FM 10-27-4

ORGANIZATIONAL

SUPPLY AND

SERVICES FOR

UNIT LEADERS

*FM 10-27-4

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Organizational Supply and Services for Unit Leaders

Contents

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Page

Page

Page

Page

Page

Page

Preface

This manual is an overview of organizational supply and field service operations for all Army units, not just Quartermaster units. It is written for supply operations personnel, S4 officers, and commanders at battalion level and below. Unless specifically stated otherwise, this manual primarily addresses Army of Excellence organizations, rather than Force XXI type units. The manual is based on doctrine in FMs 8-10, 10-1, 100-5, and 100-10. FM 100-5 is the Army's keystone doctrinal manual. It outlines how the Army will conduct operations. FM 100-10 is the Army's keystone CSS doctrinal manual. It provides an overview of the CSS system for supporting the Army in the field. FM 10-1 is the QM principles manual. It explains the role of QM units and soldiers in the field. FM 8-10 is the keystone manual for the Army Medical Department. It explains the purpose of health service support in a theater of operations. This FM is a guide, not a directive. Refer to the publications identified in references for specifics on operations.

Planning. Supervisors must carry out the unit mission with the equipment and personnel available. They must be aware of the kinds of problems they will face. This manual details unit supply procedures and describes methods to organize unit resources. The Appendix is designed to assist unit leaders and supply operations personnel in planning supply operations.

Operations. This manual summarizes existing doctrine. It gives suggestions and standards based on field experience. It relates tactics, techniques, procedures, and policies that apply to company, detachment, and battalion supply operations.

Organization and Coverage:

There are six chapters in this manual. Chapter 1 provides an overview of battlefield logistics. Chapter 2 covers supply procedures for the different classes of supply and laundry. Chapter 3 covers different methods of supply. Chapter 4 covers water and field services. Chapter 5 covers supply in different types of tactical operations and environments. Chapter 6 covers property accountability and responsibility for unit commanders.

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Unless this publication states otherwise, masculine nouns or pronouns do not refer exclusively to men.

Chapter 1

OVERVIEW

This chapter provides and overview of how Army supply concepts are integral to the modern battlefield and provides some basic supply terms and concepts required for understanding the rest of the manual. This chapter also includes a short synopsis of the current and near future automated logistics systems, as well as how the changes under Force XXI will affect organizational supply and services.

1-1. **THE MODERN BATTLEFIELD AND SUPPLY**. Providing timely, efficient, and effective logistical support to Army units is more critical than ever before. The Army must have optimal logistical support to maximize its combat power. Combat service support encompasses the full range of health services, finance support, and personnel functions as well as the traditional functions of supply, maintenance, field services, and transportation. Supply is the process of providing all items necessary to equip, maintain, and operate a military command. Supply operations include design, development, acquisition, storage, movement, equipping, distribution, and evacuation. Supplies may not be available when and where they are needed and in the correct quantity. Supply shortages (especially ammunition, fuel, and repair parts) can cause units in the attack to reach their culminating point before accomplishing their mission. Therefore, providing the best possible supply support is vital to the success of our combat forces. Just as tacticians must concentrate combat power to accomplish their mission, so too must logisticians concentrate logistics assets to accomplish their mission. Leaders must know all about resources; type, quantity on hand, location, condition, and availability. They must know the current rate of use and be able to estimate future consumption rates based on the tactical situation. The status of supply operations is a subject of interest to soldiers, the news media, Congress, and the American public.

1-2. **ARMY DOCTRINAL TENETS.** Successful Army operations exhibit five essential characteristics or tenets which are: initiative, agility, depth, versatility, and synchronization. Table 1-1 explains how these characteristics relate to supply operations.

Table 1-1. Tenets of Army Operations.

TENET	DEFINITION	SUPPLY APPLICABILITY
INITIATIVE	Setting or changing the terms of battle by action.	Thinking ahead and anticipating future requirements while planning supply needs beyond the current operation.
AGILITY	The ability of friendly forces to act faster than the enemy.	Physical agility depends upon the right quantity of supplies, both enough but not too much. Mental agility can be affected by low morale or poor health, which can be caused by the wrong amount of supplies, for example; food, water, clothing.
DEPTH	The extension of operations in space, time, and resources.	Proper use of supplies plays a critical role in achieving and maintaining momentum in the attack and elasticity in the defense.
VERSATILITY	The ability to tailor forces and move rapidly and efficiently from one mission to another.	The successfulness of moving from one mission to another will not be efficient if the supplies are not in the right place at the right time.
SYNCHRONIZATION	The arrangement of battlefield activities to produce maximum combat power at the decisive point.	If supply support, especially ammunition and fuel, is not correctly synchronized, units will fail to achieve maximum combat power at critical moments.

1-3. **LOGISTICS CHARACTERISTICS.** The characteristics of logistics describe the planning and execution considerations required for successful support operations. These characteristics seldom have equal influence in an operation, but identifying them during the planning process will provide the leader with a guide for analytical thinking and prudent planning. A listing of the characteristics and their applicability to supply follows:

- *Anticipation*. The ability to foresee future operations and identify, accumulate, and maintain the assets and capabilities to support those operations.

- *Simplicity.* The avoidance of complexity in both planning and executing logistical functions. Mission orders, drills, and SOPs contribute to simplicity.
- *Responsiveness.* Entails getting the right supplies and other support functions in the right place at the right time.
- *Economy.* Providing appropriate support without excess. Commanders must judge economy in prioritizing and allocating resources.
- *Flexibility.* The ability to adapt organizational structure and logistical procedures to changing situations, missions, and operations.
- *Integration.* The coordination of logistical operations with the other missions and components of the organization.
- *Attainability.* The minimum quantity of supplies and available services required to begin an operation.
- Sustainability. Ability to maintain continuous support to all phases of operations.
- *Survivability.* The capacity to shield logistics functions from destruction.
- *Improvisation.* The ability to make, fabricate, arrange, or invent what is needed from available supplies. This should not however be considered as an acceptable alternative to proper planning. The ability to foresee future operations and identify, accumulate and maintain the assets and capabilities to support those operations.

1-4. **CLASSES OF SUPPLY.** Supplies are divided into 10 major categories, which are referred to as classes. There are also a few miscellaneous items that do not fit into any of the other 10 supply classes. Table 1-2 shows the 10 supply classes and what they consist of.

Table 1-2. Classes of Supply.

CLASS	TYPE OF SUPPLY
I	Subsistence and commercially bottled water.
II	Clothing, individual equipment, tools, tool kits, tents, administrative and housekeeping type supplies, as well as unclassified maps.

Table 1-2. Classes of Supply (continued).

CLASS	TYPE OF SUPPLY
III	POL includes bulk fuels and packaged products such as antifreeze.
IV	Construction items, including fortification and barrier materiel.
V	Ammunition of all types.
VI	Personal demand items (nonmilitary sales items) and gratuitous health and comfort pack items.
VII	Major end items, such as launchers, tanks, mobile maintenance shops, and vehicles.
VIII	Medical supplies, including repair parts for medical equipment.
IX	Repair parts and components, to include kits, assemblies, and subassemblies, both reparable and nonreparable, which are required for maintenance support of all equipment.
X	Materiel to support nonmilitary programs, such as agricultural and economic development, which are not included in supply classes I through IX.
Miscellaneous.	Salvage, packaged water, captured enemy supplies

1-5. **RESPONSIBILITIES.** At Battalion level, the S4 has primary staff responsibility for logistics. The support platoon performs battalion LOGPAC operations. At unit level, the commander is responsible for supply operations with the XO, first sergeant, and supply sergeant performing different supply functions, including guiding the LOGPAC at the LRP. Chapter 3 gives a more detailed explanation of LOGPAC operations. Table 1-3 explains organizational supply responsibilities.

Table 1-3. Organizational Supply Responsibilities.

POSITION	RESPONSIBILITIES
Unit Commander	Responsible for the proper use, care, custody, and safekeeping of all government property within the command. Ensures that all authorized equipment is on hand or on order. Ensures that unit property is complete and serviceable. Ensures supply personnel are properly trained. Ensures property is inventoried annually and sensitive items are inventoried quarterly. Ensures excess property is turned in. Begins process to account for lost, damaged, or destroyed property.
HHC Commander	Responsible for organizing and supervising LOGPAC operations for the task force. Leads the Support Platoon leader and provides guidance on platoon missions. Ensures proper coordination with Battalion S4. Also has same responsibilities as the Unit Commander shown above.
Unit 1SG	Responsible for submission of routine personnel and logistics reports and receipt of mail and routine unit correspondence. Guides LOGPAC from LRP to platoon areas as needed. Supervises feeding, unit resupply operations, and other unit field services such as showers.
Supply Sergeant	Prepares and maintains supply and property book records. Safeguards supplies and property stored in unit supply room and storage areas. Processes unit laundry. Coordinates issue and turn in of unit property between company and personnel. Requests, receives, and issues supplies. Prepares adjustment documents for lost, damaged, or destroyed property. Supervises unit armorer. Coordinates delivery of supplies from field trains forward. Develops the unit supply SOPs
Unit Armorer	Inspects and performs organizational maintenance on unit weapons. Turns in weapons to direct support maintenance. Maintains authorization list and ensures soldiers' weapons cards are up to date. Secures weapons, helps with inventories, and maintains arms room key control.
PLL/ TAMMS Clerk	As equipment records and parts specialist, responsible for maintaining TAMMS records, requisitioning and disposition of PLL and shop stock duties including; vehicle dispatching and class IX requesting, receiving and issuing.
S2	Advises and coordinates with staff officers and commanders regarding intelligence and security matters. Arranges for background checks on unit armorers.

Table 1-3. Organizational Supply Responsibilities (continued)

POSITION	RESPONSIBILITIES
S3	Coordinates with S4 on supply training items. Coordinates training ammunition supply and property authorization documentation with S4. Develops and analyses plans, determines unit locations and establishes supply routes. Coordinates unit deployment plans in support of the force projection Army.
S4	Advises other staff officers and commanders on supply matters. Monitors the requisition, temporary storage, and distribution of supplies, including expendable supplies and property book items. Monitors the unit basic loads to ensure correct quantities and quality (for dated items) are on hand. Reviews adjustment documents and confers with PBO and survey officers. Maintains records for MTOE equipment shortages. Performs supply assistance visits with units and coordinates the Command Supply Discipline Program. Controls the Battalion field trains. Coordinates with unit executive officers and supply platoon leader to keep unit trains supplied. Coordinates unit movements program.
Platoon/ Section Sergeant	Maintains supervisory responsibility over all assigned property including: accounting for the property, maintaining the property, and reporting any lost, damaged, or destroyed property.

1-6. **UNIT SUPPLY SOP.** Units should develop a supply SOP. It may be a separate SOP or part of the unit SOP. More details on operating a unit supply element are in FM 10-27-3, Chapter 3. The SOP should include at least the following:

- Responsibilities of unit supply personnel (Table 1-3).
- Supply section's hours of operation.
- Procedures for securing supply room or tent.
- Procedures for controlling durable items and other property issued to unit personnel.
- Kinds of records, reports, and forms required.
- Detailed procedures for requesting, receiving, storing, inventorying, issuing, and turning in supplies and equipment.
- Procedures for initiating adjustment action for lost, damaged, or destroyed items.
- Procedures for safekeeping property of absentees.
- Procedures for laundry and bath services.
- Safety procedures, including: risk management, fire, and other emergencies.

- Information on supply training.
- Deployment packing list.
- Procedures for automation security.

1-7. **AUTOMATED SUPPLY SYSTEMS**. A brief overview of current automated supply systems and the functions they perform is provided. Some of the systems directly affecting organizational supply operations are discussed in more detail in Chapter 6 of this manual.

- **Unit Level Logistics System.** ULLS is a menu-driven, automated information system, designed to manage property below the property book level. There are three different ULLS. ULLS-A for aviation maintenance functions, ULLS-G for unit maintenance functions, and ULLS-S4 for automated supply functions. ULLS-A will not be discussed in this manual.

  - ULLS-G. This system automates the following functions:

    - PLL and IMPL management.
    - Periodic required equipment services.
    - Equipment and vehicle dispatching.
    - Document control register.
    - Deadline data reporting.
    - Parts requisitioning and control.
    - Operators' qualification records.
    - Oil Analysis Program records.
    - Fuel and equipment usage reports.
    - Maintenance work orders.
    - Automated unit status report.

  - ULLS-S4. This system automates the following functions:

    - Automated supply requisitioning.
    - Document registers and receipts.
    - Asset visibility of assigned assets.
    - Expenditures accounting .
    - Unit transfers.
    - Component listings and subhand receipts.

- **Standard Army Retail Supply System.** SARSS is the primary automation system used in Army DS/GS supply units. It processes customer requests from ULLS, SAMS, and SPBS-R. SARSS maintains stock record balances and reports them to the higher echelon SARSS. SARSS provides requisition status (estimated order-ship date, back ordered items, etc.) feedback to its supported ULLS. SARSS functions are outlined below:

  - Financial management.
  - Asset visibility.
  - Redistribution/referral.
  - Accountable records.
  - Materiel release control system.

- **Standard Army Ammunition System.** SAAS is the system that automates the supply of ammunition. ULLS-S4 interfaces with the Division Ammunition Office SAAS. SAAS performs the following functions:

  - Requests/receipts/issues of ammunition stocks.
  - Adjust ammunition stocks.
  - Allocates Class V by task organization and task force.

- **Standard Property Book System - Redesign.** SPBS-R is an interactive, on-line property accountability and reporting system operated by the PBO. The system can be located at separate company, battalion, brigade, or division level. SPBS-R performs the following property accounting functions as required by AR 710-2:

  - Property accountability.
  - Property book transactions and history.
  - Automated document register.
  - Property responsibility management (primary hand receipts).
  - Unit transfers.
  - Change of PBO and hand receipt holder inventory.
  - Equipment requisitioning, receipts, turn-ins, and issues.

- **Combat Service Support Control System.** CSSCS is the combat service support portion of the Army Tactical Command and Control System (ATCCS). CSSCS provides the means to collect, collate, analyze, and disseminate accurate and timely data to support decisions for the employment of CSS resources at brigade and higher levels. CSSCS supports the maneuver brigade commander and staff by

enabling the conduct of planning for internal logistics, personnel, medical, and command and control functions - including preparation of a logistical course of action analysis. CSSCS performs the following functions:

- Monitors critical assets.
- Allocates resources.
- Provides information management.
- Reports preparation; such as the logistics situation report (LOGSITREP).
- Provides situational awareness.
- Performs course of action analysis.

- **Global Combat Support System – Army.** GCSS-Army is an emerging system that will provide the Army a seamless, integrated, and interactive communications & automated information system at all force levels of combat service support from separate company through theater army. It will provide users a responsive and efficient means to rapidly anticipate, allocate, and synchronize the flow of available CSS resources to equip, deploy, project, sustain, reconstitute, and redeploy tactical forces in support of the national military strategy. Also, units will employ GCSS-Army in garrison and in field training, at installation sustaining base organizations and activities, and in support of joint services and allied operations. The system will streamline CSS information management by eliminating duplicative systems, consolidating logistics functionality, sharing data and computing applications among components of the system, and inserting advances in emerging information technology. The system will be of modular design where users will have access only to the system applications and software tools needed to perform the mission tasks at their location. The GCSS-Army will integrate and functionally modularize the following systems:

  - SARSS.
  - ULLS (all versions).
  - SPBS-R.
  - SAMS.
  - SIDPERS
  - DAMMS-R.
  - SAAS.

