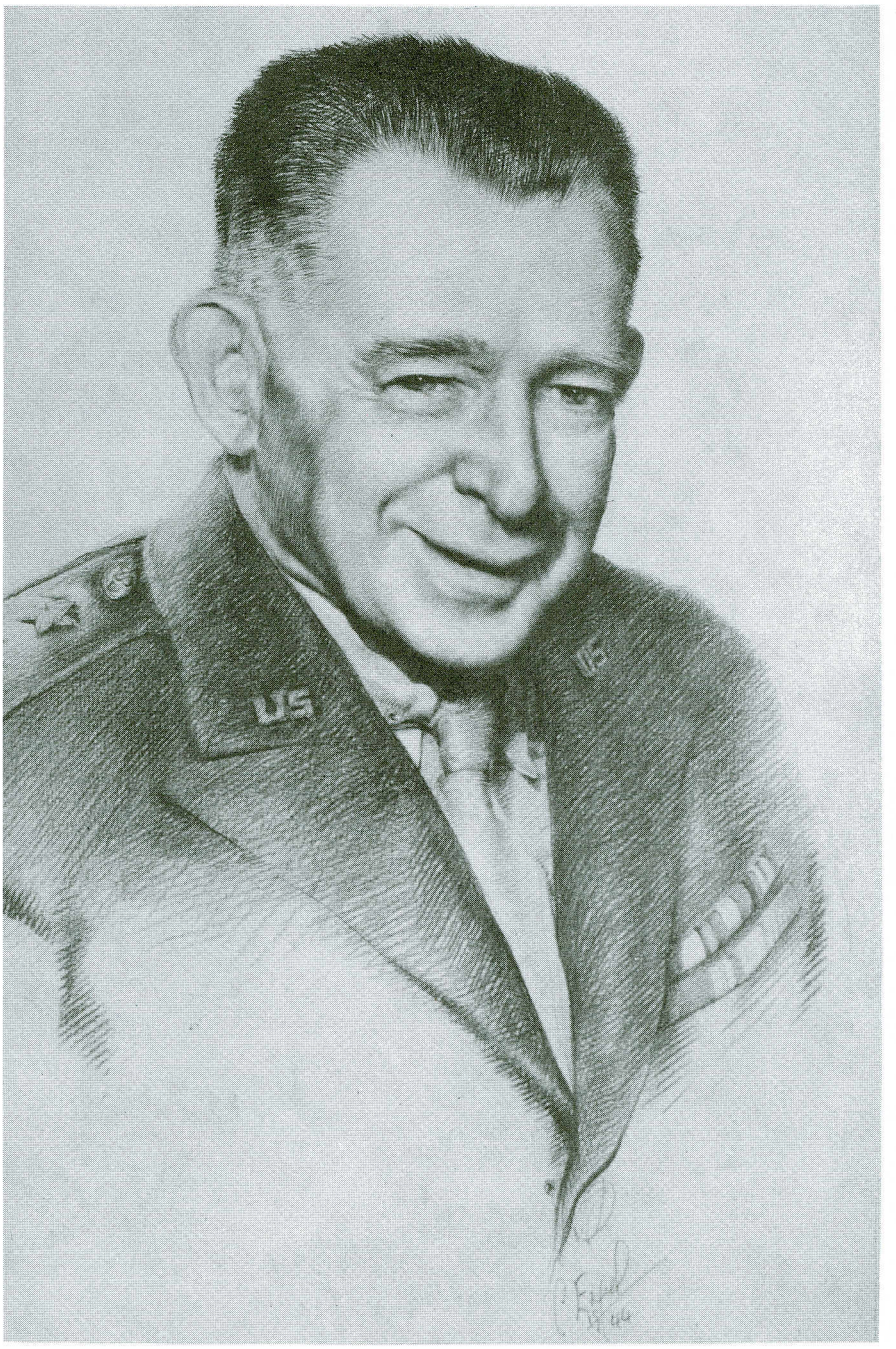
Dr. Steven E. Anders

Logistics—once defined simply as "gittin' stuff"—entails what many perceive as the unglamorous side of war. Its successes are often taken for granted, while even the slightest failure is deemed unpardonable. General Brehon B. Somervell, head of the Army Service Forces in World War II, had it about right when he said: "Good logistics alone can't win a war. Bad logistics alone can lose."

For more than two centuries the U.S. Army Quartermaster Corps has sustained the Army with vital supplies and field services, without which victory in our many past conflicts would not have been possible. Rommel's oft-quoted remark that "the battle is fought and decided by the quartermasters before the shooting begins," is a shrewd bit of advice applicable even today.

Few Quartermasters, though, can ever hope to achieve the kind of instant notoriety or longterm recognition accorded their combat arms brethren. The brilliant Revolutionary War strategist Nathanael Greene knew all too well what he was being asked to sacrifice, when, as a favor to General George Washington, he agreed to become Quartermaster General of the Continental Army in the wake of Valley Forge. His lament at the time—"No body ever heard of a Quarter Master in History"—still resonates. There have been exceptions, of course, but they are few and far between.

In the case of World War II commanders, vast stores of collected records, published memoirs, and weighty biographies have long since ensured the places in history of Eisenhower, Marshall, MacArthur, Bradley, Patton, and others. Even corps and division commanders, if not always household names, are at least well-known to students of military history. The same hardly holds true for key logisticians of World War II, whose names are anything but familiar, despite their many successes and quite sizable contribution.



Major General Robert M. Littlejohn, 1944

If I were to compile a list of outstanding logisticians for World War II, at or very near the top of that list would be the Chief Quartermaster for the European Theater of Operations, Major General Robert M. Littlejohn.

Littlejohn was handed an enormous task by the Supreme Allied Commander. He faced an endless array of logistical problems, any combination of which might have undone a man of lesser stamina and ability. Yet he managed to turn in a winning performance.

Why? In my view he was the right man for the job, uniquely qualified through decades of training and experience to hold the senior most Quartermaster position in the European Theater. While others may disagree, I also think he had, on balance, the necessary temperament as well.

Born in 1890, in Jonesville, SC, Littlejohn attended Clemson Agricultural College for a year before entering the United States Military Academy in 1908. His student days at "the Point" left an indelible stamp, and he made close ties and associations that were to last a lifetime. As a student, Littlejohn was best known for his athletic prowess. Strong, barrel-chested and determined, he quickly made his reputation as a hard-hitting tackle on the football team and a championship wrestler.

Cavalry

Following graduation in 1912, he was commissioned a second lieutenant in the Cavalry and served three years with the 8th Cavalry in the Philippines, then 1 1/2 years with the 17th Cavalry out of Fort Bliss, TX, patrolling the Mexican border during the Punitive Expedition. Captain Littlejohn returned to his alma mater as an instructor in 1917, just three months after the U.S. declared war on Germany.

He switched from Cavalry to Infantry in Spring 1918, was promoted to major and eventually took command of the 332d Machine Gun Battalion at Camp Wadsworth, NY. He set sail for France in September as commander of the 332d. There he served with the 39th and 4th Infantry Divisions in the last days of the war, and for a few months during the occupation that followed.

Littlejohn got his initial exposure to quartermastering while still in the Cavalry, with an occasional stint as Squadron Quartermaster. Just before returning home in 1919, he was detailed to the Quartermaster Corps in France—which marked the start of a 25-year association (and, in effect, professional love affair) with the Quartermaster Corps.

Army Food Expert

He graduated from the Quartermaster Subsistence School in Chicago in 1922. He stayed on first as an instructor and then as assistant commandant for nearly three years, becoming something of an expert on Army food and nutrition. Between 1925 and 1930, he graduated from both the Command and General Staff College and the Army War College and taught logistics at Leavenworth, KS, for nearly three years.

He spent 1930-35 in the Operations and Training Branch, on the War Department General Staff, before returning for a third tour at West Point, this time serving as Post Quartermaster with the rank of lieutenant colonel. The end of the decade (1938-40) found him back overseas in the Philippines, first as Assistant Quartermaster in Manila, and later as Superintendent of Army Transport Service for the entire Philippines Department.

With the fall of France in 1940, Littlejohn was recalled to Washington to head the Clothing and Equipment Division, Office of the Quartermaster General. There he demonstrated some of the traits that would become his trademark later on: namely, an overwhelming impatience with bureaucratic red tape and a willingness to sidestep "niggling regulations" and go out on a legal limb, if need be, to get the job done. By now, too, he had acquired as much logistical knowledge and firsthand experience as any Quartermaster officer in the Army—and he knew it.

With the attack on Pearl Harbor, Littlejohn yearned to get out from behind a desk and take on a field command. As he later explained: "My personal ambition was always to be Chief Quartermaster in a combat theater in a major war. After two years in the Office of the Quartermaster General at Buzzard's Point, pushing papers and being harassed, I decided it was time to break loose." It was early May 1942 and Dwight D. "Ike" Eisenhower, a fellow West Pointer, had just come to Washington as a newly promoted brigadier general, fresh from the Carolina maneuvers. Littlejohn (also a brand new brigadier general) explained the situation to Ike over a lunch at the Federal Reserve cafeteria, and asked if there was anything he could do. A week later he received a call about becoming Theater Quartermaster.

Chief Quartermaster

Littlejohn arrived in London at the beginning of June and opened an office at Number 1, Great Cumberland. His assigned building had been badly bombed and was bereft of furnishings and equipment. As he described it, he and his lone assistant, Colonel Michael H. Zwicker, pulled together a few cracker boxes to use as desks, and stuck on the door a penciled sign that read "Chief Quartermaster, ETO" (European Theater of Operations). From such humble origins grew a massive enterprise which in the end would affect the fate of millions.

It was known from the start that Quartermaster support would play a vital role in the Allies' ability to win on the continent, but that it would be a most difficult undertaking. Several factors made it so. Certainly the level of troops, supplies and equipment needed to launch and sustain the cross-channel attack dwarfed any previous

D-Day, 6 Jun 44: American assault troops carrying full equipment move onto Omaha Beach on the northern coast of France while landing craft jams the harbor.

experience in recent history. Also, the changed nature of mechanized, highly mobile warfare meant that Quartermaster planning factors and reference data had to be worked out almost from scratch, and amounted to little more than educated guesswork.

Another factor was organization. The complicated support structure that emerged between 1942 and 1944, and continued changing even to the end of the war, was built on tension, compromise and often conflicting or overlapping lines of authority. A logistics flow chart would show theater supplies moving through a communications zone, from base section to advance section, with a host of intermediate depots, storage areas and distribution points—to get to user units at the front. Of course, this all took place at the end of a very long line of communications, with a zone of interior and industrial base nearly 3,000 miles away.

Also, a large number of technically trained units and personnel—more than 30 different Quartermaster units alone, ranging from supply depot and railhead companies, to very specialized bakery, salvage, refrigeration, shoe repair, petroleum distribution, and graves registration units, to name but a few—were required to sustain Allied soldiers in the assault.

Logisticians of every stripe had also to contend with the vagaries of coalition warfare. In Littlejohn's case, he relied heavily on his British hosts for such crucial items as assigned storage facilities, laborers and clerical help, and a tremendous amount of locally procured goods and services. Their dealings were usually, but not always, amicable. In time, most of the frustrations were overcome as coalition partners learned to adjust to one another's standards and practices.

Yet, in war, as Clausewitz said long ago, even the simplest thing

is complex. Hence it took time for procurement officers to learn, for example, that when our English-speaking counterparts said "bracers" what they really meant was suspenders, that garbage cans were called "dust bins," and that cookies in the United Kingdom were termed "biscuits." And so on and so forth.

For Littlejohn, each day brought a fresh set of challenges and new problems that needed solving. And not a few surprises. After several months of painstaking efforts to accumulate Quartermaster support for the cross-channel invasion, suddenly in late Autumn 1942 he was given the word to refocus Quartermaster planning, resources, men and materiel in anticipation of *Operation Torch*. This sudden shift in strategic priorities marked an immediate setback for the Chief Quartermaster. He sent 78 of his best officers to North Africa, while others were taken from his replacement depot at Lichfield, and from a number of hand-picked specialists awaiting shipment at the New York port.

Positive Side

On the positive side, he quickly learned from this experience what worked and what did not, and gained a far better appreciation of the level of supplies needed to support an over-the-beach operation. In comparison with Normandy, *Operation Torch* was a relatively modest affair. Yet it still required, for instance, 22 million pounds of food, 38 million pounds of clothing, and 10 million gallons of gasoline to be put ashore on the African coastline.

It also illustrated the need for **flexibility** in every aspect of Quartermaster support—a fact clearly borne out 1 1/2 years later as the continental invasion finally got underway, and Littlejohn and company were made to adapt to the twists and turns, and ups and downs brought on by each season, each phase in the European campaign. Littlejohn was promoted to major general six months before D-Day, June 6, 1944.

Over the Beach

After a successful landing on D-Day, a stalled drive inland and failure to capture port facilities right away meant that Quartermaster supply soldiers had to continue bringing material in over the beach: sort, store and distribute it along a fairly narrow and dangerous front. If Littlejohn felt good about the initial landing, he was none the less surprised by the effects of strenuous fighting in the Normandy hedgerows.

In a matter of weeks, U.S. troops slugging it out in the mud consumed roughly 2 1/2 times the amount of clothing and other Quartermaster items of equipment that he and his staff had planned for. "The capture of each hedgerow meant a life and death race," he noted afterwards; and in trimming down to meet that race, the American soldier "frequently left behind his overcoat, overshoes, blanket and shelter." As a result, Littlejohn had to completely re-equip the better part of a million soldiers while still in the early stages of the campaign.

The breakout and pursuit that followed only intensified pressure on the Chief Quartermaster, who saw the overall supply picture go from feast to famine. The situation in late summer and early Autumn 1944 illustrated the old adage that a stationary front is the Quartermaster's dream come true, while a war of unchecked maneuver poses as the ultimate nightmare. By September the Allies were required to deliver to forward areas no less than 20,000 tons of supplies daily. As the lines stretched further and further from Cherbourg, the inevitable shortages began to be felt—with crippling effect. Whether it could have been otherwise is debatable.

