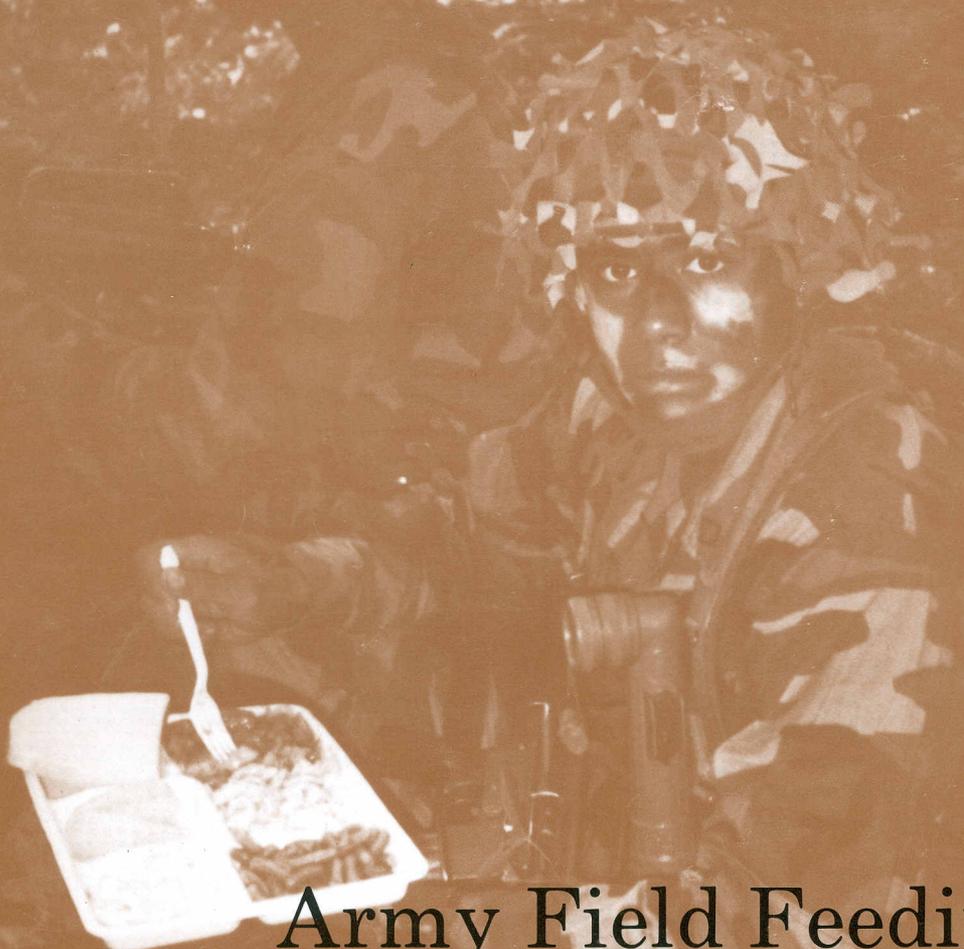


Quartermaster

PROFESSIONAL BULLETIN

DECEMBER 1988

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Army Field Feeding System: Battlefield Motivator



U.S. ARMY QUARTERMASTER CORPS



Key to Logistics

THE QUARTERMASTER GENERAL

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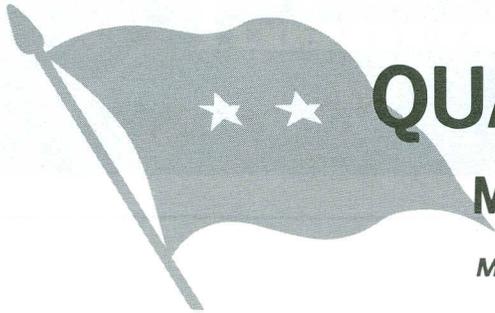
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QUARtermasters:

Meeting the Needs of the Battlefield

MG William T. McLean

Quartermaster - When we were needed, we were there - providing support to the soldier. Since 1775, the Quartermaster Corps has been one of the most important branches of the United States Army. The Corps sustained the troops when they took the field during active campaigns and continues to sustain them in garrison during times of peace. This issue of the Quartermaster Professional Bulletin highlights one of the pillars of this support - food service.

Current changes in the Army Field Feeding System (AFFS) make 1988-89 a crucial time as the Quartermaster Corps seeks to enhance its ability to support the soldier. As AFFS evolves, Quartermasters will continue to stress the importance of food service and ensure its adequate resourcing. In order to understand the importance of this system requires an analysis of human needs.

Soldiers, like all people, behave according to certain principles of human nature. These principles govern behavior in war just as they do in peace. In the understanding of these principles, a leader finds the basis for developing cohesive, disciplined units and for successfully leading soldiers in battle.

Sociologists today still emphasize Abraham Maslow's "hierarchy of needs", a principle first stated in 1943. Its basic premise contends that all individuals are "need" motivated, and those motivating needs are arranged in a hierarchical manner. The most powerful needs are also the most basic; moreover, they are physical: food, water, shelter, and sleep. When those needs are not met, an individual's motivation to satisfy them can overwhelm other, less basic motivators, such as a soldier's desire to accomplish his mission. The Quartermaster Corps is charged with providing the means of satisfying a soldier's essential needs. Specifically, the AFFS addresses the need for food.

With this in mind, it is essential that all members of today's Army, particularly its leaders, realize the importance of AFFS. If that leadership can ensure that the most basic needs are satisfied, then higher level motivators can be activated. Once activated, those higher level needs, elements such as a soldier's desire to meet his potential, help others, and fight for a worthwhile cause, have proved to be powerful and lasting motivators on the battlefield.

Some of history's most notable tacticians understood this idea: Napoleon stated - "An Army marches on its stomach", and Field Marshall Rommell said - "The battle is decided by the Quartermaster before the first shot is fired". Today's leader must note the lessons of history and fully appreciate the significance of food service.

As logisticians executing our creed, we can never forget that our primary focus has been and always will be to provide the best possible support to the soldier in the field. Take pride in the Quartermaster Creed, read it during formations to our soldiers. I challenge you to sustain and enhance the outstanding record of service support Quartermasters have earned since the days of the revolution. I am Quartermaster! I am proud!

MG William T. McLean is the Quartermaster General.

ARMY FIELD FEEDING IN THE ARMY OF EXCELLENCE

The Doctrine, Equipment and Personnel that Make it Happen

CW3 Wesley C. Wolf Fred D. Choice

During the last few years, and continuing through the next, units throughout the Army are involved in the transition to new organizational structures as part of the "Army of Excellence" (AOE) initiatives. The goals of AOE were to activate two new Active Army divisions, enhance special operations forces, activate a separate ranger and regimental headquarters and restructure other assets to support light infantry divisions within the current end strength of the Active Army.

The Army Food Service Program has changed rapidly as a result of these initiatives. Activating two new Active Army Divisions, the 6th Light Infantry, and the 10th Mountain divisions without expanding the end strength of the total force resulted in a requirement to save spaces in combat service support units. This meant the loss of approximately 3,400 cooks Armywide. In addition to this, it became apparent that the future combat scenario, characterized by highly mobile operations on an airland battlefield could not be supported using current field feeding techniques.

Since World War II, the B-Ration has been the primary field ration for U.S. Army troops. The B-Ration, consisting primarily of canned and dehydrated items packaged in various sizes, requires two to four hours of preparation time.

In addition, using the B-Ration requires more personnel to serve and clean up after meals as well as a large amount of equipment to accomplish the task. A new way of feeding the soldier was needed.

The development of the Army Field Feeding System (AFFS) was driven by that need. AFFS re-

duces requirements for labor, water, and fuel and at the same time increases kitchen mobility, effectiveness, and responsiveness. At the heart AFFS is the unitized T-Ration; the Meal, Ready to Eat (MRE); upgraded field kitchen equipment and a totally new feeding doctrine.

AFFS RATIONS

T-Rations. The T-Ration replaces the B-Ration in the field. T-Rations are rectangular pans of prepared entrees such as Beef Tips with Gravy or Chicken Cacciatore; starches, to include Spanish Rice and Macaroni Salad; vegetables, such as Whole Kernel Corn and Mixed Vegetables; as well as desserts. Each T-Ration comes in either 12 or 18 portion serving sizes. They are usually heated by immersing them in hot water, but may be heated in an oven if their lids are removed. If unopened, T-Rations may be reheated once.

The unitized T-Ration module includes all items necessary to provide one complete T-Ration meal to 36 soldiers. The unitized module is packaged in two banded boxes, each weighing forty to forty-five pounds. In addition to the T-Rations, each module contains paper trays and cups, plastic flatware, condiments and plastic trash bags.

The module must be supplemented by bread and milk in order to make the T-Ration meal nutritionally complete. Fresh hardy fruit, such as apples and oranges, and individual boxes or bowl packs of dry cereal may also be added to a T-Ration meal.

T-Rations have a three-year shelf life and a pallet of unitized T-Rations contains 12 modules. Unitization of the ration takes place at either Tracey Depot in California or Mechanicsburg Depot in Pennsylvania. During FY 89 the Army's goal is to have



The T-Ration module contains all items needed to provide one complete T-Ration meal for 36 soldiers.

14 lunch/dinner T-Ration menus available for issue.

Meal, Ready to Eat (MRE). The MRE is the combat ration of AFFS. It replaces the Meal, Combat Individual (MCI). The MRE is an individual meal which contains food items that may be eaten hot or cold. Each case of MREs contains 12 assorted meals. Each MRE is separately packaged in a pouch, which also contains an accessory packet with coffee, condiments, gum, matches, and toilet paper. The MRE pouch may also contain dehydrated fruit, dessert or candy, depending on which menu is selected.

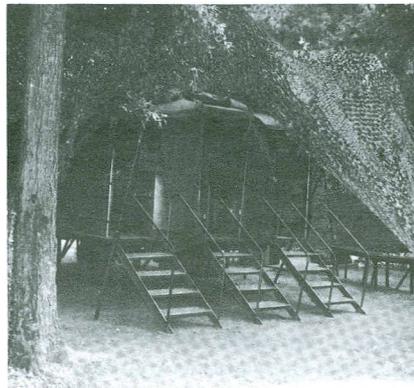
Recent improvements to the MRE include increasing the meat entree size from five to eight ounces and the elimination of all dehydrated entree items. Brand name condiments and candies are also being added to accessory packets.

AFFS EQUIPMENT

Equipment. AFFS utilizes several pieces of equipment for feeding soldiers in the field.

Mobile Kitchen Trailer (MKT). This highly mobile feeding unit is designed to prepare and serve T, B, and A-Ration meals. A single MKT can support 300 soldiers at a meal. The MKT is allocated to divisions, separate brigades and Armored Cavalry Regiments (ACR) based on battalion consolidated strength. For EAD units which are pending conversion to the AFFS, the MKT will be allocated based on one per company with a strength of 100 or above. There may be minor deviations to these basic allocation rules depending upon the battlefield deployment of units. The MKT may be towed by either the 2 1/2 or the 5 ton truck.

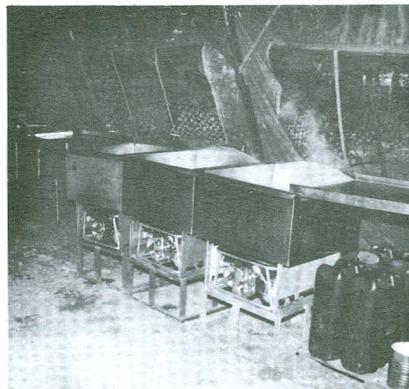
Kitchen Company Level Field Feeding (KCLFF). The KCLFF is allocated on the basis of one per line company for light, airborne, and air assault divisions. The



Mobile Kitchen Trailer

updated AFFS concept authorizes KCLFFs to battalions with a fixed number of subordinate units at the rate of one per two companies in heavy divisions, separate brigades, and Armored Cavalry Regiments (ACR). This recent change provides flexibility in preparing hot meals for dispersed units and remote sites.

Sanitation Center. The sanitation center is housed in a TEMPER (Tent) and consists of equipment for cleaning and sanitizing food service equipment. The major components are three field sinks,



Sanitation Center

three M-2 burner units, a table, two pot and pan racks, and a

drain table. One sanitation center is authorized for issue with each MKT and FKM. The actual basis of issue for items is currently under review at the QMS to determine whether mobility or space considerations meet the operational needs of all types of division. Alternative methods of sanitizing are also being considered.

Meal Carrier. This insulated unit is capable of transporting up to 24 hot T-Ration meals to serve soldiers at remote sites. MKTs are authorized one meal carrier per 24 soldiers supported, KCLFFs come with two meal carriers. Because of numerous maintenance complaints from



The M-2 burner unit is the heat source for many AFFS equipment systems to include MKTs, KCLFFs, Sanitation Centers, and FKMs.

field units the Army has recently determined that it will not purchase more meal carriers. Until a new food carrier is developed and fielded the Mermite Can (insulated food carrier) will be used to transport heated unopened T-Ration Trays to remote field feeding locations.

Insulated Food Carrier (Mermite Can). The insulated food carrier has been used by the Army to transport rations for field feeding for years prior to the AFFS. The mermite can, as it is commonly known, has three removable inserts. For remote site use with

T-Rations those inserts are removed and three T-Ration pans can be placed in the container. The mermite can also be used to transport prepared A and/or A/B ration meals pending development of the new dual purpose food carrier.

Mounted Individual Ration-Heating Device (MIRHD). This fabric heater is designed to work on vehicles with a 24 volt DC system. This system gives crew members the means to dry heat four MRE entrees in 20 minutes.

Canteen Cup Stove. The last item of equipment is the canteen cup stove. This aluminum stand fits over the standard canteen. It allows the soldiers to heat his MRE entree by immersing it in a canteen cup of water. Trioxane tablets or other combustible material provide the heat source.

The following items of AFFS equipment are issued primarily to medical units:

Field Kitchen Modular (FKM). This kitchen, housed in a modular tent or TEMPER tent, is

issued to hospital units. An FKM is capable of providing complete regular and modified solid and liquid meals prepared from A, B, or T rations, when supplemented with medical food preparation sets.

Hospital Ward Food Service Transport System (HWFSTS).

This two-man portable system is used by field medical units to protect food, maintain temperatures, and serve patients unable to go to a central feeding area. It can transport up to 20 regular and five special diet meals.

Operational Concepts and Doctrine

In 1984, the Chief of Staff, Army, set a field feeding standard of two hot meals and one combat ration per day. The deployment plan calls for using MREs initially and progressing to hot T-Ration meals twice a day. As the theatre stabilizes, plans call for a limited number of A-Ration meals (one every three to five days). The biggest advantage of AFFS is that it allows the commander the flexibility to quickly serve a hot meal under conditions where, in the past, only a cold combat ration would be used. A typical hot T-Ration meal can be heated and ready to serve in less than one hour, an impossibility with any previous field ration which required preparation.

In addition to reduced food preparation time, sanitation for the AFFS is also streamlined. There is no requirement to establish labor intensive and water dependent mess kit laundry lines because all eating ware is disposable and kitchen cleanup with the T-Ration is minimal. Soakage

pits and grease traps are a thing of the past with T-Rations; their only liquid kitchen waste is the water used to heat the T-Ration pans.

Accountability for the T-Rations and MREs is consistent with the basic theme of Army Field Feeding - simplicity. The Quartermaster School (QMS) and Troop Support Agency (TSA) recently completed, for staffing, accountability procedures which will decrease the number of forms required for the AFFS from ten to four. The new procedures designed to replace all current field accountability procedures are due for worldwide implementation during the 3rd Quarter FY 89.

Based on a recent decision by the VCSA, a revised AFFS is now being implemented.

Under the initial AFFS concept a specific unit was designated to provide ration support to all organizations collocated in the designated unit's area. These feeder units were resourced to

provide ration support to the designated feeding elements. However, field reports revealed that there is a systemic deficiency associated with the original AFFS designated feeder unit concept. It has been determined that the designated feeder unit concept is not tactically sound because it places too much dependence on the feeding unit for ration support and it does not account for movement or placement of units on the battlefield.

The revised AFFS concept for divisions, separate brigades and ACR consolidates cooks and equipment at the battalion level for all battalions with a fixed number of subordinate units. It recognizes the traditional dependency association, e.g., divisional headquarters companies retain responsibility for feeding soldiers from units supporting DTOC (Division Tactical Operations Center). Other divisional separate companies, e.g., MP, chemical, etc., will continue coordinating with divisional units for ration support.

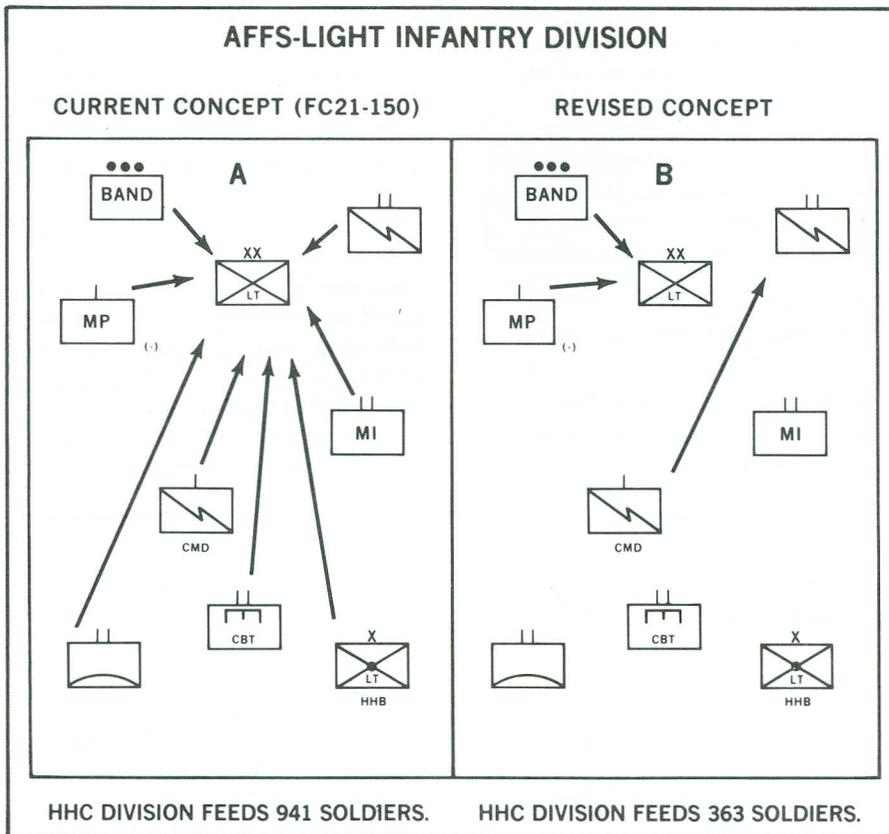


Figure 2

A dependency statement for feeding must be included in Section I of the TOE.