1-8. **SUPPLY RELATED AUTOMATED SYSTEMS.** There are several new and emerging automated systems that facilitate the supply process. A short description of each of these systems follows:

- **Movement Tracking System.** The MTS provides the capability to identify position, track progress, and communicate with the operators of tactical wheeled vehicles. Through the use of positioning and communication satellites, transportation movement control and mode operators can determine the location and communicate with tactical wheeled vehicle assets anywhere. This system enhances the supply system by providing real time positioning of vehicles, as well as allowing communication between the vehicle operators and their leaders. MTS performs the following critical functions:

  - Monitors positioning of transportation assets.
  - Allows communication between leaders and vehicle operators.
  - Lets leaders to divert vehicles from one destination to another.

- **Transportation Coordinators' Automated Information for Movement System II.** TC AIMS II will be a common, unit-level deployment information system; an installation/command deployment management system; a common carrier management tool; and, a TOE/battlefield transportation information system. TC AIMS II will support the functions previously accomplished by current systems, as well as planned functions – accommodating multiple users. Specific transportation missions executed by TC AIMS II include:

  - Deployment operations.
  - Force reception.
  - Movement control.
  - Daily freight movements.
  - Motor transport operations.
  - Cargo transfer operations.
  - Transportation planning.
  - Road space management.

- **Force XXI Battle Command Brigade and Below.** The FBCB2 system is the principal digital command and control system for the Army at brigade and below in the digitized division. In addition to feeding information to the other ATCCS Systems, the FBCB2 provides CSS information to the Combat Service Support Control System via CSS report threads. The FBCB2 is intended to be mounted in the major platforms at brigade and below to provide real time situational information to the user.

1-9. **SUPPLY CHANGES UNDER FORCE XXI.** Logistics operations within the division have changed dramatically under the Force XXI division redesign concept. The DISCOM commander can now focus logistics support

to meet the requirements, similarly to the way the DIVARTY commander focuses his fires to meet the division's indirect fire support requirements. The DISCOM organizational structure was changed and includes an end strength reduction. There are two major personnel changes (or pass-backs to EAD) that were required to get the DISCOM structure to the current end strength. One of these was the movement of water purification and distribution personnel to the COSCOM. The other was the movement of the PBO from the DISCOM to the COSCOM. The major structural changes affecting supply are in the battalions within the DISCOM and the deletion of the support platoons in the maneuver battalions. The DISCOM still has forward support battalions, but they are structured differently than in AOE units.

- **Force XXI Forward Support Battalion.** The Force XXI Forward Support Battalions now consist of an HHC, Base Support Company, Medical Company, and appropriate number of Forward Support Companies. There are three FSCs for a brigade with three maneuver battalions.

- **Force XXI Forward Support Company.** The Force XXI FSC is a multifunctional logistics company designed to provide organizational and direct support logistics to its supported maneuver battalion (or battalion task force). The FSC provides the following type support to the task force:

  - Field Feeding.
  - Ammunition support .
  - Fueling (both organizational and DS).
  - Maintenance (both organizational and DS).
  - Supply support (DS).
  - Personnel replacement transportation support.

- **Impact on Unit Supply.** While there is a great difference on how organizational services will be performed in Force XXI units, the impact of the Force XXI division redesign on unit supply operations will be minimal. The greatest impact will be for maneuver commanders to reduce their focus on supply functions so they can further focus on the combat mission. Also, automation improvements will continue to make supply processing more efficient.

Chapter 2

SUPPLY PROCEDURES

Not all classes of supply have the same issue procedures. This chapter addresses those unique characteristics of each supply class. The chapter also addresses organizational laundry procedures.

2-1. **RESPONSIBILITIES.** The battalion S4 is the primary staff officer having staff responsibility for internal supply. The S4 section is organized to process supply requests, receive, temporarily store, and issue supplies. The S4 office also assists commanders in maintaining supply accountability by producing subhand receipts, processing report of survey documents, and producing financial reports using the ULLS-S4 system. The battalion commander makes supply distribution decisions based on the S4 officer's recommendations. Routine supplies are delivered to the companies from the battalion field trains under the supervision of company or battalion supply personnel.

2-2. **PLANNING.** Initial stockage and resupply requirements for a theater can be determined using field experience, command guidance, unit SOP, or the OPLOG Planner computer program. The consumption rates in the OPLOG Planner may need adjusting based on the intensity of combat, type of conflict, type of unit, force structure, and METT-TC. You can request the OPLOG Planner via the Internet at http://www.cascom.army.mil/multi/Operations_Logistics_Planner. Supply planning is a continuous process for maintenance-related Class II and Classes III, IV, V, II, and IX because of sensitivity to weather, terrain, and tactical operations. Classes III and V requirements are particularly volatile based on combat intensity. Classes I, II, and VI requirements are usually easier to plan for because they are generally based on the supported population. Class VIII supplies are planned for and controlled by the brigade or division surgeon.

2-3.. **LOADS.** Loads are a quantity of durable and expendable supplies kept by units to sustain their operations. Loads of Class VI, VII, and X will not be kept. There are generally three types of loads. These are: basic loads, operational loads, and prescribed loads.

- **Basic Loads.** Basic loads are MACOM-designated quantities of Class I through V and VIII supplies, which allow a unit to initiate its combat operations. Items from the basic load will be used during peacetime only when no operational loads are available. Basic loads must be able

to be moved into combat using organic transportation in a single lift. Basic load items that are subject to deterioration or have a shelf life must be replaced as required.

- **Operational Loads.** Operational loads are quantities of Class I through V and VII supplies the organization keeps to sustain its peacetime operations for a given time. Operational load quantities are based on usage history data. These supplies may be moved into combat if transportation is available after essential lift requirements have been met.

- **Prescribed Loads.** Prescribed loads are quantities of maintenance significant Class II and IV, and of Class VIII and IX organizational repair parts kept to support a unit's maintenance program and are based on command designated items and demand history data. These parts may be moved into combat if transportation is available after essential lift requirements are met. AR 710-2 prescribes Army Policy and sets the numbers of lines and quantities authorized on a unit's PLL.

2-4. **CLASS I.** Class I is normally distributed through supply points. When units are part of operations exceeding battalion level, Class I will be issued by forward support battalions to each battalion food service section. Details of Class I supply are contained in FM 10-23. The AFFS is covered in chapter 4 of this manual.

- **Resupply.** Resupply procedures are standardized in SOPs and modified by the service support annex of the OPORD. The S4 checks on ration storage, field sanitation, and hygiene procedures. Army guidance for Class I consumption rates is in FM 101-10-1/ 2 and FM 10-23. Allowances must be made to feed soldiers more hot meals in very cold weather and more rations in strenuous mountain operations. Factors to use in determining ration requirements include the proportion of hot meals and the number of personnel supported as well as METT-TC. For example, it would be wise to increase MRE stocks if a mechanized infantry battalion is preparing for a deep attack. The battalion might be unable to get rations for a few days because helicopter resupply priority is given to Classes III, V, and IX.

- **Accountability.** Accountability of rations issued from a Class I supply point is accomplished by using DA Form 3111, DA Form 3294-R, and DA Form 5913-R. These forms provide the supply point and using units an audit trail for accountability. More details on ration accountability are in FM 10-23 and AR 30-21.

- **Basic Load.** Individual units are required to maintain a basic load of Class I on the property book. Basic loads are stored by supply personnel in a cool dry place until they are needed. Rations exposed to freezing and thawing should be inspected by veterinary service personnel before consumption. Class I basic loads are to be issued for consumption only during emergency conditions during peacetime. During contingency operations, Class I basic loads will be issued for consumption when required. Class I basic loads will consist of those items and quantities as directed by the MACOM and often consists of three MREs per person per day for three days. During peacetime, the basic load is drawn in garrison from the TISA and is paid for with operational funds. Coordination for the rotation of the Class I basic load items should be made with the TISA. More details on Class I basic loads are contained in AR 30-18 and AR 710-2.

2-5. **CLASS II.** CTAs 50-900, 50-909, and 50-970 list the basis of issue allowances for Class II. OCIE items in CTA 50-900, Appendix C, are unit property and thus deployable. The Army Service Component Commander or Army forces commander designates the Class II items in the Active Army Mobilization column of CTA 50-909 to be worn, carried, or transported to the area of operation. CTA 50-909, Chapter 2, identifies what can be air-delivered or airdropped. Unclassified military maps are now considered a Class II item and are requested through normal supply channels. Requirements for other items, such as administrative and housekeeping supplies, are based on unit needs. The S4 identifies these needs based on demand history.

- **Resupply.** Automated supply systems maintain demand data on expendable Class II items. Clothing and expendable equipment basis of issue depend on seven climatic zones. CTA 50-900, Appendix D, describes these zones. Appendix F of CTA 50-900 shows how the basis of issue can be affected by the soldier's MOS. Class II, III packaged, IV, and VII supply points are set up throughout the theater. These classes of supply are issued by the supply activities of the forward support, main support, corps support, and area support battalions in the theater. Companies submit their requisitions for Class II items through the S4 to the appropriate support activity. Requisitions for intensively managed Class II and IV items and restricted federal supply classification high priority requests may require command approval.

- **Accountability.** Accountability procedures for Class II items are don by the ULLS-S4 and SPBS-R. OCIE issued to soldiers is further accounted for on individual supply records maintained by unit supply personnel. Housekeeping and administrative Class II supplies do not require formal accountability at unit level but are issued to unit personnel on an as-needed basis.

- **Basic Load.** The basic load lists for combat items should be periodically reviewed. Class II basic load items and quantities will vary greatly depending on the MACOM requirements and the unit's mission. Higher headquarters will direct MOPP gear supply requirements.

2-6. **CLASS III PACKAGED.** Automated systems above unit level maintain demand history for Class III packaged. Combat consumption rates for packaged petroleum products are in SB 710-2, Chapter 2. Tables in SB 710-2 list both sustained and intense combat rates. Actual consumption requirements will depend on the type and quantities of using equipment on hand in the unit. Environmental considerations must be made for the storage of Class III products. See FM 10-15 for more information on environmental considerations.

- **Resupply.** Companies submit their requisitions for Class III packaged items through the S4 to the appropriate support activity. The transportation of these items should consider environmental consequences as well. Class III should never be transported on the same vehicle as Class I subsistence items.

- **Accountability.** AR 710-2 prescribes accountability procedures for Class III supplies. Expendable items that are not part of the basic load but consumed during normal use, require no formal accountability after issue.

- **Basic Load.** Basic loads of Class III packaged products are based on vehicle densities and do not require formal property book accounting.

2-7. **CLASS III BULK.** The battalion S4 forecasts the fuel needs of his unit. Battalion forecasts are reviewed and consolidated at brigade. They are then relayed to the appropriate MMC or support operations section of an FSB. Although the Army is moving toward a multipurpose fuel concept, fuel requirements vary with the types of equipment. Tactical vehicles need JP8. Some heaters, generators, and M-2 burners need MOGAS. Special measures must be taken to ensure fuel is not contaminated. Bulk fuel needs depend on the number of major items of fuel-consuming equipment in each phase of operation.

- **Fuel Forecasts.** The following determines battalion fuel forecasts:

  - The prescribed load for fuel and the capacity of all battalion fuel tanks and fuel cans.
  - Consumption data from previous operations.
  - The amount and type of equipment.
  - The quantity and rate that each piece of equipment uses fuel.

- The type of fuel each item uses.
- Operational plans from the S3.
- Local use limitations.

- **Resupply.** POL is normally obtained by the battalion transportation section from the Class III supply point. However, the maneuver battalions must go through at least a basic request for fuel from the supply point. Stockage problems and misunderstandings develop if units think they can just show up at the fuel point and get whatever they want when they want it. This forecasting also helps the supply point coordinate a schedule so that all the battalions do not show up at the same time. No formal request is needed for bulk fuel at a supply point. Requests from companies are not required for Class III resupply. POL tankers move forward with each LOGPAC. Requests are submitted to the combat trains CP for unusual requirements. The support platoon delivers Class III bulk and packaged to the companies. The first sergeants request resupply from the battalion combat trains. If tankers are attached to the companies, they return to the Class III point in the BSA to refill as soon as they refuel their companies. Each tactical vehicle stores a small amount of Class III packaged.

- **Accountability.** Drivers sign DA Form 3643 when their vehicles are refueled. Either the Support Platoon or the S4 maintains these forms. The S4 will prepare a monthly abstract of issues from DA Forms 3643. More information on fuel accountability is in AR 710-2 and DA Pam 710-2-1.

2-8. **CLASS IV.** CTA 50-970 authorizes basis of issue allowances for Class IV items.

- **Resupply.** Intensively managed items are requested from the supporting supply company and normally delivered by DISCOM, COSCOM, or theater-level transportation. Class IV items may be prepackaged or pre-configured for the mission and delivered as far forward as possible. Some Class IV is command-regulated, which mean all requests for those items must go through command channels.

- **Accountability.** Responsibility for durable items is assigned using hand receipts at the unit level. Records of responsibility are not maintained on expendable items. Class IV basic load items are not maintained on the property book.

- **Basic Load.** Basic loads required for individual fighting positions are in the company SOP part of each vehicle load plan. Combat vehicles, following the unit SOP, carry small combat loads of Class IV, such as

wire, pickets, and lumber. As with all basic loads, these items must be on hand or on order at all times.

2-9. **CLASS V.** Ammunition supply cannot exceed the controlled supply rate even though the required supply rate may be higher.

- **Resupply.** Class V comes from the FSB supply company's ATP in the BSA. Under MOADS, this ATP is organic to the DS ammunition company. The corps ammunition supply point locates near the division rear boundary. If required, both COSCOM and DISCOM trucks and helicopters can deliver ammunition to the battalion combat trains. The support platoon requests resupply based on unit expenditures or projected requirements and the controlled supply rate. The division ammunition officer validates the request. The ammunition is then picked up and transported to the combat trains, where it remains loaded until company resupply is needed. Class V resupply is based on the first sergeant's report of expenditures to the combat trains CP. It is delivered to the company as part of the LOGPAC. Class V is pre-positioned in a defense or delay. It is distributed as part of supply point or unit distribution. Details on ammunition are in FM 9-13.

- **Accountability.** Ammunition basic loads are maintained on the property book. More details on ammunition accountability are in AR 710-2 and DA Pam 710-2-2.

- **Basic Load.** Ammunition basic load quantities are assigned annually by the theater ammunition office. They are based on the unit's mission and analysis of the threat during peacetime. Ammunition basic loads are stored at ammunition supply points per the theater ammunition storage plan, until needed.

2-10. **CLASS VI.** When units are deployed, the provision of Class VI goes through three phases. First, soldiers are supposed to deploy with a 30 day supply. Then, health and comfort packs are issued gratuitously after the first 30 days of an operation. Finally, Class VI items are sold through AAFES and mobile PX sales teams as they become available in theater. There is no requirement to maintain a basic load of Class VI.

- **Resupply.** The unit requests Class VI supplies through supply channels when a PX is unavailable. Sometimes, these items can be bought from host nation and contract sources. Resupply flow is the same as for Class I. One Type I health and comfort pack can support 10 soldiers for 30 days. Type II health and comfort packs support 10 females with feminine hygiene products for 30 days.

- **Accountability.** Accountability for health and comfort packs is the same as for expendable Class II administrative and housekeeping supplies.

2-11. **CLASS VII.** Class VII items are authorized by MTOEs and TDAs. Class VII operations in a theater of operations include the expedited replacement of weapon systems including crews and weapons above .50 caliber in size. This includes tanks, mortars, and TOW weapons. It does not include small arms. The key is joint managing, reporting, and monitoring of complete weapon systems at battalion and higher levels. The G3 allocates replacement ready-to-fight weapon systems to the battalion. The battalion WSM coordinates the efforts of the S1 and S4. The commander allocates weapon system resources to the companies. He is aided by the S1, S4, and their higher echelon counterparts. The situation report advises the battalion of the status of each of its weapon systems. The battalion initiates the battle loss report that goes to brigade.