Letters from Littlejohn to a colleague in mid-September give some indication of the trials faced during this period of "frantic resupply:"

> "It is very difficult," he wrote, "to sit here and determine current requirements on clothing and equipage. We know that the Maintenance Factors on many items are entirely too low. We also hope that the war will come to an end before many weeks and it will not be necessary to ship troops as originally planned. Somewhere in the field I must make an educated guess."
>
> [And again a couple of days later.] "I have so many problems today in connection with clothing that it is hard to know just where to stop or start. . . "
>
> [Thinking of the future he added.] "I have just returned from talking to General Bradley and I can assure you that for the next 6/8 weeks the problems that I shall have in connection with the mobile ground elements will be something to write about and study at Leavenworth for years to come."

Of course the war did not end as hoped, and his troubles would persist for another season and more. There was an especially tenuous period during the Bulge when supply lines and key Quartermaster depots came perilously close to enemy capture. But the worst threat came from the weather. The wet winter months took a terrible toll on Allied troops, and Littlejohn's personnel strained to meet the ever-growing demand for winter field jackets, shelter halves, wool blankets, socks, overshoes and shoepacs.

As the number of instances of severe frostbite and trench foot mounted into the thousands, sources inside and outside the military looked for a scapegoat. Littlejohn emerged as a prime target for criticism. It all came to a head in one devastating piece in *The Washington Post* entitled "Shades of Valley Forge." Later investigations exonerated Littlejohn of any form of negligence or wrongdoing, but it was a painful episode nonetheless.

Unforeseen

In Littlejohn's mind all the factors mentioned so far—the dynamics of the campaign, the war's extension through the winter, high maintenance factors, delays, shortages, and all the rest—contributed to what he saw as the most difficult problem in the ETO, a host of "unforeseen requirements."

Perhaps the greatest unforeseen requirement of all was the swelling tide of prisoners of war (POWs) who had to be cared for in the waning months of the war. On this subject the Chief Quartermaster later observed as follows:

> "Somewhere in the planning for the war against Germany I saw a statement that one million prisoners would be a reasonable estimate of the take. With all my problems of providing for U.S. forces, French forces, and Allied forces I put this problem in the realm of Limbo."
>
> "It did not remain in that state very long as the victorious American Armies advanced from the west and south the prisoner take reached astronomical figures—as of VE-Day 3 1/4 million."

Such gross miscalculation resulted in a sorely taxed supply system by war's end. Littlejohn's efforts to employ POW labor worked to some extent, but had little effect on the problem overall.

Major General Littlejohn often went to the field himself 'to get a look-see' at how the troops were being supplied.

It is perhaps useful at this time to say a few words about Littlejohn's method or approach to the position of Chief Quartermaster in the ETO. His first, most pressing task was to gather the personnel needed to accomplish the mission. He estimated he spent at least 50 percent of his time that first year in the United Kingdom making or defending tables of organization.

From the few who initially took up residence in the ramshackle London office in June 1942, Littlejohn's staff gradually increased to 30 or more, then jumped to around 400 or 500, and ultimately ran to more than 1,800 at its peak in February 1945. By then Office of Chief Quartermaster Headquarters had moved to France, and the general himself had become rather comfortably ensconced in a commodious chateau opposite the historic palace at Versailles.

His division chiefs were men of the highest caliber, with wide military background and civilian expertise. He employed, for example, a number of marketing and department store executives, the president of a nationally known shoe company, the manager of a distillery, a college president, and the circulation manager for a major metropolitan newspaper. He also had a habit of rotating his staff fairly frequently so they gained even wider experience.

Great Thrill

Those who failed to measure up were relieved or reassigned, while the successful ones got promoted. Littlejohn had his critics, to be sure, but those who stuck with it to the end remained intensely loyal to "the Old Man." Many would later look back on

these as the most exciting and rewarding days of their lives and had nothing but good things to say about their former boss. A letter from Brigadier General Al Browning, dated 5 Nov 45, is typical in this regard:

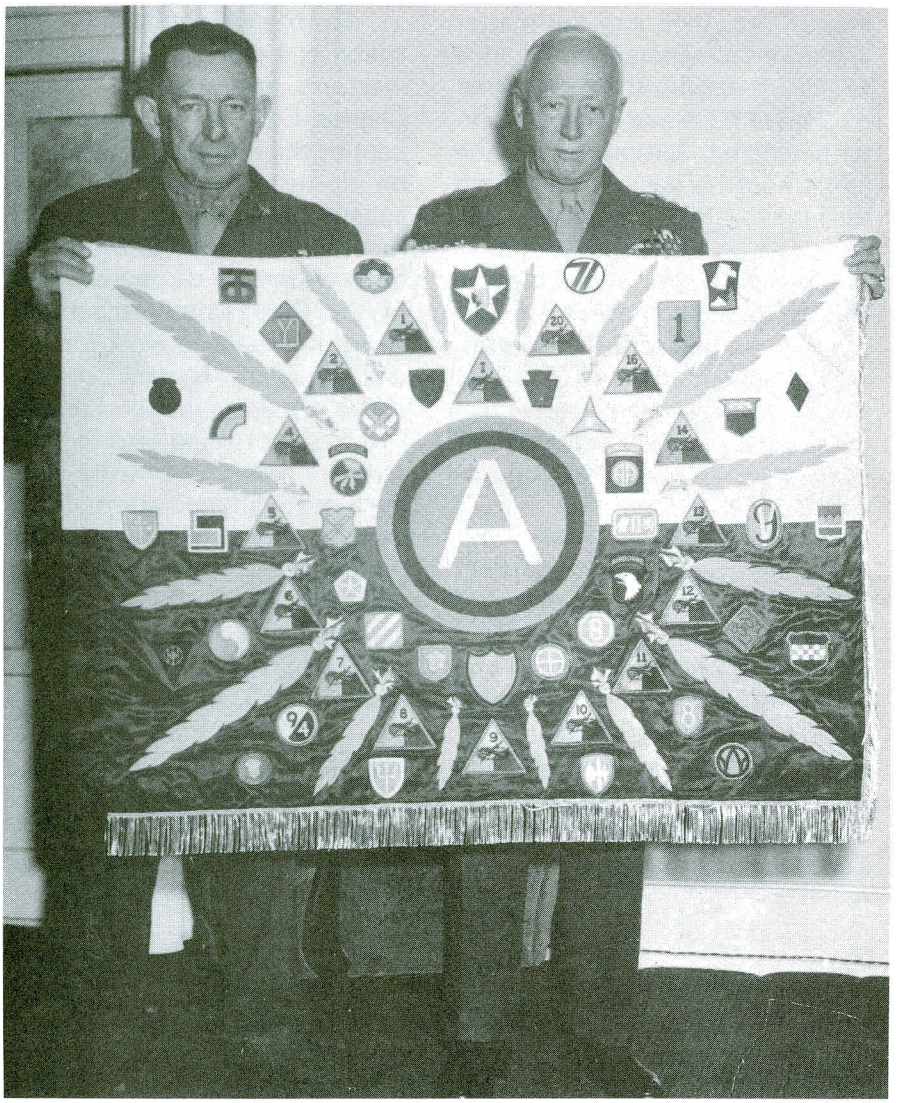
> "Before I leave the Army, which I expect to do in about two weeks," he wrote, "I want to tell you how much my association with you has meant to me. It has been a great thrill to watch your operations from the time when I first met you five years ago until now. I don't know of any man who could have handled the job of Chief Quartermaster for the European Theater of Operations in a manner even approaching the way you did this very vital job."
>
> "Although you probably will not get proper recognition for what you did," he continued, "nevertheless several million men were better clothed, housed, and fed because of you."

But as noted earlier, Littlejohn most definitely had his critics. A rancorous rift developed early on between the Chief Quartermaster and certain elements within the Office of the Quartermaster General (OQMG) back in Washington. They pegged him as a hectoring know-it-all, who constantly hit them up for more of everything, yet pointedly refused to heed their advice. Littlejohn, for his part, did little to disguise his contempt for rear area "academicians" whom he thought knew nothing of soldiering or actual conditions at the front. So a running battle ensued.

When supplies failed to materialize on time or in the amount promised and OQMG's response was that the check, so to speak, was in the mail and for him to remain patient, Littlejohn was anything but patient. Often as not, he would try an end run by pitching his case through technical channels, hoping to find a more sympathetic ear; or he called the Quartermaster General direct. Transcribed phone conversations have Littlejohn saying over and over, "General, this will not do . . . it simply will not do!" When this failed he appealed to higher authority, which had the effect of endearing him even less to OQMG. If he persisted in getting the "run-around," to use his term, he was not above leaking to the press that American GIs were paying needlessly for bureaucratic red tape.

All this would appear more than a little damning unless we realize what truly motivated Littlejohn: the care and well-being of the individual soldier in the field. All else was secondary. Indeed, he was a "muddy boots logistician" who never forgot his World War I experience with shabby clothes and lousy food and vowed it would never happen again, at least not on his watch.

To serve effectively he had to know what was going on. He adopted the practice of routinely sending staff members to the field to gather firsthand evidence, or he went himself to "get a look-see" at how the troops were far-



Major General Littlejohn and General George S. Patton were old friends.

ing: how their tents were holding up, for instance, or what they thought of the latest rations. Where shortages existed, and whether or not a new item of equipment was being accepted.

It is very tempting to view Littlejohn's manner and temperament as essentially "Pattonesque." He told his uniformed personnel in no uncertain terms they were expected to be dedicated, physically fit and ready to sacrifice at all times. He held himself to the same tough standards. Above all, he hoped they would exhibit drive and determination and adopt the can-do attitude needed to overcome the many hurdles that Quartermasters inevitably face in war. Here he harkened to his early West Point days and the words of his old wrestling coach, Tom Jenkins, whose favorite expression was "there ain't no holt that can't be broke." Littlejohn made this the motto of the Quartermaster Service in the ETO, translated into his own language: "It Will Be Done."

After it was all over, Littlejohn felt tremendous pride at what his team had accomplished. Many thought, and indeed hoped, he would be rewarded for his great service by being picked as the new Quartermaster General. In fact, that honor was bestowed upon another superb logistician, Major General Thomas B. Larkin. Larkin, incidentally, came out of an Engineer instead of the usual Quartermaster background. As a measure of his disappointment, and no doubt reflective of his loyal Confederate roots, Littlejohn once scoffingly referred to the new Quartermaster General as a "Carpetbagger!"

If Littlejohn felt a bit let down and under-appreciated by his beloved Quartermaster Corps in the days immediately after the war, it no ways matched the outright anger and resentment expressed with some of the early histories being written about the war. He completely dismissed a series of monographs on Quartermaster support in the ETO written by historians at Fort Lee, VA. He attacked rather mercilessly Roland Ruppenthal's second volume on logistics in the "Green Book" series—calling it in effect slanderous, a waste of taxpayer money, and part and parcel of a long-standing conspiracy to, as he put it, "cut my throat." He even went so far as to call for an inspector general investigation into the matter and asked for a personal audience to discuss it with the Army Chief of Staff. Praise and criticism notwithstanding, Littlejohn got the judgement he valued most from the leaders he most admired: Generals Eisenhower and Patton.

Ike called him "one of the top-flight Quartermasters of the world," and described Quartermaster support in the ETO as "the greatest supply job in history." Ike thanked him for his invaluable service in an autographed copy of *Crusade For Europe.*

As for Patton, his and Littlejohn's respect for each other was complete. Old friends from way back, Littlejohn served as a pallbearer at Patton's funeral and was later instrumental in having the statue of him erected at West Point. Despite the turmoil of combat, the two managed to stay somewhat in touch throughout the European campaign and apparently enjoyed sharing insights. A few weeks before his fatal crash, Patton wrote in a letter to Littlejohn: "I only wish that we could see more of each other as you and I are among those who look at war from a realistic standpoint."

Overall, it would seem that Littlejohn's strong personality aided him in doing the stupendous job he set out to accomplish. However, his personality probably worked against him in the eyes of posterity, made him appear more caustic and self-centered than he really was and thus rendered a fair assessment all the more difficult. Indeed it is hard to remain dispassionate toward such a passionate fellow as he.

From my own distant perspective, I tend to side with the wartime appraisal of Colonel Charles Garside, an investigator sent by the Pentagon to check up on some allegations leveled against Littlejohn. In a close-hold report carried back to the states, Colonel Garside came away a fan of the Chief Quartermaster. "I would not want to work for General Littlejohn," he said, "or serve under him as an officer. I doubt if I would want to go on a camping trip with him. But if I were invading a continent and attempting to destroy a vast military machine I would select Littlejohn as my Quartermaster."

That's a judgement I think the general himself would heartily approve.

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Aerial Resupply of Bastogne

CPT Mark A. Olinger

The aerial resupply of the encircled 101st Airborne Division and its attachments at Bastogne during World War II serves as an example for logisticians in developing and implementing their support concepts under adverse and trying conditions. In the grueling days of December 1944, the leadership and decisions of an acting division commander and division G4 provide a model for meeting the challenge of sustaining a light division in battle against a heavy corps.

When the 24 division-size counter offensive of German Army Group B broke through the Ardennes on 16 Dec 44, the theater reserves available to General Dwight D. Eisenhower consisted mainly of lightly equipped airborne divisions. The 82d Airborne Division was at Rheims, France, and the 101st Airborne Division was at Camp Mourmelon, France, resting and refitting after their release from ground operations in Holland. The 17th Airborne Division was in England, recently deployed from the United States. Additionally, the 7th Armored Division was with the Ninth Army in Holland and the 10th Armored Division was in reserve in the Third Army area. Movement of the airborne divisions began on 17 December. The 82d Airborne Division was sent to Werbomont, Belgium and the 101st Airborne was moved to Bastogne, Belgium, both by truck. The 18th Airborne Division began to be airlifted to Rheims, France. While the airborne divisions were relocating, the defenses in the VIII Corps area

were crumbling, and the Germans came within 11 miles of Bastogne.