- Non-divisional combat service support (CSS) separate companies with a strength of 100 or more and **HHC of divisional and non-divisional 06 level commands** will be resourced for preparing rations for themselves and dependent units. (Change)
- HHC of non-divisional CSS battalions will not be resourced for ration preparation, but will subsist with one of their attached units. (Change)
- As a general rule, non-divisional CSS separate companies with strengths of less than 100 will not be resourced for ration preparation; however, these companies may develop requirements for cooks and

equipment by combining its strength with that of other small units which are doctrinally in the same location. (Change)

Allocation of Cooks.

- Determination of the specific number of cooks per unit will be made by considering the unit's strength, type and location on the battlefield.
 - Each battalion with a fixed number of subordinate units and HHC of non-divisional battalions will be allocated a food service supervisor. Additionally, for each MKT authorized, the unit will be allocated a working food service supervisor.
- The net effect of the revised AFFS concept is fourfold.
- It increases the number of cooks assigned to all divisions to

provide an A-Ration preparation capability (2 A-Ration meals per week), as the tactical and logistical situation permits.

- It provides in some instances an increase in MKTs in divisions to support battalion consolidated feeding.
 - It adds the KCLFF to the heavy divisions to provide flexibility in remote feeding.
 - It provides the same ration preparation capabilities for divisional and non-divisional units.
- The Army Field Feeding System will allow soldiers to be fed nutritious hot meals, quickly, using a minimum of food service personnel. The revised AFFS concept resolves the systemic deficiency of the original designated feeder unit concept and puts the entire system on a tactically sound foundation which reflects the mobility and responsiveness of the airland battlefield scenario. Still, the process of refining the AFFS continues.

Despite the simplification of food preparation in the field offered by the combination of T-Rations and MREs being used with AFFS equipment, other areas of consideration within AFFS remain to be resolved.

- Waste management and back-haul of trash and garbage are real concerns. The problem will receive much attention as we continue to field the AFFS. There is also concern as to the disposition of individual leftover T-Ration components. For example, an unused pan of vegetables cannot be returned to the TISA, only complete and banded modules. Individual pans of T-Rations can be taken back to a garrison feeding facility to be incorporated into the daily menu. These leftover pans are also ideal for late night feeding, range feeding or for guards.

An effective means of using leftover meat and vegetable T-Packs is to combine them to create warming soups.

Two effective means of using leftover T-Ration pans in the field were observed during Reforger 88. One is to combine vegetable/meat items and create a warming beverage soup; this item is highly accepted by soldiers. The second is to use the leftover items at consolidated feeding locations such as arrival and departure airfields, redeployment assembly areas and railheads.

- Remote feeding may be accomplished by a variety of methods. Battalions may send hot meals forward to remote units using the remote food carriers or mermite cans. When this arrangement is not feasible, the battalion may attach a KCLFF or MKT and cook(s) to the remote unit for hot meal preparation. Depending upon its strength, duration of mission and other tactical, administrative and logistical considerations, the remote unit may be administratively attached for rations to the nearest unit with a ration preparation capability. Remote feeding arrangements must be identified prior to a field training exercise or deployment in the exercise directive and field feeding SOP.
- There continues to be a problem in getting hot chow (A-Ration or T-Ration) to the last soldier in a tank, track or squad. The Quartermaster School and Natick are tackling this problem by considering a single serving ration (airline meal) that could be heated in the tank, or track near the consumption site.
- There is an ongoing dilemma of what to do with "old" rations (B-Rations, earlier versions of T-Rations and MREs) as the T-Rations and MREs are improved. Many changes have occurred to AFFS rations already, among them menu changes and

CHICKEN VEGETABLE SOUP

YIELD: 25 SERVINGS

EACH PORTION :1 CUP

INGREDIENTS	MEASURES	METHOD
Chicken ala King	1 Tray	<ol style="list-style-type: none"> 1. Open and remove Chicken ala King from tray. Place in container large enough to hold both chicken and vegetables. 2. Open vegetables. Do not drain. Add to chicken and mix well. 3. Add water to mixture and stir. 4. Heat slowly to serving temperature stirring occasionally. Do not boil.
Mixed Vegetables	1 Tray	
Water	3 Quarts	

NOTE: Any of the following vegetables may be used in lieu of mixed vegetables:
 Green Beans Peas and Carrots Peas with Mushrooms
 Whole Kernel Corn Sliced Carrots

an improvement in quality, but current stocks must be consumed before new variations are issued. Numerous proposals to resolve this situation are being discussed, to include mixing old and new rations. Another proposal being considered is a supplement pack which will be issued with the older date of pack MREs to enhance their acceptability. One AFFS problem - inadequate can openers - needs further explanation. New bench-mounted can openers with hardened steel blades are being issued as part of the upgrade kit for MKTs and KCLFFs. New specifications for the procurement of hand-operated can openers for use at remote sites have also been developed; they will be improved with hardened steel blades. Further, there has been a proposal to issue four P-38s with each T-Ration module. The P-38s are to be used for emergency situations only- to preclude soldiers from using their bayonets or personal knives to open T-Ration pans in the event the issued can opener is lost. The P-38 is also ideal for opening dented or crimped portions of the T-Ration pans.

The U.S. Army Quartermaster School, in conjunction with HQDA, Natick RD & E, and other agencies continue work to improve the overall Army Field Feeding system. Improvements in field menu selection and quality,

field equipment, simplified accounting, and overall AFFS doctrine, are ongoing. The Quartermaster School is also producing two new Training Circulars (TCs) 10-11, Army Food Service Operations and 10-10, Subsistence Supply Management, Distribution, and Operations. TC 10-11 supersedes FM 10-23, 10-10 supersedes FM-10-24. The new manuals reflect major changes in procedures for ordering and receiving rations during times of war. These procedures are based on emerging doctrine defined in Field Circular 21-150, Army Field Feeding System Operation.

The ultimate objective of all AFFS initiatives is to provide the best possible food service support to U.S. Army soldiers on the battlefield while working to achieve the goals set by the Army of Excellence. The structure of AFFS is in place and further refinements are forthcoming. It will be a continuous process; technological advances, changes in force structure, and needs of soldiers will all impact on the future of the Army Field Feeding System.

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NEW AND IMPROVED: T-Ration and MRE Development

Major Rita Alspach, Susan D. Gagne and Alice Meyer

New and improved!

Everyday the phrase comes to us, reflecting changes in requirements, changes in tastes. No aspect of our military lives is exempt, and subsistence, one of the soldier's most basic needs, is a prime example of an area where change is continual. Still, as the Army's doctrine and force structure are modified and refined, the bottom line for feeding our troops remains simple. No matter what, meals must be nutritionally sound, available, and most importantly soldiers must eat them.

Design and development of operational rations, like that of other military materiel, is driven initially by the operational and organizational concepts to which they respond. Those concepts give a specific meaning to a ration's essential characteristics of nutritional adequacy, acceptability, stability and military utility. Quite simply, those concepts form the standard against which a ration's suitability for fielding is measured. Still, operational concepts don't arise in a vacuum. In the case of the two rations which make up the subsistence basis for the Army Field Feeding System (AFFS), major advances in food processing and packaging technology have helped shape those concepts. This technology as applied to ration development of the T-Ration, and the Meal, Ready to Eat, Individual (MRE) has also made the new AFFS viable.

Every ration developer finds out sooner or later that the ideal combat ration provides the full daily nutritional allowances in virtually no weight or space, and magically transports and prepares itself into an endless variety of delicious and familiar foods. It also retains these properties indefinitely, no matter how long or where it is stored. Nobody expects these miracles to become real, but then, the capabilities of the MRE and T-Ration may have seemed equally outlandish less than two decades ago.

When one ration developer in the late 1940s proposed that food could be heat processed in flexible materials he was considered wildly visionary. By the late 1950s, things had changed considerably. Retort pouch capability was shown to be enough to warrant the formulation of the first parameters for the ration that was to become the MRE. By 1961, the concept had been sufficiently developed along the lines of organizational and operational requirements that specifics for developmental engineering were approved. The goal was to increase the acceptability and reduce the weight of the Meal, Combat, Individual (MCI) using the capabilities of the retort pouch as a foundation.

Testing had already shown that the flat configuration of the retort pouch meant that less drastic heat processing than required for rations in round metal cans was needed. This resulted in better retention of characteristic food texture and flavor. Further, whereas the MCI had been designed for only "infrequent use", the MRE was required to pass the test of acceptability without monotony when eaten as the sole diet for seven consecutive days - a then most unusual "up-front" requirement for a combat ration!

Technical and user tests showed that the first prototype MREs did not meet these criteria. Further work was necessary to assure package integrity and to formulate acceptable products. When "Final" user/technical testing took place in 1974-75, the MRE was so significantly preferred to the MCI as to warrant the new ration's use as a sole diet for 10 consecutive days.

The MRE was adopted as the DOD combat ration in 1975. The first buy, a large-scale production test, began in 1978, with delivery in 1981. By this time, HQDA was giving serious consideration to basing AFFS on the MRE without Tray Packs, at least for the first 60 days. The developers at Natick protested that the MRE had not been designed or tested for this. A prolonged feeding test in the early 1980s confirmed that this objection was well founded, and the MRE took its place as part of AFFS, not its only component.

The MRE not only increased combat ration acceptability and reduced package weight, making the ration easier to carry on the person, but also proved to eliminate problems of rust, corrosion and detinning. This gave the MRE a significantly longer acceptable shelf life than was obtainable with the MCI. In addition, it eliminated problems of dependency upon commercially available can sizes, making the ration easier to improve as feedback comes in from the field.

The latter proved especially valuable, as feedback - principally from the foregoing prolonged feeding test in 1983 as well as larger and smaller scale tests in 1985, 1987, and 1988 - led to an extensive incremental improvement program. That program has been ongoing since 1984 and is aimed at increasing the MRE's acceptability for prolonged consumption as part of AFFS.

Because of this MREs procured in 1988 are markedly different than earlier issues. "Wet pack" retort pouch entrees have totally replaced freeze dried entrees in all 12 menus, with nine components reformulated to meet changing tastes. Entree quantity has been increased from five to eight ounces for 10 menus. A fruit flavored beverage powder is included in all menus and liquid hot pepper sauce in some. A premoistened towelette is added to the accessory packets. These changes slightly increased the MRE's weight, but it is still below that of the MCI.

These new MREs were tested at Fort Bragg, North Carolina, during Market Square II this past summer with enthusiastic response from the troops. Work is underway towards future incorporation of pouched white bread, additional wet-pack fruits, and pouches with better performance characteristics in extreme environments.

The other part of AFFS is the T-Ration. Developed and fielded as individual items, its growth has been even more evolutionary than the MRE. Commercial and military developers originally saw the potential of the flat, rectangular pans that required 50% less processing time than the conventional round #10 can providing more acceptability. Items such as Lasagna, beef pot roast, and cakes could be successfully packaged in the Tray-Pack. This is not attainable in #10 cans. Due to the marketing difficulties and competing priorities, the commercial market was never fully developed.

Nevertheless the T-Rations high potential for military use was recognized.

Tray-Packs do not require refrigeration and can be prepared with minimal food service

equipment and trained personnel simply by heating the containers. Because of this, they offer the possibility of providing hot "kitchen prepared" meals to large and small groups throughout the theatre of operations, even where this had previously been unfeasible.

A Letter of Agreement for AFFS food service equipment referencing both Tray-Packs and the MRE was approved in 1981. By 1983, the Armed Forces Product Evaluation Committee of the DOD Food Planning Board has approved a program of field testing to accelerate introduction of acceptable Tray-Pack foods on a line item basis into the supply system.

The initial variety of fully developed, specification Tray-Packs has increased annually.

Recent experience with the new items at Market Square II demonstrated their much improved acceptability. As a result of ongoing efforts, 14 each T-Ration breakfast and dinner menus incorporating 54 different items are available for 1989 procurement. To make ration breakdown simpler, these are provided in 36-person modules which include other items required for a nutritionally complete meal. The modules also contain expendable utensils, cups, plates, etc. for consuming the meal. The 1988 modules are most notable for responding to continuing complaints about a lack of typical breakfast entrees: corned beef hash, and various types of omelets are among the new breakfast components. Development to increase the variety and acceptability of the components is continuing at a rate of five new items a year.

As the user must eat his way through the stocks already available, it may be some time before

the improvements summarized above or yet to come are evident in the field. This problem is recognized and is being addressed at the highest levels in DCSLOG. In the interim, the latest version of the MRE will be provided to troops on field exercises at major training centers (such as National Training Center).

Surveillance inspection is accomplished to prevent issue of deteriorated or otherwise unsuitable rations. Use of the Unsatisfactory Material Report (UMR) is the best way to provide this feedback. Combat rations must all be sufficiently acceptable to troops under combat stress; that is those rations must be of such quality to encourage consumption. Unless the soldier eats enough of his ration to sustain his efficiency in the field, that ration has little value. Converting processed foods into rations that meet this level of acceptability is not a simple undertaking. In accomplishing it, the developers at Natick rely on expanding their technological capabilities and receiving specific, substantiated and responsible feedback from the field. Neither is exactly easy to get. That's part of the challenge, as well as Natick's goal as work towards the ideal combat ration continues.

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DOCTRINAL TRAINING TEAMS

CW3 Wesley C. Wolf

Fielding any new system is always a tremendous job, requiring careful planning and coordination. Fielding a system as far-reaching as the new Army Field Feeding System (AFFS), a system which will involve the most basic need of all soldiers, requires more consideration than most. One of the resources which the U.S. Army Quartermaster (QMS) School, Fort Lee, has employed to aid the Army in a smooth transition to AFFS is the Doctrine Tactics Training (DTT) Team.

The DTT Team consists of three NCOs and a Warrant Officer, and functions primarily in a "train the trainer" capacity. They are involved in developing AFFS training materials to be used in all Food Service resident courses at the QM School, but the DTT team itself constitutes the most valuable and most immediately available training on the AFFS.

When units convert to the Army of Excellence (AOE) structure, the QMS forwards a message to the unit or installation, offering AFFS training. Once the unit responds affirmatively, coordination of the training effort begins. The DTT considers what AFFS equipment a unit has, the number of the students to be trained and the grade range of the students.

Drawing on this information, the team tailors AFFS training to

meet the needs of the unit. For example, if a unit has converted to AOE structure, but has not received Mobile Kitchen Trailers (MKTs), the school plans to have an MKT shipped to the unit during training. Similarly, if only fifteen students are to be trained, the grouping and scheduling will be quite different than for 100 students. The number of DTT instructors sent to a given site is also based on the amount of students and length of the course offered. The average DTT Team training involves three instructors, training a five-day course. The course combines lectures, discussions, demonstrations, written practical exercises and testing with hands-on training. The majority of the course is spent with students operating the new AFFS equipment. The basic subjects covered are:

- Overview of AFFS
- Basic Components of AFFS
- A/B/T Rations
- Operation and maintenance of the MKT
- Operation and maintenance of the Sanitation Center
- Operation and maintenance of the KCLFF
- Accounting for T-Rations
- AFFS Concept
- Loading plans for AFFS equipment
- Camouflaging AFFS equipment

Soldiers who successfully complete training receive a Quartermaster School Certificate of Training on the Army Field Feeding System. It is expected that those personnel trained by the QMS DTT Team will be used by the unit trainers for the continuation of new equipment training and on-the-job training within the unit. The DTT Team leaves an exportable training packet with the unit for this purpose.

During the last year DTT Teams concluded training for 1500 personnel at 15 sites Armywide. As more units convert to AFFS during the coming years, the team will be on the road even more, continuing their mission of making AFFS an easily understood and implemented system for feeding today's Army in the field.

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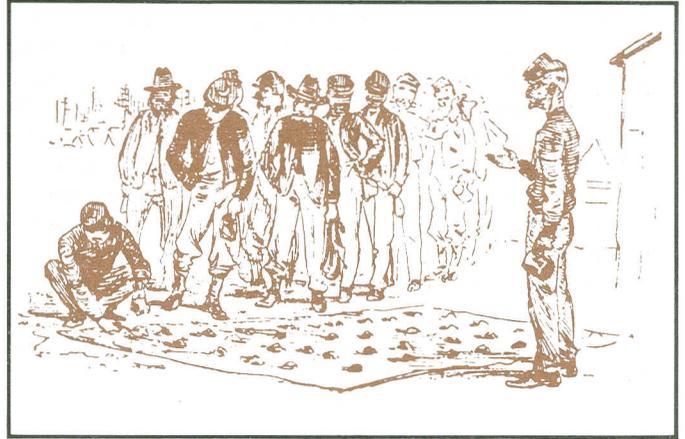
FEEDING BILLY YANK: Union Rations between 1861 and 1865

J. Britt McCarley

“Who shall have this?” Sergeant John W. Fuller asked in a voice loud enough for all the assembled troops to hear. He stood beside two ordinary army blankets laden with precious contents. One contained forty-five carefully divided mounds of ground coffee, the other an equal number of piles of sugar. Together, they represented a four-day ration of coffee and sugar for Company C of the 100th Regiment of the Indiana Volunteer Infantry.

Sergeant Fuller was pointing to one of the heaps of coffee. No matter how carefully they tried, it was impossible to divide the coffee equally; the company had no scales. As a result, each mound was always a bit larger or smaller than the others. In order to distribute the ration, First Sergeant Sanford W. Meyers, facing away from the coffee and the company, read from the muster roll and called out a name at random. Private Theodore F. Upson stepped forward to claim this most important part of a soldier's ration, then, its sweetener.