- **Weapons System Replacement Terms.**

  - Ready-for-issue weapon: A weapon removed from preservation, with all ancillary equipment installed. This includes fire control, machine guns, and radios. Ideally, each weapon has a full load of fuel, ammunition, and boxed basic issue items.
  - Ready-to-fight weapon system: A ready-for issue weapon plus crew.
  - Linkup: The process of joining a ready-for-issue weapon with its crew. This produces a ready-to-fight weapon system. The crew stows basic issue items, loads ammunition, checks communications, and sights and zeros weapons.
  - Weapon system manager: The person at battalion (XO), brigade (XO), division, or corps who closely monitors and maximizes the number of operational weapon systems.

- **Resupply.** In a theater of operations, major end items are issued based on battle loss reports. COSCOM may deliver large items directly to the unit trains. The HHC commander sends ready-to-fight weapons systems forward with LOGPAC. The support platoon picks up smaller items at the BSA supply point.

- **Accountability.** Accountability of Class VII items is accomplished with the use of SPBS-R. Accountability procedures for property book items are discussed in detail in Chapter 6 of this manual.

2-12. **CLASS VIII.** The DMSO issues, manages, and maintains the medical supplies within the division. The DMSO provides all medical supplies to the medical units in the division.

- **Resupply.** Medical companies of the FSB are stocked with limited Class VIII supplies for mobility purposes. The forward support medical companies provide emergency medical supplies or limited routine medical supplies to the battalion aid stations. Routine supplies are forwarded to the DMSO. Medical supplies are delivered by ambulance, backhaul, nonmedical trucks, or aircraft. The unit supply section supplies the combat lifesaver with Class VIII. The battalion aid station in the maneuver battalion supplies the company medics.

- **Basic Load.** Company medics carry a basic load of Class VIII supplies. The medical platoon leader monitors the levels of supplies for follow-on missions. See FM 8-10 for more details.

2-13. **CLASS IX.** Repair parts are the subject of numerous initiatives within the logistics community, which have been conceived to enhance the Army's readiness posture. These initiatives include but are not limited to: SARSS, ULLS-G, In-transit Visibility, Total Asset Visibility, and Velocity Management. The MMC manages the Class IX system. The G4 develops policies, plans, and procedures for establishing and maintaining supply levels and stockage lists.

- **Resupply.** ALOC items are usually flown directly from CONUS to DSUs and GSUs. At the GS level, the QM repair parts supply company, GS, provides repair parts in response to MROs from the MMC. At the DS level, repair parts are provided through maintenance channels. The unit stocks repair parts based on a PLL. Repair parts are issued in response to a specific request. The requests go from the unit's ULLS-G system to the supporting activity's SARSS. If the item is in stock, the supporting activity will issue the item. If the item is not in stock SARSS will check other systems for lateral transfers, or will order the part from their supporting activity. Parts are moved forward from a Class IX supply point during routine LOGPAC operations or as required to the UMCP.

- **Accountability.** The ULLS and SARSS maintain accountability procedures for Class IX items. Once the repair part is issued by the PLL clerk, no further accounting procedures are required for that item.

2-14. **CLASS X.** Material to support nonmilitary programs such as agricultural and economic development. Class X items are those not included in Classes I through IX. There are no Class X basic loads.

2-15. **MISCELLANEOUS .** Salvage is to be turned in to the local DRMO. Packaged water is water purified and packaged by a commercial organization by a military unit. It may be packaged in disposable bags or bottles. Captured enemy material may require authorization by higher echelon commanders in or for use or consumption. For example, captured enemy

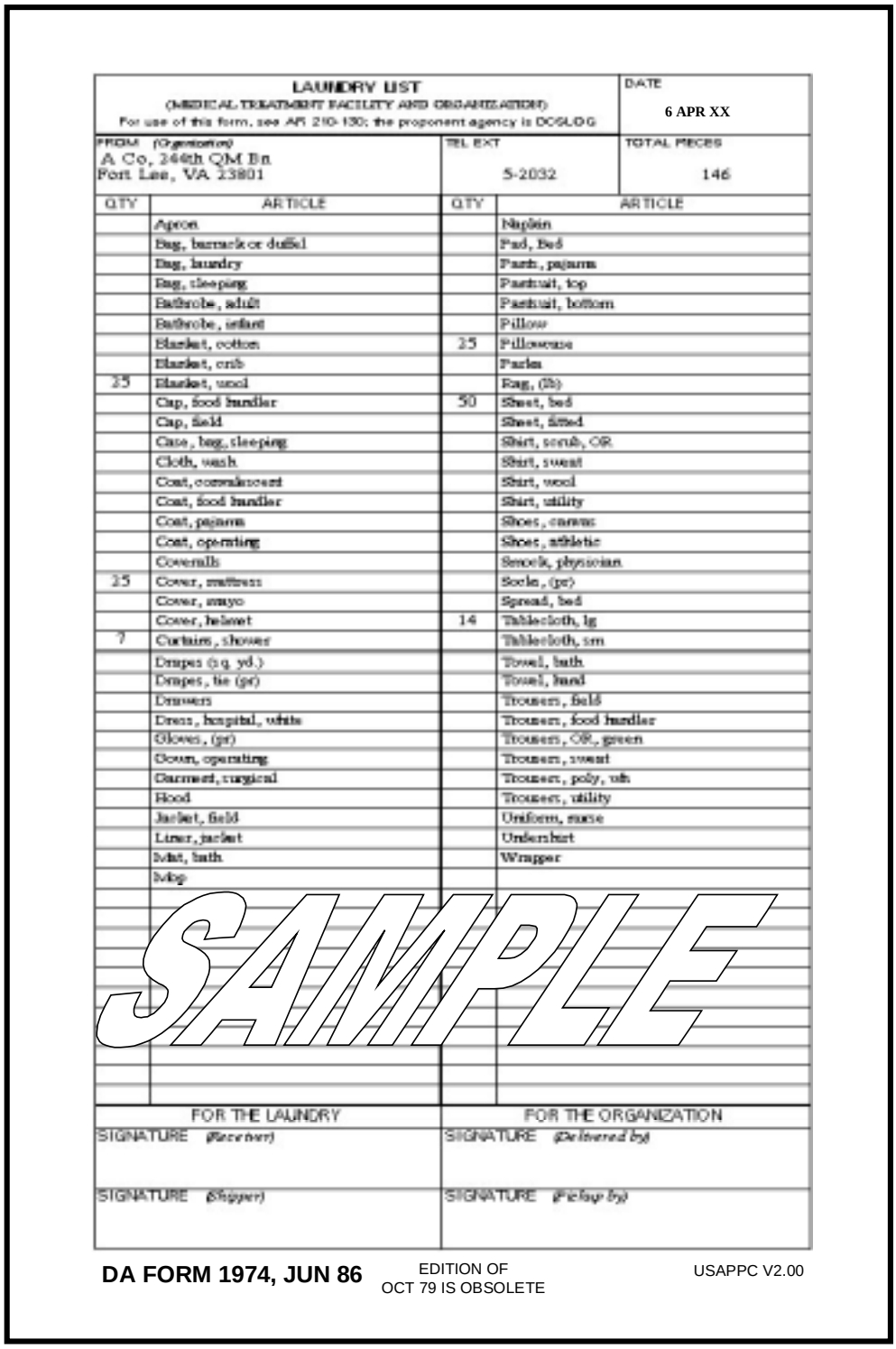
subsistence requires approval by the Army Service Component commander after recommendation of the veterinary service representative.

2-16. **ORGANIZATIONAL LAUNDRY.** During peacetime, units and organizations use the installation laundry service for items such as pillow cases, sheets, tablecloths, and other items not issued as personal clothing. The commander must monitor the way the supply personnel process unit and organizational laundry. Organizational laundry is turned in to the installation laundry collection point. The local SOP will direct the bundling procedures for the units and the dates they are to turn in laundry.

- **DA Form 1974.** DA Form 1974, figure 2-1, is used to process organizational laundry in garrison, such as sheets, pillowcases, blankets and blankets. A DA Form 1974 must accompany each shipment of laundry. The forms may be from the unit's publications account or the automated version may be used. Prepare the form following these procedures:

  - Prepare two copies (more, if required by installation SOP).
  - Write or type organization and station in the From block.
  - Put the organization telephone extension in the Tel Ext. block.
  - Count rag and web items in number of 1-pound bundles. Four pieces of rag items count as 1 pound.
  - Sign in the "Delivered By" block.

- There will need to be at least three copies of the form prepared when the laundry is shipped by a commercial carrier. The laundry manager checks the number of items turned in against the DA Form 1974. The organization turning in the laundry will receive a duplicate copy for its receipt file. Once the clean laundry is picked up, the unit will receive the original copy and place it in the files to show it was picked up.



LAUNDRY LIST
(MEDICAL TREATMENT FACILITY AND ORGANIZATION)
For use of this form, see AR 210-130; the proponent agency is DCSLOG

DATE: 6 APR XX

FROM (Organization): A Co, 244th QM Bn, Fort Lee, VA 23801

TEL EXT: 5-2032

TOTAL PIECES: 146

QTY	ARTICLE	QTY	ARTICLE
	Apron		Napkin
	Bag, barrack or duffel		Pad, Bed
	Bag, laundry		Pants, pajama
	Bag, sleeping		Pantsuit, top
	Bathrobe, adult		Pantsuit, bottom
	Bathrobe, infant		Pillow
	Blanket, cotton	25	Pillowcase
	Blanket, crib		Parka
25	Blanket, wool		Rag, (lb)
	Cap, food handler	50	Sheet, bed
	Cap, field		Sheet, fitted
	Case, bag, sleeping		Shirt, scrub, OR
	Cloth, wash		Shirt, sweat
	Coat, convalescent		Shirt, wool
	Coat, food handler		Shirt, utility
	Coat, pajama		Shoes, canvas
	Coat, operating		Shoes, athletic
	Coverall		Smock, physician
25	Cover, mattress		Socks, (pr)
	Cover, mayo		Spread, bed
	Cover, helmet	14	Tablecloth, lg
7	Curtain, shower		Tablecloth, sm
	Drapes (sq. yd.)		Towel, bath
	Drapes, tie (pr)		Towel, hand
	Drawers		Trousers, field
	Dress, hospital, white		Trousers, food handler
	Gloves, (pr)		Trousers, OR, green
	Gown, operating		Trousers, sweat
	Garment, surgical		Trousers, poly, wh
	Hood		Trousers, utility
	Jacket, field		Uniform, nurse
	Liner, jacket		Undershirt
	Mat, bath		Wrapper
	Mop		

SAMPLE

FOR THE LAUNDRY	FOR THE ORGANIZATION
SIGNATURE (Receiver)	SIGNATURE (Delivered by)
SIGNATURE (Shipper)	SIGNATURE (Pickup by)

DA FORM 1974, JUN 86 EDITION OF OCT 79 IS OBSOLETE USAPPC V2.00

Figure 2-1. DA Form 1974

- **Other Items.** Other items may be laundered at the installation laundry plant. The complete list of items the may be cleaned free of charge are contained in AR 210-130, Chapter 2. Some of those items include, but are not limited to:

  - Towels, uniforms, tablecloths, and napkins used in government-operated dining facilities.
  - Sheets, pillowcases, mattress covers, and blankets.
  - Initial issue items that need to be returned to stock.
  - MTF laundry as determined by the Surgeon General (per AR 40-2).
  - Clothing of prisoners held at a military confinement facility.
  - Government linen items used by civilian fire fighters who stay in government quarters during duty hours.
  - Items being prepared for turn-in to the DRMO.
  - Clothing of deceased military personnel.

- **Direct Exchange Items.** DX of government-owned items other than those from an MTF is authorized. DX items include, but are not limited to, sheets, pillowcases. and blankets. The installation laundry SOP will detail which items are available for DX.

2-17. **INDIVIDUAL LAUNDRY.** There is no provision to provide a free-of-charge laundry service to soldiers in garrison. However, during field training exercises and deployments where there is a SLCR team, host nation support, or contracted laundry services, soldiers will be able to have their uniform items cleaned without cost. The doctrine covering this policy is contained in FM 10-280.

Chapter 3

METHODS OF SUPPLY

This chapter covers several methods, or modes, units use to provide the different type of organizational supplies that were discussed in the previous chapter. It also provides information on some alternative sources of supply that some units may use when there are few to no other options.

3-1. **TYPES.** Resupply can be routine (LOGPAC), emergency, cached, or mobile pre-positioned. Routine resupply is the regular resupply of Classes I, III, V, and IX. It occurs at least daily and preferably in times of limited visibility. A supply cache is the placement and concealment of supplies on the battlefield. It is mainly used in the defense when subsequent battle positions are to be occupied. Mobile pre-positioning is like prestocking except supplies stay on the vehicles. The company covers each in its SOPs and training. DS resupply details, less Classes VIII and IX, are in FM 10-27-2.

3-2. **LOGISTICS PACKAGES.** A LOGPAC is a centrally organized resupply convoy originating at battalion field trains. A LOGPAC is the standard, preferred, simplest, and most efficient type of routine forward resupply. The battalion should use this method whenever possible to resupply forward companies. The S4 must plan and coordinate a LOGPAC so that it fully supports the commander's tactical plans. The company and battalion SOPs should specify its composition and march order. A LOGPAC should contain all supplies needed to sustain the company for a specified period. This is usually 24 hours or until the next LOGPAC. Normally a company LOGPAC includes unit supply, POL, and ammunition. Unit supply trucks should have Class I. The number of personnel determines the amount of Class I to be pulled forward. LOGPACs also have requisitioned Class II, mail, replacement personnel, water in cans, and a towed water trailer. POL trucks have Class III bulk and packaged. Ammunition trucks have a standard load of Class V for organic weapons systems.

- **Organization.** The HHC supply sergeant coordinates and supervises resupply of the main CP, scout and mortar platoons, combat trains, and attached units. The platoon sergeants of these elements or the senior NCO present reports the requirements to the HHC first sergeant or to the combat trains CP. LOGPACs for platoon-sized elements are

usually loaded on a single truck. The platoon sergeant picks up items at the LRP. Elements larger than a platoon use their own CSS vehicles for their LOGPACs. The HHC first sergeant delivers the LOGPAC to the main CP, combat trains, and scout and mortar platoons. Elements resupply from these locations or as previously coordinated. Alternatively, elements can be resupplied from a nearby company LOGPAC. The S4 coordinates this before the LOGPACs are dispatched. Special procedures may be needed to resupply the scout platoon. Each truck pulls back to a resupply site. Resupply is near the combat trains as the platoon repositions. One combat trains Class III truck refuels the platoon on short notice.

- **Movement.** Company supply sergeants assemble the LOGPAC under the supervision of the support platoon leader or HHC commander in the battalion field trains. LOGPAC vehicles also bring forward replacements and soldiers released from medical treatment facilities. When possible, all LOGPACs move forward together in a march unit with the supply sergeants and the support platoon leader. The LOGPAC convoy may include other vehicles moving forward. Designated soldiers from the combat trains and UMCP , company first sergeants, and platoon sergeants from specialized separate platoons meet the LOGPAC at the battalion. At least one combat trains senior representative (S1, S4, or senior NCO) should meet the unit first sergeant and support platoon leader for logistical coordination. The first sergeant submits routine personnel and logistics reports, requisitions, and the deadline status to the UMCP representative. The first sergeant receives mail and routine unit correspondence. Either he or his representative meets and guides the LOGPAC to the resupply point. He informs each driver which method the commander or XO has decided to use, service station or tailgate. Variations can be used for emergency resupply. When the LOGPAC arrives, the first sergeant informs the commander, who orders the platoons to resupply based on the tactical situation.