The first request for aerial resupply came from the 106th Infantry Division on the night of 17 December to support two regiments in the St. Vith area. When additional requests brought the number of aircraft loads from 40 to 138, Major General Paul Williams, Commander of IX Troop Carrier Command, decided that all aerial resupply missions would be supported from England and ordered that all requests be sent there. After numerous delays, the mission to support the 106th Infantry Division was canceled on 21 December when St. Vith was overrun by the German Sixth Panzer Army.

Resupply became a serious problem when the 426th Quartermaster and 801st Ordnance Companies were unable to enter Bastogne on 19 December as a result of ambushes by German units. These companies were subsequently diverted to VIII Corps control until 27 December for the 426th and 29 December for the 801st. The absence of these companies left the 101st Airborne Division without normal supply operations for the entire resupply period. LTC C.W. Kohls, G4, 101st Airborne Division, maintained strict supply control and accountability and received daily status reports from all units. Use of abandoned supply points provided limited food and medical supplies, but the shortage of artillery ammunition was becoming serious.

The German XLVII Panzer Corps, commanded by General Baron Heinrich von Luettwitz, completed its encirclement of Bastogne on the night of 20-21 December making resupply by air the only option. On 22 December the situation was critical within Bastogne. Despite sound supply economy, the division could not hold out without resupply. Combined with the worsening supply situation was the German ultimatum for surrender or annihilation to which Brigadier General Anthony C. McAuliffe, acting commander of the 101st Airborne Division, gave his now famous response: "Nuts!"

Combined with the worsening supply situation was the German ultimatum for surrender or annihilation to which Brigadier General Anthony C. McAuliffe, acting commander of the 101st Airborne Division, gave his now famous response: 'Nuts!'

The 101st Airborne Division requested 104 aircraft loads of ammunition and rations on 20 December. Initially, the C-47 aircraft were to load in England and fly to an airfield in the Third Army area. There, the aircrews would be briefed on drop zone locations and would link up with fighter escorts from the 9th Air Force. The IX Troop Carrier Command planning staff soon realized that this process was too time consuming and would not meet the needs of the supported unit. The difficulty was that supplies had to be located and rigged for airdrop. Based on lessons learned from *Operation Market Garden* aerial resupply missions, the IX Troop Carrier Command decided to parachute insert two 101st Airborne Division Pathfinder Teams, consisting of one officer and nine enlisted men. The Pathfinders were equipped with radio transmitters for the C-47s to "home in on," so that the pilots did not have to visually identify the drop zone before releasing their loads. To allow time for preparation, the mission was delayed by IX Troop Carrier Command until 23 December.

Under normal conditions, drop zone recovery was the responsibility of the 426th Quartermaster and 801st Ordnance Companies, who were to set up supply points under division control. Because these companies failed to get into Bastogne, the division G4 instructed the S4s of the 501st and 506th Parachute Infantry Regiments to organize drop zone recovery teams. Each regiment was to send a minimum of five Jeeps to the drop zone for distribution of supplies according to instructions from the G4.

At 0935 hours, 23 December, the first two C-47s dropped two Pathfinder Teams in the area of the 2d Battalion, 327th Infantry Regiment. The Pathfinder Team leader reported to the division G4 that the aircraft would be arriving in approximately 90 minutes. The drop zones were set up and the aircraft were guided to them with no difficulty. At 1150 hours, the 21 aircraft that had been on hold in France with loads originally intended for the 106th Infantry Division arrived and delivered 28 tons of supplies. By 1600 hours that afternoon, IX Troop Carrier Command had sent in an estimated 230 more C-47s and had dropped 306 tons of supplies. The C-47s were escorted by 95 P-47s belonging to the 9th Air Force, who suppressed German anti-aircraft units. Anti-aircraft fire shot down eight of the C-47s. The teams recovered 95 percent of the supplies, with the Jeeps shuttling between the drop zones and unit supply points. The ammunition

provided did not always correspond in type and quantity to the needs of the unit. They received adequate .50-caliber ammunition but not enough .30-caliber for their M-1 rifles. They also needed more 75-millimeter (mm) ammunition for their pack howitzers, 76mm ammunition for the attached 705th Tank Destroyer Battalion, as well as medical supplies for the wounded.

gency requests would take priority over the airlift of the 17th Airborne Division.

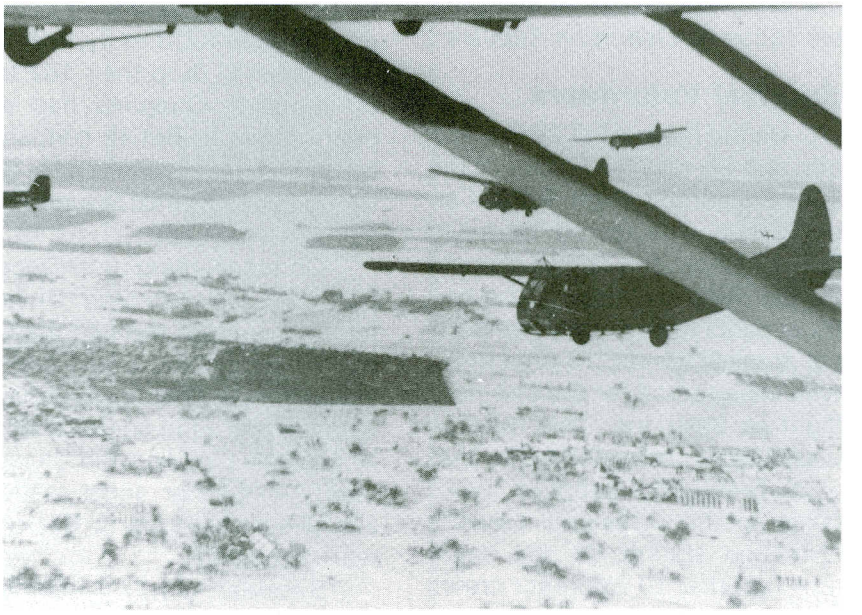
The aerial resupply continued on 24 December, as 160 aircraft of IX Troop Carrier Command dropped 183 tons of supplies. Resupply priorities were Class V (ammunition), Class I (rations), Class VIII (medical supplies)/Surgical teams and Class III (petroleum, oils and lubricants). The airlift of the 17th Airborne Division continued, and the SHAEF Air Staff augmented the IX Troop Carrier command with the Royal Air Force's (RAF's) 38th Group. This augmentation released more American aircraft for aerial resupply missions, since the RAF 38th Group aircraft and U.S. air items were incompatible.

On 25 December the weather was so foul over England that leaders had to postpone the resupply mission of 116 aircraft intended to drop 115 tons of supplies. The sustainment effort was now a full day behind schedule. The Germans attacked Bastogne in force with armor, causing U.S. fuel, antitank and artillery ammunition to run critically short. SHAEF declared that the resupply of the 101st Airborne Division was top priority for IX Troop Carrier Command the next day.

In an attempt to relieve this situation, BG McAuliffe requested an emergency airdrop on the next day. SHAEF passed the request to IX Troop Carrier Command in England. Unfortunately, the forecast stated that England would be weathered in again on 26 December.

Also, planes could not take off from airfields in France because there were not enough air items in France, nor had the unit needed to rig them arrived, due to weather delays in England. Furthermore, the supply class most needed, Class V, could not be packed very efficiently in the airdrop containers. LTC Kohls suggested solving the problem by using the salvaged gliders from the Normandy and Holland operations, which were in France with crews. Gliders could deliver artillery ammunition more efficiently than C-47s because special packing would not be required.

BG McAuliffe requested through VII Corps Headquarters



John H. Lowden, author of *Silent Wings at War: Combat Gliders in World War II*, provided this photograph of the second mission of the 440th Troop Carrier Group, IX Troop Carrier Command, 26 Dec 44, which consisted of 10 gliders loaded with gasoline. Both missions landed safely within the division perimeter despite intense German anti-aircraft fire. Glider pilots suffered a 35 percent casualty rate, one of the highest of World War II.

On 23 December another group of soldiers in Marcoury, Belgium, requested a resupply of approximately 50 loads of supplies by air. It was not feasible to insert Pathfinders there because only the town was in friendly hands. Thirty C-47s took off on the mission and attempted to drop by map coordinates, but again the supplies landed in German lines, as had happened during *Operation Market Garden* in September.

As requests for air assets increased, it became apparent that not all of them could be supported without interfering with the movement of the 17th Airborne Division to Rheims, France Supreme Headquarters, Allied Expeditionary Forces (SHAEF) Air Staff established priorities, and only emer-

an emergency glider resupply mission. At the same time, he changed the resupply priorities to Class VIII/Surgical teams, Class V, Class III, and Class I. The need for medical supplies and personnel was critical because the 326th Medical Company had been captured by the Germans on 19 December when the Division Clearing Station was overrun. The glider request was approved and transmitted to the 50th Troop Carrier Wing in Chartres, France, for execution as *Operation Repulse*.

Surgical Volunteers

On the morning of 26 December, one CG 4A Waco glider of the 96th Squadron, 440th Troop Carrier Group was towed from Orleans, France, to Etain to prepare for the mission. In Etain, the two glider pilots were met by two combat surgical teams, 13 men in all, who volunteered for the one-hour flight to Bastogne. This mission was flown successfully. The surgical team and supplies were taken to the makeshift casualty collection station. At the same time, another 10 volunteer crews from the 98th Squadron, 440th Troop Carrier Group at Orleans, were preparing to fly a glider mission loaded with ammunition and gasoline. This mission was 265 miles in length and would take approximately 4 1/2 hours. All 10 gliders landed safely—one with 70 holes in it—within the division perimeter and delivered 16 tons of supplies despite intense ground fire.

Despite bad weather over England, 301 aircraft delivered 320 tons of supplies. After completing their flight, a number of planes landed at airfields in Western France to wait for clear weather. At 1645 hours, the 37th Tank Battalion, 4th Armored Division, broke through the southern side of the perimeter at Bastogne.

Third Glider Mission

On 27 December, the third glider mission to Bastogne was flown by the 439th Troop Carrier Group based at Chateaudun, France. It consisted of 50 CG-4A gliders with 76 tons of cargo. The 17 tow planes and 15 gliders were shot down when they encountered heavy anti-aircraft fire enroute to Bastogne. Only 35 gliders with 53 tons of supplies reach Bastogne. Poor weather continued over England, and of the 238 aircraft scheduled to fly, only 188 were able to drop their 162 tons of supplies. Supplies had also been rigged in British containers by this date allowing RAF 38th Group to begin aerial resupply missions the next day.

On the evening of 27 December, the 4th Armored Division forced a corridor through the German lines to Bastogne and relieved the 101st Airborne Division, opening a ground line of communication and ending the encirclement. All further aerial resupply and glider missions to Bastogne were canceled.

Between 23-27 December, the IX Troop Carrier Command had dropped or landed by glider 1,069 tons of supplies, with 1,004 tons successfully delivered into the division area. In this same time period, IX Troop Carrier Command and RAF 38th Group airlifted 13,000 soldiers and 1,800 tons of equipment belonging to the 17th Airborne Division.

101st Survival

The fact that the 101st was an airborne division contributed to its survival at Bastogne. They were accustomed to fighting while surrounded by the enemy, whereas the armored and infantry divisions were not. The 101st Airborne Division had a rear base organization outside the encircled area which could coordinate resupply missions, and had experience in working with IX Troop Carrier Command. The Pathfinder Teams were experienced in working with the division C-47 aircrews.

This resupply could not have been accomplished without the Second Quartermaster Battalion Mobile (Provisional), which provided all parachute packing, rigging and dropmaster support for the IX Troop Carrier Command. Losses to IX Troop Carrier Command included 25 C-47 transports and 15 CG-4A gliders. The glider pilots who supported the resupply effort suffered a 35 percent casualty rate, one of the highest of the war. These heroic efforts demonstrated the power of aerial resupply in 1944. The valuable lessons learned at Bastogne have proven useful since World War II and will continue to guide logisticians in the future.

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Technology: Army Logistics, The Next Generation

SFC Karlo A. Aguilar

Seems like every day we hear about new technologies being developed to enhance the way we live. Technological advances have given us microwave ovens, digital watches, compact disc players, visual/voice telephones, and "smart" cars that tell us when our turn signals are left on or we forgot to put our seat belts on.

Peek Into the Future

I often hear people say that the Army lags behind in technology. This is not a true statement. I work in the Quartermaster Automation Office, Deputy Assistant Commandant for Future Developments (DAC-FD) at the U.S. Army Quartermaster Center and School, Fort Lee, VA, where technology is foremost on our minds. We in the Quartermaster Automation Office have the unique privilege of peeking into the future and seeing what is on the horizon for Quartermaster automation systems. The future, by the way, looks bright!

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For those of you who have been in the logistics community for awhile, you will remember LOGMARS-T (Logistics Application of Automated Marking and Reading Symbols-Tactical). This was the hand-held bar code reader that came in the nice green transit case. LOGMARS-T was developed to assist in processing receipts documents. The system could be tethered "hooked up" to the TACCS (Tactical Army Combat Service Support Computer System) computer running a software program called SARSS-1(I) (Standard Army Retail Supply System-Interim). When LOGMARS-T first hit the scene, there were a hard core group of die-hard "manualists" (you probably know the type: do not like computers, do not need computers, things are going just fine without them, thank you very much!). LOGMARS-T was introduced as a system "enhancer" and marketed as a more efficient, less labor-intensive way to increase productivity. The nay sayers hoped the "new gizmo" would fail.

Growing Pains

LOGMARS-T, like any new system, was still maturing in its applications and went through many years of growing pains. LOGMARS-T did prove that the principle of automating source data collection made sense and that anything is possible with the proper technology.

