Quartermaster

PROFESSIONAL BULLETIN

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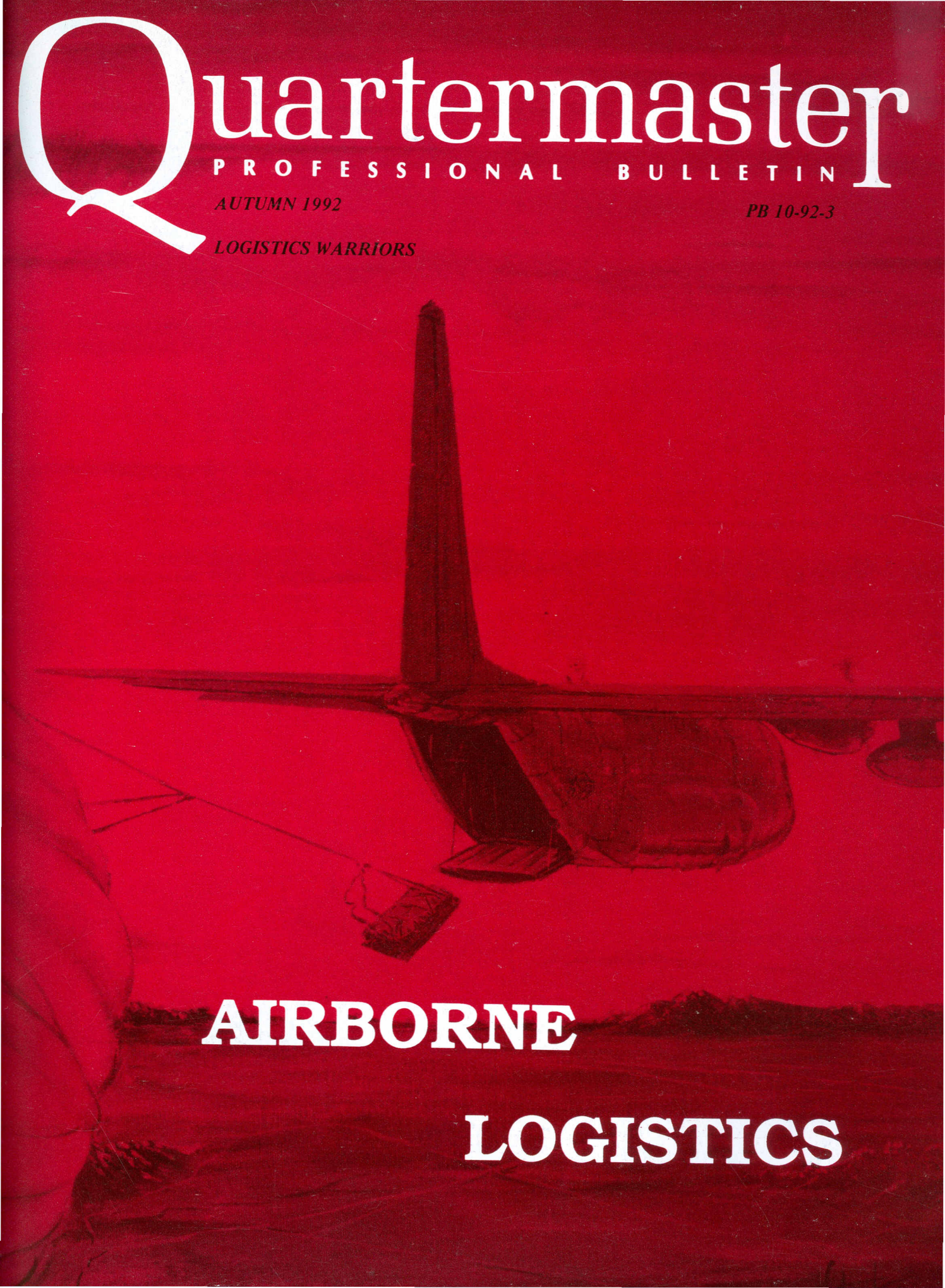
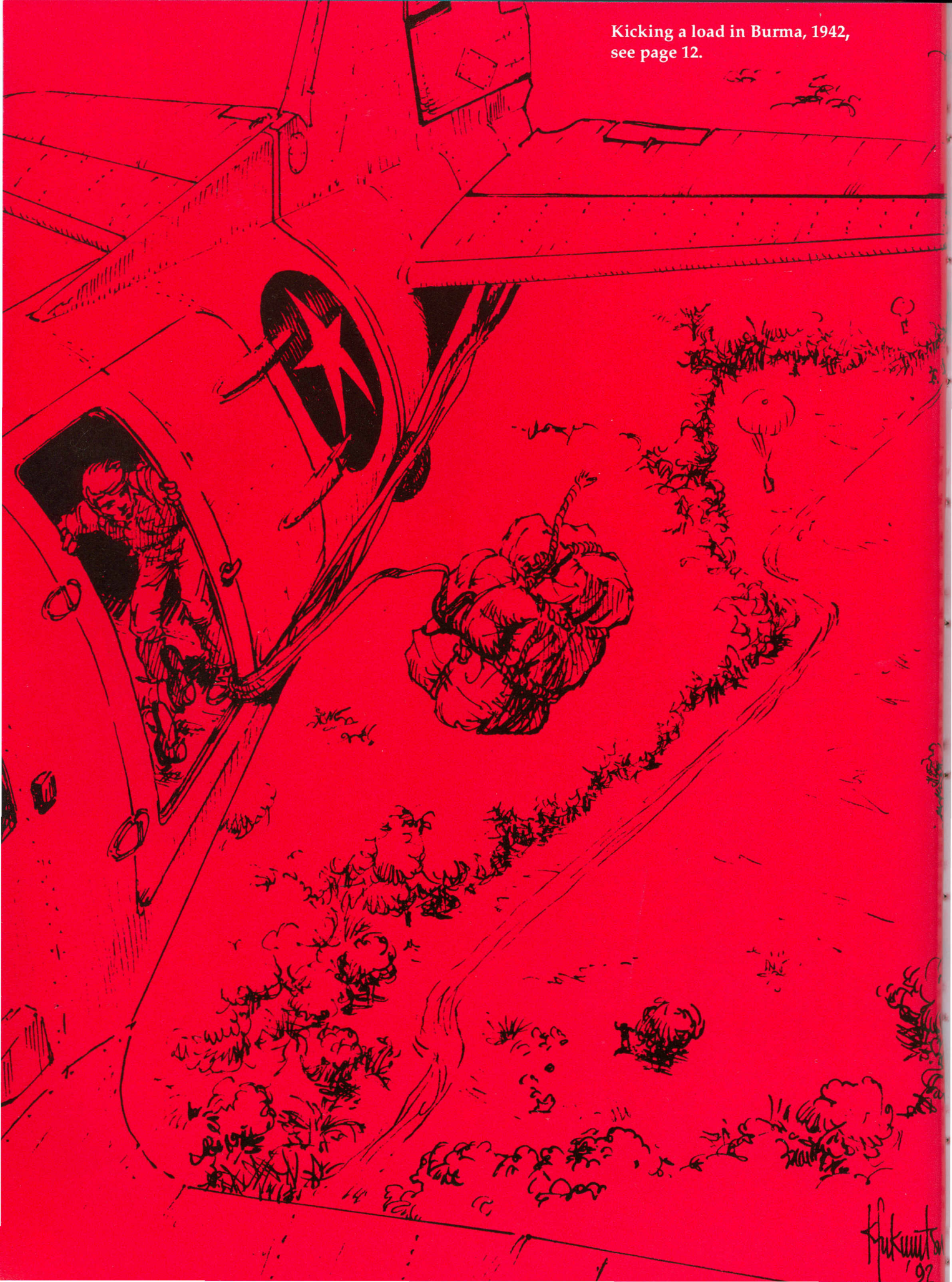
LOGISTICS WARRIORS



AIRBORNE LOGISTICS



Kicking a load in Burma, 1942,
see page 12.

Quartermaster
PROFESSIONAL BULLETIN

The Quartermaster General
Brigadier General John J. Cusick

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THE FRONT COVER: LTC Keith K. Fukumitsu, Quartermaster, depicted a C-130 heavy drop over the National Training Center, Fort Irwin, CA, in an original oil painting. The artist formerly was assigned as Chief of the Course Development Division, Directorate of Training and Doctrine, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.
AIRBORNE ILLUSTRATIONS: SPC Tyrone Darby, Quartermaster assigned to the U.S. Army Health Services Command, 407th Supply and Transportation Battalion, Fort Bragg, North Carolina, provided several pen and ink drawings for this edition. At Fort Bragg, he acts as artist for numerous illustration projects.

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From The Quartermaster General

Brigadier General John J. Cusick

AIRBORNE! Needless to say, I've got a special spot in my heart for our riggers and all our Quartermaster logisticians serving and who have served in airborne units. Your dedication and courage add significantly to the Logistics Warrior image of the Quartermaster Corps. The parachute rigger mission is truly one of our critical, life support functions and a very personal testimony of the confidence and trust our Army and, in this case, the American paratroopers have in their Quartermaster parachute riggers. Keep keeping the airborne, airborne; and remember: I will be sure—Always!

Here's what this edition of the *Quartermaster Professional Bulletin* looks like. The focus is on the special contributions and missions of Airborne Logistics Warriors throughout our Army. From the hard-charging soldiers of the 407th Supply and Transportation Battalion at Fort Bragg, NC, to Fort Campbell, KY, and the 101st Airborne Division (Air Assault), soldiers in the field are putting the right supplies on the ground at the right time through the air. Two historical articles will take you back in time to see how the two World Wars were fought from the air. The lessons learned by these Airborne Logisticians still ring true today. A look at the *Airdrop Missions and Equipment Management System* (AMEMS), rigging the Special Forces soldiers, and a piece on *Airdrop Down Under* in Australia also highlight this special edition. The rest of this edition provides interesting information on a wide variety of topics to include depot assignments for the enlisted logistician, advice for the combat arms branch transfers to our Corps, and a closer look at training in the Quartermaster Officer Advanced Course. Take a good look at the article in the Quartermaster Update section by LTC Frank W. Miller, who is the Professor of Military Science at Texas Tech University, and the great work being done by our Quartermaster-affiliated universities' Reserve Officer Training Corps programs. These young cadets represent much of the future of our Corps leadership, and they are receiving great training.

The following short summaries of three significant actions update Class IX (repair parts) redesign, the new Army Field Feeding program and the Force Provider field equipment initiative:

Class IX Redesign - Class IX redesign is an action-packed program at all levels across the U.S. Army. The U.S. Army Quartermaster Center and School (USAQMC&S) has been working hard to capitalize on *Operation Desert Shield/Storm* lessons learned to analyze current system deficiencies and capture the energy and innovative initiatives currently being discussed and tested to ensure emerging doctrine is on target. A USAQMC&S message, 161000Z Jul 92, Subject: Repairs Parts System Redesign, is a laydown of where we are and where we are headed. In this edition of the *Quartermaster Professional Bulletin*, CPT William M. Wheatley gives an overview of the redesign and makes it easy for soldiers in the field to give their input. Our next Winter 1992 edition will also focus on the Army's Class IX systems.

Army Field Feeding - The Chief of Staff, U. S. Army has approved the new Army Field Feeding program. This program, previously discussed in detail in the Summer 1992 *Quartermaster Professional Bulletin*, is a major quality of life enhancement for the U.S. soldier. We will be conducting in-depth field trials with XVIII Airborne Corps to refine the program over the next year.

Force Provider - The USAQMC&S hosted a Force Provider equipment display last June at Fort Lee, VA attended by 1,100 Department of Defense military and civilian leaders. The display consisted of 60 items of equipment, 50 percent military and 50 percent commercial. Components are similar to U.S. Air Force Harvest Bare/Eagle Program being considered for Army use. This is another important quality of life enhancement for our combat soldier and would be used for reception, redeployment, rest and recuperation, intermediate staging base, and reconstitution operations. For additional information, see the message USAQMC&S 191530Z Jun 92, Subject: Initial Update on Force Provider Display/Concept and also the message USAQMC&S 101530Z Jul 92, Subject: Update on Force Provider Milestone Schedule. For a Force Provider overview with more details, see the Quartermaster Update section of this edition.

ALL THE WAY!

Brigadier General John J. Cusick, the U.S. Army Quartermaster General, has held a wide variety of command and staff positions before his current assignment. Other key assignments include duty as Commander, Defense Personnel Support Center, Philadelphia, Pennsylvania; Commander First Corps Support Command, XVIII Airborne Corps, Fort Bragg, North Carolina; and Commander, 407th Supply and Service Battalion, 82d Airborne Division, Fort Bragg, North Carolina.

NCOs and the Quartermaster Hall of Fame

Command Sergeant Major Milton B. Hazzard

Redundancy is essential in the presentation of history. That is only one of the reasons that we should all constantly reinforce the comment: "The Quartermaster Corps has a long and proud history."

We make continual efforts to capture that history. However, an increased input from worldwide sources can tremendously enhance the information-gathering process.

A selection board for the 1992 Quartermaster Hall of Fame recently convened at the home of the Quartermaster Corps, the U.S. Army Quartermaster Center and School at Fort Lee, VA. Two rather disturbing challenges surfaced.

'I hope that every military and civilian affiliated with the Quartermaster Corps has a desire to enhance the Hall of Fame program. I believe that we have a responsibility to ensure that the prestige, traditions and accomplishments of the Corps are appropriately recognized and made a matter of officially recorded history.'

Challenge one: Very clear indicators of a need for a much better job of publicizing the existence of this Hall of Fame and explaining its intent.Challenge two: A need for a recorded historical perspective of the footprints of noncommissioned officer (NCO) and enlisted Quartermasters that seem to fade away with the tides of time. The written or mental records that are available generally provide only limited information.

I will respond to those challenges and encourage greater participation from the field. Hall of Fame procedural rules include the following:

- The Quartermaster General, in consultation with the senior active duty Quartermaster General Officer, will select and officially appoint the selection board.
- The board will convene annually and consist of representatives from Active and Reserve Component forces. Included are five individuals of various ranks. The Quartermaster Corps Command Sergeant Major, and the Honorary Colonel, Warrant Officer and Sergeant Major of the regiment serve with the Senior Quartermaster General or his designated representative, who will be board president.
- The selection board normally will select from three to five individuals per year.
- Official announcement of those selected for induction will be during a special ceremony. Recognition will include the unveiling of a display consisting of a photograph and a narrative of significant achievements.
- A permanent display of Hall of Fame inductees will be in Mifflin Hall at Fort Lee.

The Hall of Fame's eligibility criteria include the following:

- Retired or former military and civilian personnel who made significant contributions to the Quartermaster Corps.
- Personnel may be considered five years after retirement, discharge or death.
- Exceptions:
  - — Individuals serving at the rank of lieutenant general (LTG).
  - — Command Sergeant Major (CSM) serving at the LTG level.
  - — Senior Executive Service (SES) 18.
  - — Recognition for gallantry or heroism while serving as a Quartermaster.

Forward each nomination portfolio to the U.S. Army Quartermaster Center and School, ATTN: Office of the Quartermaster General, Fort Lee, Virginia 23801, not later than December of each year. Nominations should include an 8-inch by 10-inch head-and-shoulders photograph (color if possible), a narrative of achievements or contributions, biographical information and any supplemental documentation preferred by the sponsor.

Standing tall in either past or present formations have been and will continue to be a few good NCOs and enlisted Logistics Warriors who have earned the right of special recognition. I hope that every military and civilian affiliated with the Quartermaster Corps has a desire to enhance the Hall of Fame program. I believe that we have a responsibility to ensure that the prestige, traditions and accomplishments of the Corps are appropriately recognized and made a matter of officially recorded history.

We also encourage recommendations for Quartermasters who should be recognized from all branches of the Army. Your contributions are both wanted and needed.

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.

From Our Readers

Dear Editor:

There is much discussion with units that come to the National Training Center about whether to use supply point distribution from within the brigade support area (BSA) or to use supply point distribution from a scheduled logistics release point (LRP) outside the BSA. LRPs are not usually the first choice of action so distribution from within the BSA has become the norm. Distributing supplies from within the BSA is doctrinal and works well. However, LRP distribution, though not doctrinal, also works well. The question then arises: "Which is the better way?" A comparison of these two methods may answer the question:

Supply Point Distribution

BSA	LRP
• (-) Location	(+) Forward/Close to combat trains
• (+) Support asset availability	(-) Limited
• (+) Customer accommodation	(-) Time sensitive
• (-) Operations security/ Identifies the BSA	(+) Concealed/Away from BSA
• (-) Operations: Usually 24-hour	(+) Operations: Scheduled
"Convenience Store"	**"Supply Point"**

This comparison can be skewed either way but the main point is to illustrate the "convenience store" type of operation which most units use. LRP operations are time-sensitive, pure supply point operations.

The term "convenience store" implies that the supply points within the BSA are open anytime and all the time. Customer units can come, browse and pick up at their leisure for support. The impact that this type operation has upon the supply company is threefold: organization and efficiency, performance degradation, and safety.

Organization and efficiency is affected when no schedule is set for customer support. Since most units operate on a daily issue cycle, no time is available for breaking supplies into unit piles (Class I) and no time to properly position and arrange assets to maximize support and defense (Class III and water).

Performance degradation occurs when, due to a lack of a schedule, supply point personnel work around the clock to support their customers and further establish/improve their areas. Fatigue rapidly becomes a performance degrader because an effective sleep plan cannot be established.

Safety becomes a factor at this point. Soldiers who do not sleep, *do* damage equipment and *do* get hurt. When this happens, *support is degraded.*

Supply point operations should be scheduled to allow the supply company to accomplish everything required to survive and support on the battlefield. LRP operations accomplish this effectively. The impact that an LRP operation has upon the supply company is fourfold: organization and efficiency, performance sustainment, BSA security and safety.

Organization and efficiency is affected by scheduled times for customer support. This allows the supply point personnel to organize their assets, plan for additional support (if required), defend their area and rest.

Performance sustainment is affected positively because the soldiers are allowed time to rest and leaders are allowed time to plan and prepare before execution.

BSA security is enhanced by removing the signature of supply operations outside of the perimeter and performing such operations at night.

Safety is still a factor. However, more emphasis is placed on safe operations to ensure unimpeded support to the fighting force. Also, a key element is that rested soldiers are less likely to have accidents even though operating at night.

My purpose is not to simply support the conduct of LRP operations. Instead, regardless of which method used, it is to support the use of schedules to prevent "convenience store" operations which have an enormous impact upon the performance, safety, and survival of the forward supply company and its most valuable assets—its *soldiers.*

CPT Jethro R. Mann, Jr.
Forward Supply Company Combat Trainer/Observer Controller
National Training Center, Fort Irwin, California

Dear Editor:

I commend the Fort Bragg Public Affairs Office for taking the time to submit the article "Hot Showers, Clean Clothes and Fresh Bread" in the Summer 1992 edition. Field services is a combat multiplier and needs to be recognized as an enhancer to the soldiers' morale and health. However, a few points should be clarified about the article and a few accomplishments should be recognized.

I served as the company commander for the 16th Field Service Company during *Operation Desert Shield/Storm*. The 16th Field Service Company was part of the XVIII Airborne Corps during *Operation Desert Shield/Storm*. The 16th Field Service performed laundry, bath, renovation, bakery, sleeping bag exchange and mortuary affairs.

The article stated the 259th Field Service Company supported the entire XVIII Airborne Corps. The XVIII Airborne Corps received field services support from several Active and Reserve units.

The 16th Field Service Company's laundry section processed over 502,000 pieces of clothing. The laundry section performed their mission with five M-532s and three M-85s. The M-532 experienced numerous maintenance problems due not only to age but also to the harsh desert environment. The laundry section provided innovative service at trailer transfer points. The laundry section gave the customers same-day service versus the 24-hour turnaround. The reason for this method was the truck drivers passing through with only a brief stay. The bath section provided shower services to 2,500 soldiers.

The renovation section sewed over 33,000 uniforms. The renovation section was active in altering desert camouflage uniforms with the proper name tags, rank and insignia during *Operation Desert Shield/Storm*. The sewing machines used by the renovation sections were the conventional Army Chandler sewing machines. The 16th Field Service Company renovation section used the Chandler sewing machines before, during and after *Operation Desert Shield/Storm*. The machines were not replaced by light-duty commercial sewing machines.

The bakery section provided over 15,000 loaves of white and raisin bread. The salvage section performed a sleeping bag exchange mission which provided over 1,000 soldiers with clean sleeping bags. The mortuary affairs section provided the 24th Infantry Division with mortuary affairs support.

The 16th Field Service Company field service support was hindered when half of the company was attached to the 2d Mobile Army Surgical Hospital, Fort Benning, GA. The Field Service Company performed a patient decontamination mission which required extensive training in MOPP 4 gear. The team performing this mission consisted of laundry and bath specialists, fabric repair specialists and bakers. The mission was unique to a field service company. The company was divided into three different directions while still performing a limited field service mission. Upon completion of the ground phase, the company resumed field service operations upon regrouping just south of the Saudi Arabia-Iraq border.

The 16th Field Service Company was proud to serve with the XVIII Airborne Corps. The unit to this day continues to perform missions with the XVIII Airborne Corps. Field service support is underrated on the battlefield, but once field services support is used it becomes one of the most valued commodities a soldier can be given.

CPT Eddie Rosado
Training Officer, Airborne and Field Services Department
U.S. Army Quartermaster Center and School, Fort Lee, Virginia

CORRECTION: In the Summer 1992 edition of the *Quartermaster Professional Bulletin*, the article "The NCO Career Map" in the Quartermaster Update section had inaccurate information that does not reflect the current Department of the Army Tuition Assistance policy. Specifically, Army Tuition Assistance is not limited to courses on the Noncommissioned Officer (NCO) Career Map, which became effective in January 1992 for all Career Management Fields (CMFs). Tuition assistance is available for a soldier's declared educational goals. Counselors can provide tuition assistance for postsecondary courses recommended on the career map and those courses leading to the overall recommended CMF and/or personal goal, provided all courses lead to the soldier's educational goal and funding is available. It is the counselor's job to ensure that the courses approved for tuition assistance fit into the educational goal of the soldier. While soldiers should be encouraged to take the postsecondary course recommendations on the NCO Career Map, soldiers should have the option of pursuing disciplines related to their professional development or their personal goals, understanding that they may be the same or vastly different.—COL Douglas E. MacFarlane, Director, Army Continuing Education System (ACES)

A Jump Through Airborne History

LT Gary F. Sargent

Members of a U.S. airborne force file into a C-47 in 1944 for a drop into Holland.

The supply of an airborne force in World War II included many unique problems uncommon in today's Army. The helicopter was more than five years away from use on the battlefield. An aircraft that could drop large loads through a rear cargo ramp did not arrive until well after the war's conclusion. The single problem, which everything hinged on, was that airborne was a new and untested element in warfare.

World War I to Crete

Before 1 September 1939, only six countries had airborne units: Germany, Russia, Italy, Spain, Poland and France. During World War I the deadlock of trench warfare inspired the idea of airborne forces. The French, Russians and Italians used parachutists. The Italians were the most successful.

Aerial resupply traces its beginnings to World War I, with the first recorded case in March 1916 when a British aircraft dropped a 70-pound package to a garrison in Mesopotamia. Russia was the first to experiment with large-scale airborne landings. In 1939 Russians used small groups of paratroopers to open their invasion of Finland. However, Germany would make history and ensure the birth of the United States Airborne force.

Germany had organized numerous glider clubs between the world wars. The glider, which would become so important as a means to deliver heavy supplies and troops, became a way for Hitler to avoid the terms of the Treaty of Versailles. The German *Fallschrimjager* began 20 January 1936 when Hermann W. Goering ordered a training school set up in Stendal, Germany. By 1940 the Germans had used paratroopers in Norway and Holland and captured the gigantic fortress of Eban-Emael in Belgium. Eban-Emael contained over 1,000 defenders and enough food and water for 60 days. Eban-Emael was captured by a glider assault with less than 100 German *Fallschrimjager*. In 1941 Germany invaded Greece, and the island of Crete became the target of Germany's most ambitious airborne operation. The Germans would invade the island completely by air. At 0900 on 20 May 1941, 500 Ju 52s and numerous gliders began Germany's largest and costliest airborne invasion of the

war. Crete fell, but the German *Fallschrimjager* would never again attempt anything as bold. Hitler decided using them in this manner was too costly. Of the 22,000 men who attacked Crete, 6,000 died and nearly half of the 500 Ju 52s were destroyed.

America's Airborne

America's involvement with paratroops began with the great aviation theorist, General William "Billy" Mitchell. He pushed throughout his career the idea of aviation and airborne warfare as the wave of the future. His outspoken criticism of the War Department preceded his court martial in 1925. His vision inspired others to make his dreams a reality.

After World War I, small-scale testing of the airborne concept continued within the American military. In 1928 three soldiers and a machine gun were parachuted over Kelly Field, TX. An exercise in Delaware in 1932 announced the arrival of a CPT Kenney and a fully equipped airborne infantry section. Full-scale testing would not occur until the world watched the Germans parachuting above the Low Countries of Europe. On 29 June 1940, the first American Parachute Test Platoon made its maiden jump at Fort Benning, GA. By the first few months of 1941, the 501st Parachute Infantry Battalion (later Regiment) would be established. America's entrance into the select and small group of nations with airborne forces was swift and paralleled by the British. The United States and Great Britain would control the sky and use the airborne soldier as many had envisioned: large-scale airdrops deep inside enemy territory.

The first combat use of United States paratroopers occurred in North Africa on 8 November 1942 to seize French airfields at La Senia and Tafaroui. The flight never made either target. Instead, paratroopers dropped on Lourmel airfield, Morocco, after making an unopposed landing at Sebka. *Operation Husky*, the invasion of Sicily, proved a lesson on how not to accomplish an airborne assault. On the night of 9 July 1943, a combined British and American force of 6,400 paratroopers and glider troops landed on Sicily. A combination of the weather and poorly trained pilots spread the force over hundreds of square miles of terrain, with 252 men drowning in the sea and only 12 gliders landing on their assigned drop zones (DZs). Airborne troops would drop again in Italy, at Salerno, in September, but the greatest jumps of the war would occur in the countries to the north: France, Holland and Germany.

American Paratrooper

The soldier who dropped in France in the early morning hours of 6 June 1944 carried a very heavy load indeed. Carrying all his weapons when he exited the aircraft, he jumped ready to fight, unlike the Germans who dropped all their weapons, except a pistol, in containers. He wore a jumpsuit that had numerous pockets for storing gear, with the rest of his gear strapped to his body. Most paratroopers carried an excess of 125 pounds of equipment when they jumped over Normandy. A PVT Donald Burgett of the 101st described the equipment he jumped with the night of 5/6 June 1944:

> One suit of Olive Drab, worn under my jumpsuit (which was treated to help protect against gas attack), helmet, boots, gloves, main chute, reserve chute, Mae West, M-1 rifle, .45 pistol, trench knife, jump knife, hunting knife, machete, one cartridge belt, two bandoliers, two cans of machine gun ammo totaling 676 rounds .30 cal., 66 rounds .45 cal, one Hawkins AT mine, four blocks TNT, one E-tool with two blasting caps taped on the outside of the shovel, three first aid kits, two morphine needles, one gas mask, a canteen of water, three days' supply of K rations, two days' supply of D rations, six fragmentation grenades, one Gammon AT grenade, one orange and one red smoke grenade, one orange panel (similar to our present VS-17 panel), one blanket, one raincoat, one change of socks and underwear, and two cartons of cigarettes. (John Keegan, *Six Armies in Normandy*, page 77)

The parachute was very similar to the present T-10. The harness was almost identical without the quick releases on the risers, added after a number of soldiers were killed on Corregidor, Philippines, in 1945. The American harness did not have a single quick release in the center of the harness as the British did. This meant American soldiers carried numerous knives to cut themselves out of the harness upon landing in enemy territory. The British quick release harness would be adopted by American forces after Normandy. The paratrooper of World War II was his own supply man. Support was either carried on his person or airdropped, which usually never occurred at the right time or place. On the night of 5/6 June, only four officers and four enlisted men of the Quartermaster Corps jumped, one the division Quartermaster from the 101st and the remainder from the 82d.