- **Service Station Resupply.** In the service station method, individual vehicles move back to a centrally located rearm and refuel point. Depending on the tactical situation, from one vehicle per platoon up to the whole platoon goes by in relays in a one-way traffic flow to resupply. This continues until the entire company is resupplied. Only vehicles requiring immediate unit or higher level maintenance stop in the maintenance holding area before taking on supplies. Any WIA, KIA, or EPWs are transported back to this point to await transportation. KIA must be segregated from WIA and EPWs. WIA and EPWs should not be transported together. See FM 19-4. Crews rotate to eat, receive mail and supplies, and refill or exchange water cans. When each platoon finishes, if possible, the platoon leader or his sergeant conducts a precombat inspection in the holding area.

- **Tailgate Resupply.** Combat vehicles remain in place, or they back up to keep the resupply vehicle covered. POL and ammunition trucks go to each position. Crewmen rotate through feeding areas and pick up supplies, water, and mail. Armored ambulances evacuate critically WIA while others are carried or walk to ambulances. KIA are brought to the holding area, and EPW are escorted to the rear. Vehicles needing maintenance are brought to the maintenance area.

- **ROM.** An alternative supply method for bulk fuel is Refuel on the Move. The primary purpose of ROM is to ensure that the fuel tanks on all combat and fuel-servicing vehicles are topped off before they arrive in the unit's tactical assembly area. A ROM system consists of enough hose connections, fittings, valves, and nozzles to operate a four to eight-point refueling operation using the 5,000-gallon tanker, HEMTT, or other mobile bulk fuel sources. ROM operations normally will be conducted from behind the division rear boundary to the rear of the brigade rear boundary. Although ROM may be configured in many ways, a ROM kit has been developed from existing hardware that will allow eight-point refueling from a 5,000-gallon tanker.

- **Return.** After resupply, LOGPAC vehicles are prepared for their return. Vehicles requiring recovery for maintenance or salvage are prepared for towing and kept in dispersed positions until moved out. KIA are put in mortuary bags, blankets, or ponchos. They are placed on fuel or cargo trucks or towed disabled vehicles. Medical personnel determine which WIA are put on cargo trucks or disabled vehicles for transportation to the LOGPAC release point. KIA and WIA should never be transported in the same vehicle. Always segregate by condition. EPWs are consolidated on damaged combat vehicles or empty cargo trucks. Walking wounded sometimes guard EPWs. The morale and physical condition of the EPWs must be considered when determining guard requirements. The first sergeant tells his supply sergeant the requirements for the next LOGPAC. The supply sergeant collects mail, personnel, and equipment for transport to the rear. The first sergeant or supply sergeant returns the LOGPAC to the support platoon leader at the field trains or LRP. For greater security, return should be as a reunited LOGPAC convoy. The S4, based on the tactical situation, sites two to four LRPs well forward and where they are easily found. The operations overlay should include the LRPs, MSR, and combat and field trains. The combat trains CP notifies subordinates and the field trains well in advance which LRPs will be used. The SOP covers the LOGPAC convoy LRP arrival time and the time it stays. If the tactical situation requires a change, the S4 notifies the units. Subordinates must ensure the return of resupply vehicles as soon as

possible. Class III and V vehicles never sit empty. If the schedule cannot be met, the combat trains support operations officer CP must be notified. More information on conducting LOGPAC operations is contained in FM 71-1 and FM 71-2.

3-3. **PRE-POSITIONED SUPPLIES.** Most defensive operations require pre-positioned supplies, primarily Classes III, IV, and V. All element leaders down to vehicle commander and squad leaders verify the sites during reconnaissance and rehearsals. There are two methods of pre-positioning supplies for a platoon. In one method, Classes III and V are in one central location in the assembly area or battle position. Each vehicle pulls into the area for Class V. Class III should also be positioned in the same location. A pre-positioned tanker refuels by the service station method at the rear of the position. In the other method, Class V is pre-positioned near each vehicle position. The tanker is pre-positioned in the rear of the platoon position. When the platoon arrives, three vehicles move into their fighting positions and start rearming. The fourth vehicle stops at the tanker and refuels. Then, it moves to its fighting position, and the other vehicles take turns refueling. Consider the following when pre-positioning Class V:

- Covered and protected positions should be used.
- Pre-positioning frees transportation assets for resupply.
- The company lacks site guards, so it risks loss of the supplies.
- Pre-position fuel far enough away so that its destruction will not harm unit assets.
- Pre-positioning fuel is difficult. It requires extra equipment including transfer pumps, drums, or 5-gallon cans.

3-4. **EMERGENCY RESUPPLY.** Emergency tactical and logistical needs may require special LOGPACs. The combat trains have a limited amount of Class III and V for emergency resupply. In emergencies, a company LOGPAC may meet the first sergeant at a rendezvous point. By itself, a LOGPAC is very vulnerable to attack, loss of communications, and disorientation. Emergency resupply may involve Classes III and V, NBC equipment, and possibly Class I and water. It usually comes from the support platoon and company teams. Limited resupply can be made to platoons under fire at the closest concealed position using the tailgate method. Fighting vehicles can also drop back to resupply as the platoon leader directs. The service-station method is appropriate in combat lulls. The S4 coordinates emergency resupply from the combat trains and then refills or replaces the combat trains assets. The unit leader may need to request immediate airdrop resupply due to unanticipated, urgent, or priority requirements. FM 100-27 explains request channels, as should the organization's SOP.

3-5. **DISTRIBUTION.** As a rule, CSS elements provide support on an area basis. They use a varying combination of two distribution methods--supply point and unit.

- **Supply Point Distribution.** The supporting unit issues supplies to the supported unit at a supply point. The supported unit draws supplies and transports them back to the unit with its own transportation.

- **Unit Distribution.** The supporting unit issues the supplies and arranges transportation. The supporting unit delivers them to the receiving unit. Unit distribution is preferred, but it is not always possible due to resource constraints of the support unit. The preferred method of transportation in unit distribution is throughput distribution. In throughput distribution, supplying units avoid unnecessary handling by bypassing one or more intermediate supply units or installations. They ship supplies directly to an SSA or the using unit as far forward as possible. COSCOM or even the TSC may directly deliver some supplies, especially Classes III and V, but normally not forward of the field trains.

- **Distribution Factors.** Factors to consider in determining the type of distribution to use include:

  - The requirements for and availability of personnel and equipment to deliver and pick up supplies. (This includes trucks, helicopters, and MHE.)
  - The mission and location of the supported forces.
  - Support priorities.
  - The adequacy of road networks and the ability to travel off-road.
  - Competing road priorities.
  - Distances involved.
  - Threat level.

3-6. **CONTROLLED EXCHANGE AND CANNIBALIZATION.** Supervised battlefield cannibalization and controlled exchange may be used when parts are unavailable on a timely basis through the supply system. The decision to perform a controlled exchange should be made as close to the site of the unserviceable equipment as possible and be based on the guidance of higher headquarters. Maintenance personnel will make recommendations to the commander.

- **Controlled Exchange.** Controlled exchange is the removal of units of serviceable parts, components, assemblies, and subassemblies from unserviceable, economically reparable equipment for reuse in restoring a like item of equipment to a combat operable or serviceable condition. It is normally done on items being evacuated for extensive or time-consuming repair. The serviceable part removed is replaced on the item by the unserviceable part. Use of controlled exchange from the

ORF is not permitted. The document register, due-in records, and record of demands must be adjusted when controlled exchange is used. For more details, see AR 750-1.

- **Cannibalization.** Cannibalization is the removal of serviceable and unserviceable parts, components, and assemblies from materiel authorized for disposal. It is a major source of critical repair parts in combat. It is usually done at a cannibalization point. Using units are not authorized to cannibalize organic equipment in peacetime. The echelon commander with input from the G4 normally establishes cannibalization policies.

Chapter 4

Water and Field Services

Section I of this chapter introduces some basic water purification and distribution policy and procedures. Section II describes the three common field services of food service, shower & laundry, and mortuary affairs.

SECTION I WATER

4-1. **RESPONSIBILITIES.** The battalion S4 has staff responsibility for potable water supply. The S4 estimates daily water requirements for the battalion and any assigned or attached units. The requirements are consolidated and submitted to the battalion's supporting element. Commanders and logistics staff planners at all levels should use the OPLOG Planner to determine water requirements.

4-2. **INDIVIDUAL WATER REQUIREMENTS.** Individual water requirements are affected by climate, work intensity, NBC environments, and availability and extent of field services. Factors to consider are explained below.

- **Drinking Water.** Drinking water is needed to prevent dehydration. All drinking water must be potable. Under hot conditions, water is required to prevent heat injuries, such as cramps, exhaustion, and stroke. Water consumption will increase for that portion of the force operating under MOPP 3 or MOPP 4 conditions depending on the climate.

- **Hygiene.** Soldiers need water for personal hygiene. This water must be potable. This includes hand washing, sponge baths, brushing teeth, and shaving.

- **Shower and Laundry.** The shower and laundry site must have an ample supply of clean water, which can be nonpotable. The water must be as free from impurities as possible. The Office of the Surgeon General recommends, from a health maintenance standpoint, a

minimum of one shower and one change of uniform per soldier per week. This meets minimum health standard requirements. However, from a morale standpoint, commanders may desire more frequent shower and laundry services. Logistics planners must be aware of the impacts on both force structure and water consumption associated with providing central hygiene support above The Surgeon General established minimum.

- **Food Service.** Water is needed for meal preparation and kitchen sanitation. This water must be potable. Heat and serve UGRs require 0.5 gallon per meal. The use of disposable eating utensils as part of the MRE and UGR reduces the amount of water required.

- **Medical Operations.** Medical use varies with combat intensity, weather, number and severity of casualties treated, number and type of medical facilities, and evacuation policies. Use only potable water for medical use. Water used in medical operations is that which is required to perform the 14-patient care activities associated with aid station, dispensary, and hospital functions.

4-3. **EQUIPMENT CARE REQUIREMENTS.** Water use for the care of equipment depends on the amount and type of equipment. Potable water is not required.

- **Vehicle Maintenance.** To replace their coolants, vehicles need water. This water may need to be filtered of salt and foreign material. Potable water is not required. Calculate the requirement by totaling the radiator capacities of all unit vehicles, or use the per-vehicle estimate of 0.5 to 1 gallon. This depends on a temperate or hot climate.

- **Aircraft.** Water used in aircraft maintenance is that which is required to perform the daily maintenance operations. There is no requirement for potable water; however, fresh water is recommended to avoid corrosion. Weekly wash down of aircraft and phased maintenance aircraft cleaning generate the largest water consumption requirements for aircraft.

4-4. **OTHER SUPPORT REQUIREMENTS.** Water use for support requirements varies with the tactical situation, type of battlefield, and combat intensity.

- **Engineer Operations.** The terrain and type of construction affect engineer water use. Engineers use water to make concrete, roads, airfields, pipelines, drilling wells, operating quarries, and asphalt

plants. If the water is scarce, it cannot be used for dust control for roads and quarries. Fresh water is required for pipeline testing and desired for most other missions since salt water may cause corrosion or reduce material strength. TRADOC Pam 525-11, Net engineer Construction Water Requirements, provides some planning estimates.

- **NBC Decontamination Operations.** The frequency, intensity, and location of chemical attacks affect water requirements for decontamination. Decontamination sections need 12.4 gallons for biological and radiological decontamination of an individual, 100 gallons for operational equipment decontamination, and 450 gallons for thorough decontamination of a major end item. Potable water is not required.

- **Mortuary Affairs.** Water usage depends on the fatality rate. Potable water is not required, but must be free of dirt and disinfected. Mortuary Affairs Specialists (MOS 92M) not only use water for personal hygiene, preparing remains, cleaning equipment and vehicles, but to decontaminate remains when required.

4-5. **WATER SUPPLY PROCEDURES.** Water supply companies set up and operate bulk storage and distribution facilities in the corps and EAC. Water points are set up as close to the using unit as possible. Usually water is delivered with Class I. If possible, water points are collocated with Class I supply points. The HHC commander or support platoon leader coordinates with the supporting FSB to pick up water from the MSB water supply point. Depending on water sources, a water point can be a purification or supply point or both. Water purification teams produce potable water. The most forward water points are in the BSA even if they are points requiring water to be transported to them. Transportation medium truck companies line haul potable water in tankers or collapsible fabric tanks. If required, a GS water supply system may be established. Using units use their own transportation and water trailers to get their water. However, water supply units can provide some water to units unable to help themselves. The MSB S&S company purifies water and, if necessary, distributes it either directly to the users or into collapsible fabric tanks. Do not use potable water containers or tanks for nonpotable water or for Class III items. Supporting DISCOM supply units run forward water points. Before water sources are used for potable purposes, preventive medicine personnel must check them, and the command surgeon must approve them. Quality surveillance of potable water supplies at the company level and below is the responsibility of each unit's field sanitation team. Division and higher preventive medicine personnel monitor all other potable water supplies. In the corps rear and EAC, the nondivisional DS supply company provides DS water support on an area basis. The water section operates supply points established at approved water sources. The DS supply company can establish mobile supply points and provide limited unit distribution. In regions lacking sufficient water resources, GS water supply units provide water. They pump, de-mineralize, purify, store, test, and transport water to water points. Engineer units drill

needed wells. Each vehicle should carry water cans to be refilled or exchanged during Class I resupply and LOGPAC operations. More details on water operations are in FM 10-52.

SECTION II FIELD SERVICES

4-6. **FIELD FEEDING.** The Army field feeding system is based on consolidating feeding resources. Battalions may consolidate field feeding at battalion headquarters level using the MKT or perform decentralized feeding at the unit level using the KCLFF-E. The food service section prepares UGRs. When consolidated operations are being performed, the food is packed in insulated containers and sent forward with the LOGPAC to each company. Unit personnel, under the supervision of the first sergeant help the cooks serve meals. The insulated containers are returned for reuse. Units in the rear areas of brigade and higher echelons are fed similarly by their battalions or by unit kitchens assigned to feed specific units or personnel. For more details on Army field feeding, see FM 10-23.

4-7. **SHOWER, LAUNDRY, AND CLOTHING REPAIR.** SLCR sections originate from the company base of the field service company, DS. SLCR sections are sent to supported units when scheduled by the platoon headquarters. Each section can provide shower, laundry, limited clothing repair, and delousing services at separate locations. Each section can support 3,500 soldiers per week. These sections provide services at the supported unit's request. Operational areas should be located at or near a plentiful water source, or arrangements should be made for delivery from the supporting water point. If there is doubt about the available water source, coordinate through the field services company with the battalion operations officer or through the supported unit to get preventive medicine soldiers to test the water. Supported units will be requested to help in site setup and to guard valuables. The field services company provides services to divisional and nondivisional personnel from the corps forward area to the forward line of troops.

4-8. **MORTUARY AFFAIRS.** Mortuary affairs operations have a direct impact on the morale of soldiers and the public. Mortuary affairs support is provided throughout the TO on DS and GS levels. Mortuary affairs in a TO include searching, recovering, tentatively identifying, and evacuating remains and their personal effects through the TO to CONUS, and subsequently to the person authorized to direct disposition, and the person eligible to receive effects for final disposition.