After that brief history lesson on LOGMARS-T, let's look at how the LOGMARS-T concept has evolved. In the never-ending search to design a better system, the Army is looking at commercial applications of technologies to provide better source data collection, increased intransit visibility, real time transaction tracking, and a logistical support system that increases response times to our missions in a "user friendly" environment.

Bar Code Data

You may be asking, is this possible? From a technological perspective the answer is definitely yes. From an institutional perspective it depends on whether you think the glass is half full or half empty. One of the first things we consider in automation is what is available in hardware and software. To do this, we look at what we are trying to automate, such as functionality, usage, benefits, cost, overall performance, and most importantly: the mission. The first application I will discuss is called Bar Code Data Collection System. Bar Code Data Collection Systems consist of the following:

- A code
- A symbol
- A printer to produce the symbol
- A scanner and terminal to read the symbol
- Communications to a computer via a network:
  - •• Without intermediate controller
  - •• With intermediate controller
- Software
  - •• Network
  - •• Printer/scanning/terminal facilitators
  - •• Host application, personal computer and/or mainframe
- Integration, interaction, and maintenance
- Trained personnel

If you have never thought about it, those bar codes you see on products in the supermarket and elsewhere had to go through the processes listed above. So you may be wondering what exactly are some of these things. Well let's talk about a couple of them.

Unique Numbers

A code is a way of identifying a person, place or thing with a unique number (or set of letters and numbers). Whenever this number is encountered in a particular system, the identity is accurately established. The following are examples of codes found in everyday living:

- A license plate
- A social security number
- A house or business address
- A part number
- A stock number
- A requisition number

Many of these are taken for granted. It is important for the bar code data collection system user to understand that any code can be represented with a bar code symbol.

- A code - identifying number and/or letters
- A symbol - array of bars and spaces
- A format - specified layout of symbol and code

Now that we've looked at the technical breakdown of a bar code, let's look at a typical example of its usage. The Automotive Industry Action Group (AIAG) label is used to identify the movement of inventory materiels between automotive suppliers and the automotive assembly plants, and between manufacturing plants and assembly plants operated by the automotive companies. The label identifies the movement, inventory, reorder point, cost, and receipt. One label does it all. The Army is using bar codes in several ways to give us the type of tracking the AIAG has.

Personal Computers

Direct connection of bar code scanner/terminal units to a host application is acceptable when there are few data collection stations or when the "host application" itself resides on a personal computer (PC) (SARSS-1 as an example). One of the most common ways of connecting scanner/terminal units to a host application is to use an intermediate controller device, which in today's world is a PC equipped for this purpose. There are several advantages for using a PC for this purpose:

- Software is readily available to turn a standard PC into a very capable controller.
- An intermediate controller device "decouples" the scanner/terminal devices from the mainframe (host application) operating environment.
- Most host application systems will need no major expansion to handle the increase in two-way communication traffic between bar code data collection system and the host. PCs handle this communication traffic quite well.
- Use of an intermediate controller (SARSS-1) device begins to build redundancy into the bar code data collection and helps with the task of ensuring that no data is lost once entered.

By this point if you feel as if you are reading a technical manual, bear with me a little longer. We are almost through the 'Tekkie Talk' and into the 'Wiz Bang' stuff.

Bar Code Symbols

A bar code symbol implies:

- Encoded data
- A symbology standard
- Acceptance and widespread use
- Consistent implementation

There are many bar code symbologies. The most popular are Code 3 of 9, Interleaved 2 of 5 (I 2 Of 5), UPC-A, UPC-E, Codabar, and Code 128. Symbols are delivered to the scanning device in a bar code data collection system as a regular part of operating the system. The symbol conforms to a symbology standard (3 of 9 for Army personnel). The code number represented in the symbol is a standard number (standard code) for that system (such as SARSS). The symbol(s) may be delivered in a standard format (application specific label or form such as the 1348-1A used as a receipt document). So what's this all mean to you and me? A standard is defined as:

Scanners and Terminals

Now let's talk about scanners and terminals used to read bar codes. Scanner technology is truly amazing. Leading edge application of physical science has been involved in developing relationships between scanners, terminals, terminals to network, and of networks to host applications. Delivery of collected data at the scanner/terminal unit(s) is accomplished by using a computer communications network which connects many scanner terminal unit(s). The network connects the scanner terminal units either directly to the host application (mainframe) or to a controller which buffers the network from mainframe outages and helps guarantee that no data is lost once data is entered into the bar code data collection system.

By this point if you feel as if you are reading a technical manual, bear with me a little longer. We are almost through the "Tekkie Talk" and into the "Wiz Bang" stuff.

Data Collection

Recently, Radio Frequency Data Communications (RFDC) has

come into rather common use in many data collection applications. (The Army is testing this system at Fort Bragg, NC.) Two technologies are available on the market today, narrow band and spread spectrum. The narrow band systems have been used for several years and have a proven track record. Spread spectrum has been installed commercially for only a year or so and is maturing very rapidly. The basic advantage of spread spectrum is the ability to achieve higher data rates than narrow band systems which will enable larger populations of terminals on a single system, (Think in terms of a forward or main direct support unit processing receipts directly into the system from anywhere outside or inside the storage facility...in real time!)

The advantage of spread spectrum is the reduction in range that accompanies the lower power allowed by the Federal Communications Commission (no license required) as compared to narrow band radio systems (license required). RFDC combines the features of a hand-held data computer (LOGMARS-T) and a two-way radio in order to enable communications on line in real time to a remote (SARSS-1) data base. Under the umbrella of Battle Lab initiatives, the Quartermaster Automation Office is testing RFDC/SARSS-1 within the I Corps Support Command, Fort Bragg.

I have talked about symbologies, scanners, bar codes, and radio frequency technology. Now let's look at two-dimensional bar codes.

The transitional automated/identification concept uses unique identification number or name carried in a linear bar code (3 of 9 discussed earlier). When scanned, that name or number goes into a computer (electronic data base) to access a file containing additional information. For example: A receipt is scanned. The SARSS-1 activity file is accessed. The item is either placed in location as part of the authorized stockage list (ASL) or issued to the unit as a materiel release order, A5A.

Stacked Bar Codes

Two-dimensional or stacked bar code symbologies such as Code 49 and Code 16K, introduced in the late 1980s, generally satisfy the requirement to produce high-density symbols for marking small items. They have the capacity of about 80 characters in the space of a postage stamp. This means you can take about 20 materiel release orders or 10 transportation control movement documents or any other large-volume documents and put them on a bar code the size of a postage stamp.

Unlike traditional linear bar codes, which serve as a key to a record in the external data base containing the required information, the Portable Data File (PDF) is the entire record. All required information is contained in the symbol itself.

Are you impressed yet? The technologies I have mentioned are but a few of the innovations the Army is looking at and in many cases, already testing. The future holds a better way of doing business using automation as a true enhancer or, as I have often heard, as a force multiplier in the logistics support world. While we move closer to the 21st century and our global responsibilities change, the Army will continue to evolve, using technology, into a force capable of providing support when and where needed, as well as maintaining a high state of readiness globally.

Stay tuned, the future is closer than ever before.

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SFC Karlo A. Aguilar is assigned to the Quartermaster Automation Office, Deputy Assistant Commandant for Future Developments, U.S. Army Quartermaster Center and School, Fort Lee, Virginia. He is a graduate of the Quartermaster Noncommissioned Officer Academy Basic and Advanced Courses, the Instructor and Key Personnel Operators Course for the Logistics Application of Marking and Reading Symbols-Tactical (LOGMARS-T), Tactical Army Combat Service Support Computer System (TACCS), Desk Top III Standard Army Retail Supply System Objective (SARSS-1, 2AD, 2AC/B), and system manager and operator training including Informix Structured Query Language (ISQL) on UNIX. His previous assignments include three tours as Noncommissioned Officer in Charge of Supply Support Activities/Direct Support Units in Germany; Chief of Supply and Services Division, Chief of Plans and Operations Division, 20th Area Support Group, Korea; and Instructor for Advanced Individual Training enlisted, Basic and Advanced Noncommissioned Officer Courses, Officer Basic and Advanced Courses and Precommand Courses. SFC Aguilar has also provided training on tactical computer systems at the Command and General Staff College (CGSC), Fort Leavenworth, Kansas.

Too Fast for Safety

SFC Gary Archibald

Situation 1:

You are the first sergeant or company commander for a unit just back from a major field training exercise. You must give the safety briefing for the long weekend coming up. You know from past experiences that soldiers only laugh at the so-called **SAFETY SPEECH.** Wanting to keep it short and sweet, you generalize and tell your soldiers: "Be safe, have a good weekend, and don't drink and drive." During that weekend in only one accident, two soldiers were killed and another was disabled for life. They had been drinking, not wearing their seat belts, and driving too fast.

Situation 2:

The headquarters platoon sergeant enters the office of the supply sergeant and directs him to go to the motor pool to perform preventive maintenance checks and services on a vehicle. At the close of business (COB) formation, the platoon sergeant asks for the DA Form 2404 (Equipment Inspection and Maintenance Worksheet) on the vehicle. Even though the supply sergeant never went to the motor pool, he produces a DA Form 2404 prepared on the vehicle.

On Monday, the unit is alerted for another major deployment. The March Order is in two hours, but no one knows that the vehicle's brakes are inoperable and that one tire is dangerously thin. During movement, the vehicle's brakes fail. The vehicle leaves the road, the tire explodes, and the vehicle rolls over. The driver is killed instantly. He also was not wearing his seat belt.

In both situations the leaders failed in their duties to ensure that their soldiers were properly briefed on mission performance and individual responsibilities. This inattention to detail or dereliction of duties could result in serious injuries or fatalities to the soldiers or serious damage to the equipment. As leaders, we are responsible for the actions of our soldiers as well as ourselves.

"But We've Done That a Thousand Times Already." "Anybody Knows How To Do This." "We Don't Have the Time."

All too often we hear these phrases. Is it out of boredom or a cover-up for laziness? All three phrases can contribute to carelessness during a mission. Reality does not usually set in until too late and someone is injured or killed or equipment is damaged. Trying to be a step ahead of everyone else, we too often look over the little things with a greater impact on us in the long run. Safety is one of those "little things" we seem to overlook many times.

If every soldier or leader had to review the statistical data on Quartermaster accidents, we definitely would have fewer accidents and better use of safety procedures. We often think of ourselves or our unit as exceptions to the rule. "That could never happen to me" was possibly the thought that passed through the minds of the last eight Quartermaster fatality victims in the Corps or possibly through the minds of the other 154 accident victims reported thus far in FY 93.

The Quartermaster Accident Summary shows a comparison between the total number of accidents for the Ist and 2d Quarters, FY 93 and the entire number of accidents for FY 92.

Leadership

Leaders need to ask some important questions. Are all accidents being reported? Are units submitting the required DA Form 285 (US Army Accident Report)? Of the accidents reported, how many could have been prevented? Possibly almost all accidents could be avoided by taking a few minutes for a little risk assessment of the hazards that we face. Is horseplay on- or off-duty really worth human lives? Are we really being cost-conscious by rushing, or are we only creating more problems and trouble for ourselves?

Safety has been taught to us all our lives, even as far back as "look both ways before crossing the street." Lest we forget, one of the FY 93 fatalities was a Quartermaster soldier who walked out into the street in front of a car. Poor judgment has resulted in approximately 70 percent of the reported accidents this FY alone. In FY 92, 23 Quartermaster soldiers were killed. These lives were needlessly taken in a few thoughtless minutes of time. We do not plan our days around accidents, but some of us can be classified as accidents waiting to happen.

The majority of privately owned vehicle (POV) accidents in FY 92 were due to excessive speed or driving too fast for road conditions. We always seem to leave later just to drive faster.

Sports injuries were also a large percentage of the total Quartermaster accidents. The largest percentage of these accidents

was related to basketball. Improper footwear often results in broken or severely twisted ankles. Jammed or broken fingers often result from improper catching or handling of the ball or rim.

Improper equipment handling resulted in numerous accidents as well. Simply using the right tool for the job could help eliminate these accidents. Improper lifting techniques can cause serious injury or loss of life or limb. Being "gung-ho" when lifting and handling supplies and equipment could possibly lead to the loss of the soldier or equipment.

This is the type of information that should be incorporated into the unit safety briefings as well as reminding soldiers of past unit-specific incidents. The old Unit Safety Briefing has gotten too repetitious, boring, and almost comical. Have you ever felt like you are just talking to people who never really listen anyway? Follow this simple rule: safety briefings are important and must be adapted to the safety problems related to the unit.

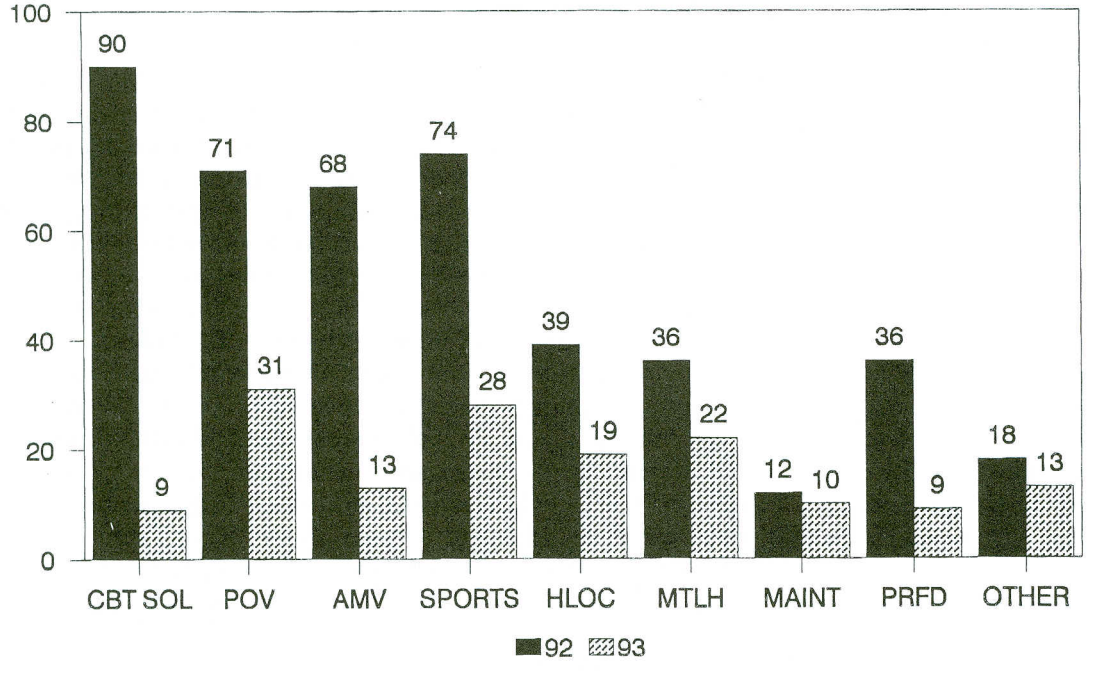
Remember, accidents within the Quartermaster Corps affect us all, both personally and professionally. We often read about accidents and make our comments, but how we really feel is never conveyed. Will you or I be next? Stop and spend a little time considering the risks involved in everything you do.