Salt pork and hardtack, the rest of the marching ration were to be weighed and issued later by the regimental commissary but that wasn't important now. The company focused its attention on the blankets. The weather in this third week of June, 1864 was wet and unseasonably cool, as it had been for the four previous weeks of the campaign to



Atlanta. The source of that next, all sustaining cup of hot coffee, now ranked in importance with the Confederate enemy entrenched less than a mile away - Private Upson returned to the ranks with his fair, if not quite equal share of coffee, and the issue continued, by random name, till each pile of coffee and sugar had been claimed.

Scenes like this were enacted countless times in hundreds of Union Army infantry and cavalry regiments as well as batteries of artillery throughout the course of the Civil War. From day to day, very little was as important to Billy Yank as his ration.

The common soldier was the last stop in a long and complex process of ration procurement and distribution. The Commissary General for most of the war, Colonel Joseph P. Taylor (later Brigadier-General), headed the Subsistence Department and advertised specifications for the various components that made up the Union ration. Given those specifications, private contractors placed bids. The Commissary General, or an authorized officer of that department chose the lowest bid from a responsible bidder. That contractor then prepared the foodstuffs, and delivered them, packed in boxes and barrels to a designated place. There they were inspected and received. These transactions were confined to a handful of cities: Boston, New York, Philadelphia, Cincinnati, and St. Louis.

At this point the rations became the responsibility of the Quartermaster's Department, which was in charge of transportation and storage for the Army. In sailing vessels, steamships, barges and railroad cars, the food traveled south to the base of operations of a field army. Here, Quartermasters stored it temporarily in warehouses, sheds, or out in the open until it was shipped, usually by rail, to the army's advance depots. From there, army supply wagons carried the rations through temporary depots and finally to the corps, division, and brigade levels. At the brigade, a regimental officer heading a special detail received the food and delivered it to the regimental commissary, who in turn distributed it to the separate companies for issue to each soldier.

Rations are the issue of a fixed amount of foodstuffs for a given period of time. Billy Yank drew two types of rations. When his army was in camp or garrison, he typically received the full ration according to Army Regulations; while on campaign he was issued the much abbreviated marching ration. (See Table 1.) Only when a march took them beyond the range of army wagons, as happened from time to time with the fast-moving cavalry, or when a battle separated them from their primary depots did Union soldiers go without food. The most famous example of the latter was the aftermath of the 1863 battle of Chickamauga, Georgia. There, by luck and a Union command error, the Confederates routed the Federals from the field and chased the Northerners into Chattanooga, where a siege fol-

lowed. For about a month, Union soldiers in Chattanooga went on half rations and even ate feed grain meant for the Army's starving animals. When the siege lifted in October, 10,000 horses and mules had died. Still, the Federal ration was more than ample in terms of quantity and calories. It was larger than that of the British, French, Prussian, Austrian, and Russian armies of the same period.

crackers made of flour and water, Federal soldiers began to cook. As time went by, they acquired utensils such as cutlery and a tin plate and cup, fashioned boilers by adding a wire bail to an empty tin can, or rigged a frying pan from discarded canteen halves with a green stick to serve as a handle. They also discovered that by forming a mess of approximately five soldiers, preparing meals became a social occasion. The soldier who



DAILY UNION ARMY RATION

3 August 1861 - 20 June 1864

CAMP AND GARRISON RATION:

Meat: 12 ounces of pork or bacon, or
1 pound and 4 ounces of salt or fresh beef
Bread: 1 pound and 6 ounces of soft bread or flour, or
1 pound of hard bread [hardtack], or
1 pound and 4 ounces of corn meal

To every 100 rations:

15 pounds of beans or peas, and
10 pounds of rice or hominy
10 pounds of green coffee, or
8 pounds of roasted (or roasted and ground) coffee, or
1 pound and 8 ounces of tea
15 pounds of sugar
4 quarts of vinegar
1 pound and 4 ounces of adamantine, or star candles
4 pounds of soap
3 pounds and 12 ounces of salt
4 ounces of pepper
30 pounds of potatoes, when practicable, and
1 quart of molasses

Paragraph 1191: "Desiccated [dehydrated] compressed potatoes, or desiccated compressed mixed vegetables, at the rate of 1 ounce and 1/2 of the former, and 1 ounce of the latter, to the ration, may be substituted for beans, peas, rice, hominy, or fresh potatoes.

MARCHING RATION:

Meat and Bread: same as above
Coffee, Sugar, and Salt: same as above

The real trouble began when Billy Yank received the ration. On a march, it usually consisted of four parts: three-fourths pound of salt pork, one pound of hard bread (hardtack), coffee, and sugar. Few soldiers knew much about cooking, and the Army was still about a half century away from training cooks. Further, the soldier's issue of equipment did not include any cooking utensils beyond camp kettles and mess pans, for use by the company in camp or in garrison. Faced with few tools, little culinary skill, a hunk of pickled pork, and around ten thick and large hard

Despite the regular issue and ample quantity, Union rations were deficient in nutrition and taste.

demonstrated the greatest culinary talent was often appointed the cook. This duty became the envy of other soldiers, because the cook was excused from all other camp chores. After much experimentation and many digestive complaints as a result, Federal soldiers settled on a few tried and true methods of food preparation. There was not much that could be done with salt pork beyond frying it, boiling it, or adding it to a stew. If there was no time for these small luxuries, it could be placed between two pieces of hardtack and eaten as a primitive sandwich. Salt beef,

derisively labeled "salt horse" by the soldiers, was hardly fit for consumption. It was so heavily impregnated with salt that it had to be soaked overnight in a running stream. Even then, it was still often rusty from improper packing and gave off an incredible stench. Salt horse was so foul that upon occasion angry soldiers used it as ammunition with which to pelt the commissary's tent, or staged a mock burial and laid the putrid stuff to rest, complete with feigned military honors.

Fresh beef provided a welcome relief from salted meats. Special drivers directed by the chief commissary of the army herded beef cows behind the field armies. When the troops stopped for the evening, the cattle were slaughtered and issued that night or early the next morning so that soldiers could prepare the meat for that day's march. One Massachusetts artilleryman remarked that his typical issue of fresh beef reached him so quickly after slaughter that it was still "quivering from the butcher's knife." Most soldiers broiled their fresh beef on sticks over campfires.

Hardtack, another basic part of the Union soldiers ration had a forbidding appearance and a consistency that belied its usefulness. Although it could be eaten as issued, alternative methods for dealing with hardtack were preferred. If broken up and soaked in

Boxed and barreled by the manufacturer, Union rations arrived at centralized ration points before forward distribution.



the water left from boiling meat, then fried in pork grease, it produced a dish Billy Yanks called "skillygalee", a type of tasty crouton. Unfortunately most methods of dealing with hardtack were based on necessity, not on taste.

Sometimes, because of improper packing or exposure to the weather, hardtack would get wet. As a result, a fine crop of mold would grow on the hardtack, or it would become host to weevils or, less often, maggots. Spoiled hardtack could be returned to the regimental commissary for fresh crackers, but circumstances didn't always allow this recourse.

Union soldiers tried different means of freeing their occupied hardtack from its unwanted tenants. The most successful method was to drop the crackers teeming with weevils into hot coffee and skim off the drowned wildlife when it floated to the surface. The weevils left no discernible taste in the softened bread now flavored with coffee.

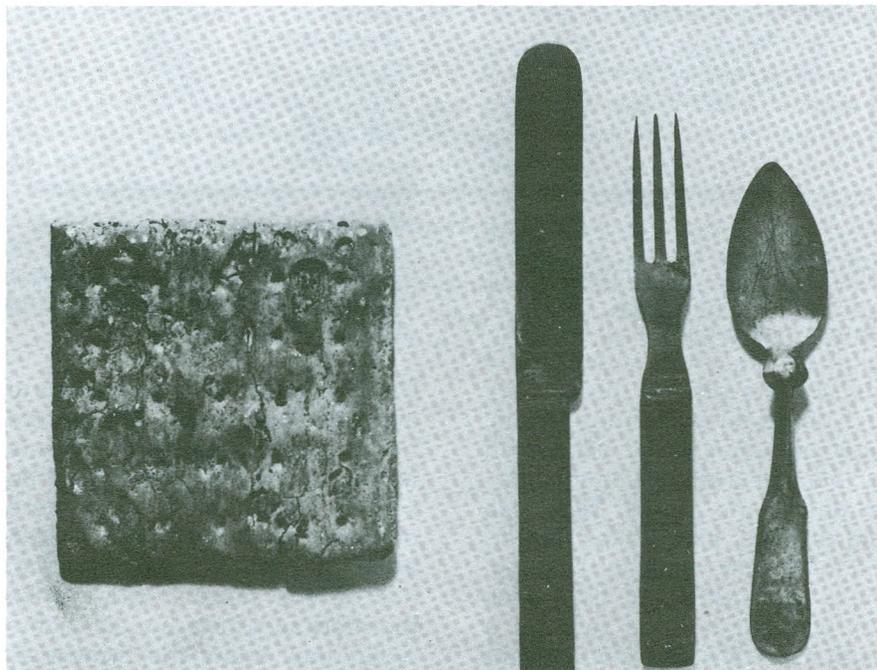
Whenever the army camped in an area for an extended period, bakeries were usually built and soldiers received fresh bread. During most of the ten-month siege of Petersburg, Virginia (June 1864 to April 1865), Federal soldiers were issued bread still warm from the ovens at City Point, their base of supplies some eight miles to the rear on the James River.

As related above, coffee was the most important part of a soldier's ration. Whenever Union armies halted on the march, even if only for an hour or so, rail fences in the area soon became firewood for brewing a large, stout cup of coffee. Excess coffee was also used as a trade item on those rare occasions when Confederate and Federal soldiers met between the picket lines. Southern tobacco, not on the Union ration, was traded for Northern coffee, an increasing rarity in the Rebel ranks as the war continued. The beverage was in such demand that the Army developed something commissaries called "essence of coffee". It came packed in tin cans and looked like axle grease. Apparently, it tasted like the same. Before long it was removed from the ration and replaced by the genuine article.

Few Federals drank their coffee with milk; it was not part of the ration and cost too much to buy from the sutler. (A sutler was an authorized vendor of non-issue

supplies, something of a traveling grocer and dry-goods dealer.) They tempered the strength of their beverage with sugar, which most soldiers mixed with their coffee at the time of issue. This ensured a somewhat sweet cup of coffee each time it was made.

Despite the regular issue and ample quantity, Union rations were deficient in nutrition and taste. One of the most persistent dietary problems was Vitamin C deficiency. This often caused scurvy, and could lead not only to the death of individual soldiers but could also impair the army's ability to campaign. The army recognized the problem and attempted to upgrade the nutritional value of the ration by issuing what Army Regulations called "desiccated [dehydrated] compressed potatoes" and "desiccated compressed mixed vegetables." Soldiers were to take the cubes of potatoes or turnips, carrots, and assorted greens and add them to water. In theory, they rehydrated and made a wholesome



Hardtack and field eating utensils

vegetable or vegetable medley. With few exceptions, Billy Yanks despised desiccated vegetables, which they labeled "desecrated vegetables" or "baled hay." A much better solution to the problem of scurvy and the general lack of vegetables was to issue dry-storable vegetables such as potatoes and onions, or processed foods such as pickles and sauerkraut. Unfortunately, those remedies were not always available, and soldiers had to try other ways to improve their ration.



Frying Hardtack.

Army Regulations allowed commanders of regiments, corps, or separate detachments on campaign to appoint a sutler to the unit. Sutlers offered the soldiers such delectables as canned fruits, vegetables, meats, and milk, which had become available on the market during the 1850s. They also sold tobacco, pies, cakes, butter, and some army regulation clothing. These foodstuffs and dry goods carried a high price tag. As a result, Federal soldiers often went heavily into debt to sutlers, though Regulations permitted them only

to be indebted up to one-half of their meager 14 dollar monthly salary. On occasion soldiers became so disgruntled with the business practices of sutlers that they attacked the sutler's establishment. At night, groups of soldiers would approach the sutler's place of business, level it, and carry away his goods in triumph. Such infractions often went unpunished when sympathetic officers turned their backs on the incident. Still, most sutlers, especially late in the war, were

honest traders and provided necessary relief from the monotony and distaste of army fare.

Union soldiers found other ways to augment their ration. They wrote home to relatives and friends asking that a package of food be sent to them. These boxes were delivered to the soldiers by the army, but only if it was in camp, not on the march. Billy Yanks therefore sent their requests home when they knew the army was about to encamp for an extended time, for example, winter, and the

boxes usually arrived a few weeks later by the wagon load.

In passing through the various levels of command on their way to the individual Federal soldier, these packages were often opened and searched for illicit alcohol. Occasionally a dishonest inspector would filch an article or two that he fancied, but that occurrence was rare.

When the soldier received the box, even if opened and partly emptied, there was still enough left to feast royally on the cakes, relishes, pickles, meats, cookies, and whatever else relatives and friends had stuffed in it. Soldiers' letters overflowed with thanks for the generosity and thoughtfulness of home folk.

The final means of supplementing the army ration was foraging. Though foraging occupies a prominent place in fictional and cinematic versions of the Civil War (witness *Gone With the Wind*), the Union Army seldom resorted to it and then only with great care and planning. The most famous example is Major-General William T. Sherman's infamous March to the Sea and through the Carolinas that lasted from November 1864 till the end of the war.

Sherman deliberately cut his army off from the sustenance provided by the railroad running back to Louisville, Kentucky. He set out through one of the breadbasket regions of the South right after fall harvest. He was certain he could live off the land, but just in case that effort proved difficult, he ordered his army's wagons filled with twenty days' rations and had a herd of 3,400 beef cattle driven along behind the troops. Along his way to Savannah, Georgia, and then through the Carolinas, Sherman systematically lived off the country. For the most part, his army's foraging was handled in a

fairly orderly fashion under the watchful eye of officers. A major exception was the march through South Carolina. Sherman detested the secessionist movement that had first turned violent in Charleston, and his troops acted on their commander's hatred for disunion by stripping the state of food and destroying whatever might be of use to the dying Confederacy.

Despite Sherman's late-war marches through the Lower South, foraging was not usually an effective means of obtaining food for the Federals. Not all of the South produced edible crops, and usually the Confederate Army was nearby to prevent the Union troops from dispersing enough to glean rations from the countryside.

Notwithstanding, these efforts at augmenting the Union Army ration, Billy Yanks lived almost exclusively on army fare. While the ration was ample, and its issue regular, it remained deficient in taste and nutrition. The Union Army's experience in feeding its approximately two million troops offers insight for the U.S. Army as it develops and implements the Army Field Feeding System (AFFS), anticipating how and what to feed soldiers on the Airland Battlefield.

In the "come as you are" war envisioned by theoreticians and planners of the Airland Battle, the T-Rations and Meals, Ready to Eat



Members of the 22nd New York State militia at Mess.

(MREs) of the current AFFS cannot fall short in the critical areas of nutrition and taste, as did the Union Army Ration. Tomorrow's war is forecast to be too short to allow for even such meager corrections and supplements that improved the subsistence of Union Soldiers. Further, during the critical early stages of future wars, U.S. Army troops might well be cut off from any augmentations and have nothing but Army food to eat. At this point Host Nation Support

(HNS) and the Logistical Civil Augmentation Program (LOGCAP) aren't likely to do any good. With no time available during a future conflict to determine what a ration will be, how it will be provided, or who will prepare it, the time to resolve the AFFS's difficulties is now.

J. Britt McCarley is the Assistant Command Historian/Archivist, U.S. Army Quartermaster Center, Fort Lee, Virginia.

A Short History of Identification Tags

Captain Richard W. Wooley

Arlington National Cemetery is not the only resting place for "Unknown Soldiers." Countless American soldiers have died defending their way of life throughout the history of this nation; many of their graves are marked with a single word, "unknown."

The Civil War provided the first recorded incident of American soldiers making an effort to ensure that their identities would be known should they die on the battlefield. Their methods were varied, and all were taken on a soldier's own initiative. In 1863, prior to the battle of Mine's Run in northern Virginia, General Meade's troops wrote their names and unit designations on paper tags and pinned them to their clothing. Many soldiers took great care to mark all their personal belongings. Some troops fashioned their own "ID" (identification) tags out of pieces of wood, boring a hole in one end so

that they could be worn on a string around the neck.

The commercial sector saw the demand for an identification method and provided products. Harper's Weekly Magazine advertised "Soldier's Pins" which could be mail ordered. Made of silver or gold, these pins were inscribed with an individual's name and unit designation. Private vendors who followed troops also offered ornate identification disks for sale just prior to battles. Still, despite the fact that fear of being listed among the unknowns was a real concern among the rank and file, no reference to an official issue of identification tags by the Federal Government exists. (42% of the Civil War dead remain unidentified.)

The first official advocacy of issuing identification tags took place in 1899. Chaplain Charles C. Pierce, who was tasked to

establish the Quartermaster Office of Identification in the Philippines, recommended inclusion of an "identity disc" in the combat field kit as the answer to the need for standard identification. The Army Regulations of 1913 made identification tags mandatory, and by 1917, all



Identification discs became standard issue during World War I.

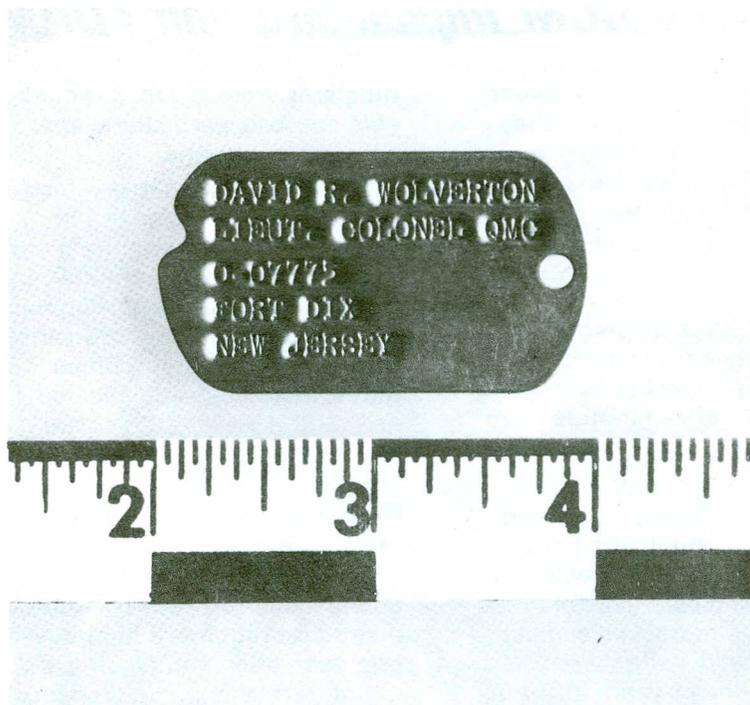


During the Civil War, soldiers carved their own wooden "ID tags", and wrote information that would help establish their identities on them.