- **Responsibilities.** Commanders of all units are responsible for the search, recovery, tentative identification, and evacuation of remains and PE to a MACP. Remains include but are not limited to members of

the unit, other services, and other remains that may be found in the commander's area of responsibility. Remains must be evacuated at the first opportunity. Commanders must ensure that search, recovery, and evacuation operations are conducted respectfully.

- **Search and Recovery.** When remains are recovered, all personal effects and identification media must be safeguarded and kept with the remains. All personal effects, portions of remains, and identification media not found on remains, must be kept separate and noted as to the location of these items. Ensure the DD Form 1380 is secured to the remains. If there is not a DD Form 1380, have medical personnel prepare one prior to evacuation. When evacuating remains, ensure they are shrouded and kept from view. The remains are shrouded with any suitable material such as a human remains pouch, poncho, or poncho liner. The remains are then evacuated to the nearest mortuary affairs collection point.

- **Isolated Interment.** Isolated interment (formerly known as emergency burial) of remains should only be conducted as a last resort when the tactical situation does not allow evacuation or when remains are NBC-contaminated and cannot be decontaminated. The geographic combatant commander must approve the isolated interment. More details on isolated interments are in JTTP 4-06.

- **Casualty Reporting.** Unit commanders are responsible for casualty reporting. They are to report casualties according to AR 600-8-1, Chapter 6.

- **Personal Effects.** Unit commanders must ensure that property left in unit, hospital, or rear storage areas by persons deceased, missing, missing in action, or captured by the enemy are collected, safeguarded, inventoried, and shipped to the effects depot.

4-9. **FORCE PROVIDER.** Force Provider is a complete, containerized, highly deployable bare-base system that is engineered to provide climate-controlled billeting; dining; shower; latrine; laundry; and morale, welfare and recreation facilities in modules designed to support battalion-sized units (550 soldiers each). It is packaged with utility systems, including water storage and distribution, fuel storage and distribution, wastewater storage, and power generation and distribution capabilities. Force Provider's basic building block is the TEMPER, which comes with external forced air heating and cooling systems. Force Provider missions include providing rest and refit for combat-weary soldiers, supporting theater reception, and acting as an intermediate staging base or as a base or redeployment camp for humanitarian assistance, disaster relief, and peacekeeping operations. Force Provider is NOT designed for use as a supply point to resupply units.

Chapter 5

Supply in Tactical Operations

Organizational Supply procedures are different in garrison than in a deployed situation. Procedures during tactical operations can vary based on the type of environment. Each class of supply may require different quantities or type depending on the environment where the unit is deployed. This chapter outlines differences in supply procedures and how environmental differences can change quantities and amounts of the differing classes of supply.

5-1. **NIGHT OPERATIONS.** Night operations affect the resupply of all classes of supply, especially Classes I and III. Class I supply points and field kitchens must operate at night. Night vehicle use tends to increase idling and use of lower gears, thus increasing POL requirements. As a rule, demand increases for luminous paint and tape, engineer tape and stakes, shelters, night vision devices, flashlights, all batteries, infrared filters, red-lens goggles, replacement bulbs, and chemical light sticks.

5-2. **NUCLEAR, BIOLOGICAL, OR CHEMICAL WARFARE.** Under conditions of NBC warfare, weather, terrain, and weapons all impact supply operations. Commanders should use terrain for cover and concealment and to disperse the force. They should maintain sufficient stocks of NBC detection supplies, MOPP suits, water, and decontamination equipment. The rate of decontamination varies with time and the weather. Weather factors include precipitation, humidity, wind, and sunlight. Requirements for Classes I, II, VI, VIII, and water are much less predictable than usual. More petroleum, especially JP8, is consumed. More time is needed for LOGPAC resupply, casualty treatment, and on-site repairs. Field tests have shown that CSS operations were seriously degraded in NBC environments because of the following:

- Rate of travel was slower.
- Engines ran longer and idled more.
- Loading times were greater.
- Initial diagnosis of equipment failure was incorrect.
- Setup of unit Class III points required more time..

- Cover and protection of ammunition were significantly degraded.

- There was unsatisfactory performance in decontamination of equipment before initiating repairs, and there were reduced safety practices

- Fewer supply requests were completed.

Enemy use of NBC weapons increases delousing and maintenance requirements and the need for Class IX. Contamination may render equipment and supplies temporarily or permanently unusable. More details on NBC operations are in FM 3-3, FM 3-4, FM 3-5, and FM 3-100.

5-3. **JUNGLE OPERATIONS.** Jungle operations are affected by terrain, weather, and vegetation. Traffic and security problems increase. The transportation network may require resupply by pack animals, human portage, helicopters, and airdrop. US forces in jungle operations may be at the end of a long line of communication. Logistics operations must be done as far forward as possible to take advantage of the security offered by combat units, to cut road movement, and to reduce response time. Unit distribution is the norm. High temperature, humidity, and rainfall cause rapid rusting of weapons and equipment; deterioration of clothing, boots, canvas, and rubber items; weakening of batteries; and corrosion of electrical connections. Lenses and dials fog up rapidly. Frequent weapon cleaning and oiling are required. The terrain makes aerial resupply common. Its responsiveness allows combat trains to stock less supplies. Thus, combat trains may consist only of medics, a maintenance element, and emergency resupply of Class III and V supplies. The field trains would have subsistence, POL, vehicles, ammunition, an aid station, maintenance elements, and water purification facilities. Trains should be far enough forward to respond quickly, but still have minimal enemy exposure. However, the predominance of aerial resupply may allow collocation of the combat and field trains in the brigade trains area. All trains should be near landing zones. Field, combat, and company trains should also be close to a road, river, or trail as an alternative LOC. New landing zones and supply routes may have to be constructed to meet these requirements. The prevalence of ambushes, mines, and infiltration requires securing both the supply routes and CSS convoys. More details on jungle operations are in FM 90-5.

- **Supply Routes.** Secure supply routes by clearing vegetation alongside roads and using day and night aerial and ground patrols. Locate rear elements along supply routes and have personnel clear, secure, and maintain the routes. Use scout dogs, minesweeping teams, and surveillance, target acquisition, and night-observation devices. Secure bridges and large culverts which cross supply routes.

- **Convoys.** Secure convoys with ground and air armed escorts using airborne forward observers and forward air controllers. Conduct counter-ambush training. Prepare vehicles for movement. Put at least two layers of sandbags on cab and cargo area floors.

5-4. **URBAN OPERATIONS.** Urban areas have the advantages of cover, concealment, and adequate road networks. They sometimes have operable utility services, airfields, railroads, waterways, and underground passageways. CSS units should use existing facilities and should be dispersed throughout built-up areas to reduce vulnerability to detection and attack. Urban areas require a greater emphasis on fire protection and security against attack, sabotage, and pilferage of all classes of supply. Communications are hindered by the extremely short range of tactical radios in built-up areas. An increased emphasis is put on unit distribution. Forward delivery of supplies may be more difficult due to refugees. They may be panic-stricken and infiltrated by enemy agents and sympathizers. Obstacles, rubble, mines, snipers, and ambushes may also hinder the forward delivery of supplies. Enemy capabilities may preclude much forward aerial resupply. Resupply may require using armed convoys, substituting lightly armored vehicles for trucks, and portage by unit personnel. More details on urban operations are in FM 90-10-1.

- **Class I and Water.** Delivering prepared meals to forward elements may be extremely difficult. Forces which might become isolated should consider stocking an extra day or two of MRE, if it will not impede the unit's mobility. Water resupply may be difficult. Local sources must be tested, carefully monitored, and medically approved before consumption. The requirement for portable water containers increases for dispersed, small unit-level stockage, especially in defensive operations. Civil affairs relief efforts may increase demand for Class I and water.

- **Class III.** Tactical vehicles use less fuel due to increased unit distribution and dismounted operations. However, engineer and power generating equipment may use more fuel. Delivery difficulties may require an increased requirement for small, portable fuel containers.

- **Class IV.** Defensive operations require increased supply of barrier materiel when local materials and debris from structures (other than historical monuments, churches, mosques, temples, schools, orphanages, hospitals, and art, science, and public service buildings) are inadequate. Stockpiling sand for fire fighting in individual fighting positions is a priority.

- **Class V.** Attacking built-up areas may require MSR changes. Artillery and mortar ammunition consumption increases when using sustained isolating and interdiction fires. The proportion of time and variable time artillery fuses in basic loads may increase. Increased

consumption of demolition material, ammunition, smoke munitions, mines, hand grenades, and light antitank weapons is likely. Ammunition requirements are 5 to 10 times greater in urban environments than in field environments. Using ammunition caches in defensive positions is recommended.

- **Class VI.** Transportation priorities may limit Class VI availability. However, health and comfort packs should be supplied with LOGPACS.

- **Class VII.** Forward repair needs to be emphasized. Disabled equipment should only be evacuated to guarded sites along supply routes or to the combat trains.

- **Class VIII.** The isolation of forces and intensity of battle may increase Class VIII needs. Evacuation difficulties may increase requirements for first aid items. The disruption of civilian health services, food supplies, utilities, and sanitation services may sharply increase the risk of disease and epidemics. Local hospitals may be inoperable, and medical supply channels may be disrupted.

- **Class IX.** It may be necessary to stock high-use repair parts for weapons systems and tactical vehicles in unit trains. Controlled substitution may be required due to the inability for using aerial resupply.

5-5. **DESERT OPERATIONS.** The desert provides nothing to sustain and much to hinder a force. Units use more water and fuel. Units move faster and more often in the desert. Also, great distances between units stretch LOC. Thus, requirements for Class III and transportation support increase. Only tactical vehicles may be able to go off the few roads and only with reduced loads. The lack of significant terrain features hinders navigation. Also, the environment leaves trains and supply points exposed to the sun and sandstorms as well as land and air observation and attack. Vulnerability to attack requires wide dispersion. This increases the problems of command and control and security. Minimize stockage levels and off-vehicle stockpiling to enhance mobility. More details on desert operations are in FM 90-3.

- **Class I and Water.** Water is scarce in the desert. If water is unavailable locally, it must have a high transportation priority. Water resources are a prime enemy target. All units must continually watch for and report possible water sources to their headquarters. Sources include oases, dry wells, dry water courses, and open bodies of water. Only preventive medicine personnel evaluate water. The command surgeon determines potability. Soldiers cannot indefinitely consume less water than their bodies need. Temporary water rationing with

medical advice is possible. However, it can reduce combat efficiency. A suggested priority order for water follows:

- Drinking water.
- Vehicle and equipment cooling systems.
- Other personnel uses to include

  - Medical aid.
  - Cooking.
  - Cleaning food service equipment.
  - Personal hygiene.
  - Washing clothes.

Potable water must be used for drinking, personal hygiene, food preparation, and medical uses. All other requirements may be met with nonpotable water. Vehicle decontamination has a high priority. Daily forecasts should note the status of reserve water and rations.

- **Class II.** Soldiers need desert camouflage uniforms, tropical clothing, sweaters, sleeping bags, eye protection goggles, neck scarves, canteens, and hand tools.

- **Class III.** Rapid and frequent movement over great distances and difficult terrain increases the demand for fuel. The desert's heat, sand, and sandstorms increase the need for oils, lubricants, and filters. Fuel reserves should be divided between combat and field trains based on METT-TC. Sometimes fuel cans may be needed to apportion fuel, since sand may degrade a loaded fuel tanker's cross country capability. Cans, however, may create handling and noise problems. Class III requirements should be forecast as far in advance as possible.

- **Class IV.** Make maximum use of local materials. Sandbag use increases. Make requests for Class IV as soon as you know the requirements.

- **Class V.** Ammunition consumption is high because of excellent targeting and the need for extensive suppressive fires. The commander

may need to restrict use of some ammunition types. Battalion task force trains should have a one-day supply of ammunition and missiles for each of its vehicles. When trains are echeloned, this supply should be divided between the combat and field trains. The desert makes units quite vulnerable to air attack. Therefore, ADA units rapidly consume their ammunition stocks. A task force commander must ensure his ADA weapons are supplied with ammunition. Other task force vehicles may carry spare ADA ammunition.

- **Class VI.** Gratuitous health and comfort packs must be supplemented with extra sunblock and sunglasses.

- **Class VII.** PMCS must be conducted more often than normal due to exposure to extreme temperatures and sand.

- **Class IX**. The desert greatly increases maintenance requirements and the need for repair parts. This includes filter elements, water hoses and pumps, clamps, gaskets, oil and greases, seals, fan belts, ignition system parts, tires, wheel and sprocket nuts, wedge bolts, and spare caps for all liquid containers. Small, high-use items should be kept as far forward as possible. They may also be kept on fighting vehicles. The DS maintenance company contact teams, which may be with the task force trains, can carry heavier and larger items than unit maintenance vehicles. Sometimes Class IX items need to be flown to repair sites.

5-6. **COLD WEATHER AND MOUNTAIN OPERATIONS.** Details on cold weather operations are in FM 31-70 and FM 31-71. Details on mountain operations are in FM 90-6. Weather in mountainous regions is extreme. It varies depending on altitude, storms, and wind exposure. Fog clouds that can severely reduce visibility and mobility are common. Rain, snow, and ice can hinder operations by obscuring, degrading, blocking, or damaging bridges, roads, and trails. Landslides, flash floods, and avalanches are common. The nature of mountain warfare means that LOC are limited and difficult to maintain and secure. Tactical radios can have reduced operating ranges in mountainous terrain. Airfields, good roads, and railroads are not always readily available. A footpath may have to substitute for a good road. Mountainous terrain and weather constrain CSS units. At the same time, they offer enemy airmobile and infiltration forces opportunities to attack, ambush, mine, and set up roadblocks on supply routes. Thus, CSS units may have to enhance their mobility and dispersion while aggravating their command and control and local security difficulties. Therefore, they should emphasize security and move support as far forward as possible. Throughput distribution using aerial resupply is the preferred method of distribution in mountainous terrain. Heavy wheeled vehicles with tractor trailers can rarely negotiate narrow, unimproved, mountain roads or move cross-country over rugged terrain. The various classes of supply are affected differently by cold weather.

- **Class I.** The rigors of mountainous terrain increase caloric requirements for soldiers. Planners should plan for increased potable water usage.

- **Class II.** Operators require cold weather clothing and equipment. Examples include--

    - Tire chains.

    - Waterproof matches in waterproof boxes.

    - Winter camouflage and extreme cold weather clothing.

    - White rucksack and web gear coverings.

    - Extreme cold weather sleeping bags.

    - Skis, sleds, and snowshoes.

    - Lip balm, sunblock, and windburn prevention cream.

    - White and loam-colored camouflage face paint.

    - All-weather lubricants.

Use all-weather lubricants on all small arms below 0°F. First, strip weapons completely. Clean them with a dry-cleaning solvent to remove all lubricants and rust prevention compounds. Use white nonglossy paint for camouflaging vehicles, weapons, and equipment. As the length of arctic nights increases, so does the need for flashlights, batteries, and light sticks. Soldiers in mountainous terrain need rope and other climbing equipment. Class II items must be replaced more often.

- **Class III.** Road net limitations reduce ground fuel consumption and increase aviation fuel requirements. Vehicles may not be able to get to tank and pump units. Fuel cans may be needed. Very cold weather can cause some increases in POL use. More antifreeze and gas treatment items are needed. Engines idle more to reduce their number of starts. Seal POL containers to keep out moisture. Do not mix various grades of engine oil or gear oil. Also, do not mix standard and arctic grades of antifreeze. Allow for expansion when filling radiators.