As leaders, we are responsible for the safety of our subordinates at all times. Do you want to be the individual who has to say "Private Doe or Sergeant Doe has been in an accident because I didn't perform my duties as a leader"? Insist that your soldiers, as well as yourself, take all necessary safety precautions and perform to the standards required. In too many cases, rushing has often resulted in serious accidents.

Slow down, be safety conscious. Identify the risks involved and correct or manage them. Make yourself aware. The life you save may be your own.

SFC Gary Archibald is currently assigned to the Office of the Quartermaster General as the Senior Career Management Noncommissioned Officer. His most recent assignment was a Senior Drill Sergeant in the 266th Quartermaster Battalion, Fort Lee, Virginia.

Quartermaster Accident Summary FY 92 and 1st/2d Quarter FY 93



Legend:

AMV - Army Motor Vehicle: improper operation, enter/exit vehicle, misjudge clearance, vehicle malfunction
CBT SOL - Combat Soldiering: physical training, parachuting, weapons, fire, explosives
HLOC - Human Locomotion: stairs, climbing, running, walking, falling, bending
MTLH - Materiels Handling: lifting, storage, improper equipment use
MAINT - Maintenance: preventive maintenance checks and services, operator maintenance, improper equipment
OTHER: fires, quarters maintenance, not official duty
POV - Privately Owned Vehicle: speed, fatigue, failure to yield, other driver, tailgating
PRFD - Preparation of Food: burns, M2 burner, grease, immersion heater
SPORTS: basketball, football, softball, swimming, bicycling, skateboarding

PROFESSIONAL READINGS

The Professional Readings section of the *Quartermaster Professional Bulletin* encourages the professional development of all Quartermasters. Titles are selected from the Quartermaster School Professional Reading List and the current Department of the Army Contemporary Military Reading List, as well as other notable sources. Short reviews from the field are always welcome.

In Search of the Warrior Spirit

Richard Strozzi Heckler, North Atlantic Books: Berkeley, CA, 1990.
CPT Jeffrey S. Wilson

What is a warrior, and does he have a place in the modern military? The author provides a penetrating and thoughtful examination of this question. At the time of writing, Heckler was affiliated with the Sports Mind Organization, a Seattle-based firm that specializes in human potential development programs. Sports Mind uses meditation, martial arts, biofeedback and a variety of other exercise, nutrition and self-awareness techniques to help clients achieve greater unity between mind, body and spirit - a more holistic perspective on life. In 1985, the organization won an Army contract to work with two Special Forces A-Teams for six months to see if concentrated exposure to the Sports Mind methods, especially martial arts (aikido in particular), non-confrontational conflict resolution techniques, and meditation could measurably increase the physical fitness, endurance and mental awareness of soldiers who were already well above the Army norm.

The Sports Mind group was a diverse mix. Heckler himself is a son of a career officer, former Marine and All-American track star, and holder of a fourth degree black belt in aikido, along with a doctorate in psychology. The others included a retired Marine colonel, a biofeedback engineer, a potpourri of experts in other martial arts and meditative disciplines, and a Benedictine monk. As for the soldiers, their units and identities are all pseudonyms, though the details in the book will reveal to most soldiers which installation and Special Forces group was involved.

The book is interesting on many levels. The reader does not have to be in the combat arms or even interested in the martial arts to appreciate the depth with which the Sports Mind staff tried to enable the soldiers to gain new perspectives on the most basic questions facing the modern military professional: Do I really know what a warrior is? Do I fit the description? What is the role of the warrior in light of the end of the Cold War and the popularity of more "passive" forms of public service for young people? Perhaps most importantly, how can I effectively use meditation and the non-confrontational conflict resolution methods to increase harmony between my mind, body and spirit without losing the pragmatic, non-reflective, action-and-decision-oriented part of myself that is so critical to battlefield success?

Heckler's group and the Green Berets tested each other, probed for weaknesses, analyzed each other's motives and world views, and finally achieved unity of effort. That story is related in riveting detail, thanks to Heckler's extensive use of diary notes and taped interviews with the soldiers.

In the end, the quantitative data prove that the program had exceeded all expectations. Data came from periodic physical training tests, biofeedback sessions (in which the soldiers showed the ability to consciously produce Alpha brainwaves for relaxation and alertness), martial arts competitions, and a capstone winter field training exercise. All the soldiers increased their physical fitness, endurance, self-control and stress management abilities, as well as their martial arts skills. Significantly, many soldiers revealed through periodic contact with Sports Mind for five years after Project Trojan Warrior that the spiritual disciplines continued to affect their personal and professional lives positively and profoundly.

The book's primary value is Project Trojan Warrior itself. The author demonstrates to civilians that military personnel reflect the society they serve. Some desire to be examples of the best that society has to offer. On the other hand, the book serves as a challenge to the military to accept new concepts proven valuable in the civilian world. (Sports Mind conducts Trojan Warrior-type programs for corporate leadership and individuals.) Applying those concepts will enhance soldiers' awareness of their relationship with society as a whole, while improving their readiness to face the challenges of the post-Cold War world.

CPT Jeffrey S. Wilson, an Ordnance Officer, is attending graduate school at the University of Illinois, Champaign-Urbana. He is studying toward a master of arts degree in philosophy, pending assignment to the English Department of the United States Military Academy at West Point, New York.

Wars in the Third World Since 1945

Guy Arnold, Cassell: London, 1991.

With the end of the Cold War, the weakness derived from poverty and underdevelopment in the Third World means that many small and not-so-small wars will continue into the foreseeable future. The big powers have intervened directly. They have supplied arms and taken sides, depending upon the interests they wished to defend or the actions of other major powers that they wanted to counterbalance.

In the years immediately after World War II, nationalism throughout the Third World spelled the end of the European empires, and the beginning of the Cold War with its idealogical division between the capitalist West and the Communist block. As a result, four decades of violence have been confined to the world's developing countries. The author divides the book as follows: colonial liberation wars, big power intervention wars, border wars and wars between Third World countries, Israel and its neighbors, and civil wars.

Global Logistics and Strategy: 1943-1945

Robert W. Coakley and Richard M. Leighton, Office of the Chief of Military History, U.S. Army, Government Printing Office: Washington, D.C., 1968.

This volume examines how and how well the U.S. Army overcame the problems of logistics in the major operations of World War II against Germany and Japan. The focus is on the many problems of dividing resources among nations and theaters of war in a global conflict. The book does not cover detailed logistical operations at lower levels and it does not treat internal logistics in overseas theaters except as necessary to establish the context for decisions at the center. It is primarily concerned with ground force logistics. This work is a sequel to *Global Logistics and Strategy, 1940-1943.*

A Soldier Supporting Soldiers

Joseph M. Heiser, Jr., Center of Military History, U.S. Army, Government Printing Office: Washington, D.C., 1991.

The author offers firsthand experience in the organization of combat service support. He describes and analyzes problems still familiar to those who provide the materials and other support required by today's Army. The book also deals with leadership and the opportunities in the military services.

The author, a retired lieutenant general from the Ordnance Corps and a logistics consultant to government agencies, has been an eyewitness to logistical doctrine in the U.S. Army for a half century.

Logistics of Liberty

James A. Huston, University of Delaware Press: Newark, 1991.

This study surveys the Continental army's logistical problems and accomplishments in the American Revolution. The book focuses on supplies for a long march, the concentration of forces and supplies at Saratoga, Washington's supply lines in New Jersey and Pennsylvania, and the great concentration of forces at Yorktown. The author, who notes that military historians long neglected logistics in favor of strategy and tactics, goes beyond the Revolution to postwar steps toward a national arms system.

Operation Desert Shield/Desert Storm After Action Review: 1990–91

1st Corps Support Command, U.S. Army, 1991.

The after action review covers the activities of the command beginning with the order on 4 Aug 90 and ending with the redeployment of the Port Support Activity on 15 Jun 91. Also, the report summarizes the functions executed during Operation Desert Shield, deployment and defensive operations, Operation Desert Storm, offensive operations, Operation Desert Farewell and redeployment.

Army Civilian Career Evaluation System (ACCES) Update

ACCES is the new career referral system that replaced the SKAP system for all GS-12 careerists and above. The Career Program 13 (CP-13) ACCES Raters Training and Panel was held 13-23 Jul 93. Thirty-eight supply careerists, GS/GM-13 and above, were trained to rate the accomplishment statements for the six abilities required by ACCES. Over 600 packages were rated. Results were mailed to registered careerists last August. Referrals began immediately.

ACCES package submissions have no suspense dates. Submit packages anytime through an Activity Career Program Manager for forwarding to the U. S. Army Total Personnel Command (PERSCOM). Panels meet quarterly to rate all packages submitted during the previous 90 days. You cannot be considered for any promotional opportunities or lateral reassignments if you have not submitted your package. The career opportunities may not be plentiful right now, but some exist. Be ready when a referral list is requested. For additional information, contact the Supply Proponency Office, Deputy Chief of Staff for Logistics (DCSLOG), DSN 225-3844.

ACTEDS Career Opportunities

The Army Civilian Training, Education, and Development System (ACTEDS) Plan for Career Programs (CPs) CP-13, CP-17 and CP-24 provides a road map for training needed for career success. This plan integrates the Supply Management, Materiel Maintenance Management and Transportation Management career programs under one cover without losing the identity of the individual career programs. It describes the formal training, beginning at entry level, that builds solid logistics backgrounds.

The ACTEDS Plan identifies five levels of progression. Entry level is grades GS-5 through GS-7. Specialist level is at grades GS-9 through GS-12. The intermediate level is the supervisory, technical, or staff headquarters specialist level, GS-12 through GS/GM-13. The management level is grades GS/GM-13 through GS/GM-15. The fifth level is the Senior Executive Service level. Formal training requirements are identified at each level.

In addition to the typical schoolhouse courses, the ACTEDS Plan identifies numerous competitive training opportunities for significant career enhancement. Careerists are competitively selected for development to positions with greater responsibility in a career field. The several categories of competitive training include short-term and long-term military-sponsored training courses (Army Management Staff College and the National War College), professional developmental assignments (Training With Industry and Headquarters, Department of the Army (HQDA) Action Officer), competitive development groups (LOGAMP and the Army Acquisition Corps) and the Logistics Education Assistance Fund for both undergraduate and graduate work. Most of these opportunities are open to careerists GS-12 and above.

Properly planned assignments in several specialties at different installations or echelons strengthen depth and breadth of experience. They also are factors in improving individual competitiveness for advancement. You are responsible for your own career planning. Identify your individual career goals, and determine the professional development opportunities to best serve your objectives. Then apply. For a copy of the ACTEDS Plan, see your Activity Career Program Manager or contact the Supply Proponency Office, HQDA Office of the Deputy Chief of Staff for Logistics (ODSCLOG), DSN 225-3844.

QMOBC — A Civilian Among Us

LT Mark A. Thomson

While in-processing into the Quartermaster Officer Basic Course (QMOBC), the usual mixture of students (United States Army Military Academy, Reserve Officers' Training Corps and Officer Candidate School graduates, Active and Reserve Component soldiers, and two soldiers from Allied nations) welcomed an unusual addition. Sitting in the sea of Class B uniforms was a lone civilian in a suit and tie.

Mitchell Scott Hines is the first in a series of Department of the Army Civilians (DACs) to be sent through QMOBC. He is part of the class in every way, participating in all training and instruction, and even attending early morning physical training.

This program is the result of an agreement between the Deputy Chief of Staff, Logistics (DCSLOG) and the 42d Quartermaster General, Brigadier General John J. Cusick, to evaluate the applicability of Quartermaster training to civilians working in Army supply management fields.

Mitchell Scott Hines

Hines' civilian job is Army Material Command supply management intern (GS-7), managing the flow of test, measurement, and diagnostic equipment (TMDE) for missile systems. He works at the U. S. Army Missile Command (MICOM), Redstone Arsenal, AL. He attended the Intern School of Engineering and Logistics at Red River Army Depot, TX, for nine months to prepare for his position. He then spent nine months working at his civilian specialty before selection to attend QMOBC.

Culture Shock

The transition from a civilian to a military environment has been the most challenging part of his experience. Facts of military life that a soldier takes for granted, such as early formations, military courtesy and short haircuts were all new experiences for him.

Although not required to do some things soldiers must, such as physical training, he makes it a point to participate in everything his class does. This has greatly helped his integration into the class, since there is no perception by classmates of him receiving preferential treatment.

Except for the unusual DAC insignia a civilian wears on battle dress uniforms, it is virtually impossible to distinguish Hines from any of the other QMOBC students. Occasionally, instructors are surprised to learn that one of their students is a civilian, and they take a few moments to pick him out from the crowd. His haircut is also good camouflage. During the early days of the course, he went to an on-post barber shop and told the barber to "give me a medium haircut." Hines found out that a military "medium" haircut is very short by civilian standards.