Airborne Quartermaster

Before March 1945 an Airborne division had one Quartermaster company consisting of 87 officers and soldiers divided as follows: company headquarters, a service platoon, and an airborne truck platoon of jeeps and 1/4-ton trailers. After linkup with friendly forces, a truck company was usually attached from another unit. A new table of organization and equipment (TOE) of March 1945 combined the Quartermaster company with the attached truck company, totaling 11 officers and 197 enlisted soldiers. The trucks could not be used until a linkup with friendly ground forces. No allied aircraft could transport a 2 1/2-ton truck.

> The supply organization to support the airborne was huge, comprising five separate echelons: the divisional airborne quartermaster element, the divisional seaborne or land transported organic quartermaster element, attached quarter-

master troop units, quartermaster depot units at take-off fields, and the organic quartermaster element of division rear. (William F. Ross and Charles F. Romanus, *The Quartermaster Corps: Operations in the War Against Germany*, page 477)

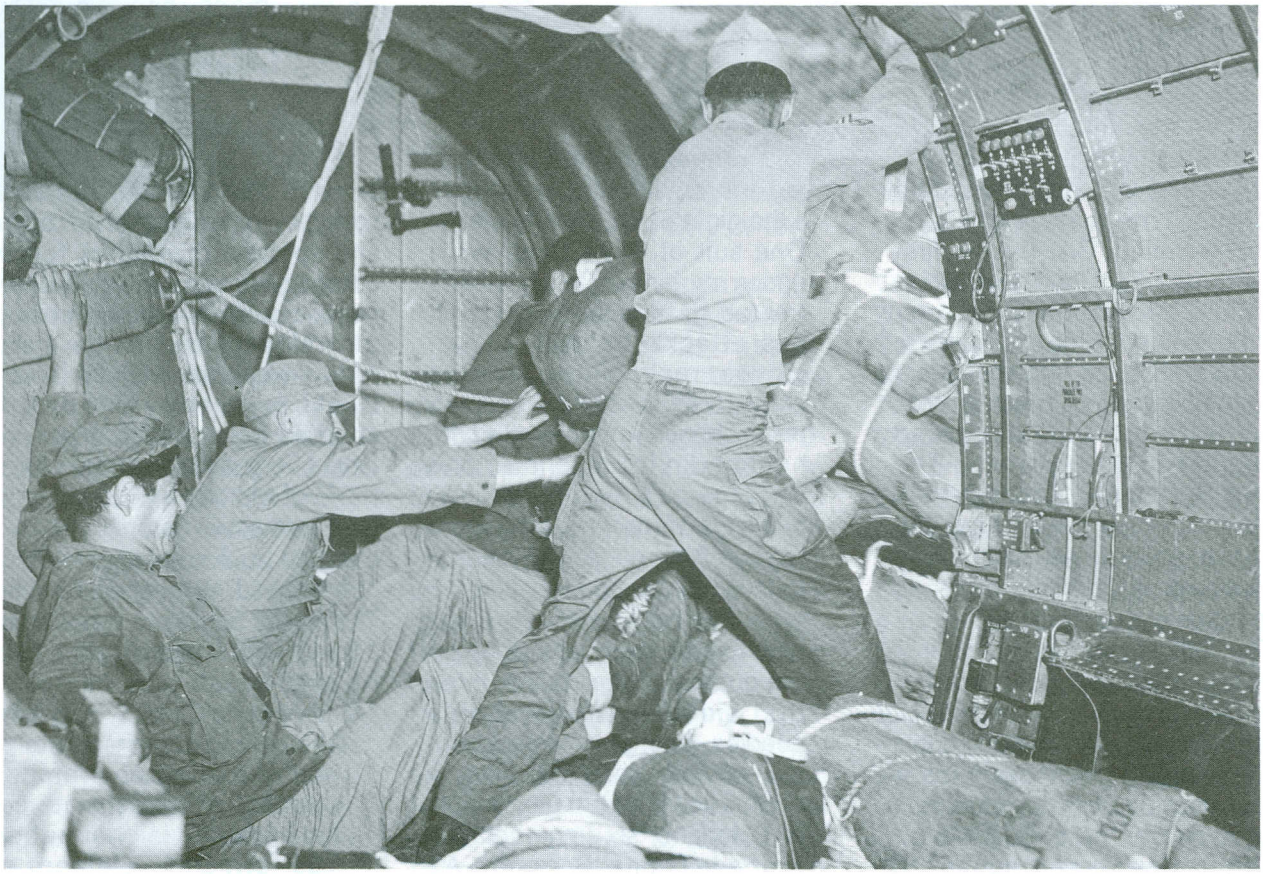
Rigging personnel and equipment parachutes did not become a Quartermaster job until after World War II. The airborne battalions used soldiers trained by rigging personnel, who were trained at Fort Benning. In the Italian theater in the fall of 1943, a group of Quartermasters were taught how to rig supplies for airdrop by the 509th Parachute Infantry Battalion. They would use these skills to supply Allied units, fighting in Italy's mountainous terrain with no other supply source, for the rest of the campaign. Supplies dropped from the air usually used a color parachute system of red, yellow, brown and green to designate what type of supply the canister contained.

Allied Aircraft

The Allied airborne forces used a variety of aircraft to deliver soldiers and supplies. Paratroopers were transported either by glider or transport plane. The main transport for all Allied airborne forces in Europe was the C-47. The C-47 could carry 18 fully equipped paratroopers or a total of 6,000 pounds of equipment. The aircraft could also drop heavier equipment from under its wings, usually disassembled 75mm howitzers, while the paratroopers jumped from the aircraft's door. The C-46, Commando, would arrive in western Europe in time for *Operation Varsity*, the Rhine crossing in March 1945. The C-46 was used primarily in the Far East because of its range. The Commando could carry 36 paratroopers or 10,000 pounds. The C-46 was projected as a vast improvement over the C-47 because it could exit twice the paratroopers, with exits on both sides of the aircraft. However, the C-46s did not have self-sealing fuel tanks and would become "flying coffins" during *Operation Varsity*.

Gliders were the aircraft that brought the heavy equipment to the battlefield. The American Army used both its American- produced Waco and the British-produced Horsa. The Waco could carry 15 soldiers, including the pilot and copilot, who fought as infantry soldiers until linkup with friendly ground forces. The Horsa had approximately the same capabilities as the Waco but was only used by American forces on D-Day. The jeep and the 57mm antitank gun could only arrive with airborne troops when landed with gliders. Landing a glider in combat was more dangerous than jumping. "Most of the men feared the glider. Posters went up on barrack's walls in the 325th and 326th with a montage of crashed gliders captioned: Join the glider troops! No flight pay! No jump pay! But never a dull moment!" (Clay Blair, *Ridgway's Paratroopers*, page 45)

Not until aircraft had rear ramps



The crew of a U.S. Eighth Army C-47 cargo plane kick out a parachute load of medical supplies and food to a leper colony, starving on an isolated island in the Pacific Ocean and surrounded by Japanese-mined waters, in the Philippine Islands, 1945.

could heavy loads be parachuted. Numerous other aircraft were used for aerial resupply. Any aircraft could drop loads. Fighters even dropped supplies from their wing bomb racks.

Just after midnight 6 June 1944, airborne forces of the United States 82d and 101st and the British 6th Divisions began their assault on France. The initial drops scattered the troops all over the area. Once again darkness, weather and insufficient training for the new air crews resulted in missed DZs. A total of 1,350 transports carried the paratroopers and over 3,000 gliders with equipment and troops. A glider resupply mission was flown at dusk on the 6th. Most gliders crashed upon landing. On the 7th a resupply of 480 tons was airdropped, but less than 40 percent was recovered. A major problem with the aerial resupply was that the unloaders could not drop items quickly enough. By the 8th, the 82d had linked up with its attached truck company before its organic Quartermaster company, which was transported by ship, had landed on the beach.

On 17 September 1944 the largest airborne assault of the war began over southern Holland. Unknown to most participants, including the commanders, the area around Arnhem and Nijmegen, British 1st and American 82d sectors, had two Waffen SS (Schutzstaffel) panzer divisions refitting and rearming in "quiet" Holland. *Operation Market-Garden* would be a daylight assault. Therefore, most units would suffer light casualties during the initial drop. Two American divisions, one British division, and one Polish brigade would make the drop. The biggest problem faced by the commanders was getting all the units on the ground in Holland. Not enough aircraft were in theater for a single mission drop.

The glider landing of heavy equipment on 18 September was almost perfect, and half the 101st's 426th Quartermaster company arrived with the gliders. Resupply cargoes were packed in England by members of the 490th Quartermaster Depot Company. B-24 bombers were put into service to make supply drops, due to the shortage of transport aircraft. On the 18th, 252 B-24s, with their ball turrets removed, flew 782 tons of supplies. However, because of the poorly trained aircrews, only 30 percent was recovered. Aircraft could only fly one mission per day because of the distance from Great Britain. By the night of the 18th, units of the 101st linked up with friendly forces and were no longer supplied by air. The 82d would not complete linkup until the 23d. The weather was unfavorable on the 19th, which severely hampered resupply for both the 82d and the British 1st Division. Eventually 1st Airborne would be withdrawn. The bridge at Arnhem, Holland, the ultimate goal of the attack, would remain in German hands until spring.

Operation Market-Garden proved that an airborne force had severe limitations. The British evacuated on 27 September 1944, 10 days after dropping in Holland.

Battle of the Bulge

The 101st became surrounded in Bastogne on 21 December 1944. Because of their rear support base in England, they resupplied by air during the siege, which lasted until December 27th. IX Troop Carrier Command arranged for three parachute resupply missions that were 98 percent effective. The major need was artillery ammunition that had to be flown in by glider. Sixty-one percent of the glider missions were successful. This experience led to the formation of an air-transportable "brick" that could supply an airborne division for a day.

Operation Varsity was the last airborne assault of the war in Europe. The experience at Arnhem would ensure that this attack occurred well within the range of Allied artillery and ground support. The British would take off from England. The Americans, for the first time leaving from airfields built especially for this operation, took off in France and Belgium. Logistically, this plan presented no problems because by the night of the first day, 24 March 1945, linkup with friendly forces was complete. After *Operation Market-Garden*, it was assumed that the risks were too great, just as Hitler had decided after Crete.

The "light" paratrooper of 1944 was a far easier element to supply than today's counterpart. The advantages of an airborne force to a commander far outweigh its inabilities to accomplish certain missions. In the 50 years since vertical envelopment was developed, the paratrooper's main threat to survival continues to be the tank.

Military forces have aircraft capable of transporting and dropping loads larger than ever imagined in World War II. With the Army's present ability to drop supplies, the problem becomes getting supply to the personnel who need it. Quartermasters must ensure that airdrop is used correctly and not wasted. Supplies must go directly to the users. It is a waste of assets and personnel if the supplies are dropped to the forward support battalions and then transported forward. A modern airborne or heavy division uses more supplies than ever: modern weaponry ensures this fact. Aerial resupply can ensure that the supply needs of a force are met.

The Army must continue to train and use its airborne supply system. The large-scale use of heavy forces in *Operation Desert Shield/Storm* was a peculiarity in the modern age. The next war will most likely be similar to the others since World War II: small, "light" and mobile. Once again "light" and airborne forces will play the major roles.

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Fueling the Birds: Air Assault

CPT Michael L. Fears

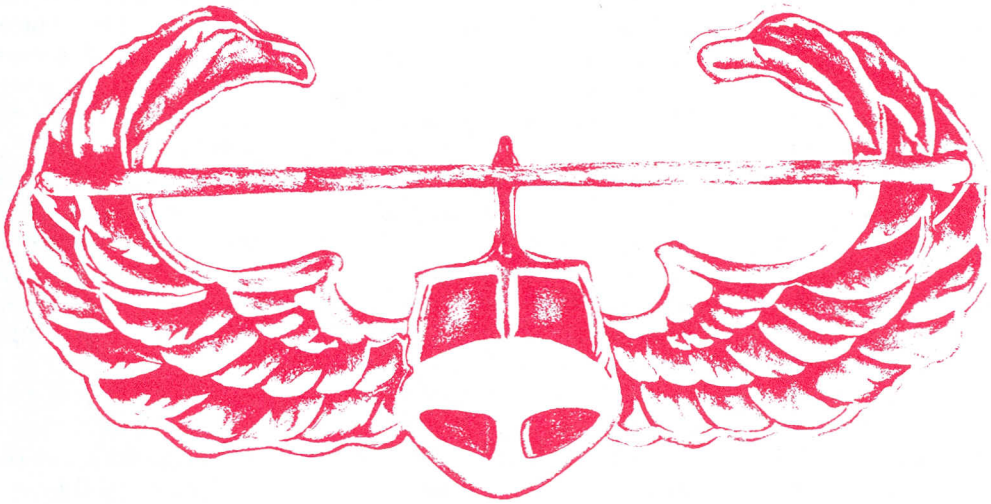
Twelve miles from the Iraqi border in a remote location in Western Saudi Arabia, soldiers from the 102d Quartermaster Company continued to refine their 25-pad helicopter rapid refueling point (RRP) and 950,000-gallon bulk petroleum storage tank farm. This, the largest and busiest tactical RRP in the theater, was established to support all allied aviation assets operating in the XVIII Airborne Corps sector.

By table of organization and equipment (TOE), the 102d normally would not possess aviation refueling equipment. However, over the years, the unit's equipment was systematically tailored for its unique mission supporting the 101st Airborne Division (Air Assault), Fort Campbell, KY. At Fort Campbell, the 102d operates two helicopter rapid refuel sites and a ground equipment refueling point. Even in Saudi Arabia, the mission of the 102d Quartermaster Company remained the same: provide aviation "HOT" refuel and bulk petroleum storage when and where needed.

Site selection, security and preparation were key elements in the success of the 102d Quartermaster Company's mission. The total land area required ultimately encompassed four grid squares. The finished refueling pads measured 48 feet by 144 feet with a distance of 150 feet from center pad to center pad. This allowed enough distance between pads to safely service all helicopters, including the large CH-47 (Chinook) helicopters. All 25 pads were outfitted with D-1, closed circuit, and open port aircraft refueling nozzles. The RRP and tank farm were designed and emplaced so that the 25 pads were divided into three separate systems, each with its own fuel source. Systems one and two were identical. Each had eight heavy helicopter refuel pads drawing fuel from six 50,000-gallon collapsible fuel storage tanks. Two pumps and two filter separators were used on the issue side of each system. Each 350-gallon-per-minute pump provided an average of 80 gallons per minute to each of the four pads it serviced. System number three differed slightly in that it had nine pads and drew from seven 50,000-gallon collapsible fuel storage tanks.

Safety and security were critical to an operation of this magnitude since the loss of even one helicopter due to low quality fuel, fire, terrorism, or other mishap could have jeapordized the entire operation. Quality surveillance was closely monitored with both Aqua-Glo and visual tests to detect water in the fuel and monthly millipore tests to check filter effectiveness. Two fire fighting teams were on hand 24 hours a day with three foam and water trucks for fire suppression and crash rescue. Air traffic control was provided by a five-man team from Fort Campbell operating from a high technology, mobile air traffic control facility.

Day one of the ground offensive began with the largest air assault of forces in history. By the end of day one, over 650 helicopters received fuel from the soldiers of the 102d Quartermaster Company. On day three, advance elements of the 102d launched deep into Iraq to establish yet another petroleum supply support base alongside other elements of the 101st Support Group (Corps). During the entire operation, over 1.6 million gallons of aviation fuel were issued, accident-free, to 5,000 aircraft. The soldiers of the 102d Quartermaster Company proudly accomplished their mission and took their place in history by "Fueling the Birds"!



CPT Michael L. Fears is Commander, 102d Quartermaster Company, 561st Corps Support Battalion, 101st Support Group (Corps).

Riggers Support the Special Operations Forces

CPT Jose D. Soto

The role of parachute riggers who support airborne units is well known. However, packing parachutes and rigging loads tell only half the story for the riggers who support Special Operations Forces.

The methods and types of missions of the Special Operations Forces demand support personnel capable of dealing with an array of sophisticated equipment not found in regular units. The uniqueness of these units requires riggers to assist in the planning, preparation and execution of missions that by their nature go unnoticed by anyone not involved or without a need to know.

Normally, a special operations unit is supported by a rigger section with as few as 6 or 7 members or as many as 28. The size and location of the supported unit will determine the size of the rigger section and the equipment that riggers will handle. Riggers supporting units with missions in cold weather climates will normally handle equipment required to operate and survive in cold weather regions. Riggers supporting units with missions oriented toward Central and South America will normally be more concerned with the effects of rain and the jungle on the parachutes and air items.

Short notice deployments, frequent travel and duty in exotic locations are not unusual for a rigger. Usually, available fixed facilities support deployed teams, but bare bases can be established.

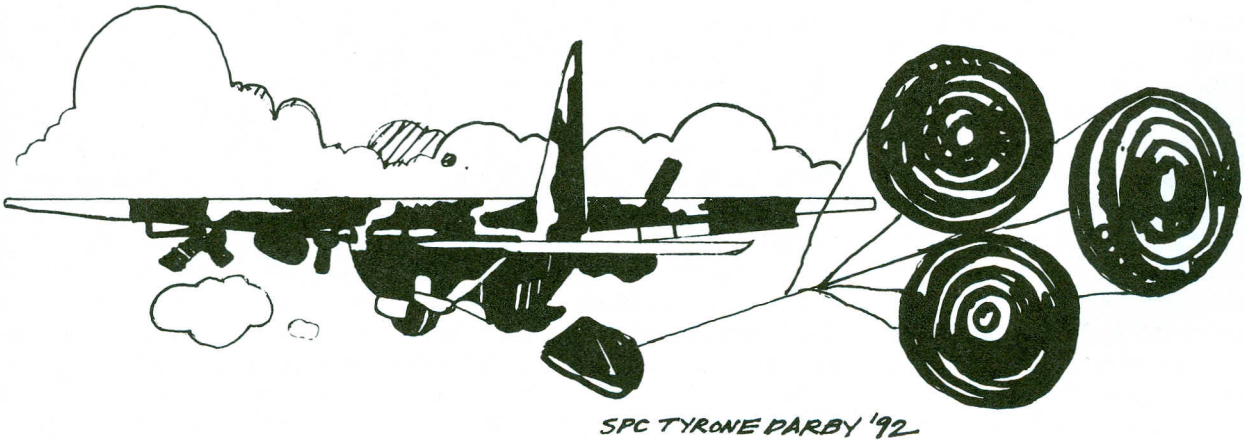
Like any other soldier in these type of units, riggers must complete demanding physical training every day. Rucksack marches, weapons training, drown-proofing training and full combat equipment jumps at night are training activities performed constantly.

In addition to packing static line parachutes and rigging loads, riggers are required to pack free-fall parachutes. They also maintain all the life support equipment related to free fall. Some riggers get the opportunity to attend the High Altitude Low Opening (HALO) Course, the HALO Jumpmaster Course and the Survival Evasion Resistance and Escape Course. Riggers also support airborne operations over water. Rubber Duck Operations, normally conducted by units with SCUBA (self-contained underwater breathing apparatus) Teams, involve the airdropping of equipment and personnel into water.

In support of units with special missions, riggers can provide aerial resupply to allied countries, conduct rigger training or translate manuals for allied countries. They can also be called to assist in the recovery of aircraft or parts of aircraft involved in accidents, operate airfields or prepare equipment and supplies for external transportation from aircraft.

The defense of the Special Operations Forces' forward operational base includes service support personnel. During field exercises and, if required in a real situation, riggers assist in the defense of the operational base if under attack. We recognize the importance of riggers and their unique contributions in support of the quiet professionals, the Special Operations Forces.

CPT Jose D. Soto has a bachelor of science degree in public communications from Sacred Heart University in Rio Pierdas, Puerto Rico. He is also a graduate of Quartermaster Officer Advanced Course, Combined Arms Services Staff School, and the Aerial Delivery Materiel Officer Course. His previous assignments include Support Platoon Leader, Assistant S3 and Battalion S5, 3rd Battalion, 7th Special Forces Group (Airborne), Panama. Most recently he served as Commander, C Company, 262d Quartermaster Battalion, Fort Lee, Virginia. He is currently the Chief, Airborne Instruction Division, Airborne and Field Services Department, Fort Lee, Virginia.



Kicking a Load in Burma

LT Christopher M. Bertelli

Air supply as a primary method of supporting light combat forces was born in the jungles of Burma during World War II. For the first time, American forces were totally supplied by air. No experience or doctrine for the massive delivery of supplies by airdrop existed before this campaign. Quartermasters on the ground and in fuselages of C-47s were there adapting and innovating to support the mission.

On December 8, 1941, Japanese forces launched an attack on Burma. Their objective was to cut off Allied supply routes to Generalissimo Chiang Kai-shek's forces in China and eventually be in a position to attack India. By May 1942, they had succeeded. Only the 10th US. Air Force flying over the Himilaian "hump" at a considerable cost could supply Chinese forces. Allied forces had to retake Northern and Central Burma and complete the Burma Road to Kumning if the Japanese were ever going to be seriously challenged in China. Allied forces needed supplies to fight in the jungles of Burma. These supplies came from the air.

Burma's heavily wooded jungles and monsoon climate made the movement of supplies over land expensive. Roads were difficult to build and maintain. Air supply eliminated the need for these roads. It also made units independent of ground lines of communication, thus defeating Japanese attempts to cut supply lines.

The British were the first to extensively use air supply during their defensive campaign of 1942. They formed the *ad hoc* 1st Royal Army Service Corps Dispatch Company. During Spring 1942, the British dropped 3,000 tons of supplies in three months. Air supply was a major component of British Major General Wingate's long-range penetration force concept. The "Chindits" consisted of 3,200 British, Indian, Burmese and Gurkha troops moving in separate columns 1,000 miles into Japanese-held Burma completely supplied by air. The operation lasted five months, destroyed portions of a railroad and gave Britain a needed morale boost. It also proved that this type of operation could be supplied by air.

Borrowed Idea

Later, Americans would borrow the idea, forming the 5307th Composite Unit, Provisional (Merrill's Marauders). The Americans also borrowed British air supply techniques and equipment for their early operations. Americans first used air supply as a regular means of support in March 1943 to supply air warning stations and Chinese units operating in the Naga Hills of Burma. An airdropping detail was formed from soldiers of the 60th Quartermaster Corps Laundry Company and the 3477th Ordnance Company. Experimental drops proved so reliable that a more permanent organization was formed. Soldiers from the 3304th Quartermaster Truck Company received and issued the supplies in forward areas. The demand for air supply soon outgrew these units' capabilities. The 2d Troop Carrier Squadron assumed full airdropping duty, increasing the number of planes available from 4 to 10. The 518th Quartermaster Battalion (Mobile) relieved the 3841st of its warehousing and packing duties to make it available for 100 percent "kicking duty." Kicking duty was the actual pushing of the supplies out of the plane. Operations continued to expand with air supply dropping platoons formed from the experienced units. By early 1945 the Burma theater operation had expanded to 900 persons. From 1943 to 1945 this force delivered 152,828 tons of supplies. Of this, 89,914 tons were airlanded, 33,136 tons were free dropped, and 29,778 tons were parachuted.

The retaking of Burma began in October 1943. This offensive took 10 months and ended with the fall of Myitkyina in August 1944. During this period, 25,000 to 100,000 troops were completely dependent on aerial supply.

Merrill's Marauders played a key role in this offensive, capturing the Myitkyina airfield on May 17 after attacking by surprise from the north. Originally planners conceived a volunteer organization of 3,000 for one three-month deep penetration mission. After this mission, planners estimated that the unit's survivors would need three months hospitalization and rest. Rumors conveyed the idea that the unit would be relieved after three months of combat duty. The 5307th actually fought for six months tying up several Japanese divisions.

Planners developed the 5307th with its own air supply personnel and organization. This was the first use of American equipment in the theater. 5307th Quartermasters based their concept of air support from the British "Chindits" experience, learning from their successes and mistakes.

Because the operation was totally dependent on air supply, all soldiers were aware of their responsibilities to the men fighting and allowed no obstacle to prevent the successful delivery of food and ammunition. Pilots and crews were called upon to approximate low-level bombing accuracy. Supplies in various categories representing one day's supply were prepacked and available at all times for delivery. Requests were made in the evening for delivery the next afternoon. However, for emergencies, the waiting period shortened dramatically. On May 6th a drop was made 2 hours and 22 minutes after request.

Through careful planning and continued study of this new type of operation, Quartermasters improved support. They prepared charts to determine weight and aircraft numbers for quicker calculations. Warehousemen packed and preloaded supplies onto trucks for quick dashes to the airfield. The suppliers and those supplied always had air-ground communications at the drop zone for improved coordination. The improvements gave the fighting forces maximum mobility and secrecy in a very dangerous environment.

The efforts of the Marauders were separate from the rest of the theater. During this period, air supply continued to grow. Supplies for the Chinese Y-Force operating in the Salween valley were largely airdropped. The Y-force consisted of Chinese forces with American advisors. Men forming the airdrop detachment were veterans of the earlier Burma campaigns who acted as kickers and teachers for packing supplies and rigging.

The Y-Force Air Dropping Detachment had only two weeks of planning and training to prepare for their offensive. Despite the mountainous terrain and difficult weather, they were ready. The U.S. soldiers continued to train Chinese forces and eventually assumed supervisory roles on the ground.

Rice and ammunition were the largest portion of supplies airdropped. Packers wrapped the rice loosely into three burlap bags and free-dropped these bags. Other items dropped included radios, TNT, gasoline, raincoats, flame thrower cylinders, and absentee voting ballots. Some items presented specialized problems. Soldiers adapted to get the supplies to the ground intact and as efficiently as possible. For example, the flame thrower cylinders proved to be too heavy and slippery for normal rigging. A soldier offered a solution: weave a net of rope around each cylinder and attach two parachutes. It worked well. Originally four cans of gasoline were loaded into a wicker basket, until soldiers discovered that dropping the gasoline in half-full 55-gallon drums was more economical.

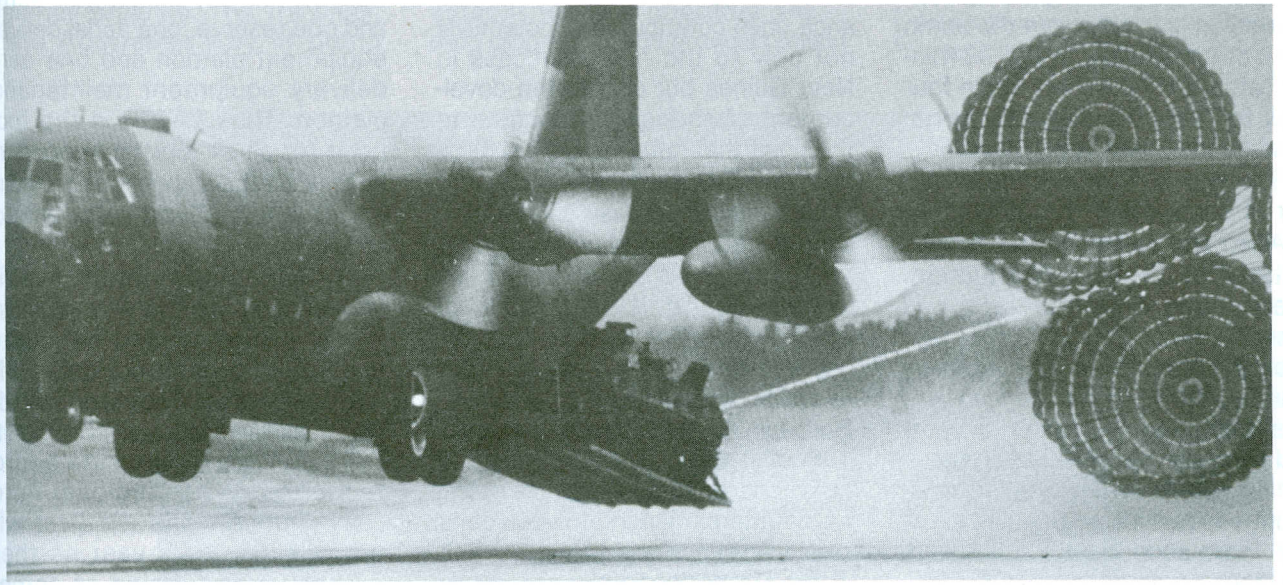
During the Salween campaign the U.S. Army used three types of parachutes. These chutes included the 22-foot American chute which could carry 300 pounds, the 18-foot Indian chute for loads of 120 to 150 pounds, and the 6-foot pigeon chute originally used to drop carrier pigeons. It could hold 35 pounds.