- **Class V.** Ammunition consumption increases in mountainous terrain. Weather and terrain restrict visibility, making it more difficult to adjust artillery and mortar fire. Because of snow, heavy forests, and rugged terrain, the bursting radius of ordnance is small. Mortars expend more ammunition in mountains. Due to their portability and high-angle trajectory, mortars provide the most responsive indirect fire to cover the dead space common at mid and short-range distances. Cold temperatures cause the 4.2-inch mortar to waste more short rounds. Because snow reduces the effect of contact-detonated ammunition, demand for VT-fuse-type ammunition increases. Mountain operations may require portage by unit personnel. Store ammunition in its original container, under a tarpaulin, above the ground, and on dunnage. Mark ammunition so it can be found should snow cover it. Clean it of snow and ice before repacking. Clean magazines of all oil, snow, ice, and condensation. Check them often. Keep magazines, drums, containers, and components closed to prevent condensation. As a rule, keep ammunition at the same temperature as the weapon. Unpack only what is immediately needed. Protect variable time fuses from low temperatures. Their performance degrades below -20°F.

- **Class VII.** Sniper rifles are useful in mountains because of their long effective range. Units with more observation posts and separate positions may need extra radios and GPS, support radars, and binoculars. It is difficult to evacuate equipment. Do so only to where repairs can be made, often the combat trains area. Transportation limitations require emphasizing maintenance and repair instead of replacement of major end items.

- **Class VIII.** Demand for medical supplies may increase. The incidence of break and crush injuries may increase in cold weather or mountain operations. Cold-weather-related injuries and sicknesses may increase. Class VIII must receive high movement priority and go by ALOC when possible.

- **Class IX.** Repair parts consumption increases. Isolated operations require increased stockage at each echelon, but only for combat-essential items. This includes tires, tie rods, transmissions, brake shoes, tracks and pads, final drives, winch parts, fuel pumps, spark plugs, and fuel injectors. In operations from -10°F to -40°F many problems occur. Batteries should be stored dry because they will lose their electrical charge and a low acid level will cause the battery to freeze in extreme cold. Seals and rubber items become brittle and crack or break in extreme cold. Tires become rigid causing flat spots or sidewall cracks. Cooling systems can freeze if not adequately protected. Ice clogs fuel filters and lines. Soldiers should check fuel filters as often as every four hours. When the liquid freezes in the

filter, the unit must be disassembled and cleaned of ice and other residue. Brittle metal can cause suspensions to fail. Driving over downed timber can harm undercarriages. Snow, ice, and moisture in weapons and rapid warming from extreme cold with cyclic firing rapidly reduce the temper of weapons and cause breakdowns. Weapons must be kept clean and dry. They should be warmed up slowly.

5-7. **SUPPLY IN ARCTIC CONDITIONS**. When possible, locate supply areas near roads and terrain suitable for airstrips or DZs. Heated storage is needed for medical supplies. Continual, all-around security is needed. Higher ground has better drainage in warm weather and is easier to defend against attack. Lower ground has more wind shelter and cover and concealment. If the tactical situation allows, bivouacs should be on high ground and in woods, Trees offer fuel, construction and camouflage materiel, and shelter from wind. Arctic regions have quick, drastic temperature changes. These areas often lack roads, railroads, or other transportation networks and facilities. High winds, snow, ice, and mud hinder mobility. Visibility is usually either very good or very poor. Fog, wide and extensive cloud cover, long periods of winter darkness with heavy overcast, mirages, and the absence of shadows limit visibility. Sound conditions can vary greatly. Sound carries better over hard-crusted snow or ice and at higher altitudes. A conversation could be carried on at a distance of 1 1/2 miles. Other conditions, such as soft snow, may silence the sound of an aircraft engine at full throttle at 1/2 mile. Arctic conditions require strict light, fire, and sound discipline.

- **Equipment.** Low temperatures degrade the strength, elasticity, and hardness of metals and reduce their impact resistance. Machine guns and mortars break more often due to the lack of give of solid frozen ground to weapon recoil. Leather, canvas, and rubber lose pliability and tensile strength. Rubber, rubber compound seals, and O-rings can warp and break. Plastics, ceramics, and other synthetics are less ductile. The operating efficiency of items composed of moving parts and different types of materials declines. Glass breaks easily if exposed to a sudden temperature change. Wrap optics in heavy blankets before entering warm areas so warming will be gradual. Keep them wrapped at least four hours to prevent moisture damage. Keep sighting equipment at outside temperatures to avoid fogging. Paint tends to crack in extremely cold weather. Gasoline vaporizes making combustion more difficult. Unburned gasoline dilutes crankcase oil causing sludge formation. Oils thicken and hinder engine lubrication and starting. Grease becomes hard and dysfunctional. JP8 thickens. This makes vehicles hard to start and operate. Personnel should check the vehicle operator's manual for operation in cold weather before starting and operating under unusual conditions.

- **Repairs.** Cold weather increases the need for repairs at the same time that it slows and hinders them. Equipment must be thawed out before it can be repaired. Carbon monoxide gas or vapors must be exhausted from warm work areas. Mechanics are encumbered by cold weather

clothing. Gloves and mittens degrade the sense of touch. Thus, units require great emphasis on vehicle maintenance, command supervision, and proper procedures for prestarting, starting, warm-up, operation, shutdown, cool down, and stopping. Maintenance manuals must be followed carefully.

- **Refueling.** Multilayer clothing and liquid fuels, such as JP-4 and MOGAS, produce a lot of static electricity in cold weather. Fuel containers and other refueling equipment and personnel must all be electrically bonded to each other. Grounding to the earth may be impossible due to permafrost. Any difference in electrical charge among equipment, fuel containers, and refueling personnel must be equalized or bled off. Open the fuel container and begin refueling only then. Use proper POL dispensing equipment to avoid spills. Store fuel in outside tents away from heaters.

- **Chemical Warfare.** Warm the protective mask to room temperature every 24 hours. Carry the mask, chemical agent detector kit, and nerve agent antidote kit under outer clothing. While sleeping, keep the mask in the sleeping bag to keep it warm and maintain accountability for it. Inspect outlet and inlet valves for icing and cracks after use.

- **Carbon Monoxide Hazards.** Enclosed areas subject to carbon monoxide concentrations need monitoring. They need testing and inspection at least every three months. Driving over rough terrain can cause exhaust system leaks. Test all vehicle passenger compartments for carbon monoxide at least quarterly. Immediately deadline vehicles that fail. Never sleep in vehicles with the engine or heater running. Keep windows open slightly when using heaters.

- **Driving.** The hazards of ice, snow, and cold temperatures magnify driving hazards. Make sure all drivers are trained for winter driving. Never stop in the center of a road or on an unchecked shoulder. Snowdrifts may cover ditches. If you have to bump or push a tracked vehicle to break it loose from snow or ice, disconnect the forward drive first. Never overcrowd vehicle cabs. This cramps the driver and hinders his vision and maneuverability. Always check the vehicle at halts for problems. Keep all lights and windows clear of ice, snow, frost, and fog. Use lights whenever visibility is reduced only as the tactical situation allows. Increase the distance between vehicles when exhaust causes ice fog. Use guides for backing and finding trails in deep snow. To maintain control of your vehicle in ice and snow, take the following measures:

    - Adjust speed and vehicle intervals to driving conditions. (Stopping distance can be 3 to 11 times greater than normal)

- Brake by slowly releasing the accelerator and then braking with a pumping action. (Jamming brakes causes locking, skidding, loss of control, and longer stopping.)

- Use chains. Put brush and burlap under wheels.

- Keep pioneer tools on all vehicles to remove snow and cut brush. Avoid using neutral steer on fully tracked vehicles. Using neutral steer stresses and abuses the suspension, drive, and power systems.

5-8. **WATER SUPPLY UNDER VERY COLD CONDITIONS.** Soldiers should drink plenty of water. Dehydration is more common than cold weather injuries during field work.

- **Locating Water.** Use an ice auger or ax head welded to a steel bar to locate water and check ice depth. Water points should be near swiftly moving water. Drain water supply equipment immediately after use when a heated shelter is not used. However, if water points are unavailable, use glaciers for water and ice sources. Using water from running streams or lakes is preferable to using the fuel needed to melt snow or ice. It takes 17 cubic inches of uncompacted snow to yield only 1 cubic inch of water. A hole may be cut through a stream or lake ice to get water. Cover the hole with a poncho or board and loose snow to prevent refreezing. Open it frequently in very cold weather. Mark water holes with a stick to avoid obscuration by drifting snow.

- **Obtaining Water from Snow and Ice.** If snow or ice must be melted, take it from areas uncontaminated by humans, animals, or toxins. Use ice, the most compact snow in the area, or other snow in that order. Fresh sea ice appears milky and is angular in shape when broken. In some areas with weak current and tidal action, just the top layer of sea ice may become desalinated. This may be as much as 100 centimeters or 40 inches. Do not burn the pot when melting snow and ice. Put an inch of water in the pot. If water is not available, put the pot near the heat source and carefully melt some snow. Gradually add snow or ice, compact the snow in the pot, and stir occasionally. Store snow or ice to be melted just outside the shelter. Allow canteen space for ice expansion.

- **Purifying Water.** QM units must procure, treat, and distribute medically approved potable water to units as in any other environment. No other source of water can ever be assumed to be safe to drink. In an emergency, when water cannot be obtained from a medically approved QM source, the unit commander must ensure that water is obtained from the cleanest source available and is always treated by medically

approved methods before to consumption. The unit field sanitation team can assist the commander in performing and training soldiers in these methods. Boiling, the use of water purification tablets in canteens, and the use of calcium hypochlorite in large storage containers such as 5-gallon cans, pillow tanks, and 400-gallon trailers are the medically approved methods at the unit level. Water with lots of sediment should be allowed to settle or be filtered through tightly woven cloth before treatment by any of the above methods. In an NBC environment, none of the above unit-level methods will remove chemical or radiological contamination.

- **Transporting and Storing Water.** Water for small groups may be stored in 5-gallon containers. Sled-mounted, 250- to 300-gallon tanks are a larger option. Use immersion heaters to prevent freezing of water supply tanks. Take extra precautions when temperatures are below -30°F. When roads are hazardous in snow and ice conditions, use tracked vehicles for transporting water. When transporting 5-gallon cans, fill them only 3/4 fill. Agitation will hinder freezing. Store cans off the floor in heated shelters.

Chapter 6

Property Accountability at Unit Level

This chapter discusses concepts and procedures for accounting for organizational property and weapons. Another major concept introduced in this chapter is the command supply discipline program. It also introduces the basic methods for the relief of property accountability.

6-1. **ACCOUNTABILITY AND RESPONSIBILITY.** Property accountability is one of the greatest challenges a company commander will face during his tour of duty. The commander can do many things during a command tour but still fail as a commander if he does not maintain proper accountability of his equipment. The commander has the responsibility to keep the unit's property in serviceable condition. The commander must stress to the soldiers that each person is responsible for all property in his charge and not just for property that is listed on the unit property books. Commanders must also ensure their soldiers properly account for unit property. AR 710-2 and AR 735-5 contain the Army policy for property accountability and responsibility. DA Pam 710-2-1 contains the manual procedures for property accountability. DA Pam 735-5 contains procedures for officers conducting a report of survey.

Property Accountability. Property accountability is the obligation of a person to keep an accurate formal record of property issued to him. The record should show item identification data, quantities, balances, and transactions. This obligation may not be delegated. The accountable officer does not have to personally make all detailed entries on property records. However, he must:

- Make sure that the property issued to him is correctly noted on the property records.
- Know what is on hand as determined by the property records.
- Take action to resolve shortages or overages.

Property Responsibility. Property responsibility is the obligation of a person to ensure that government property entrusted to his possession, command, or supervision is properly used and cared for and proper custody and safekeeping are provided. AR 710-2 requires someone to be assigned direct responsibility for each nonexpendable and durable item on hand in the unit. There are three types of responsibility based on position within the

organization, and a fourth type based on signatures. The four types of responsibility are shown below:

- **Direct Responsibility.** Per AR 735-5, direct responsibility is the obligation of a person to ensure all government property for which he or she is receipted, is properly used and cared for. Direct responsibility results from assignment as an accountable officer, receipt of formal delegation, or acceptance of the property on hand receipt from an accountable officer or other hand receipt holder.

- **Command Responsibility.** The commander has command responsibility of all property in his unit**.** Command responsibility is the obligation of a commander to ensure the proper care, custody, and safekeeping of all government property within the command. He has this command responsibility for unit property whether he has signed for it or not. He must personally ensure the security of all unit property whether it is in storage or in use. For example, he must provide a secure place for mechanics to store tool kits issued to them. If he has not done so, and an item is lost, the commander could be held liable for the loss. The commander must also ensure proper supervision to make sure the tool kit is being used properly.

- **Supervisory Responsibility.** Supervisory responsibility is the obligation to ensure the proper use, care, and safekeeping of government property issued to or used by subordinates. Supervisors can be held liable for losses incurred by their subordinates.

- **Personal Responsibility.** Unit personnel are responsible for all arms, hand tools, and OCIE issued to them for their use. They are responsible whether they signed for the property or not. For example, when the tool kit is issued, the mechanic assumes personal responsibility for it and all items in it. The mechanic must take proper care of the kit and secure it in the assigned storage area when it is not being used. If the mechanic forgets to secure the kit and it is lost, he is responsible for the loss.

Financial Responsibility. Financial liability is the statutory obligation of a person to pay the U.S. Government for government property that was lost, damaged, or destroyed because of negligence or willful misconduct. A person may be held liable by his admission or as the result of an investigation. Soldiers can be charged the full amount of the loss when personal arms or equipment are lost. Accountable officers are liable for the full amount of the loss unless they can prove they were not at fault. Commanders who maintain separate property books at company level are accountable officers. The concept of financial responsibility is for reparations for the loss to be made by

the person responsible for the loss rather than for this to be used as a punitive action.

Types of Property. All Army property, except real property, is classified for property accountability purposes as nonexpendable, durable, or expendable. Whether property is considered nonexpendable, durable, or expendable is determined by the ARC. The ARC is found in the Federal Logistics Data on CD-ROM (FEDLOG). When an officer assumes command of a unit, he also assumes responsibility for these three types of property.

- ***Nonexpendable***. Nonexpendable property is property that is not consumed in use, keeps its original identity, and has an ARC of N. Nonexpendable items require property book accountability after issue from the stock record account. They include property described in AR 710-2, Chapter 2.

- ***Durable***. Durable property is personal property that is not consumed in use, keeps its original identity, and has an ARC of D in the FEDLOG. Durable items do not require property book accountability after issue from the stock record account. However, they do require hand-receipt control when issued to the user. They include hand tools with a unit price greater than $5.

- ***Expendable***. Expendable property is personal property that is consumed in use or loses its identity in use, or property with a unit price less than $100 neither consumed in use nor otherwise classified as durable or expendable. These items have an ARC of X in the FEDLOG. Expendable items require no formal accountability after issue from a stock record account. They include paint, officer supplies, nuts and bolts, some repair parts, and components.