His most difficult subject area so far is the one giving the rest of his class the least difficulty: general military subjects. The officers in the class have been exposed to tasks such as adjusting indirect fire, or wearing a protective mask for years before coming to QMOBC and are proficient at basic military tasks. Even the students from the Allied countries have gone through training which is at least similar, making it fairly easy for them to pick up on the U. S. Army way of doing business.

Hines, however, has no background in these tasks. He has studied and been coached by his class for a number of hours after the duty day to gain proficiency. However, he has passed all hands-on testing, including basic Military Qualification Standards (MQS) Level I tasks.

Hines is most looking forward to the upcoming M16 qualification range. He has competed in National Rifle Association-sponsored, high-powered rifle matches and is interested in seeing if that experience will carry over to military marksmanship.

One of the reasons for attending QMOBC, as opposed to another branch basic course, is that there is a measure of compatibility between the Quartermaster Corps mission and the civilian supply field. Hines says that "about 40 percent of the course so far applies to my work."

Although 40 percent may seem low, that estimate was made during the first month of the course when more emphasis is placed on common military tasks. As the class begins to emphasize logistical concepts, Hines expects that percentage to grow much higher. He also stated that "just what I've learned so far will really be valuable back at Redstone Arsenal. "

Besides evaluating whether or not supply DACs would benefit from Quartermaster training, this program is being used to determine if military and civilian logisticians will gain a better understanding of the functions, strengths and weaknesses of their counterparts by training together. Hines is not simply participating in the training. He is also discussing his work and the civilian logistics structure with his classmates. Simply by talking with Hines, the class has learned a great deal about the support structure which will assist us in accomplishing our mission.

LT Mark A. Thomson is a former enlisted Infantry soldier who served tours in Bamberg, Germany, and on the Opposing Force at the National Training Center. He has a degree in management information systems from Oregon State University, Corvallis. He has also graduated from Airborne School and is currently attending the Quartermaster Officer Basic Course.

MOS 92A Updates

On 1 May 93 all soldiers who were 76C, 76P, 76V or 76X primary military occupational specialty (MOS) holders began reclassification and transition to MOS 92A (Automated Logistical Specialist). Some 76Z master sergeants were also reclassified to the 92A MOS. Soldiers were also awarded a Y2 additional skill identifier (ASI). This ASI is used to identify soldiers who require transitional training when an MOS is in transition.

The U.S. Army Quartermaster Center and School (USAQMC&S), Fort Lee, VA, developed several training programs for soldiers completing transition training requirements and MOS award:

- All soldiers attending 92A advanced individual training (AIT) after March 1993 did not require transition training and were not awarded the Y2 ASI. These soldiers receive 13 weeks of multifunctional 92A logistics training.
- Advanced Noncommissioned Officer Course (ANCOC) and Basic Noncommissioned Officer Course (BNCOC) residence courses began 6 Apr 93 and 11 May 93, respectively. Graduates of the 92A ANCOC and BNCOC Courses have also received transition training and should have their Y2 ASIs removed from the record. Diplomas/course completion certificates serve as proof of training for the commanders.
- The Reserve Component Configured Courseware (RC3) package has been delayed until the 2d Quarter, FY 94. 92A training at U.S. Army Reserve Forces/Regional Training Sites using the USAQMC&S-produced materials has been approved as a pilot for use by both Active Component and RC soldiers. For Unit Status Reporting, 92A soldiers carrying the Y2 ASI are considered MOS qualified. MOS 92A is considered a substitute for 76C, 76P, 76V and 76X MOSs.
- 92A Army Correspondence Course Program (ACCP) material is under development for distribution by the Army Institute for Professional Development (AIPD), U.S. Army Training Support Center, Fort Eustis, VA. Use the normal procedure for ordering ACCP material to obtain these courses. Projected USQMC&S completion dates follow:

Course	Completion date	Eligibility
Skill Level 50	OCT 93	SFC(P) or Above
Skill Level 40	OCT 93	SSG(P) or Above
Skill Level 30	OCT 93	SGT(P) or Above
Skill Level 10/20	2d Qtr, FY 94	PVT or Above

- Soldiers with primary MOS 92A who have completed the Senior Supply/Services Sergeant Course (76Z), master sergeants with a former MOS 76Z, and date of rank as master sergeant of 1 May 92 or earlier, and members of the Noncommissioned Officer Logistics Program (NCOLP) who were awarded the skill qualification identifier (SQI) K will have the Y2 ASI removed from their records. No transition training is required for these soldiers. Orders/course completion certificates serve as proof of training for commanders.

USAQMC&S points of contact are MSG Munson, SFC Fleming or SFC Archibald at Commercial (804) 734-4183/4189 or DSN 687-4183/4189. Their address is Office of The Quartermaster General, ATTN: ATSM-QMG-E, Fort Lee, VA 23801-5032.

New Reserve Component (RC) Food Service Training

The RC Food Service Management (FSM) Course and the RC Warrant Officer Courses are being revised.

- The RC FSM Course revision was completed in October 1993. This course, formerly taught at the Continental United States Army (CONUSA) level, will now be offered by the National Guard Bureau and U.S. Army Reserve Command in cooperation with the U.S. Army Center of Excellence, Subsistence (ACES) at Fort Lee, VA. The new course emphasizes additional subjects such as food service disaster relief operations, culinary arts activities, and updated administrative procedures.
- The RC Warrant Officer Courses have new names, revised lessons, and prerequisite phases. The new courses are now called the RC Food Service Warrant Officer Basic and Advanced Course (RC WOBC and RC WOAC). The advanced course still has a preresident correspondence course phase to complete before attending the resident two-week phase at Fort Lee, VA. Now the basic course also has a preresident phase. The basic preresident phase consists of 31 subcourses, and the advanced phase contains 19 subcourses. Both Phase I correspondence courses are listed in the April 1993 Correspondence Course Catalog (DA Pamphlet 351-20).

Quartermaster RC Affiliation

Beginning in FY 93, the U.S. Army Quartermaster Center and School (USAQMC&S) affiliated with four U.S. Army Reserve Forces (USARF)

Schools, three Army National Guard Academies, and one Regional Training Site - Maintenance. During May–August 1993, representatives from the USAQMC&S Directorate of Evaluation and Standardization visited each affiliated school and academy to assess the use of qualified instructors, approved programs of instruction (POIs), and adequate facilities and equipment. Representatives also ensured that students meet required prerequisites. This TRADOC-mandated program solidifies the critical relationship between Active Component schools and the Reserve Component (RC) schools. It also enhances training standardization and professional development of soldiers in the Total Army.

The following RC institutions are affiliated with the USAQMC&S:

- Pennsylvania Military Academy
- Virginia Military Academy
- West Virginia Military Academy
- 2079th USAR School
- 2090th USAR School
- 2059th USAR School
- 2073d USAR School
- RTS-Fort Stewart, GA

Mrs. Arlene Barkley is point of contact at the USAQMC&S at DSN 687-4403.

Quartermaster RC OAC Dates for FY 94

The U.S. Army Quartermaster Center and School (USAQMC&S) will instruct Phase II of the Quartermaster Reserve Component Officer Advanced Course (RC OAC) on the following dates in FY 94:

Class	Report Date	Start Date	End Date
001	16 Oct 93	17 Oct 93	29 Oct 93
002	26 Feb 94	27 Feb 94	11 Mar 94
003	09 Apr 94	10 Apr 94	22 Apr 94
004	06 Aug 94	07 Aug 94	19 Aug 94
005	24 Sep 94	25 Sep 94	07 Oct 94

These projected dates are subject to change. Check Army Training Requirements and Resources System (ATRRS) for school confirmation dates.

Students must complete Phase I before reporting for Phase II at the USAQMC&S. LTC Lee is point of contact at USAQMC&S at DSN 687-4168 or Commercial (804) 734-4168.

Unique Course for MOS 43E

A unique Reserve Components Configured Course (RC3) for the critically short military occupational specialty (MOS) 43E (Parachute Rigger) has been jointly developed by the U.S. Army Quartermaster Center and School at Fort Lee, VA, and the U.S. Army Reserve Command (USARC). The first phase of the pilot course was hosted by the Airborne and Field Services Department at Fort Lee 26 Jul–7 Aug 93.

The reservists returned to their home station to complete their second phase in an Inactive Duty for Training (IDT) status. They will come back to Fort Lee to complete their third and final phase in Summer 1994.

This course requires three different Reserve Forces (RF) Schools in three different Army Reserve Commands (ARCOMs) to be responsible for instruction in one of three phases: Personnel and Small Cargo Parachutes, Airdrop Rigging, and Airdrop Equipment Repair. Instructors at each RF School will be responsible for teaching only one of the three phases. Students will rotate from one RF School's phase of instruction to another.

Students may chose from three time tracks to complete the course:

- A 12-month track or new RC3: This consists of a two-week annual training (AT) phase in the summer, a seven-month IDT phase in the winter, and another two-week AT phase the following summer.
- A nine-month track: This consists of a seven-month phase of IDT in the winter, a two-week AT phase in the summer, and a two-week Active Duty for Training (ADT) phase that same summer.
- A six-week track: This consists of a two-week AT phase, a two-week ADT phase, and another two-week ADT phase, all in one summer.

The new RC3 is cost efficient. It will eliminate the need for the RC to send soldiers to a 12-week resident course and, at the same time, provide the Total Force with a trained-to-standard Parachute Rigger.

Branch Transferred - What Next?

CPT Mark E. Camacho

Reserve Component (RC) officers commissioned in the combat arms may find themselves branch-transferred into combat service (CS) or combat service support (CSS) before attending an officer advanced course. After nearly 12 years as an Army National Guard soldier, I found myself in this situation. I spent six years in a division Cavalry squadron. Because of force structure realignment, I was transferred to a division support command. I then attended the Quartermaster Officer Advanced Course at Fort Lee, VA. I will share some helpful information that I learned the hard way.

First, why are combat arms officers attending CS and CSS advanced courses? The answer is based partly on the needs of the organization, force structure, and medical reasons. Recruiting techniques that sell combat arms positions to cadets are also included as part of the answer. In an all-volunteer Army, the potential recruits tend to view the mili-

tary as a place for excitement, challenge and responsibility. All this is true. For example, commercials include tanks on the move, helicopters flying over trees or Infantry soldiers scaling a mountain. Therefore, many soldiers may start their careers in the combat arms, not completely aware of the opportunities within the CSS arena. They may not be exposed to many positions needed to fuel the tank, fix the helicopter or arm the artillery.

Fewer Positions

Secondly, as the Total Force shrinks in size and combat units are deactivated, fewer positions are available for career progression. This may result in more combat arms officers assigned to CS or CSS units and attending the related advanced courses.

However, the perception exists that positions within CSS units do not provide the excitement or challenges of combat units. Young officers many times overlook the forward support unit's time in the field, which is usually equal to or greater than that of combat units. Another misconception is the amount of additional missions a CS or CSS unit has back at its armory. Many soldiers in combat arms think that after the CSS unit completes its mission of supporting the maneuver element, life becomes routine or easy. This is not true. Many CS or CSS units become actively involved in real world missions such as supporting local and state community projects.

The system needs to train soldiers in new jobs that allow excellent soldiers to remain in the military. Once an officer is required to branch transfer or requests branch transfer, the transition phase begins. During this phase, officers should keep in mind both the short- and long-term impacts on their careers. During the short-term, questions such as "Who will train me?" and "Will it teach me what I need to know to be competitive with my peers?" will be of great concern.

Different Learning

The system used to train and develop leaders involves three different types of learning: (1) institutional training, (2) operational assignments, and (3) self development. The resident and nonresident RC military courses will be the primary tool to educate branch-transferred officers during the institutional phase.

Quartermasters allocate 70 percent of their units to the RC. Because of this, RC officers should seriously consider attending the Active Component (AC) course. However, a soldier might consider many aspects before deciding to attend the resident course. For example, is the funding available within the state's budget? If so, are any positions available to attend the AC course? Will the RC soldier's employer allow absence for an extended period of time? How will leaving home affect the soldier's family? If the answers to these questions are favorable to AC training, then request it through the chain of command. If the answers are unfavorable, then attend the RC course. Some of the RC advantages include (1) Less time away from the soldier's unit and civilian employer and (2) officers able to share common challenges unique to RC units.

The school will only teach so much. When the officer graduates from either the AC or RC advanced course, theory ends and practice takes over. The operational assignment phase of learning begins. Study the unit's standing operating procedures to gain knowledge of CS and CSS operations. Experienced noncommissioned officers will provide many answers to complex questions.

The third method of learning is the self-development phase. This includes Army Correspondence Courses and the use of field or branch manuals about areas within CSS. I recommend that soldiers contact their unit orderly rooms to access these vast sources.

Outside Military Service

These courses also may assist outside military service. New skills in subsistence or petroleum, for example, could open new opportunities in the civilian job market. RC officers have a distinct advantage over others when competing for civilian jobs. The education and experience that an officer derives from either course makes a better-prepared leader and manager. The bottom line: officers must remember that common priorities exist for all soldiers. For example, everyone must stay proficient at basic soldier skills to survive on the battlefield.

Finally, successful mission completion must be the first priority. As the AC and RC change in size and take on new and different roles, RC officers must continue to be flexible. The exchange of information between combat arms and CSS officers has proven invaluable not only for the soldier or unit, but also for the entire organization. By combining all these ingredients, units in the CS or CSS, such as the Quartermaster Corps, will continue to sustain soldiers well into the 21st century.

CPT Mark E. Camacho is a full-time Administrative Officer/S1 for the 38th Infantry Division, Indiana Army National Guard. He is a graduate of the Air Assault, Armor/Cavalry Officer Basic Courses and the Quartermaster Officer Advanced Course.