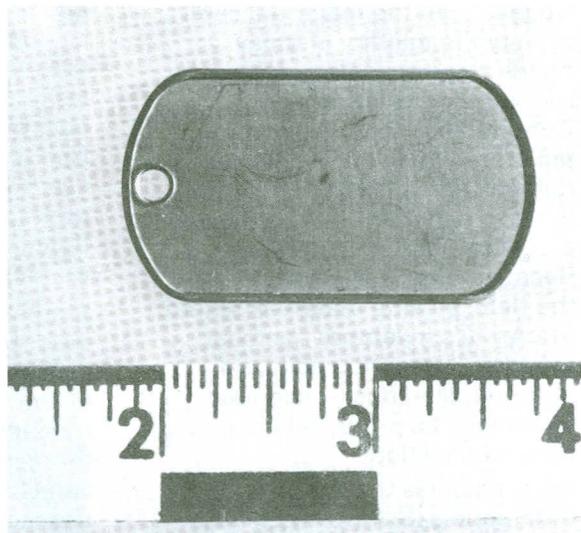
combat soldiers wore aluminum discs on chains around their necks. By World War II, the circular disc was replaced by the oblong shape familiar to us today, generally referred to as "dog tags."

Since then, some myths have arisen in connection with the purpose of the identification tags. One of the more common myths involves the reason for the notch on the tag issued between 1941 and the early 1970's. Battlefield rumor held that the notched end of the tag was placed between the front teeth of battlefield casualties to hold the jaws in place. No official record of American soldiers being issued these instructions exists; the only purpose of "the notch" was to hold the blank tag in place on the embossing machine. The machine used at this time

The notch found on the familiar WWII "dog tag" was the source of battlefield speculation. Contrary to popular belief, the notch was never used for anything but holding blank tags on the embossing machine.



Today's ID tag is smooth on all sides. This blank will be embossed with a soldier's name, social security number, blood type and religious affiliation.



doesn't require a notch to hold the blank in place, hence, today's tags are smooth on all sides.

The sole purpose of the identification tag is stated by its designation. Tags found around the neck of a casualty, and only those tags found around the neck, stay with the remains at all times. (Tags found any place besides around the neck are made note of in the Record of Personal Effects of Deceased Personnel, and placed in an effects bag.) They are not removed unless there is a need to temporarily inter the remains. If there is only one tag present, another is made to match the first. If the remains are unidentified, two tags marked "unidentified" are made. One tag is interred with the individual, the other placed on a wire ring in the sequence of the temporary cemetery plot. This enables Graves Registration personnel to make positive identification of remains during disinterment procedures; when the remains are disinterred, the tag on the

wire ring is removed and placed with the matching tag around the neck.

The Department of the Army has developed and is currently testing a new tag, which will hold 80% of a soldier's medical and dental data on a microchip. Known as the Individually Carried Record, it is not intended to replace the present tag, but rather to augment it as part of the "paperless battlefield" concept. This development is in keeping with the Army's dedication to positively identify each and every fallen soldier.

The Armed Forces make every possible effort to eradicate discrepancies and remove doubts about casualties, not least those doubts that families may hold concerning the demise of their loved ones. In recent years, a near perfect record of identifying service members who have died in the line of duty has been achieved, a far cry from the 58% rate of identification that stood during the Civil War. The ID tag

has been and remains a major part of the reason for this record. Are you wearing your ID tags today? Too many military personnel, particularly those who are part of the peacetime force stationed in CONUS, forget how vital those tags can be, forget that as soldiers they are always on the line. Wearing your ID tags is one of the easiest actions you can make towards achieving total readiness, so take those tags out of your dresser and put them around your neck. Remember - the simple information contained on that small aluminum tag can speak for you if you can't speak for yourself; it could mean the difference between a positive identification and an uncertain future for those who survive you, should your identity be "...known only to God."

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ENHANCING READINESS THROUGH DEHUMIDIFIED STORAGE -

Colonel Allan G. Little

Mr. Al Trujillo

No less than the industrial community the military of today needs a controlled storage environment for its equipment. Dehumidification, the removal of moisture which can cause rust, mildew, and a host of other problems, is a major part of achieving a quality storage environment. Because of recent advances in the field, all vital materials within the Army's inventory - combat vehicles, weapons, radio and radar installations — can now potentially be protected using dehumidification.

An example is the 21st Support Command's (SUPCOM) Enclosed Dry Air Method (EDAM) storage initiative, designed to place war reserve tracked combat vehicles into individualized Dry Air environments. The 21st stores both Pre-positioned Materiel Configured to Unit Sets (POMCUS), and Theater Reserves which require the receipt, storage, maintenance and issue of tracked vehicles. Many stocks are held in Controlled Humidity Warehouses (CHW), but those spaces are limited. EDAM provides the European theater with an effective and strategically viable alternative to overcome a shortfall of CHWs.

Individually enclosed dry air storage methods have already been adopted with success by the German, Swedish, British and Israeli Forces. In developing EDAM, the 21st SUPCOM conducted on-site, technical liaison visits to those countries to gather information first hand.

In Israel, dry air methodology as a means of maintaining and accomplishing long-term storage of tracked combat vehicles has proved a resounding success.

21st SUPCOM Implements the EDAM

Vehicles are stored for two year periods in individual bags; they are placed in bags fully fueled, armed and provisioned for immediate combat. When the representatives of the 21st visited the Golan Heights and the Sinai they were able to select tanks randomly from the storage inventory. In every instance the tank was unpacked from its bag and operational within seven minutes... immediate readiness!

Similar achievements marked other countries experience with individually dehumidified storage. In Germany, the Bundeswehr recently completed tests of long-term storage of tracked combat vehicles. Tanks were stored untouched for 11 years in dehumidified protective covers. Covers were not removed during the duration of the test, nor were the vehicles given periodic exercising or care. When the covers were finally removed, the vehicles were driven 200 kilometers each, and 22 rounds of main gun ammunition were fired. No major mechanical deficiencies or mal-

functions were noted, a remarkable success, particularly after 11 years of storage.

U.S. Army War Reserve vehicles are currently being stored in unimproved areas with little protection from the elements. The majority of this combat materiel is equipped with highly sensitive electronic and optical components, including sophisticated fire control devices which are very vulnerable to the effects of weather and high humidity.

Current storage methods result in deterioration of equipment, and as such are a threat to reliability. Long-term storage out-of-doors also requires a higher level of preservation and repair, frequent inspections, maintenance and exercising intervals. Storage in controlled humidity environments reduces those requirements tremendously. (Based upon both NATO and non-NATO experiences, 21st SUPCOM planners anticipate up to 80% repair parts' savings due to reduced cyclic maintenance requirements, using the EDAM.)



A M-60A3 is prepared for dry air storage.

When representatives of the 21st SUPCOM visited Israel, they were able to select tanks from the storage inventory at random. In every instance the tank was unpacked from its dry storage bag and operational within seven minutes... instant readiness!



One dehumidifier can support up to four storage bags.

In addition to studying the results of other nation's tests of dry air storage methods the 21st SUPCOM conducted a two-year long EDAM test of its own. This test was part of an Economic Analysis designed to determine the most efficient method of long-term storage for combat vehicles. The analysis examined two other alternatives: Status Quo (open storage) and Controlled Humidity Warehouses (CHW). The EDAM test involved six Bradley Fighting Vehicles (BFV). They were enclosed in

individual flexible shelters connected to dehumidifying devices. (One dehumidifier can be connected to four flexible shelters.) The results of the two-year test fully supported the EDAM initiative. EDAM proved to be more economical than the other alternatives in terms of energy requirements and intensive labor, as well as offering technical advantages in keeping defense equipment and materiel combat ready for long periods. Moreover, EDAM also makes it possible to extend inspection and mainte-

nance intervals, and reduces the cost of Care of Supplies in Storage (COSIS) maintenance.

Readiness rates of war reserve stock, particularly the preparedness for a transition to war, was another issue addressed during the 21st's study. Using current Status Quo open storage methods a substantial amount of time would be needed to prepare a large quantity of vehicles for combat. That time does not exist in the face of an immediate demand. EDAM cuts transition time dramatically as equipment can be stored in a combat ready state.

Following this analysis, the 21st SUPCOM successfully conducted a First Article Form, Fit, and Function Test in January 1988. Procurement of 60 Dry Air Systems in April of 1988 placed the first Theater Reserve equipment (M60A3TTS tanks) in individual controlled humidity environments at Germersheim Reserve Storage Activity; practical applications of EDAM within the U.S. Army are now well underway.

While never intended to replace Controlled Humidity Warehouses, EDAM adds flexibility, saves money and enhances combat power in time of crisis. That's a combination often sought but seldom attained; and just one more of the many ways in which the 21st Support Command continues to remain "FIRST IN SUPPORT".

COL Allan G. Little is Assistant Chief of Staff, Logistics (G-4), 21st Support Command, Germany.

Alfred Trujillo was formerly a Logistics Management Specialist for the ACSLOG at the 21st Support Command, Germany, working theater reserve and force structure issues.

"ABRIENDOS RUTAS"- Providing Logistical Support to Blazing Trails 1987

Captain David A. Matarese

West of the base camp, early morning mist was quickly disappearing from the sides of the mountains. It was 0600, and the heat of the equatorial sun was making itself felt as the engineers of Task Force 1169, Blazing Trails "Abriendo Rutas 87", made their way to the work site. The Field Services soldiers of the Logistical Support Element (LSE) for the exercise had been working for two hours, starting the showers at 0415. For the LSE, the day had long begun.

The logistical support for this expeditionary task force was perhaps unique in the history of the Blazing Trails Exercises. The original mission of the LSE was to support engineer operations charged with upgrading and paving 19 kilometers of flat road along the coast of Ecuador. A major earthquake which occurred on 5 March 1987 on the Amazon side of the Andes Mountains changed all those plans. Task Force 1169 was assigned a new mission: pushing a road through the mountainous area south of the earthquake epicenter, and building a bridge over the Rio Hollin. The new project site was some 500 kilometers east of the original coastal site, following a route that crossed mountain ranges in the Andes twice. The LSE, which had made its plans based on the coastal location quickly made changes to accommodate the support requirements of their new assignment.

The LSE was a tailored organization, consisting of U.S. Army and National Guard Combat Service Support (CSS) units. Small sections of each unit formed a melting pot that performed the support mission during 14 rotations that lasted 17 days each. A list of the names and locations of the support units involved with the exercise are listed in Figure 1.

Unit	Location	Component
HHC, 171st Support Group	Garner, North Carolina	USAR, 120th ARCOM
50th Sup & Svc Bn	Miami, Florida	FL ARNG
352d Maint Bn	Macon, Georgia	USAR, 81st ARCOM
731st Maint Bn	Tallassee, Alabama	AL ARNG
1103rd Trans Bn	Eufaula, Alabama	AL ARNG
149th Gen Sup Co	Miami, Florida	FL ARNG
430th Fld Svc Co	San Juan, Puerto Rico	USAR, 7581st USA Garrison
380th Sup & Svc Co	Washington, DC	DC ARNG
851st Sup & Svc Co	Abbyville, Alabama	USAR, 121st ARCOM
853rd SUP & Svc Co	Jacksonville, FL	FL ARNG
873rd QM Water Det	Miami, Florida	USAR 81st ARCOM
266th QM Water Det	Allendale, South Carolina	SC ARNG
267th QM Water Det	Allendale, South Carolina	SC ARNG
1128th Trans Co (MTC)	Clayton, Alabama	AL ARNG
1174th Trans Co (MTP)	Dresden, Tennessee	TN ARNG
158th Maint Co	Tallassee, Alabama	AL ARNG
277th Maint Co	Atlanta, Georgia	GA ARNG
281st Maint Co	Evansville, Indiana	USAR, 123rd ARCOM
715th Maint Co	Birmingham, Alabama	AL ARNG
1015th Maint Co	Forest Park, Georgia	USAR, 81st ARCOM
731st Maint Co (-)	Reidsville, North Carolina	NC ARNG
778th Maint Co (-)	Jackson, Alabama	AL ARNG

Figure 1

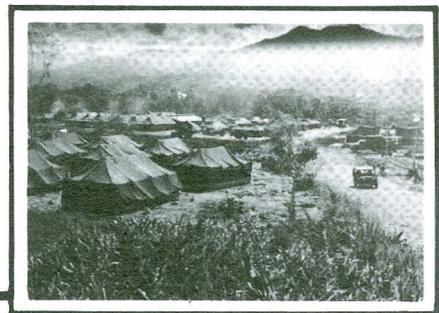
Planning for the support mission started in August of 1986. The 171st Support Group; U.S. Army Reserve, Garner, North Carolina, tasked to serve as the LSE's headquarters, conducted research on the MTO&Es and mission capabilities of the support units in the task force. The challenge was to provide an appropriate level of support to Task Force 1169 throughout the course of the mission. Beyond the parameters established by the capabilities of the support units, their considerations emphasized:

- Maintaining unit integrity as much as possible.
- Working 17-day rotations, with no overlap of incoming and

outgoing personnel, for the duration of the six month project.

- A need for personnel positions that lasted throughout the project, providing continuity between rotations.
- A ratio of LSE to Engineer personnel limited to approximately 1:4.
- Coordinating and organizing the LSE units which originated in six separate State National Guards and four U.S. Army Reserve Commands.
- An approximate troop strength to be supported which varied from six hundred to one thousand soldiers.

With these guidelines in mind, the HHC, 171st Support Group



began planning by determining what organization of logistical troops would be needed to provide the required support.

A new organization was necessary since Reserve and National Guard units are only allowed an Annual Training Status of 17 consecutive days including three travel days. Blazing Trails 87' was scheduled to last six months. To accommodate the length of the project participating units provided their specific support by sending small cells of personnel to one or more rotations. For example, the entire Class II & IV section of the General Supply Company was not justified for the small requirement of this mission. Instead, the company sent cells of four personnel to ten of the rotations, filling the requirement and allowing the entire unit to perform.

The second planning stage involved equipment. The Headquarters element used the MTO&Es of tasked units as a guide in choosing equipment. The HHC decided what equipment the mission required, then equipment was tasked making sure that the originating unit would be using that equipment whenever possible; i.e., vehicles for the maintenance element of the LSE were tasked only from assigned Maintenance Companies. The planners felt that units using their own home station equipment would provide better maintenance for that equipment, resulting in less down time.

By combining personnel and equipment from various units for each rotation, an efficient tailored organization was formed. Planners loaded all personnel and equipment information on a microcomputer data base. The data base structure for personnel was organized by each rotation.

Within each rotation, it was sorted by section showing position, description, MOS, rank, name and what unit a person was coming from. The equipment data base was organized by section showing LIN, description, quantity and the unit from which a piece of equipment was tasked. During coordination with any given unit, the data bases could be sorted to show what equipment that unit was providing as well as which personnel, at what time. Merging the two data bases matched personnel with equipment.

Following these preparations, a logistics conference for Blazing Trails 87 was held at Fort Bragg, North Carolina in November 1986. All support units were in attendance, and after mission requirements had been explained a breakout session followed. There, Transportation, Quartermaster, and Ordnance units filled in the specific requirements of providing support to the exercise. Units then reviewed the first draft of the tailored organization; headquarters units reviewed the command and control sections; supply, maintenance, transport and services units, their respec-

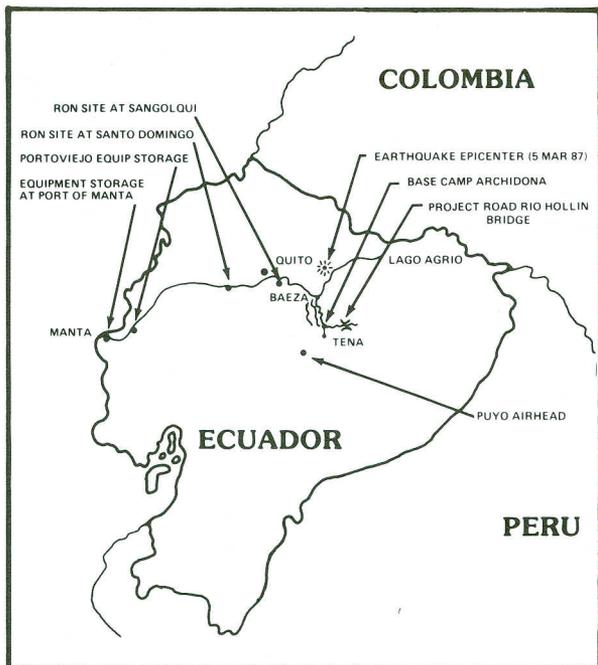
tive sections. Based on their knowledge and experience, personnel assignments and equipment rosters for the operation were fine-tuned. By the end of the conference 90% of the equipment to be sent to Ecuador had been confirmed, as well as approximately 80% of the personnel schedule (when and who). Duration positions, those that would last the length of the exercise, were also identified. Forty Special Active Duty Tours (SADT) of 179 days were the key to maintaining the continuity of operations between rotations.

With the equipment confirmed, Computerized Movement Planning and Status System (COMPASS) Unit Movement Data Worksheets (FORSCOM Form 900-R Series) were submitted. These generated the LOGMARS codes for ship loading.

By the time the earthquake struck on 5 March 1987, the task force equipment had been marshalled at the Port of Mobile, Alabama, scheduled to sail 30 March. It became apparent that little time was left for detailed on site coordination with U.S. and Government of Ecuador officials regarding a change of mission for

Planners felt that units using their home station equipment would provide better maintenance, resulting in less down time.





The actual project site for Blazing Trails '87 was located some 500 kilometers east of the originally planned site. Convoy time to the site was three days, on a route that crossed the Andes twice.