Supply Discipline. One of a commander's goals should be to instill supply discipline in his soldiers. Implementation of a strong command supply discipline program starts with the commander instilling a sense of supply discipline in the supply room personnel. By setting clear responsibilities and requirements from the beginning, the commander sets the proper command climate with regards to supply discipline for the entire unit. All soldiers in the unit need to be made aware of the importance of preserving Army property. Any practices that waste supplies or damage or destroy property must be corrected. When persons waste, damage, or lose government property, there are several actions that can be taken. They can be given oral or written reprimands. Efficiency reports can be annotated. For a serious incident, an Article 15 or a court-martial may be appropriate. Some ways to implement sound accountability practices and security measures include:

- Conduct a complete joint physical inventory before assuming command.
- Check for needed publications when you assume command and order the ones not on hand.
- Set up procedures for safeguarding government property.
- Check the supply SOP, and add or adjust procedures as needed.
- Set up procedures for controlling non-property book durable items. Use hand receipts, hand receipt annexes, or component hand receipts.
- Set up procedures for controlling expendable items. These items are not on a hand receipt or the property book. Make sure that supply discipline is strictly followed.
- Cover the methods for turning in excess property in the supply SOP for the unit. See that property is turned in as soon as it is no longer authorized or required.
- Conduct property accountability classes quarterly.
- Make sure that property records are kept up to date.
- Spot-check the PLL for inventory accuracy and item demand history. Make sure that all repair parts are on hand or on request.
- Periodically spot-check items on property records to ensure on-hand balances are correct
- Follow DA guidelines for the Command Supply Discipline Program. The CSDP was developed as a means for commanders, at battalion level and above, to ensure their commands at the next lower level have implemented compliance with DA regulatory guidance. Company level commanders are required to report to their next higher headquarters any applicable requirements which cannot be completed. The requirements listing giving specifics is contained in AR 710-2 and contains:

General Requirements, including clarification of requirements, deviations from policy, supply constraints reporting, and hazardous materials program.

Property Authorization Documents (MTOE, TDA, CTA) and reconciliation with property book allowances.

Requesting and Receiving Supplies; authorized property on hand or on request, commander review of appropriate documents, review of receipt procedures, hazardous materials handling training, and reconciliation of supply requests.

Disposition of Property; property transfers in and out, component shortages, found on installation property, disposition of ammunition residue and hazardous materials.

Property Responsibility; command and supervisory responsibility for property, hand receipt holder responsibilities, temporary vs. permanent hand receipt, assignment of personal responsibility, components of sets kits and outfits, keeping hand receipts current, ammunition responsibility, tool room responsibilities, reports on hazardous materials.

OCIE and Personal Clothing; maintaining OCIE records, soldiers clearance of CIF, authorization of cash purchases from CIF, OCIE damage statements, soldiers clothing records, clothing inspections and shakedown (for quantity, cleanliness, and proper fit) inspections.

Management of Loads: basic vs. operational loads, management of stockage of loads, establishment of responsibility for loads, maintain demand data on loads.

PLL: review of records, increases/decreases to PLL, mandatory stockage, request for reparables, number of lines.

Inventories: change of hand receipt holders, periodic inventory, command directed, weapons and ammunition, basic and operational loads, PLL, OCIE.

Adjustments for lost, damaged or destroyed items.

Storage: internal control checklists and inspections of stored items.

Petroleum Management: government credit cards, audit of bulk storage, spills and contamination, recovery of contaminated/used POL products.

Property Control. The commander must be alert to the need for security of property under his control. Taking the following actions will help accomplish this:

- Safeguard government property by controlling access to storage areas and by maintaining key control.
- Count all items yourself when doing an inventory. Do not just review hand receipts and subhand receipts. See the item. Touch it. Feel it. Do not let someone else do the inventory for you. It is your responsibility to conduct the inventory.
- Emphasize control of hand tools, OCIE, and components of sets, kits, and outfits.
- Mark equipment and supplies to show they belong to your unit.
- Use control sheets for expendable supplies so you can determine requirements and can take action when excessive demands are made.
- Make sure supply personnel are well trained in property accountability procedures.

6-2. **PROPERTY RECORDS.** The two categories of Army property are real property and personal property. Real property includes land and structures. Personal property includes capital equipment and other nonexpendable supplies. The commander must ensure his soldiers keep adequate records of the property under his control. The instruments used for this purpose are property books; hand receipts; inventory lists; transfer documents; and operational, prescribed, and basic load lists.

Property Books. Property books are formal records of nonexpendable property assigned to divisional and nondivisional units, TDA units, and separate companies. DA Pam 710-2-1 lists the property that must be accounted for on property books. Divisional property books are automated. Divisional property book teams maintain the property books according to AR 710-2 and the end users manual for the automated system used. Property books are either automated or manual (DA Form 3328):

- *Manual.* If you command a separate company or similar unit, you may be the PBO or you may appoint one. If you are the PBO, you must sign a statement at the front of the property book acknowledging responsibility. The PBO and unit supply specialists must maintain the property book according to the guidance in DA Pam 710-2-1.

- *Automated.* If you are the commander of a divisional company, the property books are automated and maintained at the division, except in Force XXI units where it is maintained at corps. Property book teams maintain property records for the division PBO. The PBO teams follow the procedures in the end user's manual for their automated system. As the commander of a divisional company, you are not responsible for the record keeping, but you still retain command responsibility for the property in your unit. You receive a monthly printout of your unit property that you must reconcile against your previous records and turn-ins, transfers, and receipts accomplished during the month.

Types of Property Books. All nonexpendable property must be maintained on a property book, with a few exceptions. Those exceptions are certain types of furnishings as outlined in DA Pam 710-2-1. As a company commander, you may be a primary hand receipt holder from more than one property book office, including; division PBO (MTOE type property), installation PBO (office type property), or furnishings management office PBO (barracks and dayroom type property). As the primary hand receipt holder, you accept command responsibility for all these type of property. The property should be marked in such a way as to be easy to distinguish which PBO it came from. When the unit deploys, it deploys only with its organizational (MTOE and certain TDA) property.

Managing Excess Property. The quantity and type of property on the property book is based on that which is authorized by MTOE, TDA, and CTA. Inevitably units acquire excess items which may or may not be accounted for on the property book. It is the commander's responsibility to make proper disposition of the excess property items, which can include:

- *TAADS Change.* The Army Authorization Documentation System includes TOE, MTOE, TDA, MOB TDA, and CTA. When the command determines an item is excess, but they need it to accomplish their mission, they need to submit a change to the appropriate authorization document. If it is a piece of equipment needed to accomplish the wartime mission, the TOE, MTOE or MOB TDA should be changed. For peacetime missions, a change to the TDA should be submitted.

- *Request for Disposition*. For property no longer needed, the command should submit a request for disposition to the next higher echelon S4. The S4/G4 will provide transfer instructions to the unit, or will instruct the unit to turn the item in. Both units must keep a copy of the transfers to make the correct update to the property books.

- *Unserviceable Items*. Unserviceable/nonreparable items must be turned in. Copies of turn-in documents will be maintained to make the correct update to the property book.

Hand Receipts. A hand receipt is a listing of nonexpendable and durable items (other than components) which have been issued to an individual, section, or unit. The signature on a hand receipt establishes direct responsibility for that item. Hand receipts are also accountable records of all nonexpendable and durable property. Manual systems use the DA Form 2062 as hand receipt documents to account for property at company, unit, or activity level. It is used to assign responsibility to the supervisor and user levels. Instructions for preparing the DA Form 2062 are found in DA Pam 710-2-1. Automated systems use machine listings as hand receipt documents. These are prepared and maintained according to AR 710-2-1 and the system end users manual.

- *Copies.* If you are a company commander acting as the PBO, issue property to the platoons and other elements of your unit on hand receipts. If you are the primary hand receipt holder, you issue the property on subhand receipts. You keep the original and provide a copy to the subhand receipt holder. The receiver must keep the copy until their hand receipt or sub-hand receipt is adjusted and updated.

- *Maintenance.* Hand receipts and subhand receipts must be kept current. The information about property on the property book and hand receipts must agree at all times. DA Pam 710-2-1 shows how to keep hand receipts current. Hand receipts may be kept current by posting changes directly to the hand receipt as changes occur, or by using change documents such as DA Form 3161, DD Form 1348-1, or DD Form 1348-1A to show issue and turn-in transactions. The issuer keeps the original and the receiver keeps a copy and they file the change documents with their hand receipts until the next time the hand receipt gets updated.

- *Adjustments.* When change documents are used to keep hand receipts current, the changes must be posted to the hand receipt:

  - At least every six months.

- Before change of primary or subhand receipt holders.
- Before a change of PBO.
- Before an annual PBO inventory.

▪ *Temporary Hand Receipts.* A PBO or unit commander may need to temporarily lend property to another unit. This may be accomplished using a DA Form 3161 as a temporary hand receipt. However, a temporary hand receipt is good only for 30 days. After 30 days, the property must be returned or be transferred to the other unit permanently.

Inventory Lists. The PBO or responsible officer may encounter a situation where it is impractical to assign further responsibility for property. For example, this could happen in the case of multiple-use classrooms, or dayrooms used by more than one unit. In this case, the responsible officer or PBO may manage the property using an automated list or DA Form 2062 as an inventory list. When using the inventory list method, the PBO or responsible officer must inventory the property semiannually. The list will be prepared and managed according to the provisions of DA Pam 710-2-1.

Issue, Turn-In, and Transfer Documents. A PBO or responsible officer may use DA Form 3161 in many different situations. DA Pam 710-2-1 provides specifics for preparation of the form. DA Form 3161 can be used as an issue, turn-in, or transfer document.

▪ *Request for issue and turn-in document.* Units not under an automated system may use DA Forms 3161 and 3161-1 (continuation sheet) to request supplies. These forms may also be used to document turn-in of items to the PBO or other activity. However, they are only valid for 30 days at which time the hand receipt must be updated.

▪ *Transfer document.* Units can transfer items laterally to other units, when authorized or when directed by the appropriate level of command, depending on the type of property involved. These transfers can be posted to the hand receipt using the DA Form 3161. Procedures for lateral transfer actions are contained in DA Pam 710-2-1.

Hand Receipt Annexes. Hand receipt annexes are used between the PBO and primary hand receipt holders and between primary hand receipt holders and subhand receipt holders. When an item with components is issued on a hand receipt or subhand receipt, any shortage of nonexpendable or durable

components must be recorded on a hand receipt annex. The hand receipt annex, also known as a shortage annex, is prepared in two copies. The shortage of any component of a major end item, set, kit, or outfit will be shown on a hand receipt annex for that item of property. The PBO and primary hand receipt holders record shortages of nonexpendable components. The person (PBO or company commander) who maintains the document register for durable items will be the level at which durable items are recorded on the hand receipt annex. Commanders ensure that the responsible soldiers:

- Maintain hand receipt annexes in the same manner as hand or subhand receipts.
- Take prompt action to requisition items to fill shortages.
- Control hand tools which are easily lost or stolen. Assign tool sets to specific individuals, and keep track of small tools not kept in toolboxes. Have each soldier who is issued a tool sign for it. Hold soldiers and supervisors accountable for lost, damaged, or destroyed tools.

Weapons Records. The commander is responsible for the security and control of all weapons under his care. Details regarding security of arms, ammunition, and explosives are found in AR 190-11 and AR 190-51. The unit armorer prepares and maintains the documents for weapons control according to AR 190-11 and AR 710-2. He maintains a master authorization list to ensure there is no unauthorized issue or use of weapons. The armorer inventories weapons when the unit receives them and records the serial numbers on the unit property records. Units may have weapons stored in a consolidated arms room. The commander of the unit in charge of the arms room is in charge of its physical security and acts as its landlord. He controls the locking of the outer doors and the keys for the doors. He is responsible for setting up an SOP which includes key control, access authorization, and issue times/procedures. Weapons in a consolidated arms room are separated by units; for example: A Company's weapons cannot be stored in the same racks as B Company's weapons. Some units store small arms (such as 9mm pistols) in a Class V filing cabinet.

Arms, Ammunition, and Explosives Control. Arms, ammunition and explosives are sensitive items. Commanders are responsible for controlling sensitive items within their units. AR 710-2 requires a quarterly inventory for sensitive items other than weapons and ammunition. Weapons are inventoried monthly by serial number. After the inventory, the commander signs a statement showing the inventory results. For units without their own property book, a copy of the inventory will be maintained in the unit and the original will be forwarded to the PBO. If the inventory shows a loss, the commander appoints someone to find out why. That person audits the supply

actions that occurred since the previous inventory. If he finds an accounting error, the records can be corrected. If not, then further action will be taken. As soon as the loss is verified, the law enforcement activity will be notified. CID will determine criminal intent before administrative actions are taken per AR 710-2 and AR 735-5. If the item is listed in AR 190-11, Appendix B or E, an investigation under AR 15-6 will be initiated. This investigation must include findings, recommendations, and disposition of unserviceable property. The results may be used for a report of survey to adjust the property record.

Organizational Clothing and Equipment Record. OCIE items are issued from the CIF. Issues and turn-ins of OCIE are recorded on DA Form 3645 and DA Form 2645-1 according to AR 710-2 and DA Pam 710-2-1, when not under an automated system. AR 735-5 allows soldiers to pay for OCIE losses that are not depreciated. Each soldier's OCIE should be inventoried quarterly. Unit supply personnel are required to perform a semiannual reconciliation with the CIF of personnel in their unit. Unit funds are used to replace OCIE in the CIF for soldiers who have departed the unit without clearing the CIF.

Personal Clothing Procedures. Certain situations require soldiers to be issued clothing at no cost to them. These situations include, but are not limited to:

- *Initial issues.* Occasionally soldiers are not issued their entire initial issue during their initial entry training. These missing items are requested using DA Form 3078, Personal Clothing Request. DA Form 3078 will be completed per the instructions in AR 700-84.

- *Alterations or Exchanges.* Any alterations or exchanges required by enlisted soldiers within the first six months of active duty will be paid for by the government. These actions are also done by using DA Form 3078.

- *Extra Clothing Allowances.*

  Supplemental. Additional uniform items, such as an additional polyester wool coat for a female on recruiting duty. These additional type items are listed in CTA 50-900.

  Civilian. Certain special duty assignments (such as when an enlisted soldier is assigned duties requiring him to wear civilian clothing) require supplemental clothing issues. There are three types of these allowances: initial, special, or temporary duty.

- *Gratuitous Issues.* Procedures for gratuitous issues of personal clothing are outlined in AR 700-84. Some situations which allow for gratuitous issues are:

  Dress uniform for burial of deceased active duty personnel.

  Replacement of items damaged by administering of first aid.

  Replacement of items damaged by a government laundry facility.

  When authorized by medical department to contain the spread of contagious diseases.

  When baggage is lost or damaged while on a government conveyance.

Lock and Key Control. Lock and key control measures are explained in AR 190-11 and AR 190-13. Local physical security offices can provide assistance in ensuring standards are met. A lock and key custodian will be appointed for the unit. He is responsible for ensuring all unit keys and locks are handled properly. Table 6-1 lists procedures for lock and key control. All keys to arms rooms and secure areas will be stored separately in a locked box. This key box will be either bolted to the wall or chained to the floor so that it cannot be removed. It must also be located in an area that is manned 24 hours a day. The lock and key custodian is responsible for keeping a record of locks and keys. He must keep track of the number and type of locks and keys used by unit personnel. DA Form 5513-R should be used for keeping these records. The proponent for DA Form 5513-R is AR 190-11.

6-3. **INVENTORIES.** An inventory is the physical count of all supplies and equipment on hand. Property records must be kept up to date so they show the quantities on hand andinventories must be taken to verify the quantities on hand agree with the property records. At unit level, items on hand receipts and balances on PLLs must be inventoried. Then the records are reconciled and action taken when items are missing, damaged, or destroyed. When assuming command, the incoming commander must complete a 100 percent physical count of all property, including components of end items, sets, kits, and outfits.

Types of Inventories. There are several types of inventories required at unit level. Some are vent oriented, such as a change of the primary hand receipt holder. Other inventories are type of property oriented, such as arms, ammunition, and OCIE. Table 6-2 shows types of inventories and when they are required to be conducted.