The primary aircraft used for the entire theater was the C-47 Gooney Bird. This was the military version of the famous and venerable DC-3. It proved far easier to load and balance than other aircraft. It could cruise at 150 miles per hour with range of 1,500 nautical miles and carry 7,500 pounds of cargo.

With the fall of Myitkyina, the Burma road could be completed to China. Before China could be retaken from the Japanese, Japan surrendered.

While new techniques still had difficulties, air supply fed, clothed and armed five Chinese divisions, one British division, one American brigade, and many remote service troops. Quartermasters were never satisfied and continually tried to improve their techniques. These soldiers brought their experience home with them, and air supply proved valuable a few short years later in saving lives and driving back communist forces in Korea.

LT Christopher M. Bertelli is a Quartermaster Officer assigned to Fort Lewis, Washington. He has a master of science degree from Boston (MA) University and a bachelor's degree from Illinois State University in Normal. He is a graduate of the Quartermaster Officer Advanced and Basic Courses. Previous assignments include Accountable Officer of the 77th Maintenance Company, Babenhausen, Germany, and Executive Officer of the U.S. Army Memorial Affairs Activity, Europe, in Frankfurt, Germany.



'Kickers' are no longer required to release a load of supplies to a waiting unit below.

Airdrop Down Under

CPT Andrew P. Hofman

Fifty years ago this year, 1942, Australia was facing its darkest hour. Singapore had fallen with the capture of thousands of Australian soldiers, bombs had fallen for the first time on the Australian mainland at Darwin, and the Japanese were at Australia's doorstep in New Guinea. What followed were three long and bloody years of fighting in which the Japanese were slowly pushed back northwards. Australia was saved thanks to a joint effort with Australians and Americans fighting alongside each other both on ground and in the air. Nowhere was this spirit of cooperation more apparent than in the aerial resupply missions flown in New Guinea, where Australian Army air dispatchers rigged and dispatched loads from U.S. Army Air Corps C-47s.

Whilst the New Guinea campaign during World War II saw the start of an organized aerial resupply system in the Australian Army, it was not the first use of airdrop. In July 1918 during the Battle of Hamel, CPT L. Wackett of the Australian Flying Corps devised a method of dropping ammunition containers by parachute from the bomb racks of his aircraft. In the 93-minute battle, CPT Wackett made four trips to resupply Australian machine-gunners with ammunition.

The war in New Guinea was a war of supply, and the movement of Allied and Japanese forces was dictated by the supply situation. Every round of ammunition and every tin of food had to be carried over the thickly jungled Kokoda Trail by native carriers because it was impossible for motor transport and pack animals. The key to maintaining supply levels in such harsh country was airdrop. Suitable clearings were soon identified and supply drops commenced in July 1942. At first an *ad hoc* organization was used, with the 1st Supply Platoon, Australian Army Service Corps, rigging the loads and an infantry platoon from the 53d Battalion providing the load "kickers." Supplies were dropped by parachute and by free drop but with little initial success until the crews perfected the right combination of speed and altitude. After a free drop of sacks of rice to a supply dump near Myola, the message came back that no further rice drops were required: a substantial rice crop had sprung up from the sacks of rice which had burst on impact.

As the Kokoda campaign advanced, it became necessary to further develop and refine the techniques of airdrop air-land. In early 1943 the 1st Air Maintenance Coy was raised at Port Moresby and was soon followed by the 2nd and 3rd Air Maintenance Coys. These companies set up at staging airfields and handled supplies both air-land and airdrop to support the Allied advance north across the Owen Stanley Ranges. In the period July 1943 to March 1944, the three air maintenance coys airdropped 2,250 tons and air-landed 23,000 tons of supplies. These air maintenance coys contributed substantially not only to the Allied success in New Guinea but also to the development of air logistics doctrine to the point that both the United Kingdom and U.S. Army sent observers to study the Australian air maintenance techniques and organization.

The three air maintenance coys were disbanded at the end of World War II. Air dispatchers did not see operational service again until the Malayan Emergency and Borneo Confrontation in the early 1960s. A small detachment of air dispatchers worked with their British counterparts and provided aerial resupply support primarily by helicopter underslung operations. In 1966, Detachment 176 Air Dispatch Coy deployed to Southern Vietnam with approximately 40 personnel and provided aerial resupply support within the Australian Task Force area. As in Malaya and Borneo this support was primarily helicopter underslung operations. In 1973 the Royal Australian Army Service Corps was disbanded and its responsibilities split between the Royal Australian Corps of Transport (RACT) and the Royal Australian Army Ordnance Corps (RAAOC). This was a significant event as the task of rigging airdrop loads was given to RACT and the packing of parachutes and maintenance of air items was given to RAAOC, thus splitting airdrop support between two corps. Any potential problems were overcome by placing RAAOC aerial delivery equipment units under command of the RACT air dispatch organization.

Today, air logistic support to the Australian Defence Force (ADF) is centralized under the 1st Air Transport Support Regiment (1ATSR), commanded by a lieutenant colonel and located at Richmond Air Force Base, about 35 miles west of Sydney. It commands two air dispatch squadrons (coy size), one active and one reserve, one aerial delivery equipment platoon and one aerial delivery equipment maintenance platoon. Thus 1ATSR is the focal point for all air logistic support requests, as it is capable of providing both personnel and cargo airdrop support.

1ATSR finds itself heavily tasked each training year providing air-land, airdrop and helicopter underslung support not only to the ADF but also to government departments and the civil community. Typical missions include airdrop resupply to the Regional Force Surveillance Units (RFSUs) who patrol Australia's vast northern outback area, rigging of combat rubber raiding craft (CRRC) and stores bundles for the Special Air

Service Regiment (SASR), rigging of vehicles and equipment for the Parachute Battalion Group (PBG), rigging of training loads for Air Force C-130 and C-7 airdrop crew training, free drop of hay and fodder for drought and flood relief and airdrop resupply to the Antarctic research station on Macquarie Island. Many of these tasks require only a small detachment and are often commanded by a corporal. Great responsibility and trust is placed in these junior noncommissioned officers (NCOs) as they find themselves providing air logistic advice to senior commanders.

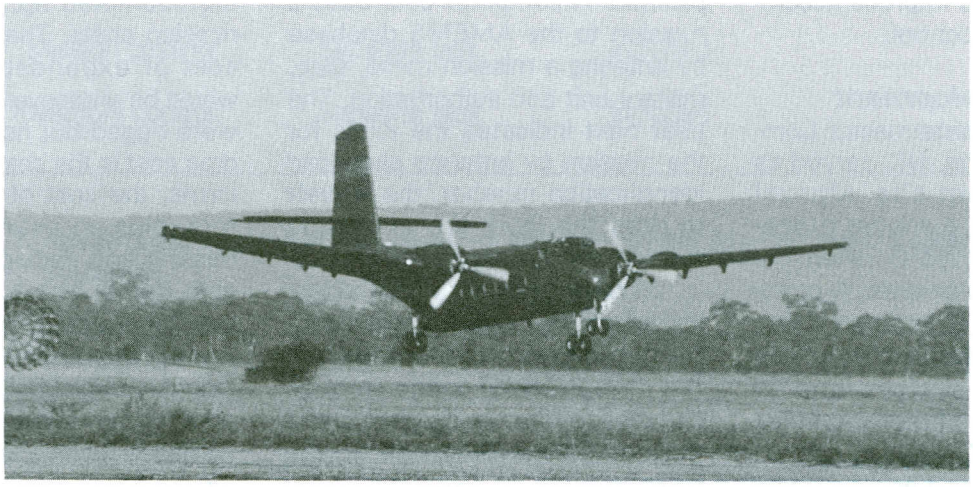
Air Movement Training and Development Unit (AMTDU) is a joint Army-Air Force unit also located at Richmond Air Force Base. The Army component of AMTDU has two missions: firstly to train new soldiers as air dispatchers and junior NCOs as crew commanders and aerial delivery supervisors, and secondly to develop rigging procedures for air-land and airdrop of new equipment entering service. It is at this unit that the U.S. Army Quartermaster 92D captain participating in the Personnel Exchange Program will find himself. The officer will generally spend one year supervising all air-land and airdrop training, and the second year as the Senior Army Project Officer for all Army air-land and airdrop developmental projects. The transition to the Australian way of doing things is made a little easier because all air items used by the ADF are U.S.-sourced and the primary airdrop aircraft is the C-130.

The Australian Army, just like the U.S. Army, has recently gone through a Force Structure Review (FSR) as a result of recent world events. At this time the Air Transport Support Regiment is to be reduced by one air dispatch squadron and the remaining units formed into a multifunctional regiment with elements of the Terminal Regiment (RACT unit responsible for road, rail, sea and logistics over the shore (LOTS) terminal operations). For many years Army planners have looked at the U.S. Army parachute rigger field and asked the question, "Why can't we combine the trades of air dispatcher and parachute rigger?" If a U.S. Army parachute rigger can pack parachutes, rig loads, and maintain air items why can't an air dispatcher or parachute rigger?

The major difference is that the air dispatcher performs many more tasks than simply rigging airdrop loads. The air dispatcher loads airdrop loads onto aircraft, provides loading advice and assistance during air-land missions, manually dispatches airdrop loads from both Army and Air Force aircraft, provides equipment and assistance for helicopter underslung operations, establishes and operates heavy drop drop zones and provides liaison and assistance at forward airfields between the Army and Air Force. The U.S. Army parachute rigger does not perform many of these tasks because there are specialized organizations to handle them. The present combination of air dispatcher and parachute rigger under a single headquarters provides the ADF with an efficient and coordinated air logistic support force.

Thus, over 50 years, airdrop support in the Australian Army has evolved from an *ad hoc* organization created to meet the operational requirements of the New Guinea campaign in World War II to a single unit capable of providing the full spectrum of air logistic support. This air logistic support is also enhanced by the continuing relationship between our two countries which is as strong now as it was in 1942.

CPT Andrew P. Hofman is the Australian Exchange Officer at the Airborne and Field Services Department, Fort Lee, Virginia. He is a graduate of the Royal Military College, Duntroon, Australia. He is also a graduate of the Transport Officer Basic and Intermediate Courses, Basic Air Dispatch, Jumpmaster, Military Free-Fall, Aerial Delivery and Materiel Officer Courses, and Airdrop Load Inspector Certification Course. Before participating in the Personnel Exchange Program, he was the Operations Officer, Headquarters, 1st Air Transport Support Regiment.



A C-7 Caribou conducts a low-altitude parachute extraction system (LAPES) airdrop at Londonderry Drop Zone, Richmond Air Force Base.

Airdrop Missions and Equipment Management System

Nancy Fuccillo

Manual airdrop mission planning procedures require riggers and supply clerks to spend days compiling lists of equipment and components to rig loads for a mission. For example, a single load such as a road grader for low velocity airdrop (LVAD) requires 41 rigging items. An entire mission might require 30 loads. After compiling a list of the required rigging items, the clerk must transfer the item quantities to the warehouse "pick list." The air items are then pulled from inventory, records updated, and hand receipts generated. This manual method is very time-consuming, tedious and prone to error.

The U.S. Army Natick Research, Development and Engineering Center (Natick) improved the operation of airdrop rigging units by automating the mission planning process. The Natick objective was to reduce time and manpower requirements and improve accuracy and inventory control.

Planning an average mission involved three soldiers for seven man-hours, extending over several days. One junior noncommissioned officer (NCO) planned the same mission with AMEMS in only 40 minutes.

AMEMS Development

The 612th Quartermaster Company at Fort Bragg, NC, served as the development site. Manual airdrop mission planning procedures were analyzed to determine automation requirements. A prototype was then developed using relational database management software. The system runs on IBM-compatible personal computers with 640K random access memory (RAM) and approximately 2 megabytes (MB) of hard disk space available. The Airdrop Missions and Equipment Management System (AMEMS) has been revised and enhanced based on user requirements and requests.

The AMEMS database stores rigging item data, such as the national stock number (NSN), description, unit of issue, location in the warehouse, quantity on hand, cost, and an indication of expendability (Y or N).

The database also stores load data such as load name, military designation, a load identification number, type of airdrop, possible aircraft to drop the load, as well as the field manual reference and date, load dimensions and weight, center of gravity, and the number of items required to rig the load. The database also identifies the rigging items for each load as listed in the field manuals.

The rigging item and load data are manipulated when a mission is planned. A computer user adds a mission to the AMEMS database by entering a mission name, date, military unit and authorization. The user next indicates the loads for the mission by entering each load identification number, the aircraft to drop the load, the extraction system, and the load quantity.

When a mission is first added, its default status is "preplanned." As the mission progresses from the "preplanned" stage through completion, the user's changes to mission status affect the rigging item inventory. When mission status is changed to "requisitioned," the rigging items for the mission are subtracted from the balances on hand. If a mission is "canceled" before the loads are rigged, the quantities will be added back to the total balances. If the mission is "canceled" after rigging the loads but before dropping the loads, the expendable items will not be recoverable and only the nonexpendable item quantities will be restored to inventory. Once a mission reaches the "turned-in" stage, the user indicates any items missing or damaged. When the mission is "completed," all nonexpendable items not indicated as missing or damaged will be added back to the inventory totals.

AMEMS has a monthly interface to the Army Master Data File (AMDF) to obtain current rigging item prices which are used to calculate load and mission costs. Before the loads have actually been dropped, AMEMS calculates the estimated rig, drop and total mission costs. The rig cost is the cost of expendable items that would be unrecoverable if the loads were rigged but not dropped. The drop cost is the cost of expendable items, the cost of parachute cutters, plus an estimated cost for missing and damaged nonexpendable items. The total cost is the cost for all items required to rig the load for the mission. Once the mission is completed, AMEMS generates a cost report for missing and damaged items and a report showing the actual total mission costs.

Productivity Improvements

Planning an average mission involved three soldiers for seven manhours, extending over several days. One junior noncommissioned officer (NCO) planned the same mission with AMEMS in only 40 minutes. This reduces mission planning time by 90 percent. Also, productivity increases because more soldiers are available to rig the loads.

AMEMS also allows greater flexibility in handling last-minute changes to load type, load quantities and aircraft. These changes can be made with a few keystrokes, and the reports can be regenerated in minutes. This flexibility, in addition to the reductions in planning time, greatly improves readiness.

AMEMS can also be used for contingency planning. Planning a mission will allow the user to determine if sufficient quantities of rigging materials are in stock. If not, AMEMS will indicate the quantities to order.

The cost calculations made possible by the interface to the Army Master Data File can help in budget forecasting. AMEMS can also be used for remote site rigging because its portability makes it readily deployable. Table 1 summarizes the advantages of AMEMS over the manual airdrop mission planning system.

AMEMS has been implemented at several locations including Fort Bragg; Fort Lee, VA; Fort Chaffee, AK; Fort Ord, CA; Fort Campbell, KY; and the U.S. Army Troop Support Command (TROSCOM). AMEMS was also used to plan missions to support *Operation Desert Storm* and *Operation Provide Comfort*. The U.S. Army Quartermaster Center and School at Fort Lee plans to incorporate AMEMS training into the programs of instruction for parachute riggers and aerial delivery technicians.

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	Manual Planning	**AMEMS**
Time required:	7 hours	40 minutes
Personnel required:	1 Technician 1 Senior Rigger 1 Supply Clerk	1 Junior Noncommissioned Officer
Accuracy:	Low	High
Flexibility:	Limited	High
Mission costing:	Separate task	Included
Inventory control:	Separate task	Included

Table 1. Advantages of the Airdrop Missions and Equipment Management System (AMEMS)

Airdropping Groceries in the Desert

MAJ Cecilia A. Grice
CPT David H. Jerome

August 2, 1990, the day Iraq invaded Kuwait, will forever have an impact on our lives. From the beginning of *Operation Desert Shield*, Defense Subsistence Region Europe (DSRE), a subordinate command of the Defense Personnel Support Center (DPSC) and Defense Logistics Agency (DLA), played a significant role in supporting our deployed troops to Saudi Arabia. At the onset, DSRE provided immediate support to all services in the Persian Gulf.

Emergency Support

DSRE had trained and practiced emergency support in many simulated exercises and in actual support of large field exercises such as REFORGER and *Caravan Guard*. By activating the DSRE emergency supply operations center,the supply and operations branches transformed into an immediate 24-hour operation cell. Additionally, DSRE established points of contact (POCs) with U.S. Army, Europe Deputy Chief of Staff for Logistics (USAREUR DCSLOG); European Command (EUCOM) Logistics; Headquarters, DLA Europe; DPSC Supply Operations; and U.S. Air Force, Europe (USAFE); Meals, Ready to Eat (MREs) depot operations at Pirmasens, Germany; Burtonwood, United Kingdom; and Sanem, Luxembourg. The DSRE operated depots at Kaiserslautern, Germany; Felixstowe, United Kingdom; and Germersheim, Germany, and established transportation contacts for air, overland and sea shipments with 37th Transportation Group, 1st Transportation Movement Control Agency (TMCA), 322d Airlift Division, and Air Transportation Movement Control Team (ATMCT).

The next challenge was to install the requisition flow and approval process. Initial requisitions were phone calls for large amounts of MREs and B-Rations, all without requisition number, required delivery date (RDD), or shipping address. Basic DLA policy prohibits the issuing of stock without a requisition number. Also, complicating the initial push of product in the early stages was the approval process for issues of Army War Reserves to Air Force units. Requests from USAFE were deducted from Air Force War Reserve Assets, and any quantities which exceeded Air Force reserves were forwarded to USAREUR DCSLOG for approval. The USAREUR position was that if the request violated Army War Reserve levels, the request was disapproved. However, if the request only violated peacetime operating stocks (POS), the request would be approved. When USAREUR disapproved Air Force requests for B-Rations, the requests were then elevated to the EUCOM level for resolution. This concept had been exercised in Winter/Cimex simulations, and the practice proved valuable when the real situation arose. EUCOM gave the final approval or disapproval for Air Force and Marine requests for B-Rations violating Army War Reserve levels.

Actual Logistics

Once an approved requisition was processed, the actual logistics of pulling the materiel, preparing air pallets, and transporting the product to the airfield began. Other than sorting out where the actual air palletization would occur at the depot or airfield and positioning the materiels and equipment at the correct point, the logistics of moving product from storage to the airplane went smoothly. All depot and transportation commands were extremely responsive. One example of logistics responsiveness involved a request to move the entire supply of MREs from Burtonwood, United Kingdom, to Saudi Arabia by sea. The request came to DSRE on Saturday, 4 Aug 90, and the vessel was loaded with all the MREs by 8 Aug 90.

The initial requests were for airlifts of over 1,150 air pallets of MREs, T-Rations, B-Rations, and ultra-high temperature (UHT) milk until sea lines were opened. Once these lines opened, DSRE was tasked once again to procure and ship fresh milk, fresh fruits and vegetables, frozen meats, fresh bread and rolls, frozen pies and holiday items to support Thanksgiving and Christmas meals.

Situation Improves

Initial deployed units ate primarily MREs, as did units positioned far forward. This situation improved quickly with A-Ration enhancements and the arrival of T- and B-Rations. In addition, the Saudi government provided prepared A-Rations in mess tents.

DSRE's only distribution problems were during the buildup phase when Class I (rations) competed with other classes of supply for air transportation. Product from all classes of supply quickly began to back up at Rhein Main and Ramstein air bases. Because of limited space to stage product, shipments to the air bases were curtailed. Products were then prioritized for air shipment by the ATMCT, which took its direction from USAREUR DCSLOG. Since most initial DSRE shipments were for the Air Force, EUCOM intervention to establish priorities at the air base was required. The lack of staging area

at the airfields lead to the eventual restriction of sending airlift-ready product to the airfield until a firm tail number of an airplane could be assigned to an individual shipment. This placed most shipments into the holding mode. Once the tail number was available or other space was located for Class I product, it had to be shipped to the airfield immediately. Over time EUCOM, USAREUR, ATMCT, 322d Airlift and DSRE were able to stage enough product on the airfield. In addition, the depot loaded the air pallets of B-Rations and shipments of those air pallets to the airfield to provide a mix of items requested. These provided the proper combination of stocks and prevented the end user from receiving all sugar and no flour, for example.

Tracking Difficult

The ATMCT prioritization system and the staging backlog at the airfields made tracking requisitions from beginning to end very difficult. Since all higher headquarters were managing numbers, determining which products were actually flown or still in the staging area was mandatory. This was accomplished by several on-site visits and the establishment of a tracking system at the airfield between DSRE and ATMCT.

All T-Ration stocks in Europe were shipped to Saudi Arabia to support *Operation Desert Shield.* The Army was the only user of T-Rations in Europe, and the war reserve stockpiles are based on the Army's ability to rotate within shelf life and on-hand quantities are based on these constraints. DSRE had trained long and hard for contingencies. DSRE's training was important to the success of DSRE's initial and long-term support of *Operation Desert Shield/Storm.* DPSC quickly obtained industry support to increase the production base to satisfy the increased requirements. DPSC also procured off-the-shelf-components to assemble the Meals, Operational Ready to Eat (MOREs). The bottom line is that the military personnel in the Persian Gulf received three nutritious meals per day. As the theater matured, more variety was provided.

DSRE's subsistence support to the Middle East also included initiatives, by the Commands Contracting Division, for offshore acquisition (OSA) sources of supply. OSA activity included purchases of over $2.5 million in subsistence and support material. The Contracting Division, with both established vendor support and vendor support that had been developed, was able to respond immediately to the requirements generated from *Operation Desert Shield.*

The DSRE contracting activity was necessary largely because resources were either not yet available or were not of sufficient quantity to support a newly established theater. The Contracting Division's Produce Branch procured over 175,000 pounds of tangerines through DSRE's Rome, Italy Defense Subsistence Purchasing Office (DSPO), while DSRE's Nuernberg, Germany Terminal Market activity, under the direction of the Field Operations Branch of the Contracting Division, procured over 15,000 pounds of mixed fruit items.

Requirements related to the material necessary for air shipment were also procured through the Contracting Division's Contract Management Branch. This branch typically procures anything other than subsistence necessary to accomplish DSRE's support mission. Shipping materials included such items as cardboard sheets, plastic bags, seals, and dry ice. All items were necessary to ensure that the subsistence arrived in theater in good condition. These requirements amounted to a little more than $43,900.

Items such as fresh milk, UHT milk, fresh eggs, ice cream, bread, water, meat, soda, and fruit drinks were all procured by the Contracting Division's General Products and Dairy Branch and, for the most part, air-shipped to the theater. These subsistence items amounted to more than $1.8 million.

The DSRE's primary mission has always been to support the European Theater of Operations, as well as the Mediterranean and U.S. Naval Forces. However, the DSRE, as the subsistence wholesaler for the DLA, stands ready to meet the needs of the contingency.

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Developing Airdrop Rigging Procedures

Logistical support of combat operations is a major function of modern air power. Since the early 1950s, the Quartermaster Corps has been the proponent for airborne logistics. The proponency includes developing doctrinal literature to support the mission, and this literature includes the airdrop rigging field manual (FM).

With one of the Army's most active FM programs, the Airborne and Field Services Department, U.S. Army Quartermaster Center and School (USAQMC&S), Fort Lee, VA, develops these FMs with detailed instructions on how to rig supplies and equipment for airdrop. Currently, the 10-500 series has 64 airdrop FMs. These 64 manuals make up 57 percent of the total Quartermaster Corps FM library.

Development begins on 7 to 12 of these joint services manuals in any given year. The XVIII Airborne Corps sets the priorities. This vigorous program results from the high priority on airdrop logistics, rapid changes in airdrop technology, and new equipment fielded to the combat units.

The question most often asked is "Why are there so many airdrop manuals?" The answer is that the procedures for each airdropped item must be tailor-made. The underlying principles in the design of the rigging procedures must provide a high degree of safety for the airdrop personnel and a high degree of survivability for the item being dropped. The lives of the aircrew as well as the soldiers needing the equipment depend on these two requirements.

First, the field identifies an item as needing airdrop certification. Then engineers at the U.S. Army Natick (MA) Research, Development and Engineering Center design the rigging procedures. (Note: On occasion, the rigging design may originate at the U.S. Army Airborne and Special Operations Test Board (USAABNSOTBD) at Fort Bragg, NC, or the U.S. Army Yuma (AZ) Proving Grounds.)

After engineers design a test plan for airdropping an item, the work shifts to the USAABNSOTBD for testing during live drops. In the test, electronic measuring devices on the load measure stress. Camera crews in chase planes record the airdrops. After each drop, the test officer examines the load and reviews the data from the G-Force measuring devices and film. This information determines changes to the proposed rigging procedures. After three successful drops, the test is considered valid.

After testing, the USAQMC&S liaison noncommissioned officer (NCO) assigned to the USAABNSOTBD at Fort Bragg documents the rigging procedures with a written report and still photographs of each step. The publications branch of the Airborne and Field Services Department at Fort Lee receives the NCO's report.

Education specialists and military subject matter experts convert the test data into an easily understood and technically correct rigging manual. Writers continually confer with the engineer and test officer. A large amount of information in written reports and photographs must be reviewed, organized and put into proper format. For example, to rig an item as uncomplicated as the M998 High Mobility Multipurpose Wheeled Vehicle (HMMWV) requires over 135 steps and 150 pieces of equipment with 50 different national stock numbers. These figures increase significantly when rigging the more complicated loads such as the seven-bay bridge or the road grader.

From the beginning of the writing process to completing the coordinating draft (CD) takes six to nine months.

The FM begins the review process with the CD's completion. The organizations responsible for CD review are Natick Research, Development and Engineering Center, USAABNSOTBD, the Military Airlift Command, the Aeronautical System Center, the Troop Support Command, Yuma Proving Grounds and the USAQMC&S. Other organizations such as the XVIII Airborne Corps and the U.S. Army Special Operations Command are also routinely involved in the review process.

The reviewing organizations have a 30-day period to review the CD and reply to the USAQMC&S with their comments before a review board convenes at the USAABNSOTBD. A panel of airdrop experts analyzes each review comment along with every word and photograph of the CD. Over the past four decades, this thorough review process has ensured the integrity of the rigging manuals. After incorporating review comments, the writer passes the material to the editorial assistant, editor and visual information specialist (VIS) who prepare the FM for final printing. In recent years, during design of the final publication, an interim manuscript has been published to provide the field with procedures several months ahead of schedule. This interim manuscript was a response to the field's urgent need for the new Type V Airdrop Platform procedures. New computer technology at the USAQMC&S should allow the VIS to produce final manuscripts in a much shorter time frame, thus eliminating the need for interim manuscripts.

To some, this whole development process is too drawn out. Not so, especially considering the small margin for error allowed when an item such as a 42,000-pound armored reconnaissance airborne assault vehicle is being yanked from the belly of a C-130 aircraft flying 1,350 feet above ground level at 140 knots indicated airspeed.

Airdrop is a complicated, high-stakes operation. The development process is lengthy, but necessary for success. The bottom line for all organizations involved in airdrop development is best summed up by the rigger's pledge: "I will be sure—Always."

Paratroopers Tested by the Storm

LTC Terry E. Juskowiak

The deployment of the 407th Supply and Transport (S&T) Battalion (Airborne), 82d Airborne Division for *Operation Desert Shield* in August 1990 began a new period of professional growth for the paratroopers of the battalion. Each of us for years had practiced and trained to hone our logistical and tactical skills, and some had the opportunity to use them in *Operation Just Cause* half a year earlier. However, for the vast majority, *Operation Desert Shield/Storm* brought the chance to do wartime logistics for the first time, and for all of us, for a sustained period of time.