16 May 1987 all logistical operations were functioning.

The Class I point operated outside of the base camp, along Archidona's main road. Ten refrigerator vans and a tractor trailer used to transport equipment secured Class I supplies. Fourteen days of rations were flown from the TISA in Panama for each rotation, trucked into Archidona, and broken down at the dining facility. Ration issue was B-MRE-B, supplemented by locally purchased fresh fruit, vegetables and eggs. The ration issue was fully automated. The on-hand inventory and the 14-day Master Menu for B-Rations was entered into a microcomputer, then menu days and the number of those attending breakfast and dinner. Based on issue factors from the Master Menu, an automated DA Form 3294 (Issue Slip) and a new on-hand inventory balance sheet were then printed, without computation errors. Approximately two hours a day were saved using the automated system as compared to manual issue methods.

Side streets located off of the main road outside of the camp were blocked off to establish the Class II and IV yards. The storage and access area was surrounded by concertina wire, and two GP medium tents and several tractor trailers were used to hold sup-

Task Force 1169. Rather than cancel the exercise, CINCSOUTH, on request of the Department of State and Joint Chief of Staff (JCS) approval, directed U.S. Army Reserve South (USARSO) to shift the exercise east of the Andes into the Napo Province. Prior to a definitive mission site selection, the SS Cape Douglas, a commercial ship containing 476 pieces of construction equipment, as well as administrative and logistical vehicles, set sail for Ecuador on 3 April 1987. In early May of 1987 the advance and quartering parties deployed to Ecuador, their destination Archidona. "Abriendo Rutas" was now underway.

Archidona is a small town about 300 miles over mountains and dusty roads from the Port City of Manta where the ship Cape Douglas off-loaded the Task Force equipment. The original exercise site in Manabi Province was a short, four hour convoy from Manta; now, convoy time was three days on a route over mountainous terrain.

Transportation assets planned for the coast did not meet the requirement for the Amazon. To assist the task force during the convoy, FORSCOM provided a 150 man logistical augmentation and planning cell, drawn primarily from the 1st COSCOM,

Fort Bragg, North Carolina. United States Army South also provided logistical support. Local contracts for hauling over 126 items of heavy equipment were also established. In all, 476 major end items of equipment were moved over the Andes without a notable accident.

Upon arriving in Archidona the quartering party began to build the base camp and establish initial logistical operations. The first support areas to be set up were water purification, the Class III point, dining facility, showers and motor pool. By the time the first rotation arrived on



The Laundry section serviced 180 bundles a day.

plies and uniforms. Construction supplies were covered by plastic and stored along the roads. Every 17 days, unit supply sergeants made a bulk draw of uniforms, jungle hats, and overboots for the soldiers in that rotation.

Although they didn't perform the most glamorous jobs, field services soldiers were the most appreciated in camp. Using erdalators (ROWPUs were to be used at the original site) set up along a tributary of the Rio Napo, the water purification section could produce and store 21,000 gallons per day, which more than met the 15,000 to 18,000 gallons per day demand. Water points at the laundry and showers, dining facility, and the engineer's forward work site were filled several times each day; this was the only safe drinking water.

After a hard work day under the equatorial sun, nothing was more soothing than a long shower. Showers were open at various times between 0415 and 2200 in order to accommodate different shifts of workers.

Four GP large tents, each containing 24 shower heads and two homemade shaving tables with running water minimized waiting time during rush hour.

Laundry service was equally efficient. Laundry dropped off one day could be picked up the next. The laundry section operated three wash and dry trailer mounted units, and kept up a pace of 180 bundles a day, with Engineer units being serviced one day, LSE units the next. Maintenance of the machinery was an important factor; the laundry equipment required a constant vigil to keep them going. General supplies were ordered as needed; order ship time (OST), averaged 29 days. A stockage of high-demand items were maintained to accommodate anticipated needs of the task force.

By turning in a Bill of Materials form approved by the Task Force S-3, engineers received supplies for road construction from the yard. With the exception of a few items; e.g., cement, which was

locally purchased, construction materials had been brought into the country with the Task Force Equipment.

The Class III point was initially established with a few 5,000 gallon tankers and tank and pump units. Later, berms were built to hold 10,000 gallon collapsible bags, two for diesel and one for Jet A fuel. MOGAS was stored in one 5,000 gallon tanker. Vendors delivered fuel from Quito, capital city of Ecuador.

Members of the LSE learned something no simulation could teach: in the middle of the jungle, they were the key to sustainment.

Located off the main road south of Archidona, the point was capable of performing hot refuel for Black Hawk and Chinook helicopters in addition to bulk and retail ground operations. 500 gallon blivits were filled at the Class III point and sling loaded to the forward engineer work site. This supply point operated on a 24-hour basis and also issued packaged Class III products. Members of the Class III section built a small building, designated the "Lost Amazon Petroleum Lab". It housed the equipment of a new prototype petroleum test kit. With the exception of Jet A fuel, which was tested in Panama, quality assurance tests were performed on site.

The roles of the transportation and maintenance sections were integral to the Blazing Trails operation. Starting with the movement from the Port of Manta to the operation site in Archidona, the Transportation Section of the LSE coordinated the movement of supplies and equipment in country, using organic assets as well as local contractors. During the course of the project, it was in charge of the air fields where both personnel and supplies entered the country. From that point they transported supplies using organic assets and civilian buses

contracted to move personnel. At the end of the project, all of the equipment was transported back over the Andes Mountains to the Port of Manta for shipment back to CONUS.

On site maintenance was vital to the exercise. Mission equipment: laundry machines, vehicles, generators, fork lifts and all other equipment required to support the exercise was constantly maintained so that it would be ready and available. Maintenance personnel also needed to prepare all equipment for its return to CONUS. Each piece of equipment had to be in a ready state upon its arrival stateside so as not to put the unit in a posture which would hinder mobilization capability, training, safety or the ability to perform their overall mission.

The final rotation of "Abriendo Rutas" ended on 28 November 1987. Personnel were redeployed, the base camp at Archidona was closed out and all equipment shipped back to home stations.

Members of the LSE of Task Force 1169 had performed their missions in an environment as close to combat as possible, and as such were given the chance to learn something that no simulation could teach: there, in the middle of the jungle, they were the key to sustainment. The basic needs of the exercise: food, water, shelter, supplies - came from no other source, the members of Abriendo Rutas 87' all looked to the LSE to be there, with whatever was needed, at all times during the exercise. Without that support, there would have been no mission. When the members of the Logistical Support Element returned stateside, it was with the knowledge that their training had been realistic, and that they were ready to take their place on any battlefield.

CPT David A. Matarese is a Logistics Staff Officer, 171st Support Group, Garner, North Carolina.

Preparing to Fight and Win:

Captain Raymond D. Nelson

The QM School's Training Initiatives

Train to Fight and Win. Today that concept is familiar to soldiers and leaders Armywide. As the trainer for Quartermaster soldiers, the Quartermaster (QM) School is challenged to constantly update and refine training methods to ensure that its students receive effective, high caliber instruction. Given fewer allotted resources, and increasingly complicated systems to train, this means continually designing and developing unique methods to meet the expanding needs of our logistics soldiers. The face of training at the school is changing, with new technology and training methods being initiated to meet the Army's future logistics requirements.

One of these innovative instructional programs, Student Centered Learning (SCL), is designed to minimize instructor lectures that involve little student participation and feedback. SCL requires direct student involvement in the learning process; classes are structured to require active student participation. Whenever practical, class size is limited to a small group consisting of 15 to 25 students. A group leader/instructor directs student involvement. (Currently, small group instruction is used extensively in all QM Officer Advanced Courses.) Hands on training is the focal point of SCL and students must demonstrate the tasks they have learned. SCL is currently used in 55 percent of all QM instruction. In concurrence with TRADOC guidance, there is an ultimate goal of 100 percent SCL in all school courses.

The QM School is also initiating a program designed to integrate different levels of courses in a specific functional area. Shared Instruction (SI) combines training

of officers, NCOs, and enlisted soldiers in order to complement the total learning experience. In one example of SI in action, BNCOC food service NCOs supervise AIT student cooks by running a Dining Facility. In another SI course, OBC lieutenants will supervise AIT fuel handlers in construction of a fuel supply point.

Selection of courses which can be integrated, and the exact tasks which can be used for shared training under this concept are determined through a process known as Vertical/Horizontal Task Integration. Simply put, horizontal training is the progressive professional development training conducted throughout a soldier's career; i.e., AIT, BNCOC, ANCOC. Horizontal training should reinforce and build upon previous experience without unnecessary duplication. Vertical training involves parallel alignment of like officer, NCO and enlisted tasks at the appropriate grade levels, taking into account the differences in the supervisory roles of officers and NCOs. Vertical training ensures that all soldiers involved in a task know the job each must do to accomplish the mission.

By furthering understanding of one another's responsibilities, the group as a whole functions more effectively; as a result, training is enhanced. The progressive skills at each level of professional training are known by all, and a definite relationship exists between the performance and supervisory tasks taught in enlisted, NCO, and officer professional development courses.

The quality of QM soldiers arriving for Advanced Individual Training at Fort Lee continues to improve. Plans call for the QM School to initiate a "Fast Track" training program which will take

advantage of this fact.

The Fast Track training program will provide instruction in additional Skill Level 1, and selected Skill Level 2 tasks to AIT soldiers who demonstrate the ability and desire to accelerate their training beyond that of their peers. Fast Track soldiers are selected by the School training departments with input from training company commanders and the S-3 of the 23d QM Brigade. After the second week of instruction, the best qualified soldiers will be selected for Fast Track training. A maximum of 20 percent of an AIT class may be selected, 80 percent of those are anticipated to complete the program successfully. The actual number of soldiers who qualify for the Fast Track program will vary between class and MOS.

Several factors are taken into consideration when selecting a soldier for the program. Proven ability in civilian schooling may be weighed with the soldier's military performance. Those selected must be good students and good soldiers. Fast Track soldiers will not be separated from their normal training cycle. Instead, they will receive additional, faster paced instruction during evenings and weekends.

Fast Track soldiers may also be assigned additional work as they finish assignments more quickly than their peers. The drive to excel in the Fast Track program will be installed by the soldier's natural desire to compete and the potential award of an early promotion. (Under a proposed concept, up to 10 percent of an AIT class who have completed Fast Track training would receive early promotion to PV2 or PFC.) All Fast Track soldiers will receive a distinctive diploma, identifying them as having completed an advanced training pro-

gram and a certificate of achievement from the Quartermaster General.

Plans call for soldiers who successfully complete the program to be awarded a Skill Qualification Identifier (SQI) for the first term of their enlistment. This would assist the QM School in tracking the effectiveness of the performance of its graduates. The School believes that the Fast Track program will prove itself by providing the gaining unit commander a more highly skilled logistics soldier. Beginning in October - November, the Airborne Department implemented the Fast Track program; all other training departments are slated to have the program on line by January 1989.

As the cost of training devices and equipment continues to rise, new solutions to provide quality instruction are being designed. The most progressive training to be offered at the QM School has recently begun. Training using computerized Interactive Video Disks (IVD) has been implemented in two low density MOSs, Petroleum Laboratory Specialist and GRREG Specialist. Computers, using the IVD lessons, actually interact with the individual student, providing feedback and repeating tasks whenever necessary to ensure competence.

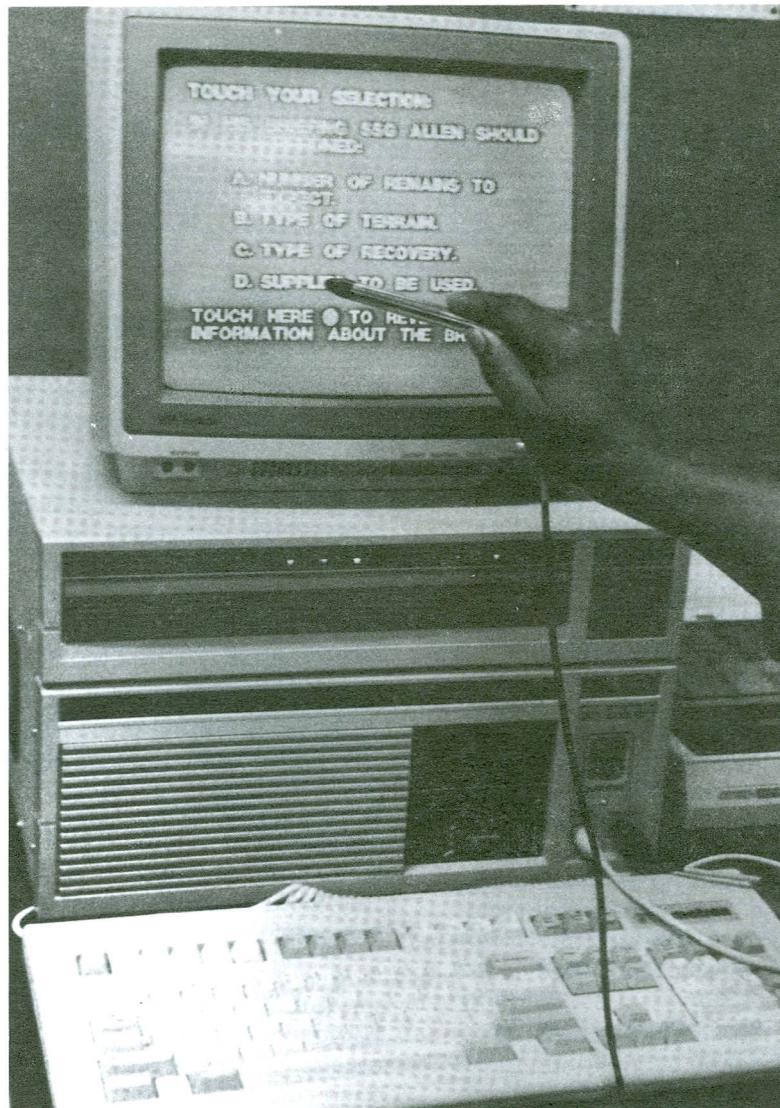
IVD is generations beyond the films and tech tapes currently in use in most classrooms. It can supplement or replace unavailable, or one-of-a-kind pieces of equipment. At a soldier's direction, the IVD program will show a piece of equipment from all sides and provide views of the interior, by showing the removing of a lid from a container or the opening of a vehicles hood. Complicated procedures which might require hours to demonstrate will take less time; the video elimi-

nates waiting time between steps. IVD lessons will also provide both positive and negative reinforcement. When training simulates a task, such as disarming a booby trap, two results are possible, success or explosion. Should a task not be performed correctly, the program returns to the point where the misstep occurred and guides the soldier through the proper procedure until successful completion of the task takes place. As this training program continues to be developed, it is expected to take on a greater role in providing realistic training to the QM soldier.

These innovative training programs are intended to ensure that the QM School not only

keeps abreast of new developments in Army training, but remains at the forefront of this increasingly complex field. Hands on, task-oriented training is the rule for current and future QM instruction. The goal of achieving concise, effective and safe logistics training requires constant analysis of training methods. These new initiatives will ensure that current training requirements are met and establish a firm foundation to support the training needs of the future.

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IVD lessons actually interact with individual students, providing feedback and repeating tasks when necessary.

INTERNATIONAL MILITARY STUDENT OFFICE

KAY SURVELLO

"A unique experience in international relationships." That's a good way to define training over 250 military students from 60 different countries on an annual basis at the U.S. Army Quartermaster School (QMS). The students come from varied cultural, religious and ethnic backgrounds, representing countries from Australia to Zaire. Many of these nations are centuries old, others are still infants, undergoing constant political, cultural and economic changes. The necessity for these countries, particularly those that are still developing, to maintain a strong defense force increases their need to train and educate their military with assistance from the United States.

International military students are at Fort Lee by invitation of the United States government under the auspices of the International Military Education Training Program and the Foreign Military Sales Program. Students from over 120 countries have graduated from a course of study at the Quartermaster School during the last few years. These students often represent the elite of their countries' military personnel. Many have gone on to the highest positions in the armed forces or attained important roles in their civilian governments. This aspect is of particular importance in relationships with the developing nations, and a significant benefit to dealings with our more developed friends and allies.

Training provided to other countries through U.S. Department of Defense resources is a vital element of security assistance. It has become an institutionalized and continuing program used to

advance U.S. interests in a global environment. Principal objectives of U.S. security assistance are to:

- promote peace
- enhance cooperative defense and security
- deter and combat aggression
- promote regional stability and contain regional conflicts
- promote key U.S. security and foreign policy interests
- promote professional military relationships.

Associated objectives are to:

- assist countries to defend themselves against external/internal threats
- strengthen democratic institutions
- secure access to bases, facilities, critical sea-lanes and strategic resources.

If you visit the International Military Student Office, a feeling of being in a small "United Nations" awaits you. Flags representing each country with an international student training at the Quartermaster School are displayed. Gifts and plaques from all over the world adorn the walls and showcases, each representing a particular country. Officers wearing the varied uniforms of their nations, speaking many languages are visiting their "home away from home". There they enjoy a cup of coffee or tea, speak with their classmates or staff members, or make calls to their respective embassies. Many times, it's like walking through the pages of *National Geographic Magazine* as they exchange information about different ancient customs existing in their societies today.

The International Military Student Office has two very important missions: the first is to provide administrative, logistical and personnel assistance and advice to the international students plus

advice and assistance to the Quartermaster School staff and faculty in all matters pertaining to their training. Training opportunities for officers include the Officer Basic and Advanced Courses, the courses of study in management related areas conducted by nearby universities, and for specific logistics training, the S-4 course. Enlisted personnel also are involved in the program and can be found in classes dealing with most functional areas, e.g. rigger school, Petroleum courses, supply and storage courses on an Advanced Individual Training (AIT) level. The second is to provide a well balanced Department of Defense Informational Program, affording the international students the opportunity to achieve a sound level of understanding of this nation's society, institutions, ideals and priorities. By combining the benefits of the training and insight gained from the Informational Program, international students can form well balanced impressions of this country. These in turn may lead to more favorable relations between their countries and the United States.

The DOD Informational Program has twelve objectives. The International Military Student Office conducts tours and special events to cover those objectives, and provide insight into American society. Among the topics covered by this program are the role of the United States Government, the Media and the way of American life to include its geographic, racial, ethnic, religious and social diversity. Special programs, as well as tours and visits that range from religious institutions to sporting events all serve to underscore the perspective offered by the Informational Program.