QUARTERMASTER UPDATE

Self-Development Test: A Measure of Success

The validation period for the Army's new Self-Development Test (SDT) for sergeants, staff sergeants, and sergeants first class is coming to a close. By this second year, most Active Army noncommissioned officers (NCOs) in these ranks have taken the SDT at least once, but not for record. The validation will continue another year for the Reserve Component, but Active Army NCOs will begin testing for record in FY 94. This means that SDT scores will be entered into NCOs' personnel records and will influence important decisions affecting their careers, such as promotions and school selection.

When fully implemented, the SDT is designed to make self-development a stronger and less-neglected pillar of leader development. The SDT provides incentive for self-development. Also, NCOs are given feedback on their self-development efforts.

Planning for the MOS 92A SDT

The Soldier Training Publications (STPs) military occupational specialty (MOS) 92A (Automated Logistical Specialist) Skill Levels 1-5 are scheduled for initial fielding 1st Quarter, FY 94. These STPs resulted from the recent consolidation of supply MOSs 76C, 76P, 76V, and 76X to MOS 92A.

Since MOS 92A personnel are exempt from taking the FY 94 SDT, early fielding of the 92A SDT will allow Active Component (AC) and Reserve Component (RC) noncommissioned officers (NCOs) additional time to study for the FY 95 SDT.

MOS 92A personnel (AC and RC), Skill Levels 2-4 were required to take the NCO Common Core SDT in FY 93. The U.S. Army Training and Doctrine Command is awaiting Department of the Army (DA) guidance concerning FY 94 SDT Administration linking the SDT to the Enlisted Personnel Management System (EPMS). This guidance is expected to detail DA's final decisions on the use of the SDT and how it will play a part in NCO promotion, school attendance, and retention/separation decisions. DA is expected also to state whether or not the Common Core SDT will be given in FY 94 and to which MOSs.

The FY 95 test window for the MOS 92A Active Component is 1 Sep 95 through 30 Nov 95. For the 92A RC, the SDT test window is 1 Sep 95 through 31 Aug 96.

76Y to 92Y MOS Action

The 76Y (Unit Supply Specialist) military occupational specialty's (MOS) designation was changed on 1 May 93 to 92Y. This action was an administrative change by local personnel centers under PERSCOM control. The change affects all enlisted personnel who hold 76Y as a primary or secondary duty MOS. The 92Y critical tasks and major duties at the 10/20 level are unchanged. The critical tasks at the 30 level changed to eliminate tasks dealing with prescribed load list and equipment records using the Unit Level Logistics System (ULLS). This training is now part of the new 92A (Automated Logistical Specialist) MOS. There is no longer any crossover into the 92Y MOS. Both the 92Y and 92A MOSs have a career progression in a straight line.

Future 92Y training will see the ULLS-S4 computer system come on line to improve battalion and brigade S4 staff section support of the unit level (company/battery/troop) supply room. By automating the management of all supply classes, property accountability to the user level will improve support to the fighting forces.

Enlisted MOS 92A and the Warrant Officer

The recent consolidation of former Quartermaster enlisted military occupational specialties (MOSs) 76C, 76P, 76V and 76X into the single-tracked MOS 92A (Automated Logistical Speciaist) caused, for many, a misunderstanding of MOS 92A as being the all-encompassing enlisted feeder MOS for the warrant officer MOS 920B (Supply Systems Technician). While this is somewhat true, many warrant officers are not considering the prerequisites for themselves and their applications to be considered technically qualified. Not meeting the prerequisites will be cause for rejecting an application. All applicants must document a minimum of three years service and experience within a technical supply, supply support activity (SSA) or direct support unit (DSU), reflecting formal stock record accounting experience. Point of contact is CW5 John F. Zimmerman, Office of the Quartermaster General, DSN 687-3702.

SAMS 1 Resident Training

Managers and supervisors continue to receive formal Standard Army Maintenance System 1

(SAMS 1) resident training at the U.S. Army Quartermaster Center and School, Fort Lee, VA. After the three-week SAMS 1 course, graduates receive an Additional Skill Identifier (ASI) B5. The course trains Active Army and Reserve Component enlisted personnel qualified in military occupational specialty (MOS) 92A (Automated Logistical Specialist) who are assigned or on orders for assignment to a SAMS 1 activity. The course includes hands-on training using Tactical Army Combat Service Support Computer System (TACCS) hardware to process SAMS 1 master files, manpower files, maintenance files, shop stock files, utility processes, and Logistics Applications of Automated Marking and Reading Symbols (LOGMARS-T) system interface.

Contact your unit training noncommissioned officer/officer for local procedures on enrollment for this course.

Warrant Officer Division Training

MW4 James E. Revels

The Warrant Officer Division of the Logistics Training Department, U.S. Army Quartermaster Center and School, Fort Lee, VA, conducts training for Warrant Officer Basic and Advanced courses in all four Quartermaster Warrant Officer military occupational specialties (MOSs). These four MOSs are 920A (Property Accounting Technician), 920B (Supply Systems Technician), 921A (Air Drop Technician) and 922A (Food Service Technician).

The nine-week, one-day basic course for the Active Component (AC) consists of common core, branch and MOS-specific training to technically and tactically certify newly appointed warrant officers in their MOSs. The 10-week advanced course for AC officers consists of common core, branch and MOS-specific training. This training qualifies officers for MEL 6 credit and assignment to higher levels of responsibility.

Reserve Component (RC) courses are similar to AC training except there is no RC basic course for Air Drop Technicians. Resident RC courses are two weeks long because RC officers usually receive training in phases. Most RC officers have problems leaving their civilian jobs to attend military training.

Milestones

All Warrant Officer Division training is part of the life-cycle career models resulting from the Warrant Officer Leader Development Action Plan (WOLDAP). Therefore, this training is extremely important to an officer's career development. Not only are these courses used as a management tool for the Army, but also as milestones for the individual to set career goals. With the Army's downsizing comes the requirement for fewer soldiers at all grade structures. The dynamics of doing more with less and making the Army a more efficient fighting force demand that soldiers be more competitive in vying for promotions, assignments and schooling.

Selection for promotion and the corresponding level of training is both an honor and opportunity. The beauty of the career model road map is that warrant officers now can use the map to predict when they should receive the different levels of training and to expect consideration for promotion to each grade level. To some degree, that puts each officer in control of his destiny. Warrant officers should use that control wisely to make the system work for them.

Courses taught in the Warrant Officer Division are held to high standards by the U.S. Army Training and Doctrine Command and the Department of the Army (DA). All training is designed to challenge the student. The student must be prepared mentally and physically upon arrival at the schoolhouse.

Requirements

The following are some tips on how warrant officers can enhance their success in the courses:

- Be in good physical condition and able to pass the Army Physical Fitness Test (APFT).
- Meet the Army's weight and height standards with good military bearing - a must.
- Prepare yourself intellectually for attending school.
- Keep up with day-to-day assignments and remember to review the appropriate references before an examination.
- Make a list and study concepts and regulations.
- Ask yourself questions that you would expect the instructor to ask or that may be on an examination.
- Make sure you get plenty of rest and recreation to keep you mentally alert.
- Look upon an examination as a game that you are prepared to win, and then play the best game you can.
- Be realistic in your self-expectations. Some soldiers need to work harder to achieve the desired results.
- Do not become preoccupied with matters outside the classroom.
- Put your personal affairs in order before leaving for school.
- Bring with you all items that you will need to enroll and sustain you for the duration of the course.

In summary, know the rules of the game and play by the rules to win.

In addition to training, the Warrant Officer Division administers the executive agent's func-

tion for the Chief of Staff, Army, Supply Excellence Award Program, DA Pamphlets 710-2-1 and 710-2-2, and supply proponency for Headquarters, DA.

For more information, contact the Warrant Officer Division, Logistics Training Department, at DSN 687-6451/7535.

MW4 James E. Revels has an associate of science degree in education from Troy State University, Troy, Alabama, and a bachelor of science degree in management from Coker College, Hartsville, South Carolina. Also, he attended the University of Maryland at College Park and did some graduate study with Southern California University. He is a graduate of the Warrant Officer Senior Course and the Master Warrant Officer Training Course. His previous assignments include Director of Unit Supply Specialist School, Fort Jackson, South Carolina; Logistics Officer, 4th Training Brigade, Fort Jackson, South Carolina; Logistics Officer, U.S. Army Field Station, Augsburg, Germany; Staff Supply Officer, Augsburg, Germany. He has been the Property Book Officer and Supply Support Accountable Officer many times in units in Germany, Vietnam, and the continental United States during more than 35 years of military service. He is currently Chief, Warrant Officer Division, Logistics Training Department, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

ARTEPs to Printer

Camera-ready copies of ARTEP 10-416-MTP, Mission Training Plan for the Quartermaster Battalion (Petroleum Pipeline and Terminal Operating); ARTEP 10-443-30-MTP, Mission Training Plan for the Quartermaster Heavy Airdrop Supply Company, Light Airdrop Supply Company, Airdrop Supply Detachment Parachute Packing/Parachute Repair Detachment; and ARTEP 10-602-MTP, Mission Training Plan for the Headquarters and Headquarters Company, Petroleum Group went to the U.S. Army Training Support Center for printing and distribution. These ARTEPs should be available by the 1st Quarter, FY 94 (December).

ACES Computer Training

The U.S. Army Quartermaster Center and School (USAQMC&S), Army Center of Excellence, Subsistence (ACES) and a civilian contractor are developing a computer-based instruction (CBI) training package. The CBI allows soldiers to progress at their own rates and provides numerous scenarios to practice. The CBI also gives the soldiers unlimited time to perform the exercises.

The training will cover topics on the Army Food Management Information System Dining Facility Operations Module with 14 lessons and The Army Field Feeding System Module with 10 lessons. On completion of the CBI in November, ACES plans to use it for resident training in the 94B40 Advanced Noncommissioned Officer Course. Once funding becomes available, ACES plans to distribute the CBI to the field through the Tobyhanna Depot.

Insulated Food Container (IFC)

The IFC has been identified as a valid Soldier Enhancement Program (SEP) new start project for FY 93. Initiated in January 1993, the IFC will replace the current insulated food container (Mermite) with better insulating properties.

Currently, Natick Research, Development and Engineering Center in Natick, MA, is conducting a market analysis and testing on nine prospective IFCs. After IFC analysis, Natick will determine the best IFC for Army requirements. User testing will support operational environments. Procurement and delivery of the first IFCs are scheduled for 4th Quarter, FY 94.

Powered Multifuel Burner (PMB)

A replacement for the current military fuel burner, the M2/M2A, is under development. This replacement burner will provide an improved, powered, labor-efficient, safe and multifuel-burning food preparation capability.

The current military burner operates only on motor gasoline (MOGAS), and the military's goal is to eliminate this fuel on the battlefield. The current burner also has safety problems with pressurized fuel. Characteristics of the developmental burner include:

- Battery pack power with potential for thermoelectric energy recovery.
- Instant on/off capability.
- Use of any distillate fuels (DF2, JP8, JP4).
- Compatibility for use with existing field feeding equipment, with the same exterior dimensions as the M2/M2A.

Kitchen Company Level Field Feeding (KCLFF) - Enhanced

The U.S. Army Quartermaster Center and School submitted a change to the current requirements document for the KCLFF. This change will provide a capability to prepare limited components of A-Ration field menu meals to company-sized units under austere logistical conditions. The changes also bring a new name to the system: Kitchen Company Level Field Feeding-Enhanced (KCLFF-E).

This system can support company level field feeding operations for extended periods (up to 90 days) where a complete field kitchen cannot be operationally deployed or established. The KCLFF-E was in the four, separate Army Field Feeding System-Future Field Trials. Proposed additional components will include an M-59 field range, ice chest,

additional insulated food containers, and tentage. The high mobility multipurpose wheeled vehicle (HMMWV) and a trailer will be included as associated support items of equipment. There will also be an additional authorization of three cooks in maneuver battalions. This will allow two cooks to operate each KCLFF-E and prepare limited components of A-Ration field menu meals in forward locations.

Multi-Faith/Vegetarian Ration (MFVR)

The current Meals, Ready to Eat (MREs) menus do not meet the specific dietary requirements for multiple religious groups including Jews, Muslims, Hindus, Buddhists and Adventists and also do not include soldiers preferring a vegetarian diet. Currently, the individual soldier meets specific dietary needs either by obtaining certain foods on his own or by abstaining from meal items prohibited by religious practice.

The MFVR MRE component will be designed to meet specific religious dietary requirements and will be generally acceptable to all soldiers. The MFVR menus will go into the standard Class I (rations) management and distribution system as a standard MRE menu. Prototype menus are being evaluated at Natick Research, Development and Engineering Center, Natick, MA.

Containerized Kitchen (CK)

The CK is the future battalion-level field kitchen. It will replace the current Mobile Kitchen Trailer (MKT). The CK is an efficient, self-contained, multifuel-powered Army Field Feeding System-Future (AFFS-F) capability designed to support commanders and soldiers across the operational continuum.

Some of the requirements include the following:

- Self-contained.
- Performs all standard cooking operations currently required for the MKT.
- Uses modern, standard food preparation equipment with instantaneous on/off capability.
- Active ventilation system and climate control system (heat, air conditioning).
- On-board refrigeration.
- On-board water tank.
- Refueling possible while cooking operations are ongoing.
- On-board power generation, permitting lighting system.

All-Terrain Lifter, Articulated System (ATLAS)

The U.S. Army Quartermaster Center and School is the Army's proponent for the 10,000-pound variable reach ATLAS rough terrain forklift. ATLAS will replace the fielded 6,000-pound and 10,000-pound rough terrain forklifts in the following tables of organization and equipment (TOEs): Quartermaster, Ordnance, Missile and Munitions, Transportation, Engineer, Aviation and Medical.