The 407th is one of two remaining divisional S&T battalions still aligned rather than multifunctional. It is organized with a headquarters and supply company; three forward support companies, A, B and C that support 1st, 2d and 3d brigades respectively; D Company, an airborne truck company; and E Company, an aerial equipment resupply company.

The following articles were written by the officers of the 407th S&T Battalion (Airborne) about their experiences in the way we did business in war. The articles are a part of the battalion's military qualification skills (MQS) program and have been included in our unit after action review. The thoughts and experiences shared here are not meant to portray the only way of doing business or even, in some cases, the true doctrinal textbook way. Given the missions assigned and the assets on hand, the methods worked well for us and the jobs were completed safely and efficiently in a timely manner. As you read through the articles, the five sustainment imperatives of anticipation, integration, continuity, responsiveness and, especially, improvisation can been seen as a common thread in our logistical operations. Making an airborne division ground-mobile and resupplying it predominantly in the same manner presented some real challenges. Our hope is that through the sharing of professional knowledge and experience, each of us will gain more from *Operation Desert Shield/Storm* than what we each saw with our own eyes.

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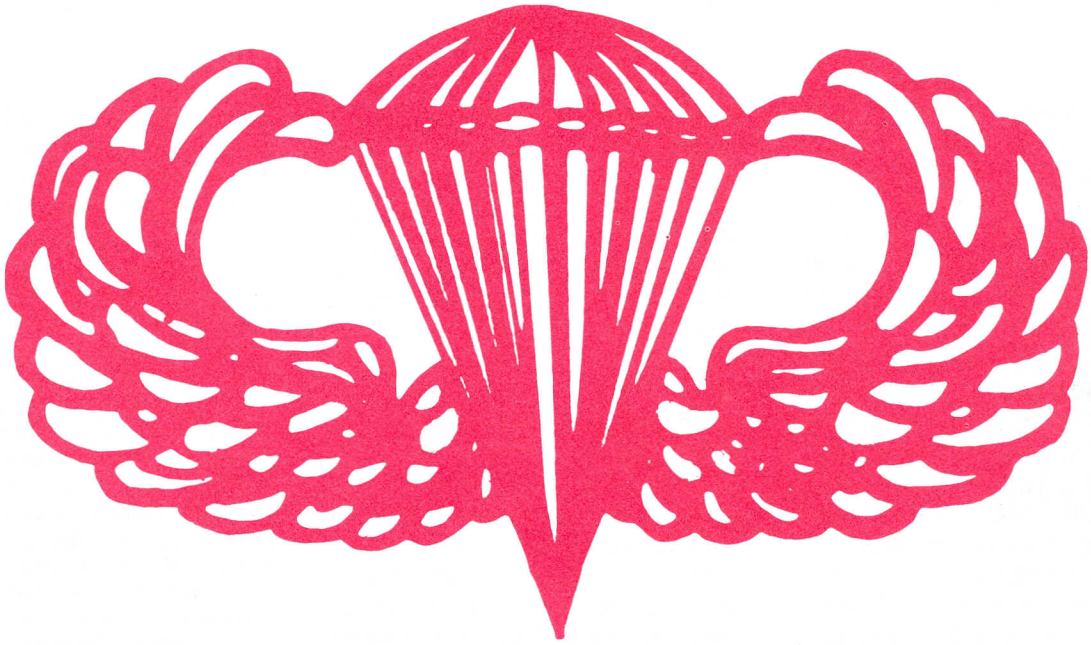

Keeping the Airborne, Airborne!

LT Jennifer C. Chronis

One unique company in the 82d Airborne Division at Fort Bragg, NC, has the primary mission to keep the airborne, airborne. That company is Echo Company, 407th Supply and Transport Battalion, a Quartermaster airdrop equipment support company. The platoon responsible for keeping paratroopers and their equipment in the sky by packing all the division's parachutes is the parachute pack platoon.

The parachute pack platoon packs all parachutes used by, or in support of, the 82d Airborne Division. This realm of responsibility includes personnel, cargo and extraction parachutes. To effectively accomplish this mammoth mission requires a great deal of manpower - 133 soldiers according to the most recent modification table of organization and equipment (MTOE). Currently, the platoon strength is 100 soldiers. Although short of authorized strength, the platoon is still the largest in the 82d Airborne Division. Managing the platoon requires the skills of a platoon leader, platoon sergeant, airdrop technician (CW2), shop foreman (E6), 3 section sergeants, and 12 squad leaders.

Packing personnel parachutes requires the greatest number of soldiers, approximately 60 on a daily basis. These soldiers pack both T10 and MC1 parachutes, as well as reserve parachutes. The platoon operates on a quota system that requires each soldier to pack a certain number of parachutes each day before being released. The normal quota is 25 parachutes per soldier per day, but during increased mission requirements the individual quota must sometimes go up to 30. The average sustained capability for the platoon is 800 personnel parachutes per day.

The packing of cargo and extraction parachutes is much different, due mainly to the size of the parachutes, but is no less manpower-intensive. Currently, the 20 parachute riggers who operate the cargo section are augmented on a daily basis by a detail of 20 Infantry soldiers from the brigade on support cycle at the time. A G11 cargo parachute, the main parachute required by the division for heavy drop activities, requires at least three soldiers to pack and two soldiers to inspect. Each group of soldiers must pack six to seven parachutes per day. Therefore, the platoon's sustained capability for cargo parachutes is 24 to 28 per day.

No question - the work performed by the riggers of the parachute pack platoon is strenuous and sometimes monotonous. As a form of motivation and an attempt to combat the monotony, soldiers are allowed to "Pack and Go." Specifically, as each soldier completes his or her assigned daily quota and if all daily training requirements have been completed, the soldier is released. Experienced riggers can pack full quota in five hours of sustained packing. The chain of command takes many steps to ensure safe packing and a quality product. Soldiers must take a supervised 15-minute break in both morning and afternoon, as well as a one-hour lunch break. Also, the platoon technician performs random pulldown inspections each day to inspect the quality of the final product. Riggers are also supervised by both inprocess and final inspectors during the packing process. Riggers who pack 5,000 malfunction-free parachutes are recognized in the "5,000 Pack Club" and awarded an Army Commendation Medal for their achievement. This elite club is tough to get into and usually represents two to three years of pack table time.

As a testament to the quality of the product produced by the riggers of the parachute pack platoon, the platoon has packed over 100,000 parachutes since return from deployment to Southwest Asia, without even one rigger-related personnel malfunction. The platoon continues to produce the most valuable item to a paratrooper during an airborne operation - that which keeps the airborne, airborne!

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The Ultimate in Resupply

LT Jordan S. Chroman

The container delivery system (CDS) is the military's ultimate means of resupply. With this system, the Army can airdrop supplies to troops on the ground, providing them a wide variety of logistical support.

The basic components of the CDS bundle are an A-22 canvas cargo bag with scuff pad and webbing, a G-12E cargo parachute, a plywood skid board, several layers of shock-absorbing, paperboard honeycomb, and the actual logistical load for airdrop. The entire bundle, including the accompanying load, must weigh between 501 and 2,200 pounds. The bundle must not exceed 99 inches in height.

Soldiers on the ground can receive almost any type of resupply via the CDS bundle. Logistical support ranging from Class I (rations) such as Meals, Ready to Eat (MREs) and T-Rations, to Class III (petroleum, oils and lubricants) packaged products, to potable water, to Class V (ammunition) of most types and even whole blood can be delivered through the CDS.

CDS bundles can be assembled almost anywhere in practically any environment and can be configured in various ways for odd-sized loads. The only necessity is a forklift to load the fully rigged bundles onto a truck or aircraft. Parachute riggers must oversee 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 nonrigger detail can rapidly assemble CDS bundles.

Resupplying an Infantry company operating in a remote area is an example of one of the many missions oriented for CDS. With a minimal-sized drop zone, the entire company could be resupplied with approximately eight CDS bundles. These bundles would contain a three-day resupply of MREs, potable water, ammunition for all company weapons to include anti-armor weapons, sundries and medical supplies.

Commanders can tailor the CDS resupply mission to fit the tactical plan. The level of aerial resupply is hindered only by the number of CDS bundles dropped. 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. Even this quantity of bundles can land on a relatively small drop zone. When the Army needs to get supplies to soldiers on the ground and normal types of transportation are not accessible, CDS is the answer.

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Operation Red Hat

LT Jennifer C. Chronis

What do you do when the "Airborne" in the 82d Airborne Division becomes threatened by a critical shortage in the military occupational speciality (MOS) 43E (Parachute Rigger)? The division's key leaders sought volunteers to reclassify to fill the shortages in November 1991. This attempt to provide a short-term solution to the critical shortage was appropriately named *Operation Red Hat.*

The 43E MOS rapidly declined in strength immediately after the STOP LOSS Program was lifted when most troops returned from deployment to Southwest Asia. Previous recruiting goals were insufficient to account for the soldiers who would leave military service. As a result, the 82d Airborne Division faced critical shortages as early as July 1991. With no relief in sight, the division had to find a solution, if only a short-term fix. Thus, the birth of *Operation Red Hat.*

The operation began in November 1991 as an initiative at division, through the U.S. Total Army Personnel Command (PERSCOM), to increase the critically low rigger strength. The program sought volunteers in non-bonus, overstrength MOSs in only the ranks of private to specialist. With an initial goal of 26 soldiers, these were criteria: the soldiers must be volunteers, airborne-qualified, have normal color vision, 18 months retainability upon completion of rigger school, with no past drug or alcohol-related incidents. Volunteers were sought from the 82d Replacement Detachment and were instructed to complete a request for immediate reclassification under *Operation Red Hat.*

A total of 33 volunteers were ultimately accepted into the program. The soldiers were released from previous assignments and in-processed into Echo Company, 407th Supply and Transport Battalion during the week of 1 December 1991. They were briefed on the responsibilities of the Parachute Rigger and on what to expect while training at the U.S. Army Quartermaster Center and School, Fort Lee, VA. Commanders also described what would be expected of them upon return to Fort Bragg, NC. The 33 soldiers attended Parachute Rigger Course 507-92 from 9 December 1991 to 11 March 1992.

While at Fort Lee, the soldiers attended normal, 11-week advanced individual training (AIT) that included a parachute packing phase, parachute maintenance phase, and an aerial delivery phase. The highlight of the course came during the third week of training when the soldiers were required to jump a parachute that they had just packed. The jump took place on Blackstone Drop Zone at Fort Pickett, VA.

Of the original 33 soldiers, 32 graduated from the Parachute Rigger Course and have since been fully integrated into the three rigger platoons of Echo Company. *Operation Red Hat* was a huge success, both in training soldiers to become Parachute Riggers and in assisting the fill of critical MOS shortages. With the recent success of this program and increased accessions of the 43E MOS, the 82d Airborne Division currently maintains 98 percent of its authorized strength of Parachute Riggers.

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Airborne Supply Sling-Load Operations

LT Mark D. Collins

When you think of airborne logistics, a picture of container delivery system (CDS) bundles streaming out of a C-130 with parachutes blossoming open at 600 feet may come to mind. Perhaps you think of a low altitude parachute extraction system (LAPES) erupting out the rear of a C-130, several feet off the ground. These sling-load missions become more frequent the longer a division element is deployed. To meet this need, the Class I (rations)/Water Platoon, U.S. Army Health Services Command, 407th Supply and Transport Battalion, 82d Airborne Division has an extensive capability to deliver rations and potable water.

The 82d Airborne relies on sling-load operations to supply its forward elements in much the same way that other divisions do. CDS and LAPES become less efficient in proportion to a lower level of enemy activity in an area of operation. Why spread critical supplies across a one-kilometer drop zone when you can deliver to your customer with pinpoint accuracy and fewer recovery hassles?

The Class I/Water Platoon uses sling-load missions frequently. A forward company can be augmented with a forward area water point supply system (FAWPSS) and personnel to meet an unforeseen demand for potable water. Cargo nets and A-22 bags of rations can be delivered directly to the user from the division's logistical base. Because of the division's forced entry capability, there are indeed times when sling-load operations are not feasible.

To decide on when to sling-load, we go back to the basics: mission, enemy, terrain, troops and time available (METT-T). Most of the platoon usually operates in the division rear, but forward-deployed water teams work in a brigade support area. Once it is decided to use sling-load resupply, the coordination through the S3 (Operations and Training Officer) air section starts.

When possible, we go to the meeting with the aviation section to get call signs and frequencies. We find out how they like to operate. For example, are they going to use night vision goggles? Radio contact on the pickup zone (PZ) is essential, but visuals alone can work on the landing zone (LZ) quite well. What type of visual signals will be used? Strobe, smoke, VS-17 panel or whatever? Smoke can assist the pilots in finding the PZ/LZ. White, hydrogen chloride smoke works well even at night for PZ/LZ recognition. For night operations, a strobe with cover may be the best. Do not forget the Chemlites, not just for the signalman but for the loads. Shifting the Chemlites on the inverted Y on each turn at night will speed up your operation. The bottom line is that coordination will make your job on the ground easier.

Prepare your loads and soldiers. What type of loads do we have and who is the customer? If we are slinging collapsible tanks of water straight to an Infantry unit, do they have the hardware needed to get at the water? Training is very important. It makes no sense to send soldiers out without adequate preparation. A unit that always relies on one or two soldiers to run all the sling loads is not using its most important assets, soldiers and noncommissioned officers (NCOs), properly. When our unit returned from *Operation Desert Storm*, the knowledge level was high, but within months the turnover rate left the platoon with only a couple of soldiers who had ever done a sling-load mission.

Training is very important. It makes no sense to send soldiers out without adequate preparation. A unit that always relies on one or two soldiers to run all the sling loads is not using its most important assets, soldiers and NCOs, properly.

Attrition is always a possibility. What happens if a controller/the enemy takes out your sling-load "expert"? Train many soldiers to be the "expert." A common excuse is that we need a helicopter to train. Can't means won't. The use of a crane, wrecker, or even a hook hung from a beam can provide hookup training. Get your signalers practicing hand and arm signals on each other. In reality, the pilot will do what the pilot wants to do; however, in cases where the pilot cannot see, the pilot has only the signalman to rely on. Make that soldier an expert. The sooner you can rig the loads the better. Use a manual. Knowledge is perishable. Double-check everything and rehearse. A mission canceled because the loads are not rigged and in place for an inbound aircraft is the leader's failure.

When you move to the PZ/LZ, remember METT-T. Security of 360 degrees is the standard. Coordinate for materials handling equipment (MHE) to down load. The MHE allows you to position your loads in a safe manner. Arrive in plenty of time to set up and conduct on-site rehearsals. During a conflict the less time spent on the PZ/LZ the better. A section sling-load kit should contain a strobe with IR cover, VS-17 panel, ear plugs, static discharge wand, gloves (shock-proof if possible), extra Type III nylon cord, extra 1/4-inch cotton webbing, cellulose wadding, tape, goggles, flashlights with cones, Chemlites and a road guard vest.

Sling-load missions are commonplace for the Class I/Water Platoon. The platoon has done sling-loads on every major field problem since returning from *Operation Desert Storm*. With the creation of a much-needed Fort Bragg (NC) Air Assault School, many airborne and non-airborne soldiers will receive training denied by geography. The bottom line is that we are here to provide customer-responsive logistics.

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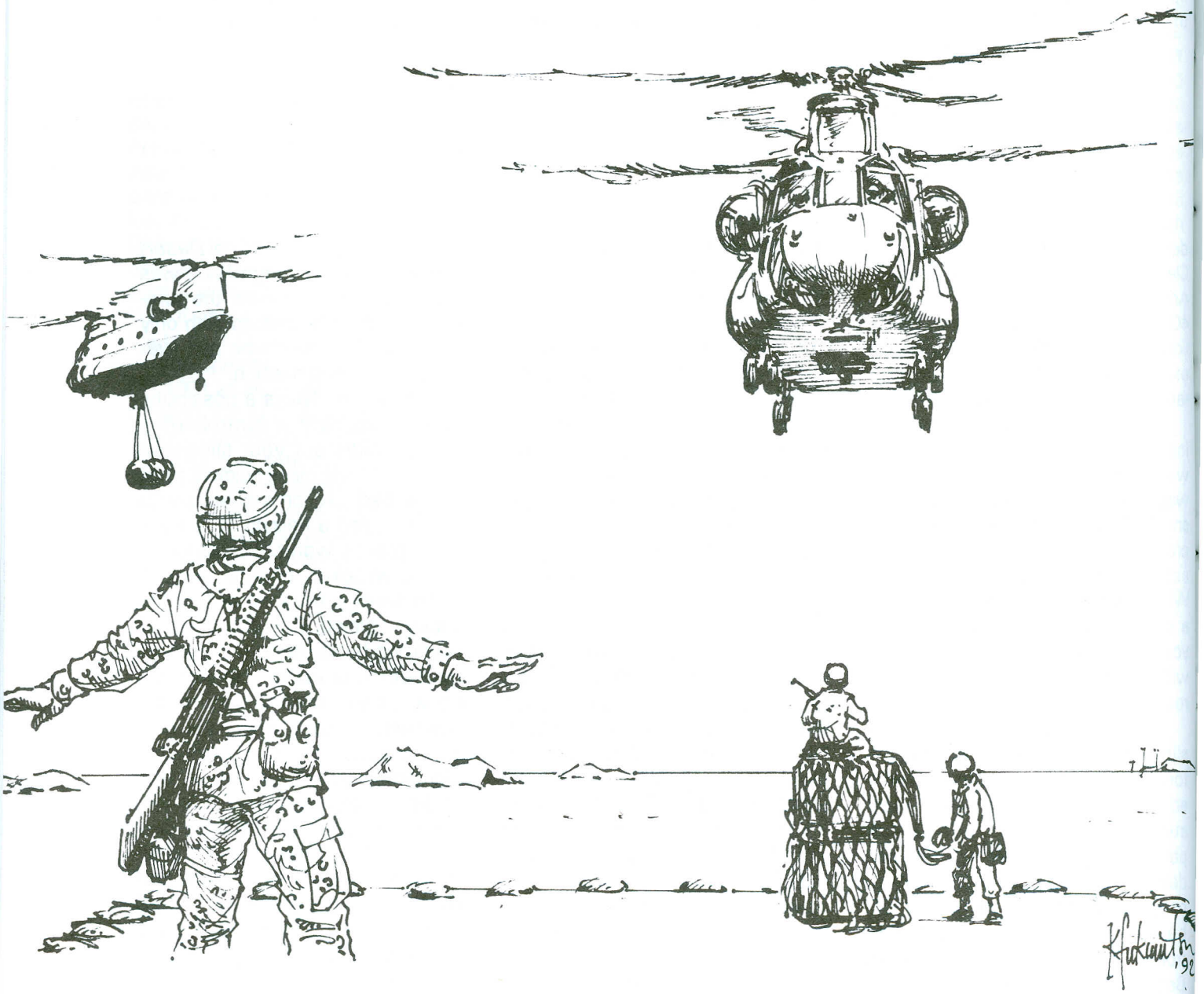

Principles of Company Base Defense

CPT Todd H. Guggisberg

"[J.E.B. Stuart] ordered the column to charge. With a shout and a roar, the leading squadron threw itself squarely against the Federals. . . In a few moments the First Virginia rushed on and soon reached the camp . . . The tents were deserted, though supplies were there in abundance . . . a regal seizure." Douglas Southall Freeman: *Lee's Lieutenants*

During his famous "Ride around McClellan" in 1862, General Stuart exploited the generally thin defenses of Union supply bases. Union commanders needed maneuver forces at the front and logistics soldiers remained to defend the rear battle area. Today's Army continues to have difficulty securing its logistics bases. The need to provide continual support, coupled with personnel and equipment limitations, make base defense a priority leadership challenge. The basic principles of defense are simple. However, the application of these principles is more difficult.

Preparation for Combat

The actions you take before deployment will directly influence your unit's performance when you reach the base site. Preparation for combat includes everything the unit does in garrison as well as in field training. *Operation Desert Shield/Storm* serves as a reminder of the importance of having soldiers always trained for war. Yet, a leader also must accomplish many tasks immediately before deployment.

- **Precombat Inspections (PCIs).** These inspections ensure your unit is ready for combat, but you also have the opportunity to evaluate specific areas. Your subordinate leaders' abilities to plan, organize and lead their units will be evident. You will see the result of your maintenance program. In addition, you can identify poor property accountability. Some essential elements of a good PCI follow:
  - **Plan PCIs:** A PCI is not an informal "look" at your unit. First, you need a checklist identifying items you intend to check. Hand out this checklist to all leaders and explain the standards for each item. Then develop a formal inspection procedure that explains how you want the inspection to flow. It should identify who, what, where and when. For example, "I will inspect the Headquarters Section in Bay 1 of the motor pool at 0630. I expect all soldiers in uniform, standing by their equipment, ready for combat." This allows your subordinate leaders time for preparations.
  - **Inspect Details:** Anybody can check the big things, but it is the small details that kill soldiers. Are your M256 chemical detection kits packed? How many? Did we bring the traverse and elevation mechanisms for the M60 machine guns? Do soldiers have their M16 sights battlesighted or set for short range? These are the types of questions you must answer.
  - **Plan Time for Corrections:** If you are inspecting properly, you will always find items that need fixing. To avoid deploying without these items corrected, give your subordinates time to make corrections. Then you must check these again.
- **Rehearsals.** While PCIs ensure your equipment is ready for combat, rehearsals ensure your soldiers are mentally ready for their mission. Commanders should have soldiers and leaders trained to standard before deployment. Because unit personnel constantly change, rehearsals will ensure that all your soldiers are aware of unit procedures. Here are some important components of effective rehearsals:
  - **Plan Rehearsals:** First, you need to identify what tasks you want to practice. Your company's mission essential task list (METL) is a good place to start. Talk with your first sergeant and other leaders in your company and identify the collective and individual tasks essential for the mission. Use your unit's standing operating procedures (SOPs) for additional information. Next, plan rehearsals into your preparations for combat and deployment sequence.
  - **Practice Under Realistic Conditions:** Although assets for realistic rehearsals may be limited during your deployment sequence, creativity will help you to simulate battlefield conditions. For example, if you cannot rehearse at night, rehearse in a maintenance bay or warehouse with the lights off. Rehearsals in mission-oriented protection posture (MOPP) gear are equally important.
  - **Use Opportunity Training:** Most deployments have chances for opportunity training. Waiting times in the personnel holding area (PHA), alert holding area (AHA) and call forward area (CFA) are examples of places to conduct opportunity training.

trate on individual skills that require few resources. Good examples include range cards, map reading and SOP review.

Priority of Work

If you conducted inspections thoroughly and rehearsed effectively, the actual occupation and preparation of your base site should flow smoothly. You need a good SOP for this phase. As you move into and begin establishing your base site, you are very vulnerable to attack.

The most important part of your base occupation and preparation is the priority of work. This procedure focuses the company's effort. You must include the priority of work in your SOP and your operation order and practice it in rehearsals. Develop a matrix similar to the example in Figure 1 (Priority of Work Execution Matrix). With the priority of work in this format, you ensure the entire unit understands what is expected. The following are the steps in developing such a matrix and making the matrix work in your unit:

- **Decide How to Provide Continuous Support:** If you do not solve this important problem, your matrix will not work. Instead of completing tasks by the matrix, your soldiers will be forced to accomplish every small support mission that surfaces. A good technique is to move enough assets to support immediate demands in your quartering party. This will allow your main body to concentrate on the occupation according to the matrix.
- **Determine Essential Tasks:** This is mostly common sense. Begin this process by prioritizing your unit's efforts. If camouflage is a big concern, for example, then place it high on the list of priorities.
- **Determine Key Personnel:** Figure 1 identifies only a few key leaders. You may decide that you need other personnel on your matrix. This will give your matrix more detailed guidance and information on leader tasks.
- **Disseminate and Train:** This matrix does little good in an SOP nobody reads. You must ensure your unit, especially key leaders, understand the matrix and how to use it. The first sergeant should include it in noncommissioned officer professional development (NCOPD). You must strive to execute your occupation by the matrix every time. After three or four times, your soldiers will understand the standards and execute on their own.
- **Execute Priorities in Sequence:** You prioritized the tasks for a good reason: some things are more important than others. Insist that work does not start on priority number two until soldiers complete priority number one to standard.

Execution

You are established in the base site. Fighting positions meet standards, camouflage looks good and obstacles are in place. Your company has settled into their support procedures. Now comes the sustainment of your base defense. The training and preparation you executed up to now ensure your soldiers know how to defend from their positions. However, the following two areas also have a large impact on your defense:

- **Patrols:** Security patrols are a vital element of your base defense. A well-trained, dismounted enemy reconnaissance element will probably not be seen or heard by your observation post/listening post (OP/LP). However random, well-equipped and well-trained security patrols can probably intercept or disrupt the enemy. You must plan patrols in advance. If you do not give that patrol leader sufficient time to plan, brief and rehearse the patrol, do not expect more than a deliberate walk in the woods. Make sure that you, the executive officer or the first sergeant debrief all patrols. This will not only keep key leaders informed of changing situations but also will show that you place high value on your soldiers' efforts. Patrols increase your normal level of security. Your soldiers will understand this and perform their support missions with a greater degree of professionalism.
- **Reaction Forces:** To defend your base, you will probably need all of your soldiers on the perimeter. As a commander this leaves you little flexibility unless you designate and train your reaction forces. Designate two reaction forces and plan signals to communicate orders. If your number one reaction force is the element most heavily engaged on the perimeter, you can respond with reaction force number two. Remember, you want these elements to perform quickly at an extremely stressful moment so rehearsals under all conditions are vitally important.

Effective Base Defense

Logistics commanders historically have struggled with competing demands of the support mission and the defense of their units. Developing an effective base defense is not easy and not without costs. You use your most precious

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CORRECTION: In the Summer 1992 edition of the *Quartermaster Professional Bulletin*, the article "The Role of the Field Ordering Officer" by CPT James E. Althouse and CPT Paul A. DeLloyd contained two errors. The author's unit was not in the U.S. Army National Guard, and the regional contracting office (RCO) was located in Frankfurt, Germany, instead of Frankfurt KY. We apologize for any confusion this may have caused.

resources, time and leadership. A firm understanding of the principles of base defense and your ability to apply them will result in a unit capable of long-term survival and long-term support. Your company will not just consist of proficient Quartermasters but confident combat soldiers.

For additional information consult the following field manuals: FM 7-10 (The Infantry Rifle Company), FM 10-27-3 (Tactics, Techniques and Procedures for Quartermaster Headquarters Operations), FM 21-75 (Combat Skills of the Soldier) and FM 90-14 (Rear Battle).

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Priority of Work / Individual	Security	Immediate Area Recon	Commo	Range Cards/ Sector Sketches	Mission Essential Equipment	Camouflage	Prepare Positions	Tentage	Obstacles
Company Commander	Debrief quartering party.	Evaluate position. Plan obstacles. Coordinate with adjacent units.	Establish command post location.	Make company sketch. Determine TRPs. Submit copy to higher HQ.	Inspect: -Perimeter, -LP/OPs. Get copy of BSA layout.	Determine level needed.	Assist in preparation of CP fighting position.	Inspect: -Positions, -Camouflage.	Supervise obstacle emplacement. Forward minefield reports.
Platoon/ Section Leaders	Establish hasty LP/OP. Conduct R&S patrols.	Designate: -Crew weapons, -Fighting positions, -Permanent LP/OPs.	Establish Plt CP location. Check Plt/Sec wire.	Check range cards. Make Plt/Sec Sector sketch.	Supervise set up.		Prepare Plt/Sec CP fighting position.		Execute obstacle plan.
Executive Officer	Check tie-in with adjacent units.	Submit closing report to higher HQ.	Brief attached units. Check wire to higher HQ.	Submit new TRPs to higher HQ. Brief CO on fire support plan.	Search for engineer support.		Walk engineer support to positions.		Direct engineer assets.
First Sergeant	Receive sensitive items, reports. Send to higher HQ.	Determine supporting units' locations.		Search for engineer support.			Supervise positions. Inspect range cards.		Determine timetable for Class I-III.
Soldiers	Position vehicles Conduct: -LP/OPs, -R&S patrols.	Occupy positions.	Emplace wire.	Make range cards.	Set up equipment.	Camouflage equipment.	Prepare positions.	Erect tents with camouflage.	Emplace obstacles.