ALGERIA
 ANTIGUA
 AUSTRALIA
 BANGLADESH
 BAHRAIN
 BELIZE
 BOTSWANA
 BURUNDI
 BRAZIL
 BURMA
 CANADA
 CHAD
 COLOMBIA
 DJIBOUTI
 ECUADOR
 EGYPT
 FIJI
 GERMANY
 GHANA
 GREECE
 GRENADA
 GUATEMALA



GAMBIA
 HAITI
 ISRAEL
 INDONESIA
 JAMAICA
 JAPAN
 JORDAN
 KENYA
 KOREA
 KUWAIT
 LEBANON
 LIBERIA
 MALAYSIA
 MALAWI
 MALDIVES
 NIGER
 NORWAY
 PAKISTAN
 PANAMA
 PAPA NEW GUINEA
 PERU
 PHILIPPINES

PORTUGAL
 SAUDI ARABIA
 SURINAM
 SINGAPORE
 SENEGAL
 SPAIN
 SOMALIA
 SRI LANKA
 ST. CHRISTOPHERS
 ST. LUCIA
 ST. VINCENT
 SUDAN
 TAIWAN
 THAILAND
 TUNISIA
 TURKEY
 UNITED KINGDOM
 UNITED ARAB EMIRATES
 YEMEN
 ZAIRE

PARTICIPATING COUNTRIES

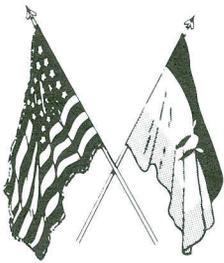
The international students attending the Quartermaster Officer Advanced Course also participate in a six day tour of Washington, D.C., sponsored by the Foreign Liaison Office in the Pentagon. The purpose of this tour is to give the students a deeper understanding and appreciation of the United States. It also acquaints them with some of the functions of our National Government to which they have been exposed through Informational Program topics. Briefings at the Pentagon and State Department; visits to Arlington Cemetery, plus visiting the Lincoln, Jefferson and Vietnam memorials are all part of the tour. They also have an opportunity to visit their respective embassies. Special events such as sponsor receptions and International Night are part of the international training program as well. The international student is also presented a Quartermaster School Badge and Certificate in a special ceremony after arrival to Fort Lee. Presenting students with this special badge has two

purposes. It recognizes the special faith and confidence the countries had in individuals selected to attend schooling in the United States. Secondly, it symbolizes a unique spirit of friendship that the Quartermaster School wishes to extend to each international student while at Fort Lee.

Some of our international military students have visited the United States prior to coming to Fort Lee, but the majority are here for the first and only time. It is important to understand where they are coming from, but more so, where they will go once they return to their home country. It's up to the Quartermaster community to help them understand America as it really is, beyond impression they gather from what they have read, or seen in movies or on TV. Departing international students usually have a totally different view of what America and its people are compared to their thoughts prior to coming to the United States. Most often, lasting friendships have been established between

international students, their classmates, sponsors, and other American "ambassadors" they have met during their stay here. Those contacts are building blocks in relationships with our allies, blocks that the U.S. Army Quartermaster School's International Student Office is proud to have a hand in placing.

Kay Survello is the Allied Training Coordinator, International Military Student Office, U.S. Army Quartermaster School, Fort Lee, Virginia.



KENYAN LOGISTICS

MAJ D. A. SHEIKH

Kenya is an East African country located on the Indian Ocean. The country is bounded on the south by Tanzania, on the west by Uganda, on the northwest by Sudan, on the north by Ethiopia, and on the northeast by Somalia. The capitol, Nairobi is the largest city as well as the commercial center of the nation. Kenya's population of 20 million stems from over 70 different ethnic groups, making the country one of diversely rich cultural traditions. Although Kenya is the most industrialized country in East Africa, agriculture still accounts for approximately one-third of its GNP. Services account for close to one-half of the GNP, and the tourist industry is Kenya's third largest foreign exchange earner.

Kenya maintains a small defensive force (Army, Navy, and Air Force) which bears an excellent reputation for training and readiness. The Kenyan Army is the largest of the three services, accounting for about 85% of all military personnel. Predominately an Infantry force, Armored and Air Cavalry Units provide additional mobility to the Kenyan Army. The Army has doubled in size since the mid-70s, and has also been completely refitted with modern equipment.

Kenya maintains close ties with the United States and Britain as well as other western nations for the purpose of weapons/equipment procurement and training exchanges. Included among those training exchanges are Kenyan Logistics Officers who attend Quartermaster training courses at Fort Lee, Virginia.

The mission requirements of the Kenyan Army predicate a unique

logistics support structure. Logistics are broken down into several branches: Ordnance, Transportation, Electrical/Mechanical Engineering (similar to the U.S. Army Ordnance Corps), Signal, and Services. Equivalent to the U.S. Army's Quartermaster Corps is the Kenyan Ordnance Corps, responsible for: General Supply, Petroleum, Fuel Services, Ammunition Repair Parts, Salvage, Water, Graves Registration and Laundry and Bath Services. Additionally, the Kenyan Ordnance Corps provides common user items (uniforms, repair parts, etc.) to the Air Force and Navy.

The Logistic Support Structure consists of various echelons. The foundation for support is the Ordnance Company. These units provide supply and service support to maneuver elements and the company commanders serve as logistics staff officers to the Brigade Commander. Each maneuver element within the Kenyan Army also has ordnance officers serving in the equivalent of the U.S. Army's S-4 positions. That officer is designated the Battalion Quartermaster.

Individual Ordnance Companies are attached to Groups, which are organized by class of supply. Above Groups, Depots support all logistics needs for units in a given geographic area.

The Kenyan Army normally remains within its nation's boundaries but has deployed to serve the United Nations as part of multi-national peacekeeping forces. When such deployment takes place, the logistics structure is adjusted to a Task Force organization. Likewise, during training exercises, various logistics services are grouped together to support maneuver

elements. Ordnance Companies are linked to the Brigade Support Area, Groups to the Division Support Area.

A major doctrinal difference between Kenyan and U.S. Logistics is noted in how maneuver elements are supported in the field. For certain types of support the U.S. relies upon unit pickup for distribution. The Kenyan Army takes all supplies to the customer, and as far forward as possible. Maneuver units never return to pickup supplies, and Ordnance Companies attempt to deliver to gun positions if possible.

Kenya's armed forces have never needed conscription to satisfy manpower needs. The technique for recruiting both officers and enlisted personnel has been the periodic "recruitment safari". During the safari, military teams visit rural communities, schools, and universities throughout the country to accept applications from potential recruits.

Minimal initial term of enlistment ranges from two years to nine years, depending on technical training. All recruit and basic officer training, as well as most technical and in-service training for the Army, Air Force, and Navy is consolidated in the Armed Forces Training College at Lanet. Army recruits undergo an intensive basic training course of about nine months. Recruits of the other services and officer candidates take shorter periods of basic training, after which they continue in specialized training. The majority of individual training for a specific military occupation specialty is conducted at the unit level for enlisted soldiers.

All officer cadets are trained equally in all aspects of tactics and general military subjects.

Upon commissioning, officers are attached to various units for two to three years. Specialization does not take place at this time; future ordnance officers may serve in other branches (e.g., Infantry or Armor Battalions). After this period, officers may volunteer to serve in the Ordnance Corps. Upon selection, the officer will be trained for six months at the School of Ordnance in Nairobi. Following this, the officer is assigned to one of the ordnance companies. After two or three years as an ordnance officer, the individual will receive additional training. This training can include the Officer Advanced Course at the U.S. Army Quartermaster School and various other courses as the officer advances in rank.

The Kenyan training exchange with the U.S. Army Quartermaster School works on many levels. Organizational similarities between the Kenyan Ordnance and the U.S. Army Quartermaster Corps make the training program a natural choice. As noted earlier, the Kenyan Army has small numbers of U.S. weapons and equipment in its inventory and the training in the United States enhances the procurement process by providing logistical understanding of those systems. The exchange officer's professional development is also enhanced by exposure to the doctrinal differences, as well as the methodologies of an army substantially larger than Kenyas. Likewise, the United States Army benefits by gaining insight into

those areas of contrast. Further, mutual understanding between the two countries is promoted by the exchange.

The Kenyan training program with the United States Army Quartermaster School began in the early 1980s.

It is hoped that the two continue to enjoy the mutual benefits gained from the program in the years to come.

Major D.A. Sheikh is a Kenyan Ordnance Company Commander who recently attended the Officer Advanced Course at the Quartermaster School, Fort Lee Virginia.



Scenario - determined Computer Assisted Logistics Planning

The U.S. Army Logistics Center SCALP Team has several software programs available through its Logistics Management Series. The Quartermaster Professional Bulletin has addressed three of those programs in the past, the Petroleum, Oils, and Lubricants Requirements Determination Template (POL RDT) (June 1988) and the Class I Planning and SCALP Demonstration Packages (September 1988). We'd like to let our readers know more about the software packages available to them through the SCALP team's program. As part of that effort two more packages available to possible users are described as follows.

TITLE: CONVOY PLANNER

DESCRIPTION: This transportation program prepares convoy march tables, given characteristics of the route, and parameters which are determined by the convoy commander or SOP. The march tables lists checkpoints, rest halts, and arrival and departure time for each unit by serials and columns.

HARDWARE REQUIREMENTS: Any IBM compatible computer; recommend 640K RAM storage capacity.

SOFTWARE REQUIREMENTS: MS-DOS 2.0 or higher operating system, LOTUS 1-2-3 software package, both versions 1A and 2.01 are available.

INTENDED USERS: Any logistics or transportation planner who needs to plan deployment of convoys.

USER

INPUTS:

Unit designations.
Convoy type (Day, night, infiltration).
Starting time, checkpoints and rest halts.
Start and release point point coordinates.
Convoy name.
No. of serials and columns if default not acceptable.
Speed and distance for each leg of march.

PROGRAM

OUTPUTS:

Vehicle list.
Start and release point coordinates.
Serial length, vehicle gap.
Average # vehicles/serial.
Route distance & per leg.
Rate of march, total time.
Speed and distance per check point, release time.
Arrival time, halt times.
Provides a printed march table by unit and per serial and column.

STATUS: Operational.

Additional vehicles are added upon request from the unit.

TITLE: LOCALLY AVAILABLE MATERIAL AND SERVICES

DESCRIPTION: The LAMS program was developed to allow logisticians to identify supply and service source information in the country to which they are deploying. Originally developed for the country of Honduras, LAMS contains logistics data by grid coordinates. The program contains an additional module which is being used by Army Contracting Officer Representatives to track vendors for several countries. The program contains a blank module allowing the user to input their own supply and service data.

HARDWARE REQUIREMENTS: Any IBM compatible computer with at least 640K of RAM memory storage.

SOFTWARE REQUIREMENTS: MS-DOS 2.0 or higher operating system and LOTUS 1-2-3- software package, both versions 1A and 2.01 are available.

INTENDED USERS: G-4/S-4 at Division or Brigade level that need to have the ability to track vendors for contingency operations or exercise planning.

**USER
INPUTS**

All vendor information
File can be established
for a country, state or
city.

**PROGRAM
OUTPUTS**

Name, location, phone
and pertinent vendor data
for a specific area.

STATUS: operational

Support has been requested for building programs for other countries.

To request a copy of these programs, send one floppy disc for each software program desired. Other software packages now available in the Logistics Management Program Series include:

***POL PROJECTIONS
CLASS I PLANNING
SCALP DEMONSTRATION
MOS SUBSTITUTION***

***AMMUNITION TRACKER
SUPPLY AND SERVICE LOCATOR
SUSPENSE TRACKER/ACTION TRACKER
BRIGADE BUDGET TRACKER***

Other programs are currently under revision or being developed. For more information, or to request your copy of a software program, please contact:



**CDR, U.S. ARMY LOGISTICS CENTER
ATTN: ATCL-OAI (SCALP TEAM)
FORT LEE, VIRGINIA 23801-6000
AUTOVON: 687-5202/4686
COMMERCIAL: (804) 734-5202/4686**

Be Proud

Captain Gary G. Furneaux

"Glory is deservedly the combat soldiers reward, but the historical record does not reveal him as overly generous in sharing credit for victory with the Quartermaster, without whose work that goal could not be reached. Only rarely is the effort of the Quartermaster praised." This statement is as true now as it was in 1962 when Erna Risch wrote the *QUARTERMASTER SUPPORT OF THE ARMY: A History of the Corps, 1775-1935*. Since 1775, the Quartermaster Corps has been sustaining the U.S. Army on the battlefield and in garrison, diligently providing the means of victory. It is not just the combat arms soldier who remains silent; we Quartermasters tend not to extol our deeds, despite the unique and challenging nature of the Quartermaster mission. Still, the Quartermaster's case must be stated, if for no other reason than to remind the soldiers of the Quartermaster Corps that they have just reason to be proud.

The history of United States military logistics is based upon the deeds and actions of various ranks. Although tactical decisions might have been made by more famous names, 'unknown' logisticians were the makers of logistics history. Logistics achievements are the result of lesser-known soldiers simply doing what was needed to be done. The U.S. Army has succeeded in the past because these unsung heroes did their job, and did it well despite hardships. The standard was met and obstacles overcome - from our humble beginnings at Valley Forge, through supporting Armed Forces of over eight million during World War II, to the jungles of Vietnam. Military history has long ignored

the Quartermaster. In 1944, General Brehan Somervell said "History has little to say about the great logisticians, for the prancing charger is longer remembered than the pack mule." The Quartermaster finds little mention in military history texts or education. This lack of regard continues in spite of the fact that logistics make up so much of the business of war.

Today the strategy and tactics of war are even more dependent on logistics than ever before. Weaponry has become more complex and demanding of support, paralleling this, the Quartermaster mission has become much more difficult and challenging. A prime example of this expansion concerns the M1 Battle Tank, with its huge fuel requirements, its increased need for timely availability of spare parts, as well as a call for expanded support from the partnership of the Quartermaster, Ordnance and Transportation Corps. The case of the M1 is not an exception. The doctrinal and equipment changes resulting from the development of the Airland Battle Concept have made the Quartermaster Corps' position a pivotal one.

In the past, an abundant and steady flow of supplies has been taken for granted by tactical leaders, usually without any awareness of the problems involved in providing the support crucial to their purposes. A number of military analysts have noted that the U.S. Army historically, after having built up forces, has not defeated enemies tactically; rather, we have overpowered and overwhelmed our enemies with equipment and firepower. In any large scale conflict of the future, our major

potential adversaries will match us in manpower and equipment/firepower. With this in mind, the role of the Quartermaster becomes a major consideration, for they will be the ones that ensure that the right supplies are in the right place, at the right time. Future battlefields will bear out the lessons of history by demonstrating the crucial role played by the Quartermaster.

Experiences in Vietnam showed that the Quartermaster must be a soldier first, not only a technician. Future battlefields will probably resemble those of Southeast Asia, in that there will be no neat, linear division between enemy and friendly forces. During our last war, there were really no 'secure' ports, depots, storage facilities, service areas, or supply routes. The actual degree of security varied according to time and place. On the modern battlefield, attacks on logistics facilities and operations are common at all levels; recently the Soviets faced that same situation in Afghanistan when their logistics forces saw as much action as their combat arms counterparts.

To fully grasp the importance of the Quartermaster Corps on tomorrow's field of battle, a close-up look at our units, and soldiers is required. Consider a Quartermaster unit supporting a major field exercise. They are typically the first unit in the field, and the last to leave. Their mission is characterized by physical and mental stress, little sleep, and the daily calling to provide effective and efficient services. As Major General McLean, the Quartermaster General, pointed out in the June issue of the *Quartermaster Professional Bulletin*, the services we provide

must be flawless. For the Quartermaster soldier there is no such thing as an exercise - only reality. The job of feeding soldiers, purifying water, and providing repair parts must be completed accurately and on time, whether or not the rest of the training is a simulation. Lasers can take the place of bullets in training but nothing can take the place of providing actual rations, fuel and water to the soldier. For the Quartermaster there is no margin for error nor the luxury of studying lessons learned in after action reports.

Redeployment from a field exercise brings its own challenges. The Quartermaster soldier's return to garrison is not usually characterized by the typical stand-down of Combat Arms units. The supply soldier is greeted by supplies waiting to be received, issued and stored. Riggers are greeted with a backlog of parachutes to pack. Cooks are faced with immediate reentry into the consolidated Dining Facility schedule. These 'normal' requirements are met as field equipment is cleaned, serviced and inventoried; weapons are made spotless; and TA50 prepared for the inevitable inspections; we must always be ready to sustain the force.

Who are these extraordinary soldiers who perform these extraordinary tasks? Let's make the Petroleum Specialist a case in point when considering the nature of the Quartermaster business. With the increased mobility and speed of our forces, fuel plays a crucial role in sustaining our forces. During training exercises, as on future battlefields, this huge responsibility rests squarely on the shoulders of the Quartermaster Petroleum

Specialist. While leaders move units and supplies around maps with confidence and ease the actual tasks are accomplished by the QM soldier. To complete this mission, the soldier is typically given an eight digit grid coordinate and general instructions, but usually no direct supervision. If that soldier arrives at the designated point and finds the customer has moved to a new location, that one soldier's initiative and decision making ability can have a significant impact upon the entire operation. The Quartermaster must go on - tired, dirty and usually reeking of fuel. After finding the customer and making delivery, the petroleum specialist turns around and does it again - sleeping when possible and eating on the move. This soldier epitomizes the U.S. Army soldier: determined, self-reliant and innovative.

Lasers can take the place of bullets during training, but nothing can simulate the task of providing rations, fuel and water to the soldier in the field.

Additionally, not many soldiers can match the courage of the POL specialists. There is something special about a soldier who courageously travels into combat areas riding in a light-skinned truck, hauling volatile fuel. I'm sure our combat arms brothers appreciate this courage as they peer from their armored enclo-

tures and watch the POL specialists rumble by in their potential fire bombs.

For the Quartermaster soldier, the going gets considerably tougher as they progress to the Noncommissioned officer ranks. Consider the Platoon Sergeant of the Supply Support Activity in a Supply and Service Company. To accomplish the Class I, II, IV, and VII supply mission this Staff Sergeant is in charge of approximately 60 to 80 soldiers (about the same number of soldiers in many companies). This NCO is also responsible for automated data processing equipment, multi-million dollar inventories, and ensuring efficient support to the all important customer. This leader is no desk jockey. At a moments notice, a QM NCO is required to load-up, deploy and become fully operational in the field. This deployment requires proper convoy procedures, effective defensive techniques, and the precise operation of sophisticated equipment in a harsh environment.