The Department of the Army ATLAS Operational Requirements Document (ORD) of 8 Jan 93, with Change 1, lists the following capabilities:

- Speed: 30 miles per hour (mph) sustained, 35 mph catch-up speed.
- Central tire inflation capability for adverse terrain.
- C-130 aircraft deployable.
- Fording depth of 30 inches to 36 inches.
- Powershift transmission.
- Coordinated boom movement.
- Variable reach boom with two forklift carriages.
- Maximum boom lift and extension safety features:
  - 10,000 pounds, 4-foot reach with 48-inch load center
  - 6,000 pounds, 13-foot reach with 24-inch load center
  - 4,000 pounds, 21.5-foot reach with 24-inch load center

A source selection committee will convene during 3d Quarter, FY 94 to select three cost-plus-fixed fee contracts for the engineering-manufacturing phase of acquisition. Each contractor will deliver five prototype vehicles for test and evaluation. Delivery of ATLAS to contingency force units is scheduled for FY 2000.

Container Cargo Retriever

During *Operation Desert Shield/Storm,* combat service support had great difficulty unloading 40-foot containers with organic material handling equipment. Currently, the only way to unload a 40-foot container is to drive a 4,000-pound rough terrain forklift into it, pick up the pallets, and back out of the container. Since the containers cannot be removed from the trailer without a 50,000-pound rough terrain container handler, the mobile ramp must be used. This time-consuming procedure poses certain risks to the forklift operator: mainly the build-up of exhaust fumes inside the container.

In March 1992, the U.S. Army Quartermaster Center and School's Combat Developments Directorate drafted a mission needs statement (MNS) for the Container Cargo Retriever (CCR). The CCR can extract loaded 48-foot by 40-foot pallets stacked two high from the back of a 40-foot container without using the mobile ramp. The CCR can stand alone as a system or become product improvement to the ATLAS forklift. The MNS is pending Department of the Army approval.

Equipment Deployment and Storage Systems (EDSS)

Lessons learned from *Operation Desert Storm* identified the need for a standardized, unit-owned container system to support unit deployments under contingency operations. The Air Force Internal Airlift/Helicopter Slingable Container Unit (ISU) and the Marine Corps Quadruple Container (QUADCON) were identified as the best systems for meeting this need. These containers were added to the common table of allowances (CTA) 50-909. Units can now purchase them based on operational requirements and available funding. The U.S. Army Quartermaster Center and School took action to add these containers to unit tables of distribution and allowances.

Mortuary Affairs Automation

During the buildup of *Operation Desert Shield,* a deficiency was noticed in the lengthy procedures for filling out mortuary affairs forms by hand. The U.S. Army Quartermaster Center and School and the Mortuary Affairs Center at Fort Lee, VA, procured and fielded an automated system for mortuary affairs support in Southwest Asia. The urgent need for this system precluded using the normal development and acquisition process. The system developed by the Air Force (Mass Fatality Field Information Management System (MFFIMS)) used laptop computers/printers with built-in modems to transmit data from forward mortuary affairs collection points such as brigade and division back to the Theater Army Area Command mortuary affairs units and facilities. The system improved accuracy and provided quicker access to information vital to the tracking, identification of human remains and accountability of personal effects.

Although successful during *Operation Desert Storm,* shortfalls were identified in software design and communication links to transmit data from forward areas to the theater rear. Jointly, the Army and Air force revised and upgraded the software to meet Army requirements. With the upgraded software, the operator (57F Mortuary Affairs Specialist) can enter data in 10 different screens ranging from search and recovery information, remains personal data, collection point records updater, remains manifest, reports, personal effects data and port of departure information. The software's projected completion date is 4th Quarter, FY 93. The system's communication link remains an open issue.

Training for Food Service Officers (FSOs)

For years, it has been a serious problem when an inexperienced officer has the additional duty of being an FSO. Young officers find themselves thrown into a position where they are lost and can get into a lot of trouble. The Army Center of Excellence, Subsistence, U.S. Army Quartermaster Center and School at Fort Lee, VA, receives many cries for help from confused and frightened lieutenants. The center always tries to help on an individual basis. Food Management Assistance Team (FMAT) visits reveal that the problem is universal.

To correct this problem, the center is developing a training support package (TSP) to prepare an officer for this responsibility. This package, which covers the FSO's field and garrison responsibilities, is due Autumn, FY 94. It will be sent to food advisors who will serve as primary instructors. The FSO will be expected to do a lot of reading and studying on his own, but the food advisor facilitates the learning process. Also, the package includes a handout for use as a job aid after training. It contains a checklist to aid the FSO.

Another initiative to assist the FSOs is a new correspondence course which came out for the first time in the April 1993 Correspondence Course Catalog (Course Number 101QM). It contains 17 subcourses and also covers both field and garrison responsibilities.

Revised Menu Planning Program

A major improvement to Army menu planning is the revision of the computerized Menu Planning Program (MPP). The MPP produces Army-developed menus; analyzes the menus with the U.S. Department of Agriculture Nutrient Analysis Database; determines the cost of the menus; computes the Basic Daily Food Allowance (BDFA); and provides the menus, recipes, and the Federal Supply Catalog C-8900-SL files. The system also provides the Recapitulation of Master Menu Issues and the Nutrient Values of Master Menu Recipes and Food Items.

The MPP is being revised to include new state-of-the-art, menu-planning techniques. It provides simplified, user friendly input and output formats and operational methods.

Food Service Publications

The publication of AR 30-18 (Troop Issue Subsistence Activity Operating Procedures) omitted blanks for the -R forms. An interim change is being processed to correct this error. In the meantime, use the forms in the old regulation.

An interim change to AR 600-38 (The Meal Card Management System) is being staffed for publication. The change incorporates guidance concerning the use of the Tactical Army Combat Computer System meal card.

New AC Food Service Training

Quite a few initiatives are on the horizon for food service personnel in the Active Component (AC).

- Food Service Management (FSM) Course. The FSM Course is being drastically revised and improved. The new course will still be three weeks long, but will be tracked. Soldiers will begin together for the first week. Then soldiers opt to take the Troop Issue Subsistence Activity (TISA) track or the Food Adviser track. Both tracks will include training in The Army Food Management Information System (AFMIS). This course is open to senior NCOs (E-7 and above) both MOS 94B (Food Service Specialist) and 92A (Automated Logistical Specialist), officers, warrant officers, and Department of the Army (DA) civilians who will work in a food advisory capacity or a TISA.
- Harborcraft Training Support Package (TSP). A new TSP to prepare 94B (Food Service Specialist) soldiers to prepare meals aboard the Army's harborcraft vessels is nearly complete. The package, due for fielding in October, includes training on the different categories of harborcraft, the types of flags, harborcraft terms, abandon ship procedures, galley operating procedures, port steward operations, sanitation, and NBC defense (to include countermeasures aboard ship). Once completed, the TSP will be sent to the harborcraft units at Fort Eustis, VA, Hawaii, and Panama.
- Graphic Training Aids (GTAs). The following three GTAs have just been revised for use by food service trainers and other food service personnel:
  - GTA 10-1-9, M-2 Burner Unit and M-59 Field Range
  - GTA 10-1-10, Gasoline Lantern
  - GTA 10-1-11, Insulated Food Container

  All three are multipage training aids available in two formats: (1) 34-inch by 44-inch wall charts, excellent for use in classes, and (2) 4-inch by 5-inch pocket-sized booklets, also good for classroom handouts and for job aids. They are due at all Training and Audiovisual Support Centers (TASCs) by November 1993.
- ETV tape (Supervising Field Feeding Operations, Part I KCLFF and Part II MKT). This new TV tape was originally designed for the 94B40 Distributed Training Pilot. The 94B Advanced Noncommissioned Officer Course (ANCOC) was to be shortened by two weeks, and the two weeks of training would be packaged and sent to the student to complete at home. The U.S. Army Training and Doctrine Command (TRADOC), however, canceled the pilot. Therefore, this TV tape, which trains senior 94B NCOs to supervise cooks operating the Mobile Kitchen Trailer (MKT) and the Kitchen Company Level Field Feeding (KCLFF), will be available through local TASCs this fall.
- Advanced Culinary Skills Training Course (ACSTC). This three-week course is designed to advance culinary skills and techniques and to develop quality hands-on trainers. It covers advanced techniques of food preparation, production and service, menu compiling and food purchasing, and cost comparison. Only 12 soldiers can attend at a time and only four classes a year. This course is now open to Army Reserve and National Guard personnel.

Commanders and Warrant Officers

All warrant officers and their commanders should be aware that the new Warrant Officer Education System (WOES) operates under a select-train-utilize concept. Essentially, this means that whenever a warrant officer is selected for promotion, he must attend mandatory leader development training to achieve the military education level required to serve in the new grade. Officers selected for promotion to CW3 attend the Warrant Officer Advanced Course (WOAC). CW4 selectees attend the Warrant Officer Staff Course (WOSC). CW5s attend the Warrant Officer Senior Staff Course (WOSSC).

The U.S. Army Total Personnel Command (PERSCOM) automatically schedules officers to attend leader development training as soon as possible after the promotion list is released. Every commander should expect promotable officers to attend training sometime during the year. To avoid conflicts with mission or personal requirements, each officer must first consult with his commander to identify attendance opportunity windows and then contact his career manager to arrange for class attendance. Due to class availability limits, this should be done early after release of the promotion list.

Since annual class quotas and travel budgets are based on promotion rates, deferment requests generally will not be supported. Also, failure to attend leader development training during the year promoted places an officer behind contemporaries in military education level. This could be a serious disadvantage during a reduction-in-force (RIF) or selective retirement board (SRB). As the Army continues to downsize, officers must take a proactive approach in all career matters. Commanders must support the WOES by ensuring that warrant officers attend leader development training when scheduled.

Army Chief of Staff Supply Excellence Award Program

Eight award winners and eight runners-up representing company and battalion tables of organization and equipment (TOEs) and tables of distribution and allowances (TDAs) units in the Active Army, Army National Guard, and U.S. Army Reserve received Army Chief of Staff Supply Excellence Awards for FY 93. As in previous years, the American Defense Preparedness Association of Arlington, VA, donated recognition plaques. Guidance for the FY 94 program, sent by message last August, will expand opportunities for greater Reserve Component participation. The Army Supply Excellence Award was established in 1985 to recognize and promote excellence in supply support operations and management at the unit and organizational levels of the Total Army. Major commands internally evaluate and nominate one unit in each category for the Department of the Army (DA)-level competition. Representatives from the U.S. Army Quartermaster Center and School at Fort Lee, VA, perform on-site evaluations of all major command nominees and select DA-level winner and runner-up units in the Active Army categories. The U.S. Army Reserve and National Guard logisticians, with the Quartermaster School, evaluate and select winner and runner-up units in the Reserve Component categories.

Active Army TOE Company/Battery/ Troop/Detachment

WINNER
502d Engineer Company
Karlsruhe, Germany
(USAREUR)

RUNNER-UP
77th Army Band
Fort Sill, OK
(TRADOC)

Active Army TOE Battalion/Squadron

WINNER
204th Military Intelligence Battalion
Augsburg, Germany
(USAINSCOM)

RUNNER-UP
25th Forward Support Battalion
Schofield Barracks, Hawaii
(USARPAC)

Active Army TDA Company/Battery/ Troop/Detachment

WINNER
U.S. Army Garrison
Fort Ord, California
(FORSCOM)

RUNNER-UP
USA TMDE Activity
Redstone Arsenal, AL
(AMC)

Active Army TDA Battalion/Squadron

WINNER
Materiel Support Center
Taegu, Korea
(EUSA)

RUNNER-UP
MEDDAC
Fort Bragg, NC
(USAHSC)

Army Reserve TOE Company/Battery/ Troop/Detachment

WINNER
388th MEDSOM
Hays, KS
(USARC)

RUNNER-UP
A Co, 368th Military Intelligence
Fort Derussy, HI
(USARPAC)

Army National Guard TOE Company/Battery/ Troop/Detachment

WINNER
B Co (-), 135th Signal Battalion
Seward, NE
(Nebraska National Guard)

RUNNER-UP
HHC, 2d Brigade, 34th Infantry Division
Boone, IA
(Iowa National Guard)

Army National Guard TOE Battalion/Squadron

WINNER
1st Battalion, 194th Field Artillery
Fort Dodge, IA
(Iowa National Guard)

RUNNER-UP
1092d Engineer Combat Battalion
Parkersburg, WV
(West Virginia National Guard)

Army National Guard TDA Company/Battery/ Troop/Detachment

WINNER
HQ Detachment, State Area Command
Charleston, WV
(West Virginia National Guard)

RUNNER-UP
HQ Detachment, State Area Command
Raleigh, NC
(North Carolina National Guard)

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A 46th Quartermaster Battalion convoy meets a 10th Quartermaster Company mule train in the Italian mountains, January 1945.

46th Forward Spport Battalion
Unit History

The 46th Forward Support Battalion was constituted 1 May 1936 in the Regular Army as the 1st Battalion, 46th Quartermaster Regiment. It was redesignated on 1 April 1942 as the 1st Battalion, 46th Quartermaster Truck Regiment, and activated at Fort Lewis, Washington.
The Battalion was broken up on 19 December 1943, and its elements were reorganized and redesignated as follows:

Headquarters and Headquarters Detachment as Headquarters and Headquarters Detachment, 46th Quartermaster Battalion, Mobile

(Companies A, B, C, and D as the 3481st, 3482d, 3483d and 3484th Quartermaster Truck Companies, respectively - hereafter have separate lineages)

Inactivated 1 January 1946 in Italy

Converted and redesignated 1 August 1946 as Headquarters and Headquarters Detachment, 46th Transportation Corps Truck Battalion

Redesignated 11 June 1954 as Headquarters and Headquarters, 46th Transportation Battalion

Activated 23 July 1954 at Fort Meade, Maryland

Inactivated 15 March 1956 at Fort Meade, Maryland

Redesignated 19 April 1967 as Headquarters and Headquarters Detachment, 46th Transportation Battalion

Activated 25 April 1967 at Fort Riley, Kansas

Inactivated 25 November 1968 at Fort Riley, Kansas

On 1 October 1990, it was reorganized and redesignated as the 310th Forward Support Battalion (Provisional). On 17 April 1992, the unit was redesignated as the 46th Forward Support Battalion.

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