LEGEND:

BSA - brigade support area
Class I - rations
Class II - general supplies
Class III - petroleum, oils, and lubricants
CO - commanding officer
Commo - communication
CP - command post
HQ - headquarters
LP - listening post
OP - observation post
Plt - platoon
R&S - reconnaissance and surveillance
Recon - reconnaissance
Sec - section
TRP - target reference point

Figure 1. Priority of Work Execution Matrix

A PARACHUTE,
LIKE THE MIND,
ONLY FUNCTIONS
WHEN OPEN.

AIRBORNE

LOGISTICS

Repair Parts System Redesign

CPT William M. Wheatley

Editor's Note: The Repair Parts System Redesign is a U.S. Army Quartermaster Center and School (USAQMC&S) initiative to improve the Class IX (repair parts) system throughout the Army. Because of the size and complexity of this project, a series of articles will appear in upcoming editions of the Quartermaster Professional Bulletin. This first article will give an overview of the Repair Parts System Redesign.

The Army, as well as all other Department of Defense (DOD) agencies, experienced a tremendous growth in repair part inventories during the 1980s. These inventories were justified on the basis of the military's increased size, the procurement of many new and technologically advanced weapon systems, and the increased readiness sought by the Reagan and Bush Administrations. Because of rising federal budget deficits and reduction of available resources, DOD directed agencies to decrease repair part inventories and reduce obligations for replacements. The logistics infrastructure has been targeted as one of the primary sources of these cost reductions.

Reports from the General Accounting Office (GAO), Army Audit Agency (AAA), and various government and contract research activities show that current supply policies and procedures are both inefficient and ineffective. The poor performance and high cost of the current repair parts system is generally attributed to problems in these four key areas:

- Automation and Communications.
- Distribution, Transportation and mobility.
- Personnel and Training.
- Supply Procedures and Stockage Policies.

Future articles will identify specific problems in these four areas and their possible solutions. Also, future articles will focus on the universe of Class IX, descriptions and impacts of various Class IX initiatives, integration of individual programs with one another, identification and solutions to Class IX problems, and the effects of changing supply policies and procedures.

Spearhead

The Army's repair parts redesign is being spearheaded by a special Class IX Task Force within the USAQMC&S Combat Developments Directorate at Fort Lee, VA. The project incorporates numerous Class IX initiatives being developed by various activities. Projects incorporated in the Class IX redesign effort include the Battlefield Spares Redesign (BSR), Objective Supply Capability (OSC), Standard Army Retail Supply System - Objective (SARSS-O), Corps Repair Parts Company Concept (CRPCC), Single Stock Fund (SSF), Sparing To Availability (STA), Total Distribution System (TDS) and Contingency Corps Parts Initiative (CCPI).

Other related programs include Integrated Sustainment Maintenance (ISM) and Readiness Based Maintenance (RBM). Additionally, analysts are defining the universe of repair parts by identifying all Army repair parts and then narrowing the focus to those parts that pertain to specific units, echelons of support, and individual weapon systems. Other analyses are identifying the effects of changing stockage and retention criteria.

The Class IX Task Force surveyed repair part system operators and managers from 7 divisions and 12 nondivisional units to list Class IX problems in the field. Many of their problems led to the current drive to improve repair part support.

Assisting with the USAQMC&S redesign study are civilian contractors, the Combined Arms Support Command (CASCOM) Operations Analysis Directorate, U.S. Army Training and Doctrine Command (TRADOC) Analysis Command (TRAC) - Lee, the Army Materiel Systems Analysis Agency (AMSAA), and the Materiel Readiness Support Activity (MRSA). Site visits will keep the field informed and gather feedback.

Battlefield Spares Redesign

The first project in the Class IX redesign program, the Battlefield Spares Redesign, concentrates on the divisional repair part system. The following five key elements are being evaluated in this concept:

- Recognizing the requirement for limited on-board spares.
- Focusing prescribed load lists (PLLs) on the most critical combat systems and consolidating PLLs at maneuver battalion level.
- Providing a senior Automated Logistics Specialist (a staff sergeant in the 92A military occupational specialty) to supervise PLL operations.
- Using a readiness-based stockage model to develop authorized stockage lists (ASLs) and PLLs.
- Using unit distribution to battalion-level customers.

Benefits of Battlefield Spares Redesign include identifying and stocking high payoff repair parts forward in the battalion area. Reducing more parts than necessary in stockage will significantly reduce total stocks. Improved supervision and training will increase efficiency and accuracy in supply operations. Rapid, assured transportation will deliver supplies to customers on time. Maximum use of modern automation and

communications coupled with a better stockage selection program will provide increased efficiency and effectiveness at reduced cost.

For further information from the USAQMC&S Class IX Task Force or to offer suggestions on the Repair Parts System Redesign, phone DSN 539-3309/3310/3302.

CPT William M. Wheatley has a bachelor of science degree in business commerce from Rider University, Lawrenceville, New Jersey. He also holds master of science degrees in systems management from the University of Central Texas and in logistics management from the Air Force Institute of Technology. He is a Certified Professional Logistician and a graduate of the Quartermaster Officer Basic and Advance Courses, the Combined Arms Service Staff School, and Airborne School. His previous assignments include Direct Support Maintenance Shop Officer, Supply Platoon Leader, Supply Management Officer, Battalion S3, Company Commander, and Supply Staff Officer. He is currently a Logistics Staff Officer in the Combat Developments Directorate of the U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

Chief of Staff, Army, Supply Excellence Award

The Office of the Deputy Chief of Staff, Logistics, announced the winners and runners up in the FY 92 Chief of Staff, Army, Supply Excellence Award competition. The winning units represent the Active Army, U.S. Army Reserves, and Army National Guard. The selections were based on on-site visits by supply personnel in the Supply and Professional Development Department, U.S. Army Quartermaster Center and School, Fort Lee, VA, during the second and third quarters of FY 92. A senior representative of the Army leadership was scheduled to present the awards 2 Sep 92 at the Pentagon. Individual awards are being sent to commanders of major Army commands for presentation on behalf of the U.S. Army Quartermaster General. The American Defense Preparedness Association, as the award program's sponsor, supplies the plaques for the winning and runner-up units. Established in 1985, this program's main goals are to enhance logistical readiness of all Army units, enhance the Command Supply Discipline Program, enhance the efficient use of available resources, and provide a way to recognize groups and individual initiatives.

Active Army MTOE Company

WINNER
21st Transportation Company (CAR)
Seoul, Korea
(EUSA)

RUNNER-UP
766th Military Intelligence Detachment
Berlin, Germany
(INSCOM)

Active Army MTOE Battalion

WINNER
25th Forward Support Battalion
Schofield Barracks, HI
(USARPAC)

RUNNER-UP
307th Signal Battalion
Waegwan, Korea
(USAISC)

Active Army TDA Company

WINNER
Senior ROTC Group, Montana State University
Bozeman, MT
(TRADOC)

RUNNER-UP
USA Vulnerability Assessment Laboratory
White Sands, NM
(USAMC)

Active Army TDA Battalion

WINNER
10th Area Support Group
Torii Station, Okinawa
(USARPAC)

RUNNER-UP
United Nations Command, Joint Security Area, Demilitarized Zone
Camp Bonifas, Korea
(EUSA)

Army Reserve MTOE Company

WINNER
HHC 302d Maintenance Company
St. Paul, MN
(Fourth Army)

RUNNER-UP
447th Medical Company (Clearing)
Grand Forks, ND
(Fourth Army)

Army Reserve MTOE Battalion

WINNER
397th Engineer Battalion
Eau Claire, WI
(Fourth Army)

RUNNER-UP
140th Military Intelligence Battalion
Bell, CA
(Sixth Army)

Army National Guard MTOE Company

WINNER
696th Maintenance Company (Heavy Equipment) (GS)
Kinston, NC
(North Carolina National Guard)

RUNNER-UP
HHC 69th Infantry Brigade, 35th Infantry Division
Topeka, KS
(Kansas National Guard)

Army National Guard MTOE Battalion

WINNER
130th Engineer Combat Battalion (CORPS)
Vega Baja, PR
(Puerto Rico National Guard)

RUNNER-UP
HQ 4th Battalion, 113th Field Artillery
High Point, NC
(North Carolina National Guard)

Army National Guard TDA Company

WINNER
HQ Detachment, Massachusetts State Area Command
Reading, MA
(Massachusetts National Guard)

RUNNER-UP
HQ Detachment, VA Troop Command
Richmond, VA
(Virginia National Guard)

Combat Arms Officer to Logistics Planner During Operation Desert Shield/Storm

CPT Martin E. Rose

It's early November 1990 and the United States has been deploying troops to the Persian Gulf since August. At the time, I was assigned to Headquarters and Headquarters Company (HHC), 2d Brigade, First Infantry Division (Mechanized) based at Fort Riley, KS. I can remember hoping that the "Big Red One" would be deployed so the unit could skip the upcoming National Training Center (NTC) rotation. I was an Armor first lieutenant in an Ordnance captain (91B) position as an Assistant Brigade S4 (Logistics Officer). I had been assigned to the brigade headquarters from an Armor battalion after requesting a voluntary branch transfer to the Quartermaster Corps.

The transfer was not approved until April 1991. Before this reassignment, my background included Armor Officer Basic Course, 15 months as an M1 Abrams tank platoon leader, and 14 months as a heavy mortar platoon leader. As a tank platoon leader, I deployed to Camp Ripley, MN, and the NTC. I developed a firm understanding of tactics but gained only limited knowledge of combat service support above the company level. I also held the additional duties of company and alternate battalion movement officer.

When I went to brigade, the Quartermaster captain who was leaving gave me a quick overview on the duties I would assume. These included the brigade-level positions of unit movement, transportation, supply, and logistics planner. The brigade provided me in-depth details on combat service support for brigade operations. The brigade executive officer (XO) aided greatly in refining my still-developing logistical skills. These skills would soon be put to the test when our division was alerted to deploy to Southwest Asia (SWA) the second week of November 1990.

Predeployment

The 2d Brigade, which consists of the 2d Battalion, 16th Infantry Regiment, and the 3rd and 4th Battalions, 37th Armor Regiment, was eight days from beginning rail load operations for NTC. The brigade's supporting units, the 201st Forward Support Battalion (FSB) and the 4th Battalion, 5th Field Artillery (FA), also were to deploy. Nearly five months of preparation and planning for the NTC would pay bigger dividends than expected.

Although training dealt more directly with battalion/task force external evaluations (EXTEVS), the brigade tactical operations center (TOC) deployed as well. We developed tactical and logistical plans that were used for the EXTEVS. The brigade XO continued to train the TOC personnel by executing Brigade/Battalion Battle Simulation (BBS) Exercises, command post exercises (CPXs), field training exercises (FTXs) and order drills. Order drills began with a division operations order, usually an NTC scenario, and followed the doctrinal process of developing and planning a mission. I probably learned more from these drills than anything else. Representatives from the FSB seldom made appearances at the drills due to prior commitments.

Planning for the NTC rotation did put the brigade a little ahead of the "power curve" relative to the rest of the division. Portions of packing and self-service supply center (SSSC) items had been picked up, with more on order. Modification table of organization and equipment (MTOE) shortages had already been identified by the battalions as well as the slice units. High demand prescribed load list (PLL) for desert environments had been identified and some PLL already ordered. Requisitions being processed were nearly uncountable.

I had two immediate concerns as the logistics planner for the brigade: Did I have enough experience to accomplish the missions? Would my overall knowledge of movements and convoy operations suffice for the large-scale movements to follow?

Deployment 15 December

I was among the 12 brigade personnel chosen to deploy as part of the division advance party. We departed on 15 December 1990. My missions for the advance party were vague at best. I was to gather all the information I could on the disposition of all classes of supply, ordering and contracting, host nation support, ship schedules and manifests, convoy operations and available transportation by type.

We arrived at the port in Ad Dammam, Saudi Arabia, on 17 December. Until 24 December I roamed around port meeting points of contact (POCs) for maintenance support, retail Class III (petroleum, oils and lubricants (POL)), division support command, Materiel Management Center, port support agencies, movement control officer, division transportation officer and the list goes on. Overall, the POCs within the division had very little information to help me before the brigade's arrival. I spent one entire day walking around the port facilities to look at ship berths, Class I (rations) and bulk water points, Class III support, temporary billeting, and staging and holding areas.

24-26 December

This was the first of three eight-hour trips I took to the 2d Brigade Tactical Assembly Area (TAA). At

the TAA, our 12-soldier team from the brigade began laying out battalion assembly areas with the Global Positioning System (GPS). This also included the support and field artillery battalions. Our next mission was the procurement and the placement of latrine facilities. This became a very time-consuming mission and the red tape seemed endless. We spent most of the day in Logbase Alpha becoming familiar with the way it operated. The logbase was approximately 30 kilometers away from the TAA.

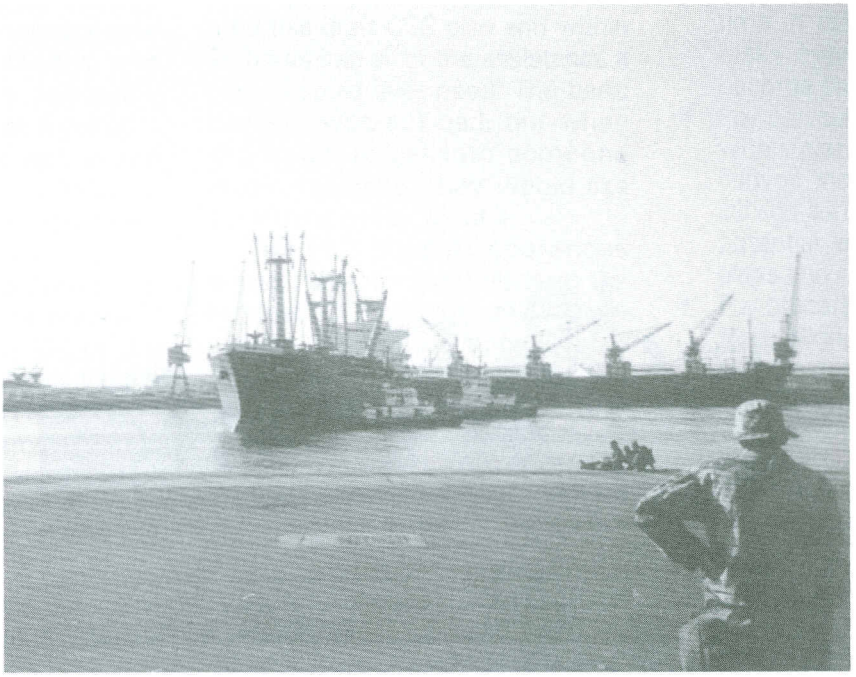
On the second day we traveled between various points of contact within the logbase, making arrangements for the next day's pickup and delivery. We stopped first at the headquarters for approval of our request, followed by a stop at the transportation section to request drivers and assets, and finally at the latrine and shower yard to schedule a pick-up time and materials handling equipment (MHE). The third day we picked up all of our assets and began moving facilities. It took an additional four days to complete the mission. The process required quite an effort from our ranking person, a major, and the FSB's S3 (Operations and Training Officer), also a major, to get anything done. No doubt it would have taken much longer with captains and lieutenants. This long, drawn out process obviously was the standard for every request because it required the same amount of effort in procuring tentage, cots, and Class IV (barrier and construction materiel).

27-31 December

Upon return to port, I contacted the same POCs I had spoken to the first time. There had been few, if any changes, in the information available. However, it was not a wasted trip. Our sister brigade had most of its personnel, and its equipment was being downloaded off the ships. I had an opportunity to observe their plans in the execution stage for linking up personnel with equipment and moving them out of port to the TAA. The brigade S3 arrived at this point and we once again departed port.

31 December - 7 January

The S3 had expected miracles, I suppose, for he seemed upset about how little had been accomplished. After several hours of explanation and debriefing, he understood our problems with gathering information. The S3 immediately began to talk and plan tactics for future operations. He did give me my first clear instructions since deploying from the continental United States (CONUS): write a movement order for the brigade, our FSB and our field artillery battalion to get from port to the TAA. I had limited experience with movement orders and they were tiny compared to what I had to do now. I spent several days preparing most of this order with the help from other lieutenants in the advance party. The brigade S3 reviewed the plan several times before approval, and the brigade XO made only minor adjustments once he arrived in port. The plan included a step-by-step process for receiving vehicles from the ships; coordinating Class I, bulk water and Class III; and getting heavy equipment transport vehicles and other transportation assets. This movement order also included a strip map with GPS grids, scheduled halts, refuel points and convoy commander instructions. Who practices writing movement orders for five battalions worth of equipment and 4,000-plus personnel on a 285-mile convoy route, stretched over a two-week period? The basic plan proved functional. The plan's foundation was flexible enough to allow for temporary changes. Additionally, we were able to infiltrate vehicles into other convoys. The brigade XO and S4 later played an important role in this.



Tugboats pushing ship to berth in Ad Dammam, Saudi Arabia

8-21 January

My next assignment from the S3 was to review all of the ship manifests and determine by ship where all pieces of equipment were and when they would arrive. I created two charts that listed equipment by type and what ship they were on. One had proper number and nomenclature and the other used common names, very simple charts for anyone to understand at a glance. From these charts I anticipated potential convoy configurations many days before

the ships' arrival. I created a working chart for configuring convoys using cutouts similar to those used for airload planning. This process did not work as well when ships did not arrive on time. The deployment cell officer in charge (OIC) would only accept estimates for equipment and personnel on the ground. This lessened our ability to accurately estimate needs. Personnel into the aerial port of embarkation (APOE) were to coincide with ship arrival at port, for quick linkups and movement out of port. When ships did not arrive on time, personnel could not leave port so they had to receive Class I and temporary billeting. This became a brigade and battalion S4 mission.

As the brigade transportation officer, I assumed control of the battalion movement officers and the support platoon leaders in the advance party. I initially formed a convoy coordination team consisting of myself and the support platoon leaders. I would build a proposed convoy and put in a bid for assets and march credits with the district transportation officer (DTO). We would compete for those assets against other units in the corps. The priority of what and who would move would change daily and sometimes hourly. One support platoon leader would coordinate for Classes I and III bulk, the other would be a POC for picking up allocated assets at their locations and lead them to our equipment for uploading. He would then lead them to a holding area to wait for convoy clearance. Of course, the process was much more involved than this. The procedure required more personnel than I had available. Selected incoming personnel were incorporated into the plan. For example, unit mess sergeants became involved in pickup and distribution of Class I bulk. POL section sergeants led fuelers to the Class III bulk site. Support platoon sergeants would assist in pickup and delivery of transportation assets. The plan would work with just about anyone in a position.

Class I requirements were based on incoming personnel and the number of personnel actually going with the convoy. Requests went through the port support agency that set an appointment for issue. A portion of each convoy's transportation assets were dedicated to carrying three days of supplies of Class I and water. Class III bulk requirements to fill incoming Heavy Expanded Mobility Tactical Truck (HEMTT) fuelers were based on ship manifests and their arrival dates. The requests went through the same port support activity to set appointments for bulk petroleum draw. Drivers for the fuelers would be led initially by my team but later by POL section personnel to a host nation's fuel storage sites.

Picking up showers at Logbase Alpha

Perhaps the toughest job was estimating transportation assets required for convoys. These assets included heavy equipment transport, cargo vehicles, stake and platform trailers, and civilian and military passenger buses. Estimated requirements were processed the next morning. Each evening, bid allocations were announced. Units had to scramble to fill those assets. We never received exactly what we asked for, sometimes more - sometimes less, sometimes entirely different assets than requested. Our unit never turned down any surprise assets. Very often the corps officer in charge (OIC) released assets to us, and another unit ended up unable to fill with personnel or vehicles. For example, our DTO would tell me that six heavy lifts, four stake and platforms, two five-ton cargoes, and three passenger buses were available for pick up in two hours. I would inform the brigade XO or S4 and they would quickly confirm that our unit had vehicles and personnel ready to move to the TAA. In the meantime, I would prepare the march credit request for the DTO to turn in if we could use the assets. Battalion commanders and XOs provided the push we needed to have their companies ready to load and deploy. By mid-January, three-fourths of the unit had departed port. The brigade XO became the driving force behind getting the remaining convoys out of port. His actions greatly lessened the burden on me. I was able to better concentrate on estimating and requesting assets until the brigade, FSB, and FA battalion were out of port.

22 January - 6 March

I completed my final trip to the TAA in record time of six hours. I took my position as the assistant S4/logistics planner stationed in the brigade TOC. I had held this position for seven months before deployment, so my actual working knowledge of combat service support (CSS) planning was seven months old. As previously mentioned our brigade was training for the NTC. We had several BBS exercises and CPXs that began with the receipt of a warning order and were planned to the execution phase. The brigade XO and S4 administered my on-the-job training. Competent and knowledgeable logisticians, these officers, one Armor and one Infantry, had held a variety of positions that required a working knowledge of tactical and logistical operations. At this point, all of my experience had been gained from unit exercises.

I began the planning process by first reading the division operation order and thoroughly digesting paragraph 4, service and support. I knew that the CSS plan had to support the maneuver elements, after all I was an Armor officer. I spent several of the first days listening to the brigade commander's guidance and intent to the XO and primary staff. I also followed around the S3 planner who actually put the tactical plan into operations order format.

I began asking questions of the S3 planner and the rest of the staff about how the CSS could be planned to best support the commander's intent. Tactics, tactics, tactics. Nobody really wanted to talk about logistics yet. Since my immediate supervisor, the brigade S4 was traveling between the port and the TAA recovering vehicles, he could only help me occasionally. The S3 and XO gave me some initial planning guidelines: plan on changes and create a flexible plan, at least for a start. Also, continue to pick apart the division's service and support annex. I just started planning as though it was another FTX.

I did the standard things such as an overlay with locations of CSS units, logistic release points, ambulance exchange points, potential Refuel on the Move (ROM) sites and tentative chemical casualty collection points. I wrote the concept of support, coordinating instructions for subordinate units and kept track of Class V of the battalions' consumption rates. Occasionally, the S3 and XO would stop to review the developing plan but still placed no major emphasis on the logistic planing.

Where have the FSB representatives been all this time? They seldom made face-to-face coordination until I published the plan. I distributed this draft CSS plan and within 24 hours had all of the assistance a person could ever need. The basic concept was not bad, but when you begin to get into someone else's specialty, they would like something to say about it.

The FSB support operations officer made frequent visits to the brigade TOC as did the FSB commander. The brigade surgeon more thoroughly developed and thought out the medical support and evacuation plans. Operations and locations of ROM sites were discussed and planned. The military police got in on enemy prisoner of war (EPW) site selection and construction. The brigade chemical officer got involved with chemical casualty collection points and decontamination sites. Experts began to develop their special needs which forced them to lay facts on the table and exchange information. This enabled the SPO, FSB commander, XO and surgeon and other necessary slices to plan the logistics thoroughly. My original plan had 12 major revisions. The final plan resulted from a team effort and coordination. The plan supported the commander's intent and allowed him to move his brigade to Safwan, Iraq, in five days. The brigade secured the airfield on which the negotiations took place. Five days after the cease-fire, I redeployed to CONUS as part of the division redeployment party to prepare for the 2d Brigade and the "Big Red One's" return. That's another story.

Over a year has past since the Persian Gulf War ended. Now, as I look back, several things have come to light about how I was able to complete my mission. Perhaps these ideas will help others with similar backgrounds or situations.

- Seek "mentorship." Draw on another person's knowledge from both tactical and logistical experiences. You will acquire insight not taught in formal schools.
- Make the most out of training exercises whether they are computer simulations or actual time in the field. Repetition of tasks eventually makes them become second nature.
- Pay particular attention to details when planning and executing convoy movements, both tactical and administrative. Wargame potential large-scale movement plans and orders.
- For officers who are part of the force alignment program or are branch detailed, take the time to learn what it takes to support the tactics you may already know.
- For officers who have always been supporters, take the time to visit the unit you support and develop good working relations with them. You must know them as well as you know your own unit.

To remain competitive in today's Army, you must become a multifunctional logistician. To do this you must strive to achieve a well-rounded logistical education from mentors, job training, trial and error and, of course, formal schooling.

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Becoming A Successful Lieutenant

CPT John J. Johnson

What Does It Take To Be A Successful Lieutenant, Especially in Light of the Present Military Environment?

The prevailing misconceptions that second lieutenants are not expected to know details about being officers when they get to their units is an idea out of the past. I contend that the typical company commander expects a newly assigned second lieutenant to start work immediately with minimum supervision or guidance. With the increasingly difficult promotion standards and competition to remain on active duty, recently graduated second lieutenants cannot take six months to a year to "learn" how to be successful. These officers need to be ready to assume their duties and perform well.

Preparing

Prepare yourself for that initial platoon or position. Newly commissioned officers should be ready for the duties of platoon leader, maintenance supervisor, dining facility officer, supply officer and the myriad of other assignments. Get a head start by writing to your future battalion commander and asking: 1) what job will I do, 2) what will be my company, and 3) who will be my sponsor? Contact your sponsor for details about the command climate. Once you know about your future unit, get its Army Training and Evaluation Program (ARTEP) and associated field manuals and know them completely.

Now that you have some idea of your unit and its mission, do not stop there. You will need to learn, or at least be familiar with, many other general military subjects. Remember that good decisions depend in great measure on accurate and pertinent information, so start building yourself a library that includes the following:

- Writing-related references, such as a dictionary, thesaurus, handbook on writing awards, and style manual for writers
- *Army Officer's Guide* (Harrisburg, PA: Stackpole Books, LTC Lawrence P. Crocker, U.S. Army (Ret.))
- Military reference books:
  - — AR 25-50 (Preparing and Managing Correspondence)
  - — AR 670-1 (Wear and Appearance of Army Uniforms and Insignia)
  - — *Enlisted Ranks Personnel, Officer Ranks Personnel, All Ranks Personnel, and Personnel Evaluation Update*
  - — Field Manuals: FM 21-20 (Physical Fitness Training), FM 22-5 (Drill and Ceremonies), FM 25-100 (Training the Force), FM 100-5 (Operations), TC 22-6 (The Army Noncommissioned Officers Guide)
  - — Branch-related field manuals
  - — Military magazines and periodicals such as *Soldiers, Army Trainer, Military Review, Parameters,* and branch newsletters and magazines

This list is not all-inclusive, but it will assist you in completing many necessary office tasks and allow you to spend more time out of the office with the soldiers.

Leading and Learning

All the leadership and technical classes and laboratories that you had in school and in your Officer Basic Course gave you the "schoolhouse answers" for dealing with the intricacies of leading today's soldiers. However, society, and thus the Army and its soldiers, consists of people with a very diverse combination of ethnic, social and economic backgrounds and varying degrees of education. As a result, being a leader in the Army is a challenging task. The junior leader must learn to balance the needs of the organization, the requirement to complete the mission and the strengths and weaknesses of the unit's soldiers. To achieve this balance, the leader must be creative, attentive and caring. Be confident and aggressive, remembering not to alienate your platoon leadership and soldiers. Listen, observe and ask timely questions and you will gain credibility.

- Probably the most influential person in your initial assignment is your platoon sergeant. One of this senior noncommissioned officer's (NCO's) jobs is to mold you into a soldier and respected leader. What you know in theory, and maybe do not know very well, your NCOs may have been doing for a long time. If you genuinely seek their advice and guidance, they will give it to you and hopefully pave the path for success, because all of you are after the same goal. The teamwork that a platoon leader and platoon sergeant develop will become the focal point of the entire platoon's cohesion. You must remember that as platoon leader you command the platoon.
- A fellow platoon leader or company executive officer, preferably someone who has been in the unit for awhile, is a person that you should talk to. Be careful not to imitate the leadership styles or methods of any one person. Remember, it is important that you be yourself.