As if these tasks aren't enough to stretch the capabilities of QM NCOs, add to them the numerous responsibilities of all Army leaders of soldiers: formations, barracks inspections, counseling, pay inquiries, promotions, family problems - the list is endless. Additionally, maintenance poses a significant test of leadership skills because our units are characterized by unique, low-density equipment. Maintaining equipment readiness and adequate operator training is even more critical because much of this equipment is used to support the daily mission.

Probably the most difficult task for QM NCOs is training. Performing daily support missions

The Quartermaster epitomizes the U.S. Army soldier- determined, self-reliant and innovative.

does not always equate to training and its demanding nature make it difficult for our trainers to focus and plan a well-rounded training program. To be effective, a training program requires a disciplined approach in the allocation of time to mission support, technical MOS and sectional training, as well as individual and

tactical training. Finding that balance is a complex task. Soldiers of all ranks should be proud of the important role the Quartermaster Corps plays in our nation's defense. Not very flashy, and often overlooked, we provide the foundation of logistical readiness. Quartermaster soldiers today continue our proud tradi-

tion of excellence and remain - the Key To Logistics.

CPT Gary G. Furneaux is the Chief, Professional Development Branch, Office of the Quartermaster General, U.S. Army Quartermaster School, Fort Lee, Virginia.

NOTES FROM THE EDITOR:

The Quartermaster Professional Bulletin exists to provide a forum for professional dialogue, reinforce the training process, and encourage study and innovative thought. Its purpose is to serve the Corps, to bring you information about technological developments, tactics, techniques and procedures as well as overviews of practical exercises, training methods and historical perspectives. Last, but not least, the Bulletin offers a medium where the views and opinions of Corp's personnel can be expressed.

In order for the Bulletin to perform its mission at an optimum level, it needs input from you- the reading audience. The continued success of the Bulletin depends upon articles and ideas received from all levels of the Corps; its pages do not spring from a vacuum. If you are involved with a project that is pertinent to the Quartermaster Corps, had an experience on a recent field exercise that might offer insight to other Quartermasters, or if you want to offer an analysis or comment on current doctrine or methodology, the Bulletin would like to hear from you.

*For more information about article submission feel free to contact the Bulletin staff at Autovon 687-4382 14741.
Or, write us at:*

**THE QUARTEMASTER PROFESSIONAL BULLETIN
U.S. ARMY QUARTEMASTER SCHOOL
ATTN: ATSM-ACZ-PB
FORT LEE, VIRGINIA 23801-5032**

The Bulletin staff will be more than happy to assist you in any way necessary. Remember, we're proud to be the vehicle of your expression and information exchange, but your support is what drives us.

*Barbara A. C. Hennig
Editor*

AIRDROP ACTIVITIES

The week of 6 - 10 February 1989 will be a busy week at Fort Lee, Virginia for those personnel affiliated with the airdrop business.

- 7 February: The Airdrop Working Group (AWG) will meet to discuss/resolve issues in the functional areas of doctrine, force structure, research and development, requirements, personnel, and training. The AWG consists of members from the Army, Navy, Air Force and Marine Corps as well as solid representation from the Reserve Components.
- 8 - 9 February: The Quarterly Airdrop Review and Malfunction Analysis Board will meet to review malfunction reports submitted by airborne activities on a worldwide basis. Actions required to preclude recurrences will be developed as input to the Quarterly Airdrop Review and Malfunction Analysis published by the Quartermaster School on a quarterly basis.
- 9 February: An induction ceremony into the Parachute Rigger Warrant Officer Hall of Fame will be conducted by The Quartermaster General.
- 10 February: An Airdrop Systems Technician (Rigger Warrant) Working Group will be hosted by the Airborne Department. The Working Group reviews issues dealing with the personnel proponent for the officer, enlisted and warrant officer airdrop specialties. In addition, the Group develops issues concerning airdrop materiel, systems, and techniques that require a higher level of resolution, for submission to either the Airdrop Working Group, Joint Technical Airdrop Group, or the Airborne General Officer IRP.

TYPE V INTERIM FIELD MANUALS

To keep up with the urgent demand for airdropping loads on the Type V platform, the Airborne Department has released four interim field manuals for publication in October 1988. They are:

- FM 10-521, Airdrop of Supplies and Equipment: Rigging Tractors and Tractor Dozers
- FM 10-562, Airdrop of Supplies and Equipment: Rigging Whole Blood
- FM 10-573, Airdrop of Supplies and Equipment: Rigging 130G Grader
- FM 10-574, Airdrop of Supplies and Equipment: Rigging 950B Scoop-loader

F Y I

RECENT POLICY CONSOLIDATION (RPC)

Recently published AR 700-142, *Materiel Release, Fielding, and Transfer*, is a new regulation that consolidates policies and procedures for the issue, fielding, and transfer of materiel. It includes new policies for total package fielding; milestone, tracking, and reporting requirements; and fielding team and transfer team requirements. The Army has also published a companion DA Pamphlet 700-142, *Instructions for Materiel Release, Fielding, and Transfer*, that consolidates instructions, formats, reporting requirements, and schedules for materiel release, fielding, and transfer processes.

OBJECTIVE SUPPLY SYSTEM TESTED (OSST)

A prototype test of the Army's supply system for the 1990's and beyond - called the objective supply system - was scheduled to begin 30 September 1988. The test will be conducted between users at Fort Hood and suppliers at Red River Army Depot, Texas.

A major goal of the objective supply system is to greatly reduce order and shipping times for supplies. The objective supply system is also expected to reduce the administrative and financial management burdens in supply units and improve the interface between the wholesale and retail levels.

To achieve these goals, the objective supply system will make maximum use of automation. In particular, an automated "search" program in the direct support and intermediate level supply systems will find the closest source of supply and send requisitions directly to that source, bypassing unnecessary middlemen and bridging the retail and wholesale levels. A similar program to be developed in the future will provide asset visibility from the national inventory control point level downward to improve supply management. This automation is expected to reduce order and shipping time between Fort Hood and Red River Army Depot from the current 12 to 25 days to 3 to 5 days.

The prototype test is scheduled to last 60 days. If test results are favorable, the objective supply system could be approved for development and implementation by 21 December 1988.

FAMILY OF CONTAINERS (FLEX PALLET)

The Quartermaster School is developing a Family of Containers (FOC) which will meet the Army's mobility requirement for class IX supplies of both the Heavy and Light (Airborne, Airmobile, and Air Assault) Divisions. A final draft Operational and Organizational (O&O) Plan for the Family of Containers was forwarded to the Training and Doctrine Command on 3 October 1988 for approval. The Forward Logistics Exchange (FLEX) Pallet has been selected as the interim Family of Containers. The approved Family of Containers O&O Plan will support type classification of FLEX and provide authorization to explore other alternative container systems; such as, the AAR Brooks and Perkins Internal/Airlift/Helicopter Slingable Container Unit and the British Transferrable Stores Containers. The milestone date for the O&O Plan approval is 1QFY89.

SUPPLY

CHIEF OF STAFF, ARMY, SUPPLY EXCELLENCE AWARD

This program was officially established on 2 Jan 85 and implemented during the 1st quarter of FY 86. The award is designed to provide a structure for, and recognition of, group and individual supply initiatives and operations. Its implementation will improve, not impose, on supply operations while recognizing those exceptional CMF 76 personnel in the field.

The fourth year of the program began with the transmittal of FY 89 guidance to all major commands. The guidance was sent via message 281600Z JUL 88, DALO-SMP-S, SUBJECT: FY 89 Guidance for Implementation of the Army Supply Excellence Award.

Evaluation for all components is scheduled for second quarter FY 89. Winners and runners-up should be announced by the latter part of third quarter FY 89 with awards being presented later in the year.

FM 38-741 DIRECT SUPPORT UNIT OPERATIONS

As a result of a DA directive, a guide for commanders and storage personnel pertaining to upload and storage of a Combat Authorized List (ASL) was developed by the Quartermaster School. These procedures are included in FM 38-741, Chapter 8 and were sent to the field during July 1988. Step-by-step instructions depict the process for determining cubic feet requirements for vehicles and storage aids. Illustrations are included which show examples of available vehicles and storage aids in the Army inventory.

CONTROL OF MATERNITY UNIFORM

Disconnects exist between AR 37-107 (USAFAC) and AR 700-84 (TSA) on controlling the issuance of supplemental allowances for the purchase of maternity uniforms.

ARs 37-107 and 700-84 will be changed to read "payment of supplemental maternity uniform allowances will be reflected on the individual's Leave and Earning Statement (LES) for 36 months".

F Y I

WATER NEEDS ANALYZED

The Army Quartermaster School, Fort Lee, Virginia, has completed a study of the factors used in planning field water consumption. With minor exceptions, the study found that the planning factors adopted in 1983 were still valid. Army officials wanted to reverify the planning factors in light of recent changes that affected water use, such as introduction of the Army Field Feeding System.

FRONT END ANALYSIS FOR WATER ARTEPS

A contract has been awarded for conducting collective front end analysis on the HHD Water Supply Battalion, 10-446-30; Quartermaster Water Supply Company, 10-468-30; and Quartermaster Water Purification Detachment, 10-469-30. With this analysis being accomplished now, the ARTEP MTP for these units should be available in February 1990 versus September 1991.

LAUNDRY AND DECONTAMINATION DRYCLEANING SYSTEM (LADDS)

The fielding date for the LADDS is second quarter FY 93. It is expected that the Quartermaster School training program and training products will be significantly affected by introduction of this system. The Quartermaster School recently distributed the first draft of the system training plan in October 1988.

LIQUID LOGISTICS

REFUELING CAPACITY INCREASED

To enhance the refueling-on-the-move (ROM) capability of the M969 and M970 5,000 gallon fuels tankers, the Army Quartermaster School, Fort Lee, Virginia, and the Tank-Automotive Command, Warren, Michigan, have added several items to the tankers' additional authorization list of required equipment.

The ROM equipment transforms each tanker into a 4- to 8-point dispensing station that can refuel combat vehicles in less than 20 minutes, depending upon the tactical situation.

The ROM kit consists of three 4-inch by 14-foot suction hoses (components of the tanker); eight 3-inch by 50-foot discharge hoses (NSN 4720-000-083-0048); eight 1 1/2-inch by 25-foot discharge hoses (4720-00-555-8325); one 4- by 4- by 4-inch assembly tee (4730-00-075-2405); eight 3- by 3- by 1 1/2 inch nozzles (4730-01-096-1039); eight 1 1/2-inch nozzles (4930-00-471-0288); two 4- by 3-inch reducers (4730-00-951-3293 and -3296); six 3-inch ball-type valve assemblies (4820-01-098-4925); eight grounding rods (5975-01-050-5707); and eight fire extinguishers (4210-00-257-5343).

CONSOLIDATION OF MISSION TRAINING PLANS (MTPs)

The Quartermaster School is currently combining the S&T Battalion MTP publications for the Light Infantry Division, Airborne Division, and Air Assault Division, in an effort to eliminate duplication of materials, decrease printing costs, and provide earlier fielding of these publications. ARTEPs 42056/66 MTP (Bn Hqs, HSC, S&T Bn) and 42056/66-30 MTP (Supply Co, HSC, S&T Bn) Airborne, Air Assault Divisions, were originally slated for fielding in the second quarter of 1990. By consolidating these products with the Light Infantry Division's ARTEPs 42026 MTP (Bn Hqs, HSC, S&T Bn) and 42026-30 MTP (Supply Co, HSC, S&T Bn) the revised fielding date is now the fourth quarter of 1989. Likewise, by combining the Fwd Sup Companies of the S&T Bn IID/Abn and AA (ARTEPs 42027-30 MTP, 42057-30 MTP and 42067-30 MTP) the anticipated date for fielding is second quarter of 1990, one quarter earlier. Since ARTEP 10-337-30 MTP (QM Airdrop Equipment Spt Co) Abn Division has no like companies in the LID or AA Divisions, the field date for this product will remain the same third quarter of 1990.

F Y I

NEW MULTI-FUEL M-2 BURNER EVALUATED

Work continues on the new Multi-Fuel M-2 burner replacement. The new Multi-Fuel M-2 Burner was recently tested at an Air Force exercise, and proved to need more work. While they lit easily in the laboratory, lighting under field conditions proved difficult. One of the features initially liked by the soldiers was the safety valve on the preheater; however, when they discovered that the valve had to be hand held until the burner was warmed to operating temperature they wanted this changed. On the plus side, the M-59 Range heated with the multi-fuel burner very quickly reached a constant temperature of 600 degrees Fahrenheit while the gas fired M-2 took twice as long and would only hold a temperature of 500 degrees Fahrenheit.

94B TRAINING FOR INDIVIDUAL READY RESERVE

Congress, in the DOD Authorization Act of 1984, directed the Secretary of Defense to develop a program to ensure that members of the Individual Ready Reserve (IRR) remain proficient in their military skills. DOD in FY 86-90 Defense Guidance further directed, "In order to maintain the readiness of personnel in the Individual Ready Reserve the services will develop and program refresher training, as necessary, by skill, to maintain the minimum proficiency necessary to support employment or deployment of the IRR upon mobilization." To help food service specialists in the IRR maintain their skills, the Quartermaster School offers two courses, the 94B20 and 94B30 IRR courses. These courses are open to reservists in the IRR in MOS 94B at skill levels one through three. Both courses are two weeks in length, and both include refresher instruction on basic skills in cooking and equipment operation as well as training on how to supervise a food service operation. The school conducts two 94B20 classes and one 94B30 class each year, generally in the summer. Reservists interested in attending these courses should contact their assignment manager at ARPERCEN.

T-RATION CALCULATOR

Ration calculations for T-Rations, especially, calculations for remote sites are chores that will choke your calculators crystal display. Natick laboratories has printed a whiz wheel to speed these calculations. This has been tested and should be available next year. The advantage of this wheel calculator is that all meals are easily converted to the 18 or 12 serving tray pans which are then converted to modules using the calculator.

SUBSISTENCE

ADVANCED FOOD PREPARATION AND NUTRITION COURSE

In January 1989, the Subsistence and Food Service Department will open its doors to students attending a new pilot course called the Advanced Food Preparation and Nutrition Course. This five-week course is designed to train food service specialists to apply advanced cooking skills to the preparation of nutritious meals in both garrison and the field. It will be offered on this onetime trial basis to 94B soldiers of grade E4 who have just reenlisted and are serving their second term. Upon completion of the pilot course TRADOC will reexamine the course and determine whether full implementation is warranted. This course will offer an excellent opportunity to significantly increase the craft skills of the young food service soldier, and provide a valuable incentive for retention.

1989 ARMY CULINARY ARTS COMPETITION

The 1989 Army Culinary Arts Competition will take place at Fort Lee, Virginia, on 8-9 March 1989. The competition is sponsored by the Quartermaster School. The competition format is based on that of previous years with a few changes:

- The Garrison competition has been revised to test team rather than individual skills. Installation teams of four will choose a menu from TM 10-412 and prepare that menu for 100 personnel. Judging will be based on management, craft skills, nutrition awareness, presentation and taste.
- 94B instructors **currently** on school duty are barred from participating in the Inter-Installation competition. This rule will remove the obvious advantage gained by Subsistence Schools.

Deadline for entries is 20 January 1989. For further information contact MAJ P.M. Dickinson, AUTOVON 687-2716.

Sergeant Major Academy Seeks Log Students

SERGEANT MAJOR ACADEMY (SMA) SEEKS LOG STUDENTS for Personnel and Logistics Staff NCO Course. The Chief of Staff, Army, has directed that the Personnel and Logistics course taught at Fort Bliss, Texas, be centrally funded by DA open allotment in order to maximize attendance. This four-week, performance oriented course is designed to prepare NCO's (E-6 and above, MOS 75B, 75Z, 76Y, or 76Z) serving in personnel and logistics (S1/S4) positions to perform staff operations at battalion, brigade, and division level. Major subject areas include doctrine, the threat, communications, the commander and staff, estimates, plans and orders, tactical operations center operations, and instruction on the use of computers and software in Army tactical operations. Ten classes will be conducted in FY 89:

501: 9 Jan - 6 Feb 89
 4: 12 Feb -14 Mar 89
 5: 19 Mar -18 Apr 89
 C16: 23 Apr -23 May 88
 9: 13 Aug -12 Sep 89
 10: 17 Sep -17 Oct 89

502: 30 May -27 Jun 89
 8: 9 Jul - 8 Aug 89

Eligible NCOs will be sent in a TDY and return mode funded by DA open allotment, as is done for the BNCOC course. The quota distribution for each class by MACOM is:

FORSCOM:	26	ARNG:	8
EUROPE:	8	OCAR:	2
WESTCOM:	4	USASSC:	1
USALOGC:	1	PANAMA:	1

This course is an important initiative in filling the need identified by field commanders for combat service support NCOs with staff functions training. Complementing the Operations and Intelligence (O&I) Staff NCO course taught by U.S. Army Sergeant Major Academy (USASMA), it trains the staff operations skills essential in implementing sustainment for the Airland Battlefield. (POC: SGM Lamb; LOGC; AUTOVON 687-1047/1048)

SGM Alfred C. Lamb is a Staff Logistics NCO, Professional Development Division, U.S. Army Logistics Center, Fort Lee, Virginia.

NCO Food Service Exchange with the British Army

MAJ PAUL M. DICKINSON

One of the best kept secrets in the U.S. Army appears to be the opportunity for two NCOs (E6/E7 94B) to take part in a Food Service Exchange with the British Army. The two year assignment takes place at the Army School of Catering (ASC) in Aldershot, England, some 40 miles south of London. ASC is the training center for all British Army food service personnel and the home of the British Army Catering Corps (ACC.) The Royal Navy and Air Force Schools of Cookery are also located at ASC.

The opportunities to advance technical skills in the culinary field offered by this program are without parallel for exchange NCOs. Partici-

pants can gain qualification recognized as equivalent to Master Chef certification in the U.S. as part of the program's training schedule. After an initial training period of four months, including a ten week instructors course, NCOs are employed as instructors at the school.