- Your soldiers are another source of guidance. Listen to their ideas and offer them the opportunity to demonstrate initiative.
- The company commander is the most important person for the junior officer to seek advice and guidance from. The company commander is directly responsible for training new lieutenants, yet some company commanders pay little attention to developing lieutenants. Look for ways to ensure that this coaching or mentoring takes place. Request the commander's feedback. Make sure you know the commander's intent during tasks, missions and extra duties.

All this information needs to be filtered. You must discriminate and weigh all the information and advice that you receive.

Ensuring Success

You have finally arrived at your unit. You are earning your paycheck and leading soldiers. A key to ensuring success is organization. The junior leader must be organized, thorough and goal-oriented in the quest for advancement and recognition. Consider the following seven points:

- Know and follow your commander's philosophies, policies and command objectives.
- Lead by example in appearance, fitness and high moral and ethical standards.
- Complete taskings and follow up on missions.
- Seek out the difficult jobs and missions, and perform them well. (Document your performance in your Officer Evaluation Report support form, using measurable standards.)
- Attempt to know the requirements and job opportunities for positions of increased responsibility at the next level.
- Read, read and read.
- Focus everything you do on combat.

Perspective

Officers need to understand the dynamics of leadership as they become accustomed to their role as junior leaders. There is no surefire plan for the junior officer to succeed. Following my guideposts should assist you, especially if you have done your homework before serving effectively as a junior leader while you refine your leadership and management styles for a successful career in the military.

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World War I Quartermaster Sergeant Wins Distinguished Service Cross

Dr. Steven E. Anders

In 1917 and 1918, when the U.S. Army went off to fight in France in World War I, thousands of Logistics Warriors from the Quartermaster Corps joined their combat arms brethren in the trenches along the Western Front. They added to the glorious reputation of the Corps.

Take, for instance, the case of Laurence M. Lumpkin of Danville, VA. He was a Quartermaster sergeant in Pack Train Number 1 working near Exermont, France, with the First Division, AEF, on October 4, 1918. Sergeant Lumpkin's pack train, loaded with sorely needed wire for the forward elements of the "Fighting First" suddenly found itself in the proverbial X-marks-the-spot in Argonne. Without warning, German batteries opened up. The terrain afforded virtually no concealment.

After artillery fire came direct fire from the German machine-gunners and snipers. Sergeant Lumpkin lost 5 of the 10 mules of his train. Even so, he knew how desperately that wire in his train was needed at the front. He pushed on, shoving his pack train through the killing fire, and made the final dash forward in safety. Later in the same action, he took a second load of wire forward, under fire. For his heroism that day, Sergeant Lumpkin was awarded the Distinguished Service Cross—the second highest honor that can be won in combat.

Dr. Steven E. Anders is the Quartermaster Corps Historian, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

Enlisted Joint Service Depot Assignment

MSG J. G. Phillips

Assignment to a Defense Logistics Agency (DLA) depot is one of the ultimate high points in an enlisted logistician's career. The breadth of learning available in almost all related logistics disciplines is only exceeded by the challenge to professionalism and maturity of the soldier.

The scope of the Noncommissioned Officer (NCO) Logistics Program is a valuable tool to prepare an enlisted soldier for a DLA depot. Nowhere else can the soldier apply so many of the varied subjects from the course of study.

Military staffs at most DLA depots are small, less than one percent of the work force. Defense Depot Ogden, Utah, for instance, has just 12 military personnel on a staff that includes over 2,600 civilian employees at both the Depot itself and sites at Hill Air Force Base. A very small enlisted contingent supplements officers from all services.

These enlisted soldiers, carefully selected, must be highly responsible individuals. Their assignments are rarely "cut and dried" billets, but instead provide great latitude for individual initiative and responsibility. These NCOs often work longer than the standard eight-hour day of their civilian counterparts, concentrating not only on their "normal" duties but also on maintaining military skills and physical fitness.

Because of a depot's wide and varied operations, the enlisted soldier often becomes involved in new tasks. Also, the emphasis on economy and on getting the most for the defense dollar takes on a new meaning. For many NCOs, this is their first time to worry about such things as the cost of wages and benefits for a certain job or how much money can be saved by restaffing or shuffling duties.

In addition, such assignments may be the first time the NCO works closely with the civilian work force. Now, such matters as overtime, shift work and labor agreements must be considered as a part of every job. In the depot's "civilianized" labor force, safety, security and the Occupational Health and Safety Act (OSHA) become more critical to the NCO than in troop units, where some OSHA provisions do not apply or where the highly trained and disciplined military work force is taken for granted.

These assignments allow the NCO to apply the advanced logistics and civilian education accrued over the years. NCOs must express themselves in writing more than in most non-depot positions. More than any other job, here is an opportunity to grasp the situation and take charge. By bringing in "field experience," the NCO can provide insight into what happens on the receiving end and help make shipping and packaging work to the advantage of both the field unit and the depot.

Here, too, is the NCO's chance to learn about different disciplines. Those who have specialized in stock control or storage over the years, for example, learn transportation and care of supplies in storage (COSIS). NCOs at the depot may be involved in operations to return unserviceable items to "like new" condition for reissue.

In my case, as the Logistics Systems Specialist for the Stock Maintenance Division at Defense Depot Ogden, I participate in an organization which assembles Deployable Medical Systems (DEPMEDS) from empty containers to the finished product. At the same time, we refurbish compressed gas cylinders, bearings and some tentage. We provide electronic test and repair facilities for the Department of Defense (DOD), performing such tasks as programing computer chips for various operations.

Each of our jobs must be competitively "bid" or analyzed, and each job represents a unit cost at or lower than other DOD facilities or, in most cases, lower than civilian contractors.

The other NCO currently authorized at Ogden, assigned to the warehousing division, has been responsible for a good deal of the successful reorganization of that division - especially the relocation of the administrative offices.

In conclusion, an enlisted logistician should consider selection for assignment to a DLA depot a pinnacle in the NCO's career. Those of us fortunate enough to have had such assignments return to the Army with a better understanding of both the "all service" logistics concept and of what our sources of supply do. We can apply that to planning for better support of our forces in preparing for and fighting on the 21st Century battlefield.

MSG J. G. Phillips has an associate of arts degree in education, a bachelor of science degree in business management, and a master's degree in business and organizational management. He is also a graduate of the 3rd Armored Division's Noncommissioned Officer Academy, Basic and Advanced Noncommissioned Officer Course, Senior Supply Sergeant Course, and the Depot Supply Operations Management Course. His previous assignments include Chief, Customer Assistance, 9th Support Center, Germany, Supply System Analyst and Noncommissioned Officer in Charge, Supply and Services Division, Director of Logistics, 6th Infantry Division (Light), Fort Richardson, Alaska. He is currently a Logistics Systems Specialist, Defense Depot Ogden, Ogden, Utah.

Quartermaster Officer Training Strategies

MAJ Joseph A. Brown

The Army of the 1990s and the 21st century will change significantly as we shape our force of the future. We must develop and implement a training strategy within the U.S. Army Training and Doctrine Command (TRADOC) to mirror the shape of our Army. This training strategy must be flexible enough to maintain the rapid tempo of change.

'Think War'

In 1990, the Quartermaster Center and School (QMC&S) critically examined its current training program for officer leader development, the Quartermaster Officer Advanced Course (QMOAC). We crosswalked the critical task lists in the program of instruction (POI) with actual wartime unit mission-essential tasks lists (METLs) and, as described in the definition of FM 25-101 (Battle Focused Training), derived our peacetime training requirements: battle-focused training.

The QMOAC was one of the first leader development courses restructured and reshaped for the Army of the 1990s. We took advantage of innovative training techniques that are time-efficient, challenging and realistic and that provide a high payoff: confident and competent leaders.

A review of our many ongoing initiatives and training exercises demonstrates the carefully crafted strategy for guiding our Quartermaster officers. The QMOAC's scenario-driven POI enhances training and realism. We focus on hands-on, performance-oriented training. The following are examples of several initiatives:

Advanced course students plot out unit locations during class Map Exercise (MAPEX).

Commander's Handbook

The handbook adds realism to practical exercises. Students actually sign an assumption of command order for the "A" Company, 3d Forward Support Battalion (FSB). The handbook contains what an incoming company commander would expect to find, such as a detailed alpha roster of the company, battalion commander's quarterly training guidance, forward support battalion (FSB) METL, recent external Army Training and Evaluation Program (ARTEP) evaluation, short range training calendar, table of organization and equipment/modified table of organization and equipment (TOE/MTOE) documents, Standard Property Book System-Redesign (SPBS-R) company hand receipt, current maintenance status, and a short synopsis of the key personnel within the company. Students then develop memorandums, policies, evaluation reports, plans and orders for an FSB supply company with "realistic" data. This handbook is a "take away" product for the students in their next assignments (very similar to a "commander's smart book").

National Training Center - Command Post Exercise

This is a 3-day (72-hour) continuous command post exercise (CPX) based an actual National Training Center (NTC) rotation that includes supporting a brigade in a deployment, counterattack, defend in sector, deliberate attack, and a rearward passage of lines. Students role-play various FSB command and staff positions in an FSB tactical operations center (TOC) and brigade administrative logistics operations center (ALOC) setting. Students use actual NTC map sheets, operation orders (OPORDs), fragmentary orders (FRAGOs), and current Forces Command (FORSCOM) unit tactical standing operating procedures (TSOPs). Also, a heavy-light scenario attaches a light infantry task force to the brigade for two of the five missions.

Joint Readiness Training Center - Map Exercise

This exercise mirrors an actual Joint Readiness Training Center (JRTC) rotation with three missions: deploy strategically, expand lodgement area, and search and attack. Actual JRTC map sheets, OPORDs, FRAGOs, and current light infantry division (LID) FORSCOM TSOPs add realism.

Students role-play the logistical staff supporting a LID brigade slice. Logistic observer/controllers from the JRTC participate in the training event whenever their schedules permit. This exercise balances and complements the current NTC CPX.

Corps Logistics Exercise

This three-week exercise is based on an actual TRADOC Southwest Asia corps contingency scenario. The mission is to deploy a corps support group (CSG) into a bare-based theater. Students must work primarily off duty hours in a combat service support (CSS) simulation computer laboratory. Students develop a Time-Phased Force Deployment List (TPFDL) for CSS units, a combat service group (CSG) operations plan (OPLAN) with overlays, and then brief/defend their products to senior QMC&S lieutenant colonels/colonels who role-play CSG commanders.

Situational Training Exercise

QMOAC students complete a situational training exercise (STX) in the 19th week of the course that uses the lane-training technique in FM 25-101. The focus is hands-on, performance-oriented training. Lanes are designed as mission battle drills on such areas as fuel system supply point (FSSP), reverse osmosis water purification unit (ROWPU), mortuary affairs collection point and Class I (rations) break point operations.

Additionally, students role-play in various training exercises that reinforce previous instruction. The following are examples:

- **Train The Trainer** - QMOAC training of FM 25-100 (Training the Force) and FM 25-101 is based on the Combined Arms Center (CAC) and the QMC&S Precommand Course (PCC) train-the-trainer sessions. However, the training is tailored to the company level. Students role-play through training meetings and briefings.
- **Unit Status Report** - The unit status report (USR) exercise integrates the data from the "A" Company commander's handbook. Students must formally present and brief the USR.
- **Deployment Readiness Exercise (DREX)** - Students must work through a 12-hour practical exercise that capstones the basic transportation doctrinal instruction. This exercise includes emergency deployment readiness exercise (EDRE) procedures, family support, and process for preparation for oversea movement (POM) activities. Students deploy their company and battalion (A Company, 3d FSB), using data in their commander's handbook and associated references. Also, students must brief their deployment plans to various subject matter experts within the QMC&S.

Many logistical practical exercises include training with Advanced Noncommissioned Officer Course (ANCOC) students who role-play key positions. Students helped restructure the QMOAC. Selected students received credit for their research, oral and written communications project by working QMOAC projects. In fact, many students will brief senior leadership within the QMC&S, including the Commandant. This initiative resulted in a success story for both the schoolhouse and the student alike. The bottom line is this: we strongly feel that the QMOAC's "Think War" training strategy will do for its officer students what the combat training centers did for units in the field Army.

Soldiers receive direction from advanced course leaders during their National Training Center-Command Post Exercise (CPX).

MAJ Joseph A. Brown was Chief of the Quartermaster Officer Advanced Course for two years. Previously, he was assigned at the National Training Center for 3 1/2 years as an Observer/Controller with the Armor and Forward Support Battalion Training Teams, and as the G4 for Plans and Operations. A graduate of the U.S. Army Command and General Staff College, he is currently attending the Naval Command Staff College in Newport, Rhode Island.

ROM - A Doctrinal Base for Rapid Refuel Missions

LT Samuel L. Russell

Since World War II logisticians have created methods of refueling units on the move. The solution in Belgium in 1944 during the Battle of the Bulge was stacking hundreds of five-gallon cans alongside a road. When a convoy came to the refuel point, a soldier in each vehicle would grab a can, pour the fuel into the vehicle and toss the can to the ground. In more recent decades, units have come up with many different configurations for refueling vehicles using select components from the Fuel System Supply Point (FSSP). Until a few years ago, there was never a doctrinal system and method for refueling a unit on the move. As a petroleum, oils and lubricants (POL) platoon leader in a supply and service company in Europe, I developed our unit's Refuel on the Move (ROM) standing operating procedure (SOP) when we received the initial fielding of ROM kits in 1990.

Equipment

ROM Kit. Using the premise that units should have a doctrinal refueling system to tailor to each mission, the U.S. Army Quartermaster Center and School (USAQMC&S), Fort Lee, VA, came up with a ROM kit. They configured the kit based on an eight- or four-point refueling system connected to a 5,000-gallon tanker. The kit was originally fielded in 1989. After feedback from field units, the Army issued a modified ROM kit during *Operation Desert Shield/Storm*. A third version of the ROM kit currently being fielded (National Stock Number 4730-01-331-8444) makes the ROM assembly even more versatile.

Components. Rather than list all the components of a ROM kit, I will briefly describe a fully configured ROM system. Coming off the pump of a 5,000-gallon tanker is a 4-inch valve connected to the middle of a 525-foot-long base of 3-inch hose. Extending out at 75-foot intervals along this base are eight 50-foot sections of 1 1/2-inch hose. Each section has a 1 1/2-inch nozzle that can dispense fuel at approximately 35 gallons per minute (GPM). A detailed listing of ROM kit components is in FM 10-71 (Petroleum Tank Vehicle Operations) with Changes 1 and 2.

Augmented Equipment. The kit comes with a ground rod and a fire extinguisher for each point, but depending on local SOPs and specific missions, units may want to augment the system with several expendable items. Units should place a drip pan, a bag of dry sweep and a shovel at each point for spill control. Some units place a sandbag filled with absorbent material under each connection. Other units place cut up sections of unserviceable berm liner under each vehicle when refueling. As in any refueling operation, all ROM personnel should wear protective goggles and fuel handler's gloves. Remember, the ROM kit is a doctrinal base that units can tailor to specific ROM missions. Units should augment the system with whatever equipment necessary to complete the mission.

Tanks and Tankers. The idea behind the ROM is that a unit can conduct a refueling mission with just two vehicles: a 5-ton tractor pulling a 5,000-gallon tanker and a 5-ton cargo truck pulling a 1 1/2-ton trailer. The number of tankers used will obviously depend on the amount of fuel required by the supported unit. The USAQMC&S configured the ROM kit for use with 5,000-gallon tankers (M131A5, M969 and M970). The 1,200-gallon tank and pump unit and M49C tank truck are not adaptable to the ROM system because they only dispense fuel from their hose reels, have inadequate pumps for a ROM system and do not carry enough fuel. If a unit uses the 7,500-gallon M1062 for a ROM, then the unit must augment the system with a 350-GPM pump and filter/separator from the FSSP. The unit must also commit another vehicle for transporting those additional items and may require a forklift at the ROM site. Additionally, the M1062 cannot be taken off road, which greatly limits a unit's capability to conduct ROM missions. Some units have set up ROM sites using a 10,000-gallon collapsible fabric tank from the FSSP. This setup also requires an external 350-GPM pump and filter/separator as well as additional transportation assets. A ROM site using collapsible tanks takes longer to set up, is not very mobile, is hard to conceal and requires an external fuel source such as tankers, rail cars or a pipeline off-take point. Units can use the 2,500-gallon M978 Heavy Expanded Mobility Tactical Truck (HEMTT) for ROM missions by connecting the HEMTT's three-inch C-valve to the ROM kit's four-inch valve assembly with an adaptor. However, the 5,000-gallon tankers offer the maximum amount of fuel with a minimum amount of resources.

Personnel. The number of personnel required to conduct a ROM depends on the type of setup used. An eight-point ROM will usually require nine personnel (77F Petroleum Supply Specialists) not including a section leader (one pump operator and one fuel point

operator on each point). Although some setups require only five personnel (one pump operator and one fuel point operator for every two points), the nine-soldier method is better for command, control and safety. A four-point ROM would obviously require half the number of fuel point operators. Depending on arrangements with the supported unit, ROM units may want to provide an additional soldier for traffic control into the ROM site. Any personnel who are not vehicle operators or assistant operators can be transported in the back of the five-ton cargo truck.

Site Selection. A unit should consider several factors when selecting a ROM site. The objective of a ROM is rapidly refueling a unit on the move, delaying movement as little as possible. Based on this objective, a ROM site should be located along or not far off the supported unit's route of march. The area should provide good concealment for the tanker and ROM operations, and the ground must be firm enough to support the movement of heavy vehicles. The site should have one-way traffic flow in and out of the ROM area and should be large enough that ROM operations do not congest the route of march. Depending on the size of the march units and the distance between convoy serials, the supported unit may require a pre-staging area. Here, the unit can tactically displace vehicles waiting to enter the ROM site without congesting the route of march. The supported soldiers may also want a post-staging area located beyond the ROM site where they can marshal their vehicles before continuing their movement.

Set Up

Eight Points Versus Four Points. A unit conducting a ROM should take several factors into consideration when deciding how many points to set up. The number of vehicles the unit will refuel and the amount of time in which they must be refueled are the two principal factors. Other considerations are the amount of space available for the ROM site (an eight-point ROM can easily require an area 200 meters by 50 meters) and the number of personnel available to conduct the mission (as few as three personnel can conduct a four-point ROM). Units can set up more extensive ROM sites using several eight-point systems in one area. Such sites require very large areas, more equipment and more personnel, and possibly radio communications, to coordinate refuel operations. Whatever setup the ROM unit uses, the primary objective should always be delaying the supported unit as little as possible.

Swap Method Versus "Nurse" Method. If a refuel mission requires more than one tanker for support, the supporting unit must decide how to array the tankers in the ROM site. The first option is the swap method. The supporting unit positions one tanker to refuel the ROM and tactically displaces the other tankers for later use. This option requires the least amount of space for the ROM site. The ROM unit must interrupt operations while they switch tankers, but with two additional personnel (one driver for each tanker) and an experienced pump operator, they can make the switch in under five minutes. The second option is the "nurse" method. The supporting unit positions the primary tanker to fuel the ROM and positions the secondary tankers to replenish fuel in the primary tanker. Using this method, the ROM unit can provide uninterrrupted refueling operations. However, this option requires more space in the ROM area (to fit two or more tankers), more time to set up the site (each vehicle must be camouflaged) and an additional soldier (the second pump operator). To provide uninterrupted refueling, the unit must top load the primary tanker, increasing safety risks during operations. ROM units must weigh the advantages and disadvantages of each method when planning a ROM mission.

Remember, the ROM kit is a doctrinal base that units can tailor to specific missions. Units should augment the system with whatever equipment necessary to complete the mission.

Execution

Crew Drills. Every major command should have an SOP for ROM crew drills. Since each command tailors crew drills to fit the mission, I will not go into the specifics of ROM crew drills. Quartermaster soldiers receive ROM training at Fort Lee in Advanced Individual Training, Basic and Advanced Noncommissioned Officer Courses, the Officer Basic Course and the Petroleum Officer's Course. Therefore, Petroleum Supply Specialists new to a unit should be familiar with the ROM system. Crew drills are an essential part of successfully setting up and operating a ROM system, and units should immediately train new soldiers on specific crew drills. An efficient ROM team will provide more rapid service than an untrained one.

Hand and Arm Signals. Hand and arm signals are also an integral part of ROM operations. Like the crew drills, each command develops specific hand and arm

crew drills, each command develops specific hand and arm signals that should incorporate the same basic precepts. The hand and arm signals should be easily distinguishable from one another and should be adaptable to both day and night conditions. Using chemical lights at night, soldiers should be able to execute and distinguish the same hand and arm signals they use during the day. Hand and arm signals are only useful if every soldier knows them. Therefore, hand signals should be incorporated into the ROM crew drills.

Traffic Control. Traffic control is a primary concern for conducting safe and efficient ROM operations. As mentioned before, ROM units may want to designate a soldier for traffic control. This soldier positions himself at the beginning of the ROM site and meets the vehicles as they depart the pre-staging area and enter the ROM area. He ensures that one soldier ground guides each vehicle into the ROM site, that the correct number of vehicles enter the ROM site and that all vehicle operators know at what fuel point they will stop. The traffic control soldier also ensures that all vehicle operators understand that for safety reasons ROM personnel have control over vehicle movement in the ROM area.

Refueling. In a combat scenario, supported units are "hot" refueled. A serial of vehicles enters the ROM area and, with the engines running and operators remaining in their vehicles, is refueled for a predetermined length of time (usually two to five minutes). In the rare occasion that time is not a critical factor and vehicles are topped off, vehicle operators should turn off their engines, put the transmission in low gear or park and use parking brakes.

Units have conducted "ROM" operations for decades using their initiative and ingenuity. By fielding equipment designated specifically for ROM operations and creating a doctrinal method that units can tailor to specific ROM missions, the USAQMC&S standardized ROM operations throughout the Army. Soldiers trained to task along with consistent conditions and standards in ROM operations mean that one command can easily conduct ROM operations in another command.

LT Samuel L. Russell has a bachelor of science degree in civil engineering from Virginia Military Institute in Lexington. He is also a graduate of the Quartermaster Officer Basic and Advanced Courses and Ranger School. His previous assignments include Petroleum Platoon Leader, Field Service Platoon Leader, and Supply Support Activity Accountable Officer, 29th Supply and Service Company, 3d Corps Support Command, Wiesbaden, Germany. He is currently serving in 1st Special Operations Command, Fort Bragg, North Carolina.

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1991 Readership Assessment Quartermaster Professional Bulletin

CPT Susan D. Lee

The following are the results of the Readership Survey from the Winter 1991 edition of the *Quartermaster Professional Bulletin (QMPB)*:

The breakdown of respondents to the survey was 84 percent officer, 15 percent enlisted, and 1 percent civilian personnel, with a component breakdown of 72 percent active duty, 14 percent U.S. Army Reserve, 9 percent Army National Guard, 3 percent retired, and 2 percent Department of the Army civilian employees.

Overall, 99 percent of those surveyed thought the *QMPB* was helpful in terms of keeping them informed about their professional field as Quartermasters. More importantly, however, 60 percent have used the *QMPB* as a source document for such professional activities as briefings, reports and training. In addition, 54 percent have used the *QMPB* to solve or better understand problems they have encountered and 79 percent feel the *QMPB* is a source of new ideas.

Many questions were asked about the content and coverage of topics in the *QMPB*. Specifically, readers surveyed wanted to see more coverage of the following topics:

- Supply automation
- Quartermaster history
- Subsistence
- General supply
- Battalion operations support
- Wholesale operations

Readers also provided feedback on some recent articles, and it appears that lessons learned from *Operation Desert Shield/Storm* were the most popular. Readers surveyed commented that they found the short news briefs very helpful (89 percent) and wanted to see more of these briefs (44 percent). More specifically, many felt the Quartermaster Update section and career notes were the only way they received timely notice of changes in the Quartermaster Corps.

As far as layout and appearance of the *QMPB*, 98 percent rated it good or better. This is important since any publication must be pleasing to the eye to keep its readers interested. The *QMPB* received its highest marks for design, layout and illustrations.

The *QMPB* also received some constructive criticism as well. Some readers felt the *QMPB* should use more experts to tell what is happening (11 percent) and that the *QMPB* should better explain how and why things are being done (11 percent).

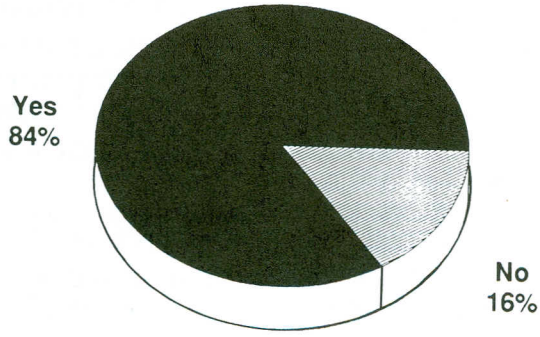
Specific, write-in comments were also a part of the survey. Recurring comments suggested that the *QMPB* have more articles on Reserve Component operations or suggested that a list of references for every article be published. More of these write-in comments were praises to the editors to "keep up the good work" — something they cannot do without feedback from their readers.

The "acid test" question on the survey asked if readers would subscribe (pay money) for the *QMPB* if it were no longer free. Only 22 percent said they would not, which stands as testimony to the value our readers place on this publication.

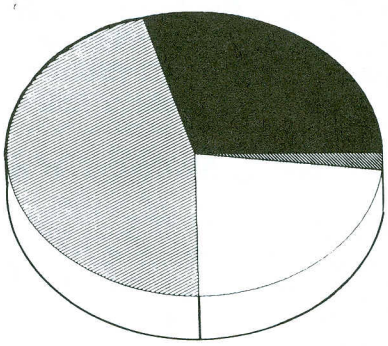
If you participated in the survey, our thanks. If you did not, please take the time next time because our goal is to publish the most useful tool for the Quartermaster.

CPT Susan D. Lee is a graduate of the United States Military Academy, West Point, New York. She is also a graduate of the Quartermaster Officer Basic and Advanced Courses and the Airborne Course. She is currently attending the Army Logistics Management College.

Have You Read An Issue Of The QMPB In The Past Year?



Overall, How Would You Rate The Content And Appearance Of The QMPB?



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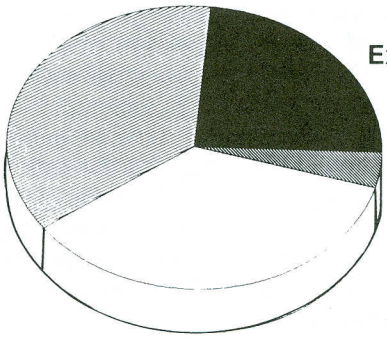

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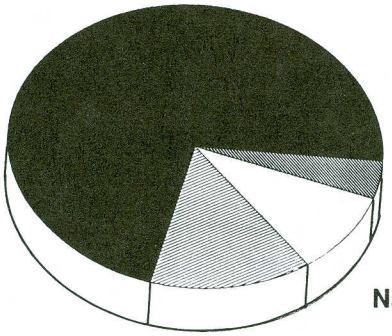

Worldwide Quartermaster Accident Data For FY 91

Michael L. Davis

Editor's Note: Effective May 1993, all soldiers with the Quartermaster military occupational specialties (MOSs) 76V (Materiel Storage and Handling Specialist), 76P (Materiel Control and Accounting Specialist), 76C (Equipment Records and Parts Specialist) and 76X (Subsistence Supply Specialist) will be consolidated to become the new MOS 92A (Automated Logistics Specialist).

The U.S. Army Safety Center, Fort Rucker, AL, calls human error a contributing factor in 80 percent of all Army accidents. Many soldiers feel that unsafe conditions and equipment failures are the main causes of accidents. In many Quartermaster accidents, the human error causing the accident ties directly into a **failure to perform to standards or failure to enforce standards**. The following sections discuss accidents by danger areas and ways that we, as leaders, can help deter accidents before they happen.

Army Motor Vehicle Accidents

Army motor vehicle (AMV) accidents were the number one killer of Quartermasters. Nine of the 21 Quartermaster deaths in FY 91 occurred in AMV accidents. AMV accidents increased by 48 percent from FY 90 to FY 91. Excessive speed caused one out of every three AMV accidents. Forty-eight percent of the AMV injuries and accidents were caused by following too close, failing to yield, misjudging clearances, or improper operation. MOS 76Y (Unit Supply Specialist) and MOS 77F (Petroleum Supply Specialist) accounted for approximately one of every two of the total Quartermaster AMV accidents during FY 91. Driver error is the single, greatest cause.

Driver training is the key to reducing AMV accidents. Enforce speed and distance requirements while in convoys. Require personnel to use seat belts and follow established routes.

Combat Soldiering Accidents

Combat soldiering, covering common activities of soldiers in the field, accounted for 21 percent of the total Quartermaster accidents in FY 91. Accidents involved cold or heat injuries; burn injuries from tent fires or trash/sanitation burning; physical training accidents; parachuting accidents; camouflaging, setting up, or moving material and equipment; and weapon/explosive accidents.

Make sure soldiers on trash/latrine burning detail are properly trained and briefed on safe operations. Enforce weapon/explosive safety requirements. Ensure proper use of tent heaters. Make sure operable fire extinguishers are nearby. Keep all entrances/exits and movement areas in the bivouac clear of obstructions. Ensure personnel are trained in setting up and camouflaging equipment and tents.

Noncombat Accidents

The largest Quartermaster reduction in accidents in FY 91 occurred in the use of privately owned vehicles (POVs). Six Quartermaster deaths from POV accidents were recorded during FY 91. In comparison, FY 90 had 27 deaths due to POV accidents. Thirty-two percent of the FY 91 POV accidents were caused by excessive speed. Alcohol was a factor in half of the Quartermaster POV accidents. While safety belt use is high among soldiers, soldiers are still dying and being maimed because they are not buckling up.

One of every nine Quartermaster accidents in FY 91 involved sports injuries. Team sports accounted for 74 percent of all FY 91 Quartermaster sports accidents. Basketball represented 38 percent and football (touch) 18 percent of the FY 91 Quartermaster sports accidents.

One of every five food preparation accidents involved the use of the M2 burner and immersion heater. Material handling accounted for nine percent of all FY 91 Quartermaster accidents and two of the Quartermaster fatalities. Maintenance accidents accounted for seven percent of the Quartermaster FY 91 injuries.

Accident Cost

Quartermaster accidents totaled $13,639,855 for FY 91. Eighty-five percent of the total cost of Quartermaster accidents in FY 91 involved individual injury costs. Fifteen percent of the total cost for FY 91 involved equipment costs. MOSs 76V, 76Y, 77F, and 94B (Food Service Specialist) totaled 80 percent of the Quartermaster FY 91 accident dollar, with MOS 77F personnel accounting for the highest costs.

Operation Desert Shield/Storm

Twenty-three percent of all FY 91 Quartermaster accidents worldwide occurred during *Operation Desert Shield/Storm*. Six Quartermaster soldiers died in accidents during the overseas operation. AMV accidents accounted for 46 percent of Quartermaster accidents in *Operation Desert Shield/Storm*.

Combat Soldiering Skills

Combat soldiering accidents represented almost 30 percent of all *Operation Desert Shield/Storm* Quartermaster accidents. Accidents involved tent fires or trash/sanitation burning accidents, camouflaging, material handling, and weapon/explosive accidents. All were

individual failures, avoidable with more leader involvement. A good example of leadership was prevention of heat injury. Because of intense leader involvement, only two injuries were recorded from heat injuries.

The M2 and immersion heater accounted for 72 percent of the total 94B *Operation Desert Shield/Storm* accidents in FY 91. A review of these accidents shows the same problems. The main problem is personnel trying to take shortcuts that always seem to go wrong. Seven material handling accidents occurred in the desert. Two of the Quartermaster deaths (both in the 76P MOS series) occurred from a material handling accident. These two soldiers died because material was improperly packed and sent to the field. These two Quartermasters were part of a six-soldier detail to off load 28 particle board sheets (each 6 feet x 15 feet x 1 1/4 feet) from a Sealand container. Stacked in a vertical position, the sheets could not be handled properly. The stack fell over and killed the two Quartermasters and another Army soldier.

All leaders need to stress sustainment tasks and skills proven so critical in any field environment. Many tasks may not be very visible, or appear to be important, until something happens requiring their use. Leaders must stress everyday tasks and skills for soldier safety. Perform field sanitation and trash burning. Ensure safe food service operations. Enforce maintenance of equipment (preventive maintenance checks and services of vehicles). Keep personnel accountable for weapons safety. Correct unsafe bivouac behavior. Enforce fire safety at all times. Ensure driver training is conducted and speed kept down. Ensure personnel use proper lifting techniques and use the buddy system when lifting large items. Enforce sleep plans as the key to sustained operations.

Accident Reporting

Accidents involving all soldiers may have been underreported during *Operation Desert Shield/Storm*. Some safety experts believe that 75 percent or more of the accidents were not reported. A major concern is that FY 91 accident data may not accurately reflect the results of the Army's effort to improve safety. Remember, reporting accidents improves Army safety. Also, accident data provides leaders with a complete picture of who, why, how and where accidents happen. This information could save a soldier's life. In peace or in war, safety procedures must be enforced.

Michael L. Davis, Quartermaster Branch Safety Office, Office of The Quartermaster General, Fort Lee, Virginia.

TOTAL ACCIDENT MATRIX FOR QUARTERMASTER CORPS, FY 91

ACCIDENT INVOLVING	MOS 43E	43M	57E	57F	76C	76V	76X	76Y	76P	76Z	77F	77L	77W	94B	WO	OFF	TOTALS	PERCENTAGE OF TOTAL QM ACCIDENTS
AMV	2		1		10	17	5	37	3	1	58	1	3	30		1	169	25 %
POV	3		3		8	9		21	6		9			12		1	72	11 %
COMBAT SOLDIERING	7	2		3	17	15	1	33	13		16	1	3	26		4	141	21 %
SPORTS	3		2		9	7	1	21	4		7		1	9	1	7	72	11 %
MATERIEL HANDLING					1	11	1	24	9	1	7		1	2	1		58	9 %
MAINTENANCE			1		3	7		11			14	1	2	2	1	2	44	7 %
FOOD PREPARATION						1		1					1	51			54	8 %
HUMAN LOCOMOTION	2		1		3	9		8	4	2	9			4		1	43	6 %
HORSEPLAY					3			1			1			1			6	1 %
OTHER			1				1	3			1						6	1 %
TOTALS	17	2	9	3	54	76	9	160	39	4	122	3	11	137	3	16	665	

AMV- Army Motor Vehicle
POV- Privately Owned Vehicle
MOS- Military Occupational Specialty
OFF- Officer
QM- Quartermaster
WO- Warrant Oficer

PROFESSIONAL READINGS

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

Crosses in the Wind: The Unheralded Saga of the Men in the American Graves Registration Service in World War II
LTC Joseph James Shomon, U.S. Army Reserves (Ret.), First Edition by Stratford House, Inc.: New York, 1947; Second Edition Revised and Updated, Printed by Keulers, Geleen (Netherlands), 1991.

The author presents his story of the soldiers in the American Graves Registration Service during World War II from his perspective as a commander of a graves registration company. A closer look at this oftentimes forgotten mission of Quartermasters, this book is highly recommended by several of our Corps leaders today.

Clear and Present Danger and **The Sum of All Fears**
Tom Clancy, Putnam Publishing Group, 1989 and 1991.

Tom Clancy's latest two offerings continue the saga of the Central Intelligence Agency's Jack Ryan. The first of the two stories, straight from today's current events, deals with the war on drugs, while **Fears** brings terrorism and a collapsing Soviet empire together. For fiction that twists today's headlines and makes it feasible, Clancy's work is some of the best. He has filled his novels with knowledgeable and accurate data on our modern military and intelligence apparatus.

The Killer Angels
Michael Shaara, David McKay Company, Inc., 1974.

Shaara is a former paratrooper and English professor who has written a personal account of the Battle of Gettysburg. **The Killer Angels** examines the battle from the eyes of the commanders and can help any leader today understand what drives people in combat. The Battle of Gettysburg is considered by many to be the turning point in the Civil War, and this book is a way to understand the battle. For the Civil War buff and the professional soldier alike, this book is highly recommended.

Attacks
General Field Marshall Erwin Rommel, Athena Press, Inc., 1979.

Written by Rommel in the early 1930s as an infantry manual, this continues to be one of the foremost books on basic "light" infantry tactics and leadership. In this personal account of his battles in World War I, Rommel discusses the war in much the same way as today's after action reports. Rommel was a true leader by modern definition, and this book provides insight into the mind behind the man. The military historian who has not read this book is missing a great work from one of the greatest military minds of this century.

Civilian Supply and Services Personnel

New Civilian Quartermaster Communication

This edition of the *Quartermaster Professional Bulletin* presents a new source of information for professional development, primarily for the civilian supply and service workforce. The Department of the Army Deputy Chief of Staff for Logistics (HQDA DCSLOG) Functional Chief and Functional Chief's Representative (FC/FCR) and the Quartermaster Corps are the proponents. This quarterly offering will present a forum to exchange critical career information resulting from developments and requirements generated by the integration of civilian proponency under the Army proponent system.

Personnel proponents have been charged to develop career maps for all of their proponent job series. These career maps are a part of the fully developed Army Civilian Training, Education and Development System (ACTEDS) plans. Where feasible, the career map depicts progress from the entry level of the job series through the highest supported positions (Executive Schedule (ES)/General Schedule (GS)/Wage Supervisor (WS)/Wage Leader (WL). The DCSLOG FCR sets the policy and manages GS and ES supply personnel programs to include the Supply Management Career Program 13 (CP 13).

The Quartermaster proponent responsibility encompasses GS mortuary affairs, laundry and dry cleaning plant management, and GS steward services. Additionally, the Quartermaster proponent is charged with Wage Grade job series existing in the broad categories of Career Field 78 (Troop Support) and Career Field 91 (Warehousing, Stock Handling, Packing and Packaging).

Both proponents are exploring avenues of mutual support in training, Quartermaster Regimental Affiliation, professional enhancement through existing organizations and better communications. Read this section in the future to find out the latest civilian supply and services career development information.

Army Supply Management Careerists - Civilian Quartermasters

Kathleen M. Schulin

This is the first article on the Army's Supply Management Career Program written for the *Quartermaster Professional Bulletin*. These articles signify the growing bonds between military Quartermasters and civilian supply careerists.

Today, as the Army reshapes, we are forging greater integration between the civilian and military workforce. Today, the Army is also moving toward greater vertical and horizontal integration. Our Army supply system is becoming "seamless." Also, our Army supply system is becoming increasingly "purple" at the wholesale level with greater Department of Defense centralized management, for example, Defense Logistics Agency management. During this period of significant change, it is more critical than ever for military and civilian personnel to have a greater understanding of each other's career progressions.

The Supply Management Career Program is to civilians what the Quartermaster Corps is to the soldiers. Simply stated, supply management careerists are civilian Quartermasters.

What Do They Do?

Supply management careerists in the Department of Army (DA) plan, control, direct and evaluate standardization, requirements determination, inventory control, storage and distribution of Army materiel and supplies to support U.S. and allied forces throughout the world. Supply careerists have broad skills and knowledges of supply management functions, as well as managerial knowledge of organizations and missions. Supply managers have a working knowledge of planning, programming, budgeting, program evaluation, information management, data automation, human factors and general management.

Where Are They?

The Supply Management Career Program includes civilians in General Schedule (GS) 5 through Senior Executive Service (SES) positions. Today, over 6,500 supply management careerists Armywide represent 7 percent of total DA civilians. Eighty-seven percent of careerists are GS 11s through GS/M13s in the federal competitive civil service. Forty-six percent of careerists are at the journeyman/specialist level (GS 11/12). Forty-one percent of careerists are at the intermediate level (GS 12 to GS/M13).

The Army has the following seven supply management series:

- 2001 - General Supply

- 2003 - Supply Program Management (Supply Systems Analyst and Supply Management Representative)
- 2010 - Inventory Management
- 2030 - Distribution Facilities and Storage Management
- 2032 - Preservation and Packaging
- 2050 - Supply Cataloging
- 346 - Logistics Management (Supply)

Supply careerists are in both the 2000 supply career series and 346 Logistics Management Specialist positions.

A high degree of vertical and lateral movement is possible within the supply management and logistics career series. Normally, an individual's career progresses from the more specialized series (such as Distribution Facilities and Storage Management (2030), Preservation and Packaging (2032) and Supply Cataloging (2050)) to the more generalized series (such as General Supply (2001), Supply Program Management (2003), and Logistics Management (Supply) (346)). The generalized series have a greater number of high-grade positions. All supply SES positions are in the generalized series.

Career Management

Enlisted and commissioned soldiers learn their branch from day one. Regimental affiliation is constant in soldiers' careers as they move from one position to another, into and out of their primary disciplines. To some extent, the same is true for supply civilians. Most received their basic training at the School of Engineering and Logistics in Red River, TX, or received similar intern training. Most have received advanced training at the Army Logistics Management College, Fort Lee, VA. Many have graduated from senior service schools. Most of the Army's senior supply careerists have moved extensively—functionally, organizationally and geographically—throughout their careers.

The Supply Management Career Program is headed by the Functional Chief, who is the Deputy Chief of Staff for Logistics (DCSLOG), currently LTG Leon E. Salomon. The Functional Chief is the personnel proponent for the Supply Management Career Program. The DCSLOG is also the Functional Chief for the Quartermaster Corps. The DCSLOG delegates day-to-day operational control for the career program to the Functional Chief Representative who is the SES Assistant Director for Supply Management at HQDA, ODCSLOG. This is currently Mrs. Billie W. Turmenne.

The Supply Management Career Planning Board assists the Functional Chief Representative. The board consists of Major Command (MACOM) Career Program Managers and Activity Career Program Managers from each of the U.S. Army Materiel Command's (AMC's) Major Subordinate Commands and Army logistics-oriented agencies and activities.

Careerists and supervisors should know their local Supply Management Career Program Manager. This person is usually a senior supply careerist and occupies the position as Career Program Manager, in addition to other responsibilities. If you do not know your Supply Management Career Program Manager, ask your supervisor or personnel office. Both should know.

Career program managers, in concert with supervisors and careerists, form a triad for career program development. The ultimate career program manager for an individual is the individual careerist.

Pathway to Success

Supervisors and supply careerists should be familiar with the Army's recommended progressive development path for supply management careerists. The Supply Management Army Civilian Training, Education and Development System (ACTEDS) Plan of April 1991 documents the career development process for all Army supply management careerists from entry until retirement. This plan is a living document: it evolves with changes in supply support doctrines, concepts and policies. This plan includes a listing of career program competencies and recommended courses and developmental assignments.

Did you know that the Army's Functional Chief Representative for supply sponsors a variety of developmental assignments? These assignments include a one-year detail with the Office of the Secretary of Defense (The Supply Management Professional Enhancement Program (PEP)) and financial support for full-time college undergraduate and graduate education (The Logistics Education and Assistance Fund (LEAF) and the Graduate Level Logistics Education and Assistance Fund (GLLEAF)). This is an example of some of the information in the Supply Management ACTEDS Plan. Get a copy and use it!

Soon the Supply Management ACTEDS Plan will be replaced by the Logistics Management ACTEDS Plan. The new plan will incorporate training for all supply management, materiel maintenance management, and transportation management careerists under one cover.

Quartermaster Corps Link

As the Army move towards a seamless supply system, a greater integration of our military and civilian professionals is more critical than ever. The new link being forged between the Supply Management Career Program and the U.S. Army Quartermaster School at Fort Lee, is an example of this integration. Today, HQDA and the Quartermaster School are working together to develop civilian careerists.

The Quartermaster School is favorably considering

mobile training team support to the Army's School of Engineering and Logistics to teach field-level supply operations and policy. Additionally, in the not-too-distant future, training seats will be established to enable civilian attendance at selected Quartermaster School courses. Additionally, the Functional Chief Representative is working with the Quartermaster School for civilians to gain Quartermaster Regimental Affiliation. These programs are making the Army's "seamless" supply systems a reality.

Kathleen M. Schulin has been the Army Staff Supply Management Activity Career Program Manager since 1987. She is the Chief, Field Policy Branch of the Supply Policy Division in Headquarters, Department of the Army, Office of the Deputy Chief of Staff for Logistics. She is a 1991 graduate of the Industrial College of the Armed Forces and a 1982 graduate of the Presidential Management Intern Program.

Additional Referral Level for Logistics Career Programs

The Deputy Chief of Staff, Personnel approved the lowering of the mandatory referral level for Logistics Career Programs to the GS 12 level, effective August/September 1993. Referral levels will automatically be adjusted for supply employees in the Army Civilian Career Evaluation System (ACCES). The two main reasons for lowering the mandatory referral level to GS 12 are: (1) to support the Logistics Career Program's ACTEDS plan and (2) to help remove barriers to the development of female and minority employees.

Army Management Staff College (AMSC)

Members of Career Program 13 are encouraged to apply to the AMSC. To date, more than 60 careerists in Career Program 13 are AMSC graduates. The following are AMSC classes for CY 93:

Class Number	Class Date	Application Deadline	Board Dates
93-1	11 Jan/16 Apr	31 Aug 92	13/17 Oct 92
93-2	10 May/13 Aug	21 Dec 92	23/26 Feb 93
93-3	13 Sep/17 Dec	30 Apr 93	22/25 Jun 93

Apply through your major command to the U.S. Total Army Personnel Command. For further information, contact Dorothy J. Narverud, DSN 227-8002 or Commercial (703) 697-8002.

Preparing DA Form 2302 (Civilian Qualification Record)

A portrait of a careerist, the Civilian Qualification Record should reflect positions held, formal and on-the-job training, self-development and awards. It should read like a biographical sketch. Remember, while preparing a DA Form 2302, some blocks are narrow and space is tight, but do not leave out valuable information. Never use job description language because job descriptions tend to use general language rather than to highlight accomplishments. Tell what was done, how well it was done, and what the results were.

Do not abbreviate too much. If necessary, tailor the form to fit your employment achievements. Record the most important experience: the most recent experience does not necessarily count the most when assigning ratings. Do not say the same thing over and over, but do distinguish among your different positions. The DA Form 2302 is most critical in any evaluation packet. It makes or breaks an employee's ratings.

LTG Leon E. Salomon, DCSLOG, is Functional Chief for Supply Management Career Program 13. Mrs. Billie W. Turmenne (DSN 225-4634 or Commercial (703) 695-4634) is Functional Chief Representative. Dorothy J. Narverud (DSN 227-8002 or Commercial (703) 697-8002), Logistics Management Specialist, handles supply civilian proponency, DCSLOG.

TOTAL FORCE

RC-NCOES

Many soldiers in the field have questions about Reserve Component Noncommissioned Officer Education System (RC-NCOES) policies that went into effect 1 Oct 91 for the Army National Guard (ARNG), Active Guard Reserve (AGR) and traditional soldiers. Enlisted Military Technicians still come under Section 506, Public Law 101-189.

With the exception of U.S. Army Sergeants Major Courses (USASMCs), NCOES courses, both Active Component (AC) and Reserve Component (RC), completed before 1 Oct 85 are no longer valid. Soldiers will not get credit for completion except to meet prerequisites for attending current RC-NCOES courses.

Soldiers who have attended the Primary Leadership Development Course (PLDC) (AC or RC) from 1 Oct 85 forward will have met their NCOES requirement for promotion to sergeant.

Soldiers who have attended RC Combat Arms Basic Noncommissioned Officer Course (BNCOC), RC Advanced Noncommissioned Officer Course (ANCOC), RC First Sergeants Course (FSC) and RC Senior Noncommissioned Officer Course (SNCOC) conducted 1 Oct 85 through Oct 87 have met the requirement for one promotion only until 1 Oct 92.

Realignment of Student Rank and Level of NCOES

To stabilize the NCOES and come in line with the Army's training and promotion policies, the training requirements that follow became effective 1 Oct 91. These training standards, met through RC or AC courses, apply to all traditional ARNG enlisted soldiers:

Specialists/corporals complete PLDC to prepare for duty as sergeants.

Sergeants complete BNCOC (Phases I and II) to prepare for duty as staff sergeants. To attend BNCOC, soldiers must complete PLDC and be primary and duty military occupational specialty (MOS)-qualified.

Staff sergeants complete ANCOC (Phases I and II) to prepare for duty as staff sergeants.To attend ANCOC, soldiers must complete BNCOC and be primary and duty MOS-qualified.

Sergeants first class must be at least ANCOC graduates for promotion to master sergeants. For questions about the NCOES requirements, contact your unit training NCO or call SGM Beech at NGB-ARO-E, Commercial (301) 671-1716.

RCMCSS Course

The Reserve Component Multifunctional Combat Service Support (RCMCSS) Course, developed under contract with the Combined Arms Support Command (CASCOM) at Fort Lee, VA, as proponent, provides multifunctional logistics training to RC field grade officers. Operational responsibility for the course was transferred to the Army Logistics Management College (ALMC), Fort Lee, 16 Mar 92. CASCOM remains proponent for the course. The RCMCSS course is the equivalent of Phase V of the Associate Logistics Executive Development Course (ALEDC). Students who successfully complete the RCMCSS course are enrolled in and given credit for Phase V, ALEDC.

The RCMCSS course is offered to sponsoring units on-site. Sponsoring units must fund the temporary duty (TDY) and per diem costs of an ALMC facilitator and the total costs (salary, benefits, TDY and per diem) for one or two RC assistant facilitators. Minimum class size is 12, maximum is 28. ALMC will help identify assistant facilitators and students. The following are tentative dates for potential sponsoring units for on-site instruction for FY 93:

19-30 Oct 92	22 Feb - 5 Mar 93	2-13 Aug 93
30 Nov - 11 Dec 92	15-26 Mar 93	16-27 Aug 93
4-15 Jan 93	19-30 Apr 93	13-24 Sep 93
1-12 Feb 93	10-21 May 93	

Interested personnel and sponsoring units should contact the Director, ARNG Programs (LTC Carlow) or the Director, U.S. Army Reserve (USAR) Programs (LTC Connors) at ALMC, (804) 765-4658 or AV 687-4658.

Revised Quartermaster RCOAC

As of 1 Oct 92, all officers enrolling for the Reserve Component Officer Advanced Course (RCOAC) must enroll in Phase I of the revised RCOAC by submitting a DA Form 145 (Army Correspondence Course Enrollment Application) to the Army Institute for Professional Development, U.S. Army Training Support Center, Newport News, VA 23628. The officer must be at least a first lieutenant and an Officer Basic Course (OBC) graduate.

Phase I consists of approximately 120 credit hours of correspondence course work. Note that Phase I must be completed before attending Phase II. Phase II is a two-week, resident phase taught only at Fort Lee, VA. It will be taught for the first time 10-23 Apr 93 and approximately once per quarter thereafter. The Army Personnel Center (ARPERCEN) and National Guard Bureau (NGB) will continue to manage quotas for the resident phase.

Current Configuration of Quartermaster RCOAC

Officers currently enrolled in the three-phase Quartermaster Reserve Component Officer Advanced Course (RCOAC) have until 30 Sep 93 to complete all course requirements. The following is a summary by phase:

Phase I, Company Command Module, two weeks at Fort Lee, VA. The last two Phase I classes will be taught 17-30 Oct 92 and 20 Feb - 5 Mar 93. Only officers enrolled before 1 Oct 92 should attend the last two classes.

Phase IIA, Common Core, correspondence course work. Officers enrolled in IIA with the Army Institute for Professional Development (AIPD) must complete all subcourses by 30 Sep 92. Officers enrolled in Phase I of the Combined Arms Services Staff School (CAS3) to meet the requirements for IIA must complete that by 30 Sep 93.

Phase IIB, Quartermaster track, correspondence course work, distributed by AIPD, must be completed by 30 Sep 93.

Phase III, two-week resident course at Fort Lee. This phase will be taught for the last time during the summer of 1993. Expect two or three classes scheduled as part of First Army's annual training schedule.

For questions about Quartermaster RCOAC, contact either MAJ Joosse or Mr. Clemons at Commercial (804) 734-3742/3679 or DSN 687-3742/3679.

Distinguished Members of the Regiment (DMOR)

Quartermaster Regiment nominations are now open to Reserve Component retired personnel, both civilian and military. Nominees must have made a significant contribution (any action or sustained series of actions that reflect special credit and pride) to the Quartermaster Corps. Individuals selected for induction will be notified and invited to attend the next induction ceremony. The annual ceremony is conducted at the Quartermaster Corps Birthday celebration.

U.S. Army Reserve and Army National Guard commands are encouraged to participate by forwarding nominations to the Office of the Quartermaster General, ATTN: ATSM-QMG-O (DMOR Project Officer), Fort Lee, VA 23801-5000.

Culinary Competition

The Reserve Components (RCs) are invited to compete in the U.S. Army Culinary Competition held annually at the U.S. Army Quartermaster Center and School, Fort Lee, VA. In 1992, 200 soldiers representing 22 installations submitted 365 entries for evaluation. This annual competition fosters the spirit of excellence in food service by recognizing individual culinary skills and ultimately enhances the overall quality of Army food service.

For information on the culinary competition, contact the Culinary Skills Training Division, U.S. Army Quartermaster Center and School, Fort Lee, VA 23801 or call DSN 687-3192 or Commercial (804) 734-3192. The RC points of contact are CW3 Gordan or Mr. O'Day at extension 7130 or 7126.

Force Provider

Force Provider will be a complex of facilities designed to improve the quality of life for soldiers in austere environments. It will consist of feeding, billeting, hygiene, and morale and welfare facilities that are containerized, whenever possible, for transport. The need for improved living conditions surfaced during *Operation Desert Shield/Storm*. The Army did a good job of providing basic field services, but equipment is available for vast improvement of these basic services. Force Provider will support force projection, humanitarian aid and disaster relief missions.

During 8-12 Jun 92, the U.S. Army Quartermaster Center and School (USAQMC&S), Fort Lee, VA, sponsored a display of equipment that could become part of the Force Provider project. The display's purpose was to obtain the Army leadership's opinions on potential components and uses for the system.

The exhibition at Fort Lee included three viewing environments: Department of Defense (DOD) equipment grouped by function; commercial equipment that could be included in the package; and a tactical layout showing how the complex could be employed in a field location. The DOD equipment display included items from the U.S. Army, Navy, Air Force, and Marine Corps. Representatives from commercial industry also participated. An extensive display of morale, welfare and recreation applications was included in the tactical layout area.

More than 1,000 personnel viewed the display, including 19 General Officers and 25 Command Sergeants Major representing a broad cross section of the Army. Also, each participant was asked to complete a survey of likes and dislikes about the equipment and to provide general viewpoints and recommendations. Over 950 surveys were completed. Data is currently being compiled and analyzed. This data will assist the Army in determining what should be included in the initial Force Provider test package.

Initial observations include the following:

- The concept should include mobile, flexible support packages.
- Potential missions should include force reception, redeployment, rest and relaxation, intermediate staging base, non-combatant evacuation, and reconstitution operations.
- The system is an ideal candidate for prepositioning, both in theater and afloat.
- Engineer support will normally be required to perform site preparation.

Future actions in Force Provider development include procurement of selected candidate equipment for testing and subsequent field testing. If all actions stay on track, the USAQMC&S is targeting 1995 as the year for fielding the first Force Provider package.

92A Independent Study

Army Correspondence Course Progrm (ACCP) and Training Extension Course (TEC) materials currently in inventory will be available for individual soldiers who wish to start learing the new 92A (Automated Logistics Specialist) military occupational specialty (MOS) skills before the MOS conversion date of May 93. The materials are grouped according to each affected MOS. The 92A MOS will result from the consolidation of MOSs 76C (Equipment Records and Parts Specialist), 76P (Materiel Control and Accounting Specialist), 76V (Materiel Storage and Handling Specialist), 76X (Subsistence Supply Specialist) and portions of the 76Z (consolidated MOS at the rank of master sergeant). A listing of these materials should be available by 1 Oct 92. Soldiers will complete these ACCPs on a voluntary basis. No transitional training credit will be given for completion. However, this provides an opportunity to prepare for the upcoming change. The official 92A ACCP course will be available in 2d Quarter, FY 95. For more information, contact MAJ Joseph Lojek at (804) 734-5452, or Carl Heinz at (804) 734-3788.