The American NCO's initial instructional duties begin as part of the Army Apprentice College AAC (AA COLL ACC) staff. The AA COLL ACC trains army apprentices (16-18 years old) through a two-year course designed to provide the AAC with over 50% of its personnel. Attendance at the AA COLL ACC is seen as the first step for many of the Army Catering Corps future NCOs and officers. The American NCOs

start by teaching basic classes and progress to more advanced courses as they gain experience. Without doubt, the British Army does things differently than the U.S. Army. Personnel chosen to participate in the Food Service Exchange Program will have to demonstrate considerable flexibility, as well as aptitude. Experience in culinary arts is not a requirement; a good record within the MOS, personality, and potential as an instructor are the main criteria for selection. In return, the program offers selectees and their families a once in a lifetime assignment, and the assurance that the welcome afforded them by the ACC is second to none. NCO applications for this assignment should be made to: Chief Culinary Skills Division, U.S. Army Quartermaster School, ATTN: ATSM-SFS-CS, Fort Lee, Virginia 23801-5041. AUTOVON 687-2716.



Culinary Exchange NCO SFC David Ramos is greeted by Princess Anne.

Quartermaster NCO Academy

CSM RONALD D. JOHNSON

When the Quartermaster NCO Academy was activated on the 27th of March 1987, a new era of NCO education was ushered in. By consolidating Basic Noncommissioned Officer (BNCOC) and Advanced Noncommissioned Officer (ANCOC) Courses previously administered by separate departments, the Academy achieved a standardization of training. By setting out to create a live-in environment, the Academy hopes to further military professionalism and leadership initiative by offering attendees a school setting where they can focus wholly on learning the tactical and technical skills vital to their careers.

During this school year, 1,269 Advanced Course and 2,623 Basic Course Students will graduate from the Academy. The next school year should see even more students pass through the Academy's door.

The basic and advanced courses include a mix of common leadership subjects, and skill

training directly related to the soldier's military occupational specialty (MOS). With more and more emphasis on schooling as the basis for promotion, the NCO Academy has become a very important step in a soldier's career. (See Figure 1.)

It is the job of all members of the Chain of Command and the NCO Support Channel to ensure that qualified NCOs get to the schoolhouse. At this time many of the Academy's classes still have empty seats. This situation is primarily due to no-shows, and the arrival of NCOs who do not meet the prerequisites outlined in AR 351-7, in particular, the arrival of NCOs with temporary profiles, or those over 40 years of age who have not been cleared physically. Had the empty seats been filled, approximately 200 additional students could have been trained.

As the race to receive the required education for promotions begins those spaces may become

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School first, stripes later

Listed below are the current and newly-approved school requirements for NCO promotions.

Rank	Current	New Requirement
Sgt. ¹	None	Primary Leadership Development Course
SSgt.	Primary Leadership Development Course	Primary Leadership Development Course ³
SFC	None	Basic NCO Course ⁴
MSgt	Advanced NCO Course	Advanced NCO Course
Sgt Maj	None	None
CSM ²	U.S. Army Sergeants Major Academy	U.S. Army Sergeants Major Academy

¹ Must graduate to be considered for promotions.
² Can be selected, but must graduate before appointment.
³ Effective Oct. 1, 1989.
⁴ Effective Oct, 1990.

Figure 1

critical. As such, it becomes essential that the right people are selected to attend the Academy. It is a tremendous waste of the NCO Education System (NCOES) dollars to send soldiers to Fort Lee only to have them turned away at the door because of a failure to meet the prerequisites. Further, each denial represents not only an empty seat, but the fact that a qualified NCO could have been attending instead; one empty seat equals two losses.

NCOs attending the Academy must be mentally and physically prepared. They will find themselves challenged by a multitude of subjects. Days are long and information comes fast. Stress is the norm, not the exception and from the first day students must be able to think on their feet and on the move. The course is just as demanding physically. Physical Training (PT) is

tough, and designed to tax students to their limit.

Some changes are planned for the near future. Programs of Instruction (POIs) for both ANCOC and BNCOC are scheduled to change in January. BNCOC course length will increase three days, and both BNCOC and ANCOC common courses will be changed to eliminate redundancy in course material. Another significant change will take place in the method of administering evaluations. Exclusively written examinations will be replaced by a combination of written examination and performance evaluations. Emphasis will be placed on performance aspects and after action reviews.

New facilities are being built to house students. Soon after the first of the year, the first of those buildings will be completed and ANCOC students will be quartered there. When the second is finished, BNCOC students will move from their current barracks. The new buildings will bring students closer together, accommodating 680 in all. The new complex will also house two new BNCOC classrooms as well as a learning center, recreation rooms and group study rooms.

The Quartermaster NCO Academy is growing and changing but the mission remains the same. Linking NCO training to promotions underscores that fact - developing more proficient, confident and professional NCOs at the Quartermaster NCO Academy is as vital to an individual's career progression as to the growth of the Corps.

CSM (Ret) Ronald D. Johnson is the former Commandant, Quartermaster NCO Academy, Fort Lee, Virginia.

MATERIEL ACQUISITION MANAGEMENT

Major Ron C. Flom

Since the Materiel Acquisition Management Program (MAM) became operational in 1983, its object has been to develop commissioned officers with multidisciplinary expertise related to the total materiel acquisition process. Through intensive management of training and broad-based materiel acquisition assignments, officers in the MAM program become qualified to exercise centralized management over planning, direction, and control of acquisition functions to include:

- **combat developments**
- **testing**
- **research**
- **initial procurement**
- **development**
- **production**
- **distribution**

and integrated logistical support for the Army's equipment or weapon systems.

MAM positions are those in which the duties and responsibilities predominantly involve materiel acquisition and may encompass such specialties as Research, Development and Acquisition, Procurement, Materiel Management and other logistical/technical specialties. The Army Materiel Command (AMC), the program's proponent, has identified over 2,300 Army officer positions requiring materiel acquisition skills. During the initial stages of their careers, officers involved in the MAM program can expect such assignments as:

- **Test and Evaluation Officers**
- **Research and Development Coordinators**
- **Combat Development Officers at TRADOC Centers and Schools**
- **DA Systems Coordinators**
- **Assistant Project Managers**
- **Weapon System Managers**
- **Assistant TRADOC System Managers**

MAM officers must be able to combine the functions of research and development, financial estimating and control, procurement, production, production/manufacturing, testing logistics, and to lead an integrated team of government (military & civilian) and industry

personnel to accomplish a certain objective within designated time, cost, and performance constraints. Chapter 101, DA Pamphlet 600-3, "Commissioned Officer Professional Development and Utilization" describes the program in detail.

To become a MAM officer, officers must apply or be nominated to the MAM Program. A U.S. Army Total Army Personnel Agency (TAPA) board selects those officers best qualified.

Officers interested in the program should:

- **Express a desire to participate in the program.**
- **Be in a branch managed by OPMS.**
- **Be in the grade of captain.**
- **Have completed 5 1/2 years of active federal commissioned service.**
- **Hold at least one of the acquisition codes listed in paragraph 101-1h of DA Pamphlet 600-3.**
- **Have at least 6 years of active federal commissioned service remaining at the time of application.**
- **Have the following educational background:**

Military schooling appropriate to the grade and length of service; this includes advanced course attendance for company grade officers.

Civil schooling. Baccalaureate or higher degree. The degree preferably should be in either the following or closely related fields:

- (a) **Management/Business**
- (b) **Engineering/Science**
- (c) **Possession of another baccalaureate degree is sufficient if the officer has received materiel acquisition related civilian or military training or experience.**

Have demonstrated an outstanding manner of performance in past assignments and potential for development as a materiel acquisition manager.

Have demonstrated an outstanding manner of performance in past assignments and potential for development as a materiel acquisition manager.

Field grade officers applying for entry into the program will be expected to meet the qualifications of captains, as well as possess appro-

Career Notes

appropriate MAM military education and previous assignment experience that qualify under the certification criteria in paragraph 101-4f of DA Pamphlet 600-3.

TAPA administers the MAM Program for the Army through its Functional Area Management Division with the Directorate of Officer Personnel Management. Entrance into the program occurs through a TAPA board selection process. Officers may apply by submitting a letter of application through their career management division at TAPA. Since the program is requirements driven, the number of officers selected is based on both validation and projected Army requirements by specialty and grade. As requirements change, so will the number of officers in the MAM Program. Currently, 2,281 officers in grades O3 through O6 are in the program.

HOW DOES THE ARMY MANAGE MAM CAREERS?

There is no specific OPMS designated specialty for the MAM Program. MAM positions usually require capabilities that are best described by a combination of two; a branch with a functional area code. Therefore, by the nature of the skills required, the MAM Program encompasses many specialties. Consequently, MAM has been classified as a skill. Positions and officers selected for participation in the program are identified by the skill code 6T.

Ideally, officers enter the program at the sixth year of service in the grade of captain. Application may be made after completing 5 1/2 years of active federal commissioned service. Upon selection into the program, TAPA, consistent with the needs of the Army and officer availability, assigns new selectees to attend the MAM course at the Army Logistics Management College. Following this course, officers will be programmed to receive their first MAM development phase assignment.

MAM enables an officer to participate in the variety of career patterns (dual or single) available to the officers corps and provides the flexibility to develop individual officers based on the Army's needs. Ideally, officers will receive assignments that will develop them in the career track they elect.

A few officers may be chosen to spend up to one year with commercial industry, where they

work in the day-to-day business world as a member of the commercial team. This Training with Industry (TWI) experience is then applied to Army operations through assignments to major Army commands such as the U.S. Army Materiel Command (AMC), Defense Logistics Agency (DLA), or the DA Staff.

While serving in the grade of major, program members normally will attend the Program Management Course at the Defense Systems Management College followed by their second MAM assignment. Officers are required to complete two MAM development phase assignments to gain the necessary experience to perform successfully as managers. Upon selection to lieutenant colonel, officers will be reviewed by a central selection board for certification as Materiel Acquisition Managers.

Recent changes in the requirements for certification include three years of experience in the acquisition, support and maintenance of weapon systems or other military equipment. At least one of the three years must have been in a procurement command (AMC). Previously, two MAM assignments were required. Completion of the Program Management course is also needed for final certification.

Starting with the first board, held March 1986, product managers are now centrally selected by DA. The PM selection board also slates officers to specific positions based on their individual qualifications. The nature, type, and number of PM positions available varies from board to board. This means that any given officer's competitiveness, based on his or her specific qualifications, varies as well.

Some aspects of the MAM Program are currently under review. Considerations include whether MAM should be designated an AOC, or whether it should remain a skill but confined to Functional Areas 51 (Research and Development) or 97 (Contracting and Industrial Management).

Regardless of the decision, the MAM Program of the future will probably be staffed with officers who have chosen acquisition management as their primary career focus. For Quartermaster officers, personnel proponents foresee the single-tracking of a relatively few officers to ensure Quartermaster equipment is developed, fielded and procured by Quartermaster officers.

For further information concerning the requirements for entering the MAM Program, refer to DA Pamphlet 600-3. Specific questions should be forwarded to the MAM Program Manager at TAPA, AUTOVON 221-3127 or Quartermaster Branch, AUTOVON 221-8119/8123.

MAJ Ronald C. Flom is the Future Readiness Officer, Quartermaster Branch, U.S. Army Total Army Personnel Agency, Alexandria, Virginia.

The QM Corps Welcomes 25Fs to the Regiment

Major Mark G. Cole

The Quartermaster Corps extends a welcome to fifty officers who joined our ranks in October 1988. Those Officers were branch transferred from the Signal Corps following the elimination of Area of Concentration (AOC) 25F, Communication-Electronics Materiel Management (C-E) as the result of a Signal Corps initiative. Seventy-three other AOC 25F officers have been branched transferred to the Ordnance Corps, the remaining 356 Active Duty 25F officers received other Signal related Areas of Concentration.

The decision to eliminate AOC 25F came after years of debate on the issue of dedicated materiel managers within the Signal Branch. Changes in technology, along with perceptions that career opportunities were limited, promotion rates low and professional career development noncompetitive were decision factors in the elimination of AOC 25F. Since the 25F performs materiel and maintenance management functions that correlate to Quartermaster and Ordnance specialties, it is managerially beneficial to align officers with these branches. It should be an equally rewarding realignment for those branch-transferred officers, since more opportunities for career development in the management field will now be available to them.

After a review and subsequent realignment of 25F spaces, a Total Army Personnel Agency (TAPA) board convened in August 1988 to review the files of AOC 25F officers. That board consisted of representatives from the Signal, Ordnance, and Quartermaster Branches.

The board's guidance was to conduct a limited

file review on each officer. Branching to Quartermaster or Ordnance, or realignment of an officer within Signal was recommended based on experience, education and assignment history. No officer was recommended for Branch Transfer unless considered "qualified" by a majority of the board members. Qualifications for Quartermaster branching included:

- assignment to Quartermaster related jobs
- education experiences, such as the:
 - Supply and Services Management Officer Course
 - Logistics Executive Development Course

Each 25F officer branch transferred has been notified by TAPA and given an opportunity to reclama. Records of each new Quartermaster officer have been reviewed to determine additional educational requirements and a training program based on individual needs has been developed. The basic curriculum for officers who have attended an Officer Advanced Course will be the Supply and Services Management Officer Course. The Quartermaster Officer Advanced Course will serve as the basic curriculum for non-advanced course graduates.

With the elimination of 25Fs from the Signal Corps, management of communication equipment is now a Quartermaster mission. Not only those fifty officers branched from Signal, but all Quartermaster officers have the responsibility to become knowledgeable of C-E materiel.

MAJ Mark G. Cole is the Chief, Officer Personnel Systems Division, Office of the Quartermaster General, U.S. Army Quartermaster Center, Fort Lee, Virginia.

CORRECTIONS AND ADDENDUM

AFFS BRIEFING TEAMS TOUR WORLD-WIDE

In November 1988, two teams of Army Field Feeding System (AFFS) briefers began a worldwide tour that would number over 35 stops before their mission was completed on December 21. These teams are part of a functional area assessment process which will culminate on 17 January 1989 at the Office, Deputy Chief of Staff for Military Operations and Plans (ODCSOPS) in preparation for a final brief on the revised AFFS to the Chief of Staff, Army (CS). During their tour, the briefing teams visited each Corps and active Army Divisions as well as selected separate brigades and Armored Cavalry Regiments. The target audience for the AFFS briefings was division commanders or their representatives; corps, division and brigade food advisors; corps and division level G-4s, force modernization personnel and other personnel designated by their commander.

The purpose of the briefing teams' tours was to provide an update of AFFS changes approved by the Vice Chief of Staff, Army (VCSA) as well as offering a means for field commanders to participate in proposed fixes thus helping to make AFFS a viable, affordable system that meets the needs of our soldiers. Based on these field visits, the CSA will be briefed after the beginning of the year on the field consensus re' personnel and equipment required to provide the desired field feeding capabilities.

GRREG TRAINING PRODUCTS AVAILABLE

There are nine various GRREG audiovisual products available for training purposes. They may be obtained from your local Training and Audiovisual Support Center (TASC). The last three may be obtained by contacting the Quartermaster School Graves Registration Center, ATSM-GR, Fort Lee, VA 23801.

TITLE	NUMBER	TIME
Memorial Activities, Part I - Combat Search and Recovery	TF 10-4697	28:00
Memorial Activities, Part II - Identification	TF 10-4052	25:00
Memorial Activities, Part III - Concurrent Return Program	TF 10-4158	22:00
Memorial Activities, Part IV - Escorting Deceased Personnel	TF 10-4161	28:00
Memorial Activities, Part V - Disposition of Personal Effects	TF 10-4159	17:00
Memorial Activities, Part VI - Cemetery Operations	TF 10-4694	42:00
Legible Prints	492-101-0166-B	06:00
Skeletal System	492-101-0189-B	11:56
Dental Structure	492-101-0190-B	06:00

TAKE CARE OF YOUR MECHANICS:

All unit leaders who have Ordnance soldiers in their commands should be aware that the Ordnance Corps Certificate of Affiliation is ready for distribution. All Ordnance commissioned officers, warrant officers, and enlisted personnel are eligible to receive it. Unit leaders should request certificates for soldiers currently in their units.

Those requests should be consolidated at the battalion level or higher and forwarded to:

**Office of Chief of Ordnance
ATTN: ATSL-O-S
Aberdeen Proving Ground, MD 21005-5201**

The following information must be included in the request: name of unit, UIC, military address, POC, telephone number and number of certificates required. For additional information, please contact CPT Kane, Regimental Action Officer (Ordnance) AUTOVON 298-5400/4400.

COMING UP IN THE QMPB

March 1989 - PETROLEUM: Corps Forward

June 1989 - PETROLEUM: Echelons above Corps

September 1989- Logistics Automation

In order to better accommodate our reading audience, the Quartermaster Professional Bulletin is now being distributed individually to Active Duty personnel at the grade of E-8 or higher. Unit distribution will continue at the Battalion level for other Active Army personnel. In the Reserve Components, distribution will continue at the company level.

Officers can insure that they receive their individual copies by making sure that the address listed on their ORB is accurate.

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THE QUARTERMASTER CREED

I AM QUARTERMASTER.

My story is enfolded in the history of this nation.

Sustainer of armies...

My forges burned at Valley Forge.

Down frozen, rutted roads my oxen hauled

The meager goods a bankrupt Congress sent by me...

Scant rations for the cold and starving troops,

Gunpowder, salt, and lead.

I AM QUARTERMASTER.

In 1812 we sailed to war in ships my boatwrights built.

I fought beside you in the deserts of our great Southwest.

My pack mules perished seeking water holes

And I went on with camels.

I AM QUARTERMASTER.

I gave flags to serve.

The medals...crests...the clothes you wear

Are my design.

Since 1862, I seek our fallen brothers

From PFC to President.

In war or peace I bring them home

And lay them gently down in fields of honor.

Provisioner, transporter.

In 1898 I took you to Havana Harbor and the Philippines.

I brought your tents, your khaki cloth for uniforms.

When yellow fever struck, I brought the mattresses you lay upon.

In 1918, soldier...like you.

Pearl Harbor, too. Mine was first blood shed that day.

I jumped in darkness into Normandy, D-Day plus 1.

Bataan, North Africa, Sicily. I was there.

The 'chutes that filled the grey Korean skies were mine;

I led the endless trains across the beach in Vietnam.

I AM QUARTERMASTER. I can shape the course of combat,
Change the outcome of a battle.

Look to me: Sustainer of Armies.

I AM QUARTERMASTER. I AM PROUD.