Equipment Deployment and Storage Systems (EDSS)

Lessons learned from *Operation Desert Storm* and input from attendees at the 1992 Division Support Command (DISCOM)/Support Group Commanders' Conference demonstrate the need for storing unit equipment in ready-to-ship containers. Containerized shipping is a vital part of moving units to the operational area. Units must have standardized, unit-owned containers compatible with their organic vehicles and material handling equipment. A standardized, modular, unit-owned container fleet will enhance the ability of maneuver and support units to store and deploy unit equipment, supplies and operational loads. Items may be fully uploaded in containers for day-to-day

operations. When required to deploy, containers will simply be sealed and loaded for surface or airlift.

The Internal Airlift/Helicopter Slingable Container Unit (ISU) and the Marine Corps Quadruple Container (QUADCON) are the most efficient systems available for storage and lift of unit equipment. The military services currently procure both systems, the QUADCON by the Marine Corps and the ISU by the Air Force and select units of the Army.

The ISU is an airmobile container with removable interior partitions and partitioned tray assemblies. The ISU is built upon a 463L (108-inch x 88-inch) compatible platform and comes in variable heights of 60, 72, and 90 inches. The QUADCON consists of four modular storage units (96-inch x 57-inch x 82-inch) coupled together to form a 8-foot x 20-foot International Organization for Standardization (ISO) envelope. It is dimensionally standard, lockable, and has ISO corner fittings for lifting and restraining. Collectively these containers have been named EDSS.

To speed up EDSS availability, the EDSS was put into the Common Table of Allowances 50-909. This action supports standardization and gives local procurement authorization to the user. The EDSS containers must be procured with Operation and Maintenance, Army funding according to Department of the Army guidance. Procedures for obtaining the EDSS were sent to each division G4.

Remote Operated Cargo Retriever (ROCAR)

Operation Desert Storm lessons learned by combat service support units included difficulty unstuffing pallets from 40-foot, commercially leased International Organization for Standardization (ISO) containers. Tables of organization and equipment authorized rough terrain forklifts (RTFL) that failed to efficiently perform this unstuffing mission. This created backlogs.

The 4K RTFL requires a ramp to drive into containers mounted on chassis or semitrailers, and drivers inhale exhaust fumes inside these long, 40-foot containers. Only the 6K variable reach RTFL has a 23-foot extendable boom, permitting unstuffing 20-foot containers without a ramp. Forty-foot containers present a problem since the boom is 20 feet too short and the 6K RTFL axles are too wide for driving into a container on the ground. The 10K RTFL axle is also too wide to drive into ISO containers for unstuffing pallets, plus it lacks an extendable boom.

Belvoir Research, Development, and Engineering Center envisions ROCAR as a modified RTFL with an extendable fork carriage mechanism. The U.S. Army Quartermaster Center and School requirements are unstuffing 48-inch x 40-inch pallets stacked two high (maximum lift weight—4,000 pounds) from 40-foot ISO containers mounted on semitrailers, railcars, or on the ground.

Modular, General Purpose Tent System (MGPTS)

The MGPTS will replace the current General Purpose Tent Family (small, medium, large). This system will improve the Army's current general purpose tents in the following areas: habitability, modularity, frame or pole support, reduced weight, reduced strike/erection time, supportability, durability, mobility, maintenance time, storage life, and configuration/versatility for diverse field tent arrays.

The draft of the MGPTS operational requirements document (ORD) has been distributed worldwide. A cost and operational effectiveness analysis comparing alternative tents is ongoing. The three alternatives for cost comparison are the currently fielded General Purpose Tent Family, Tent Extendable Modular Personnel (TEMPER), and the prototype MGPTS using lightweight fabric supported by poles and frame. Technical testing began May 92 for the MGPTS at White Sands Missile Range, NM.

Field Services Study

The U.S. Army Quartermaster Center and School, Fort Lee, VA, is completing a field services study. The Quartermaster General directed this study to enhance the quality of life for the soldier by providing the best possible support as far forward as mission, enemy, terrain, troops and time available (METT-T) dictate. The study shows a need for several changes in doctrine and policy because of shortcomings during *Operation Desert Shield/Storm*.

A new concept statement, already fielded for comments, will increase laundry support and eliminate clothing exchange.

Quarterly Airborne Board

The Quarterly Airdrop Review and Malfunction/Safety Board will meet 21-22 Oct 92 at Fort Lee, VA. All personnel and equipment involved in airdrop malfunctions during 3rd Quarter, CY 92 will be reviewed.

Water Trailer Field Trial

The field trial for the 5,000-gallon water trailer, NSN 2330-01-330-2779, LIN Z66072, will end December 1992. The 5,000-gallon water trailer (XM-1098) was developed for the Army's potable water needs during *Operation Desert Shield/Storm*. The question of the final disposition of these 230 water trailers has surfaced. The field trial with define the capability, utility and maintainability of the XM-1098 when used by divisional water support elements to distribute potable water.

Warrant Officer Leader Development Action Plan (WOLDAP)

The following key points, with scheduled implementation dates, are the results of the initial WOLDAP approved by the Chief of Staff, U.S. Army:

- Establish warrant officer (WO) Life Cycle Models for each military occupational speciality (MOS): 1st Quarter, FY 94.
- Review, update, revise and standardize the Warrant Officer Training System: 1st Quarter, FY 94.
- Conditionally appoint WO1 upon completion of Warrant Officer Candidate School (WOCS): 1 Oct 92.
- In The Army Authorization Documents System (TAADS), establish by grade position coding, such as WO1/W2; Chief Warrant (CW) 3; CW4; CW5; identify branch/MOS immaterial positions; and direct pinpoint assignment for all CW5 positions: 1st Quarter, FY 94.
- Establish a WO training institution as executive agent for all WO common core training and conduct WOCS and master warrant officer (MWO) Training: 2d Quarter, FY 93.
- Improve Reserve Component (RC) recruiting with recruiter assets, better coordination between components, and RC command emphasis: 2d Quarter, FY 93.
- Institutionalize and market understanding of WO roles, duties and responsibilities: 1st Quarter, FY 93.
- Raise civilian education goals to raise professionalism in the WO force. Examples: Obtain associate's degree by career point W3 and bachelor's degree by CW4. Identify more Army Educational Requirement System positions: 4th Quarter, FY 93.
- Retain WO insignia and centralized management: 2d Quarter, FY 92.
- Establish State Military Academies for WOCSs at select regional sites and accredit Active Component standard: 4th Quarter, FY 93.
- Establish a limited WO Military Qualification Standard (MQS) system, similar to officer MQS II, for WOs through grade CW4: 4th Quarter, FY 94.

The WOLDAP expects to achieve the following results for the total WO Corps:

- WOs who start younger, serve longer, are better educated, and have better leadership skills.
- WOs who are the products of centrally managed training by a WO institution, are professionally developed and have the right training for positions at all levels.
- More availability of senior experienced WOs for critical jobs, and filling of RC WO spaces to support readiness.

Supply System Support Office (SSSO)

The telephone numbers for the SSSO of the Quartermaster Center and School have changed. The old numbers are AV 687-1716/5001/5459/5802 or Commercial (804) 734-1716/5001/5459/5802. New numbers are DSN 687-6863/6865/6867/6869 or Commercial (804) 734-6863/6865/6867/6869. The FAX number remains the same at (804) 732-6020. Contact the SSSO for assistance in all supply-related areas including Stock Funding of Depot-Level Reparables (SFDLR), DA Pamphlets 710-2-1 and 710-2-2, supply automation, Chief of Staff, Army Supply Excellence Award Program (SEA), and all Strategic Logistics Agency initiatives.

FM 25-101 (Battle Focused Training) Comments

Combined Arms Command-Training (CAC-TNG) at Fort Leavenworth, KS, is the proponent for Army training management doctrine in FM 25-101. CAC-TNG is looking for suggestions on how to improve the manual before its next scheduled rewrite. Suggestions should include the specific page/paragraph and specific recommendation to include textual changes or additions. Provide comments to Deputy Commanding General for Training, Combined Arms Command, ATTN: ATZL-CTT, Fort Leavenworth, KS 66027. FAX comments to DSN 552-4458. For questions, contact CPT Bill Hedges, DSN 552-3919.

Corrections of Military Records

CPT Evelyn L. Lewis-Hankins

"You are your own best career manager." Officer and enlisted soldiers hear these words throughout their careers, and often problems arise which we do not know how to handle. Many times a problem that has embedded itself in our military record is very difficult to get removed. One example is if your date of entry on active duty is wrong in your official record which causes you to miss a promotion board. There is another alternative to simply "letting it go" - the Army Board for Correction of Military Records (ABCMR).

In 1989, I used the ABCMR to correct an error in my personnel data. In 1988, I was stationed in Germany on a three-year tour. Two-and-half years into my tour, my battalion commander informed me that the Department of the Army (DA) would separate me from active duty. Through my chain of command, I requested to remain on active duty. My request was denied at corps support command (COSCOM) and after almost 90 days I had no choice but to separate. Following a Congressional investigation, a mistake was discovered: my three-year tour was not reflected on my data file. The only way to correct this mistake was through the ABCMR. In 1991 a favorable deci-

sion was rendered on my behalf. I was returned to active duty, back-date promoted to captain, and returned all pay and allowances. My claim is still being settled. The ABCMR process is short and simple, but the processing time is limitless.

Created in 1947 by Congress, the Secretary of the Army, acting through a board, may correct an error from any Army record. Once an error is discovered, a DD Form 149 (Application for Correction of Military or Naval Record) must be filed within three years. This form initiates the correction process. The applicant should submit as much evidence as possible to support a case for correction. Any available information about the correction will be reviewed to determine whether to authorize a hearing, recommend a correction without a hearing, or deny the application without a hearing. If a hearing is required, then the applicant may be present, choose to be represented by counsel or may waive appearance entirely. At the end of the hearing, the board, comprised of 40 senior-level DA civilians, makes its recommendation on the case to the Secretary of the Army, who then makes the final decision. The applicant will be notified of the final decision and forwarded a copy of the hearing record. The application for correction of military record, supporting documents, record of the board decision and the Secretary of the Army's decision will be filed in the applicant's permanent military record. Monetary claims will only be settled and paid to persons who have had their records corrected, if appropriate.

The ABCMR is the last resort available for record correction. There are no time limits on the board or the Secretary of the Army in reaching a decision on a case. The best way to avoid this lengthy process is to inspect your records carefully at least annually. If you doubt something, question it. Do not let yourself be a victim of the system. After all, you are your own best career manager.

CPT Evelyn L. Lewis-Hankins has a bachelor of arts degree from Rutgers University in New Brunswick, New Jersey. She is also a graduate of the Quartermaster Officer Basic and Advanced Courses and Airborne School. Her previous assignments include Platoon Leader, Accountable Officer, and Assistant S2/3, 8th Maintenance Battalion, Hanau, Germany.

It's a Great Place to Start: ROTC Meets the Logistics Warriors

LTC Frank W. Miller

"It's a great place to start" has long been a rallying cry of our Army. Perhaps more than in any other place, this cry rings loudest in the universities that offer Reserve Officer Training Corps (ROTC) programs to their students throughout our country. ROTC produces more than 70 percent of the second lieutenants commissioned into the U.S. Army, Army Reserve and Army National Guard each year. To do this, there are more than 350 ROTC programs on college and university campuses in all 50 states, the District of Columbia, Guam and Puerto Rico. It is interesting to note that over 56 percent of all general officers obtained their commissions through ROTC.

The Quartermaster Corps is proud of affiliation with three universities: University of Syracuse in NY; Cornell University in Ithaca, NY; and Texas Tech University in Lubbock. The Quartermaster affiliation with these three universities officially began 4 April 1988 and was established to enhance recruiting and retention of high technology students into the Quartermaster Corps. Each school was selected for affiliation after a review of over 200 colleges and universities. A matrix was developed to evaluate these 200 candidate schools based on (1) strength of the ROTC program, (2) strong science/ engineering programs, (3) strong academic credentials, (4) historic ties to Quartermasters and (5) geographic proximity of Quartermaster units or installations.

Each of the three universities selected has its own strengths that led to selection for affiliation. Syracuse University offered a number of highly rated academic disciplines that support the supply and material management functions of our Corps. Cornell University offered the number-one ranked program in food service technology. Texas Tech University's strength is its petroleum and textile engineering programs. More than 460 cadets participate in ROTC at these three schools. BG John J. Cusick, The Quartermaster General, places priority on the affiliated school programs. Teams from the U.S. Army Quartermaster School, Fort Lee, VA, visit the three universities to tell cadets about the opportunities and challenges they face as Quartermaster officers. These teams are more than willing to visit other ROTC programs, showing cadets the advantages of becoming Logistics Warriors.

Our Corps also participates in the ROTC Basic Summer Camp, Camp Challenge, at Fort Knox, KY, and at the ROTC Advance Camp Branch Orientation Days, at Fort Bragg, NC, and Fort Lewis, WA. Also, Fort Lee is host to an annual ROTC cadet weekend. After a welcome by BG Cusick, cadets from various ROTC programs tour the Quartermaster Corps training departments, facilities and equipment. A social event in the evening and a tour of the Quartermaster Museum highlight this weekend for the cadets at the home of the Logistics Warriors.

Quartermaster units in the field can greatly help in this ROTC effort by participating in the Cadet Troop Leadership Training (CTLT) program. CTLT is follow-on training for certain cadets who are outstanding students and who performed well at ROTC Advance Camp. The cadets spend up to six weeks in an actual military unit. Most cadets report that they were not familiar with the Quartermaster Corps until

assigned to a Quartermaster unit during CTLT. Many of these cadets will request our Corps as their branch of choice, thus continuing the tradition of quality leaders coming into our Corps from ROTC.

There are many other ways you can help. Visit the professor of military science and cadre at a school near your installation. Speak to the cadets about combat service support missions and the role our Corps plays in those missions. Invite local ROTC programs to visit your unit. Both the cadets and cadre will appreciate the opportunity to see Logistics Warriors in action.

For additional information about these affiliated schools and their programs or for other ways you can help ensure our Corps continues to groom future leaders from ROTC, contact any of the following:

Cornell University
101 Barton Hall
Ithaca, NY 14853-1701
ATTN: LTC John L. Shirk
(607) 255-4006/4000

Syracuse University
300 University Place
Syracuse, NY 13244
ATTN: LTC Ronald E. Little
(315) 443-2462/1742/1870

Texas Tech University
Box 45003
Lubbock, TX 79409-5003
ATTN: LTC Frank W. Miller
(806) 742-2141/2142

Empowerment: An Investment in Quality Decision-Making

Lawrence Montemorra

What is the Total Quality Management/Total Quality Leadership (TQM/TQL) Principle of Empowerment all about?

Empowerment happens when leaders power down (push authority) to personnel who then experience a "sense of ownership" and control over their jobs. Empowered soldiers feel that their jobs belong to them. Given a say in how things are done, personnel feel more responsible. With a renewed sense of responsibility, they show more initiative in their work, get more done, and enjoy the work more. We must remember that leaders will always own the process! Squads are particularly effective in situations where it is impossible to greatly empower individual soldiers. When a group takes on more job responsibilities and forms a team to share duties and achievements, new heights of personnel empowerment are possible.

TQM is a set of guiding principles and practices representing the foundation of a continuously improving organization. For TQM to work, leaders must "power down" responsibility to the working soldier's level through TQL for a cultural change to take place.

Brigadier General John J. Cusick, Commander of the U.S. Army Quartermaster Center and School (USAQMC&S) says: "If it ain't broke, improve it!" The TQM/TQL "Top-Down Approach" means leaders at every level are required to "walk their talk," thus supporting the TQM philosophy of continuous improvement, forever. In a combat service support unit this translates into better quality products and services from soldiers sustaining soldiers.

Quality is everyone's business, and personnel who make up a Process Action Team (PAT)—our squad in the schoolhouse—must be empowered to flow chart, process, gather and analyze data. If the data proves the process is broken, the PAT must recommend to school management an appropriate fix.

PATs in the school environment (like the squad in a unit) are often called the "meat and potatoes" of TQM. A PAT is the symbol of a cooperative effort. Also, a PAT is an "agent of change," a group of individuals with diverse skills, talents and abilities from different organizations. They are knowledgeable in the process to be analyzed and capable of improving process as required.

What are the "benefits" to those soldiers who are "empowered"? First, increased self-satisfaction and a higher level of pride and morale in the workplace usually occurs. Second, greater and more rapid professional growth. Third, work is more rewarding when more enjoyable. Fourth, a stronger, more productive organization overall emerges as a result of soldiers/leaders systematically thinking through issues.

What are the "benefits" that accrue to leaders as a result of "empowerment"?

Challenges may lead to a new vision or mission. Enhanced worker morale can stimulate an attitude of change. Also, fostering communications between leaders and soldiers is psychologically healthy for increasing unit readiness. Soldiers and leaders become educated and trained in TQM strategy as a way of doing business that demands continuous improvement and assures Total Army Quality (TAQ).

TQM is "top-down driven" with "bottom-up success." Bottom-up success means that soldiers improve the process, and success is generated from the "meat and potatoes" teams. Bottom-up does not mean giving up leadership authority in reaching for improved performance. It does mean, however, receiving input from all members of the organization.

Since TQM talks a top-down approach with bottom-up success, empowerment is a significant aspect of achievement. The purpose is to empower the workforce to exercise self-direction while continuously pursuing improvement strategies in routine work as well as special assignments.

The primary TQM "empowerment" focus is on people and processes. Empowerment facilitates

ommunication, motivation, involvement, values, eadership actions, support, job structure, training, eward systems, productivity and teamwork. ersonnel who are empowered, and the energy that omes with feelings of ownership, are necessary for ontinuous improvement.

Impaired processes in an organization represent ontinuous improvement "challenges" for each ommander. Empowerment is another leader's tool o assist in making the TQM/TQL transition a very uccessful journey.

Lawrence Montemorra, a U.S. Air Force veteran, is a graduate of Hofstra University in New York and has a master of education degree from Wayne State University, Detroit, Michigan. He is an Education Specialist in the Total Quality Management Office, U.S. Army Quartermaster Center and School, Fort Lee, Virginia.

Until Help Arrives

SFC William E. Treon, Jr.

Imagine yourself as a Mortuary Affairs (MA) noncommissioned officer (NCO) assigned to a forward support battalion (FSB) or a main support battalion (MSB) in a division. You are the only 57F (Mortuary Affairs Specialist) for the brigade. Your commander tasks you with the mission of operating a collection point in the brigade support area (BSA) or the division support area (DSA). You ask yourself, "How in the world do I manage an operation which requires at least five people?" This was a major concern of mine when I was newly assigned to an FSB, in a division. I found I wasn't the only 57F with a question of this nature, but after I attended Basic Noncommissioned Officer Course my questions were answered and I knew how to manage this dilemma.

Until a solution to the one-NCO-deep scenario is worked out, the NCO in this position does exactly what NCOs do: they train, plan and execute. The NCO trains soldiers to operate an MA collection point in the BSA/DSA; trains soldiers in the brigade maneuver units; trains soldiers in unit-level search, recovery and evacuation procedures; develops policy; provides guidance to commanders; and practices the MA mission.

The key to the success of a self-supporting MA program requires command emphasis from the division commander to the FSB commander. All supplies, equipment and personnel needs are filled from organic sources.

An Interim Operational Concept (IOC) was developed to fill the needs of supporting a theater of operation. The plan calls for a collection company in the corps area, with a collection platoon attached to the division support command. A Mortuary Affairs Company will be assigned to the theater area with the capability to operate a theater evacuation point, personal effects depot, and an in-country mortuary if the theater commander decides it is necessary. This concept gives commanders the ability to task- organize and support logistics requirements. Until this concept is approved and the units are organized, equipped and fielded, the NCO in the FSB/MSB must prepare to support the mission using the assets within that organization.

SFC William E. Treon, Jr. is the Services Integration Noncommissioned Officer (NCO) for the Mortuary Affairs (MA) Center, U.S. Army Quartermaster Center and School, Fort Lee, Virginia. He has a bachelor of science degree in management from the University of Maryland at College Park and is a graduate of the Advanced Noncommissioned Officer Course. His previous assignments include MA NCO for the 2d Corps Support Command (COSCOM), Stuttgart, Germany during Operation Desert Shield/Storm; MA NCO, A Company, 64th Forward Support Battalion, 46th Infantry Division, Fort Carson, Colorado; and was on call to provide assistance as MA NCO for 172d Infantry Brigade, Fort Wainwright, Alaska.

Packaged Petroleum Markings

Commercial lubricants and related generic markings have been introduced into the military supply system in place of the familiar MIL-L-46152 lubricants for use in administrative vehicles. As a result, the lack of familiar or definitive markings has caused some confusion in proper lubrication (lube) identification and some potential misapplication. Although these product containers are now commercially marked, they will still display applicable viscosity grades and the American Petroleum Institute (API) service category marking "SG" which indicates that the product is for use in gasoline engines in current administrative passenger vehicles. "SG" products meet MIL-L-46152 requirements for administrative equipment but MUST NOT be used in tactical vehicle engines.

On the other hand, an API service category of "CD-II" or "CD- II/SE" indicates that the product is acceptable for use in tactical/combat equipment. Products designated in these categories meet the requirements of MIL-L-2104 and MIL-L-21260. The cardboard cases of tactical lubricants should still display appropriate military markings, such as MIL-L-2104, contract number, batch/lot number, and shelf life. However, the unit (quart) container may be a generic, white, plastic, unmarked quart bottle. Therefore, to avoid confusion and possible misapplication, administrative and tactical lubricants should be segregated in storage immediately upon receipt. Tactical lubes should be retained in original cases which display the military identification. All products should be issued thereafter by appropriate API classification and Military Specification Number. For further information, contact Mr. Leese or Mr. Roberts at the Army Petroleum Center, DSN 977-6445/8071.

Directory - Points of Contact

U.S. Army Quartermaster Center

Fort Lee DSN prefixes: 687/539
Commercial prefixes: (804) 734/765-XXXX

The Quartermaster General BG John J. Cusick	(ATSM-CG) 43458	**Supply and Professional Development** COL Robert W. Mortis	(ATSM-SUP) 43195
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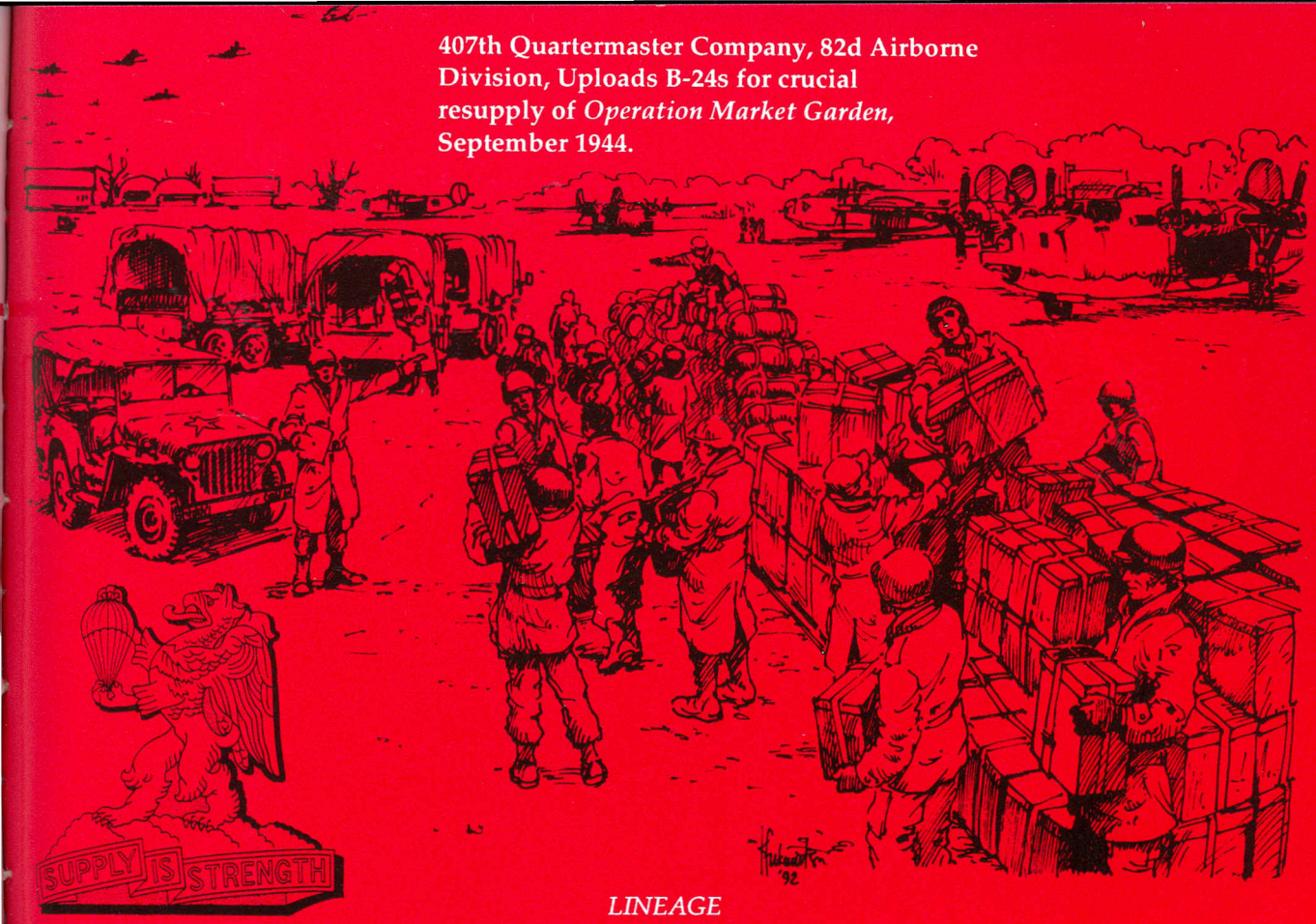
407th Quartermaster Company, 82d Airborne Division, Uploads B-24s for crucial resupply of *Operation Market Garden*, September 1944.



LINEAGE

Constituted 5 August 1917 in the National Army as the 307th Supply Train and assigned to the 82d Division

Organized in October 1917 at Camp Gordon, Georgia

Demobilized 9 May at Camp Dix, New Jersey

Reconstituted 21 September 1936 in the Organized Reserves and concurrently consolidated with the 407th Quartermaster Regiment (see ANNEX); consolidated unit designated as the 407th Quartermaster Regiment and remained assigned to the 82d Division (later redesignated as the 82d Airborne Division)

Reorganized and redesignated 13 February 1942 as the 407th Quartermaster Battalion

Ordered into active military service 25 March 1942 at Camp Claiborne, Louisiana

Reorganized and redesignated 15 August 1942 as the 407th Airborne Quartermaster Company

(Organized Reserves redesignated 25 March 1984 as the Organized Reserve Corps)

Withdrawn 15 November 1948 from the Organized Reserve Corps and allotted to the Regular Army

Reorganized and redesignated 1 September 1957 as the 407th Supply and Transport Company

Reorganized and redesignated 25 May 1964 as Headquarters and Headquarters Company, 407th Supply and Transport Battalion (82d Quartermaster Parachute Supply and Maintenance Company (activated 1 March 1945) reorganized and redesignated as Company B, 407th Supply and Transport Battalion; remainder of battalion constituted and activated)

Inactivated (less Company B) 15 August 1965 at Fort Bragg, North Carolina (Comnpany B - hereafter separate lineage)

Redesignated 21 September 1974 as the 107th Supply and Service Battalion and activated at Fort Bragg, North Carolina

Reorganized and redesignated 16 September 1987 as the 107th Supply and Transport Battalion

ANNEX

Constituted 24 June 1921 in the Organized Reserves as the 82d Division Train, Quartermaster Corps

Organized in January 1922 in Georgia

Redesignated 23 March 1925 as the 82d Division Quartermaster Train

Reorganized and redesignated 1 July 1936 as the 407th Quartermaster Regiment and remained assigned to the 82d Division

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