Table 6-1. Lock and Key Control Guidelines

PROCEDURES
• Inventory keys and locks twice a year.
• Make sure keys to the box are counted and that missing keys are accounted for when there is a change of duty officers or duty NCOs. Record this count as part of the duty log.
• Make sure that only authorized persons have access to the key box and to the keys inside. Keep the list of authorized persons near the box, but away from public view.
• Store keys to arms rooms, weapons racks, and containers away from other keys. Do not allow these keys to be left unattended.
• Do not leave keys unattended or in an unsecured area.
• Do not take keys for secure areas, arms rooms, rack, or containers outside the unit's operating area.
• Change locks at once whenever keys are lost, misplaced, or stolen.
• Make sure key control registers and inventory logs are kept up to date.
• Change combinations to locks on secured areas twice a year.

Inventory Procedures. Each type of inventory should have an SOP. When conducting an inventory take the following steps:

- *Determine what is to be inventoried.* The automated systems will generate an inventory listing which will show the items to be inventoried

- *Set the dates.* A schedule should be produced and provided to all hand receipt holders and subhand receipt holders involved.

- *Use correct publications.* Make sure the required publications (such as TMs) are available and up to date.

- *Notify the hand or subhand receipt holder.* Make sure the person responsible for the items to be inventoried knows when the inventory will occur. That person should also prepare the inventory in advance. For example, if the inventory is for tool boxes, they should be laid out in advance of the arrival of the person conducting the inventory.

- *Conduct the inventory.* Supply personnel should accompany the person taking the inventory. They should have copies of the hand receipts, component shortages, and other records with them.

- *Record results and adjust records.* Compare the inventory count with the property record, and post the results. Verify shortages and overages and adjust the records. Under an automated system, the required certification will be prepared and returned to the PBO. For discrepancies, prepare the adjustment documentation IAW AR735-5 & DA Pam 710-2-1.

6-4. **PROPERTY RECORD ADJUSTMENTS.** The commander must decide the appropriate action to take to adjust the property records and account for the differences when the records do not match the quantities on hand or equipment or when supplies are damaged or destroyed. Overages may be adjusted by adding the items to the property record, transferring it to another unit, or turning the item in as found on installation.

Table 6-2. Types of Inventories:

INVENTORY	DESCRIPTION
Receipt and Issue of Property	When property is received from a hand receipt holder or PBO, from an SSA, from the next higher source of supply, or a lateral transfer.
Change of Primary Hand Receipt Holder	When there is a change in the officer responsible for property issued to the unit.
Annual Primary Hand Receipt Holder	Within one year since the last annual inventory or within one year since the change of responsible officer, whichever is later.
Cyclic	Monthly, quarterly, or semiannually.
Change of PBO	Within 30 days prior to replacement of the PBO.
Change of Custody of Arms Storage Facility	When responsibility for the custody of the keys to the arms storage facility is transferred.
Command Directed	When directed by the installation commander.
Sensitive Items - Other than Weapons or Ammunition	Quarterly. Controlled cryptographic items semiannually.
Weapons & Ammunition	Monthly -- weapons by serial number.
Basic Loads	Monthly for Class III bulk and Class V. Semiannually for Class I, II, III Packaged and IV
OCIE	Within 5 work days after arrival or departure.

Determining Responsibility for a Loss. A loss must be investigated and the facts determined. If the person holding the hand receipt for the item admits liability, the item can be accounted for using a statement of charges or a report of survey. Details on preparing these forms are contained in AR 735-5. When no liability is admitted, causative research must be conducted before beginning the investigative procedures. This is done to determine whether there was an actual loss or if the discrepancy is simply an accounting error. When gross negligence is suspected, an investigation under AR 15-6 may be warranted. AR 735-5 gives guidance on when to use the report of survey process and when an investigation under AR 15-6 should be initiated.

Appointing an Investigating Officer or Board of Officers. A commander at any level or a primary staff officer of a general court marshal convening authority can appoint an officer or a board of officers to make an informal investigation. The appointment may be oral or written. It should specify the purpose and scope of the investigation, the nature of the findings, and the recommendation(s) needed.

Using a Report of Survey. A report of survey is used as a means of reestablishing accountability for lost, damaged, or destroyed supplies and equipment. When there is no admission of liability for a loss or when a person admits liability for the loss but the loss is greater than one month's basic pay for that person, then a report of survey should be initiated. The report of survey is not intended as a means of punishment. The commander still retains the option of administering nonjudicial punishment under Article 15 of the UCMJ or convening a court marshal. The commander will appoint a survey officer or NCO, normally of equal or higher rank than the individual who signed for the item on the hand receipt. This appointing authority commander is at or above battalion level. The investigating officer or NCO uses DA Form 4697 for recording report of survey information. DA Form 4697 along with specific guidelines and timelines are shown in AR 735-5. The timelines shown in AR 735-5 are important in seeing the matter resolved in a timely manner.

Making Minor Administrative Adjustments. Property records may be adjusted when there are administrative changes or minor errors. Although they are called minor, they correct inaccuracies in the records. However, minor adjustments do not affect or correct the on hand balance on property books. These adjustments are made under the manual system by using DA Form 4949. The procedures for preparing this form are in DA Pam 710-2-1. The following are examples of when an AAR might be used:

- NSN changes - for similar makes and models.
- Size corrections.

- Unit of issue changes.
- Items changing from accountable to nonaccountable.
- Items changing from nonaccountable to accountable.

Making Adjustments Using Statement of Charges/Cash Collection Voucher. When a person admits liability, they may be offered the option of reimbursing the government by using DD Form 362 or DD Form 1131. These forms may not be used for reimbursement to the government if the costs exceed one month's basic pay for that individual. The procedures for preparing these two forms are contained in AR 735-5.

Glossary

AAFES	Army and Air Force Exchange Service
AFFS	Army Field Feeding System. The feeding methods, rations, and equipment that support operational doctrine to meet the tactical commander's need to feed his soldiers based on METT-TC.
ALOC	Air Lines Of Communication. Supply items flown from CONUS bases to the Theater of Operations are known as ALOC items.
AMDF	Army Master Data File. A catalog of Army supply items, listed by stock number, providing additional information, other than just the nomenclature of the item.
ARC	Accounting Requirements Code. Code used to identify whether an item is expendable, durable, or nonexpendable.
ASP	Ammunition Supply Point
ATP	Ammunition Transfer Point
Basic Load	Basic Loads are MACOM designated quantities of Class I though V and VIII supplies, that allow a unit to initiate its combat operations.
BSA	Brigade/Battalion Support Area. The location of CSS units in the brigade or battalion rear area within a theater of operations.
Bulk Fuel	Fuel normally held in and dispensed from large containers, in quantities of 250 gallons or more. Examples are JP8 and MOGAS.
CASCOM	Combined Arms Support Command
Cash Collection Voucher	A DOD form used by finance and accounting to place money turned in to them in to the appropriate accounting classification.
CHS	Combat Health Support
CID	Criminal Investigation Division
CIF	Central Issue Facility
COMMZ	Communications Zone. The entire area within a Theater of Operations which lies behind the combat zone (CZ).
CONUS	Continental United States
COSCOM	Corps Support Command
CS	Combat Support
CSB	Corps Support Battalion
CSDP	Command Supply Discipline Program

CSG (F)	Corps Support Group (Forward)
CSG (R)	Corps Support Group (Rear)
CS	Combat Support
CSS	Combat Service Support
CSSAMO	Combat Service Support Automation Management Office
CSSCS	CSS Control System. CSSCS is an automated system which provides the CSS, force level, and theater commanders and their staffs with logistical, medical, finance, and personnel information processing, reporting, and planning tools.
CTA	Common Table of Allowances. A publication which documents authorizations (per unit or individual) for common use items. These items may include dayroom furniture, OCIE, and many other items. Allowances are based on several variables, such as type of organization, number of soldiers, mission, and geographical location.
CZ	Combat Zone
DA	Department of the Army
DA PAM	Department of The Army Pamphlet
DAMMS-R	Deployment Automated Movement Mapping System - Redesigned
DAO	Division Ammunition Officer
DFAS	Defense Finance and Accounting Service
DISCOM	Division Support Command
DLA	Defense Logistics Agency
DMC	Distribution Management Center
DMMC	Division Materiel Management Center
DMSO	Division Medical Supply Officer
DOD	Department of Defense
DOS	Days of Supply - Quantity of a specific item of supply needed to sustain an organization for one day
DRMO	Defense Reutilization and Marketing Office
DS	Direct Support. "Retail" type supply.
DSU	Direct Support Unit. A unit with a "retail type supply mission.
DZ	Drop Zone
EPW	Enemy Prisoner of War
FBCB2	Force XXI Battle Command Brigade and Below
FEDLOG	Federal Logistics File. A catalog of DOD supply items, listed by stock number, providing additional information, other than just the nomenclature of the item.

FM	Field Manual
FSB	Forward Support Battalion
GAO	General Accounting Office
GCSS-Army	Global Combat Control System - Army. GCSS-Army will be an integrated logistics support system encompassing the functions of supply, finance, transportation, maintenance, and personnel.
GS	General Support. "Wholesale" type supply.
GSU	General Support Unit. A unit with a "wholesale" type supply mission.
GSA	General Services Administration
HN	host nation
HNS	host nation support—civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crisis or emergencies, or war based upon agreements mutually concluded between nations.
HQDA	Headquarters, Department of the Army
IAW	In Accordance With
IMPL	Initial Mandatory parts List. Listing of repair parts provided to units that must be kept on hand during fielding process of new equipment.
ITO	Installation Transportation Officer
JCS	Joint Chiefs of Staff
KIA	Killed In Action
LOC	Lines Of Communication. Also known as supply lines.
LOGCAP	Logistics Civilian Augmentation Program
LOGPAC	Logistics Package. A grouping of supplies (may include one or more vehicles) sent to forward units to provide re-supply to those units.
LRP	Logistics Release Point. An LRP is the site established where the LOGPAC links up with someone (usually the 1st Sergeant) from the unit the LOGPAC is supporting. This person then guides the LOGPAC to the unit areas where support is required.
LSE	Logistics Support Element
MACOM	Major Army Command - Examples are; FORSCOM, TRADOC, & USAREUR.
MACP	Mortuary Affairs Collection Point
METT-TC	Mission, Enemy, Terrain, Troops, and Time available and Civilian considerations.

MHE Material Handling Equipment. Some common MHE items are forklifts and pallet jacks.

MIS Management Information System

MMC Materiel Management Center

MOADS Maneuver oriented Ammunition Distribution System

MOGAS Motor Gasoline

MOPP Mission Oriented Protective Posture. A flexible system that provides maximum NBC protection for the individual with the lowest risk possible and still maintains mission accomplishment.

MOS Military Occupational Specialty

MRE Meal Ready-to-Eat. A packaged, single meal, operational ration used as the premier Army individual use meal, requiring no preparation by food service specialists.

MRO Materiel Release Order. In a supply support activity, when the stock records section is ready for the warehouse to issue an item of supply, it produces an MRO. The MRO informs the warehouse who gets issued how much of a specific item of supply.

MSB Main Support Battalion

MTOE Modified Table of Organization and Equipment. The MTOE is the document that delineates an organization's mission, personnel allowances, and equipment authorizations.

MTF Medical Treatment Facility

NBC Nuclear, Biological, and Chemical

NCA National Command Authorities

NDI Non-Developmental Item

NGO Non-Governmental Organization

NICP National Inventory Control Point

NSN National Stock Number

OCIE Organizational Clothing and Individual Equipment. Items issued to soldiers in addition to their initial clothing items. OCIE is based on authorizations as listed in CTA 50-900. These items may be clothing, such as mechanics coveralls, or individual equipment such as a kevlar helmet.

OCONUS Outside the Continental United States

OPCON Operational Control

Operational Load Quantities of Class I though V and VII supplies an organization maintains to sustain its peacetime operations for a given time.

OPLAN Operations Plan

OPORD Operations Order

OPLOG Planner Operations Logistics Planner. Logistics software specifically designed to predict quantities of supplies needed to support a military operation. These quantities are determined based on several variables entered by the user, such as unit size, type & duration of operation, organizational equipment listing, and climate.

ORF Operational Readiness Float. ORF Items are fully mission capable equipment items temporarily issued to units when they have a like item sent to higher echelon maintenance for an extended period of time.

PADD Person Authorized to Direct Disposition. This term is used in regards to disposition of human remains by Mortuary Affairs personnel.

PBO Property Book Officer

PE Personal Effects

PERE Person Eligible to Receive Effects

PLL Prescribed Load List. Repair parts required to be kept on hand at the organization maintenance activity.

POC Point Of Contact

POL Petroleum, Oil & Lubricants. POL includes products such as; JP-8, antifreeze, compressed gases, and so forth.

Potable Water Water that is free from disease-producing organisms, poisonous substances, and chemical or biological agents and radioactive contaminants which make it unfit for human consumption and many other uses. Potable water may or may not be palatable.

QM Quartermaster

RSO&I Reception, Staging, Onward movement, and Integration

SAAS-MOD Standard Army Ammunition System-Modernized

SAMS Standard Army Maintenance System

SARSS Standard Army Retail Supply System

SB Supply Bulletin. A publication that gives specific consumption information. Called a bulletin because the data in it is subject to change on a monthly, quarterly, annual basis.

SECDEF Secretary of Defense

SIDPERS Standard Installation Division Personnel System

SLRC Shower, Laundry and Clothing Repair

SOP Standing Operating Procedure

SPBS-R Standard Property Book System-Redesign. This is an automated logistics system that supports the accountability of supplies and equipment.

SPOD Sea Port Of Debarkation

SSA Supply Support Activity

STAMIS Standard Army Management Information Systems

Statement of Charges A document signed by a soldier that allows money to be withheld from his pay. However, a statement of charges is not an admission of guilt.

TAA Tactical Assembly Area

TAACOM Theater Army Area Command

TAADS The Army Authorization Documentation System. Those documents which authorize personnel and/or equipment, such as an MTOE, TDA, CTA comprise TAADS.

TAMMS The Army Maintenance Management System. May be automated or manual, TAMMS is the report associated with operating a unit maintenance activity, such as; scheduled maintenance records, dispatches, etc. TAMMS procedures and requirements are published in DA PAM 738-750.

TC-AIMS II Transportation Coordinators-Automated Information Management System II.

TCMD Transportation Control and Movement Document

TDA Table of Distribution and Allowances. Used as an authorization document for personnel and/or equipment. The TDA generally proscribes organizations/equipment required for peacetime functions but not required for wartime missions.

TEMPER Tent, Extendible, Modular, Personnel. TEMPER tents are the primary shelter used by the Force Provider system.

TRADOC Training and Doctrine Command

TMO Transportation Movement Officer

TO Theater of Operations

TSC Theater Support Command

UCMJ Uniform Code of Military Justice

UCMP Unit Maintenance Collection Point

UGR Unitized Group Rations. A UGR may be an A-ration or Heat & Serve. The UGR is a cook prepared meal and is pre-packaged in quantities to feed 50 soldiers. Each per-packed UGR is called a module. The modules are easier to handle than traditional Army rations and are easier to request. There are only two NSNs per meal rather than several NSNs.

ULLS Unit Level Logistics Systems

ULLS-G Unit Level Logistics System - Ground. ULLS-G provides ground maintenance logistics support at the unit level.

ULLS-S4 Unit Level Logistics Systems - S4. ULLS-S4 provides property requisitioning and property accountability support at the unit level.

USAMC United States Army Materiel Command

USC United States Code

WEAR Wartime Executive Agent Responsibilities

WIA Wounded In Action

WSM Weapons System Manager. Usually the Battalion/Brigade XO, the WSM coordinates the efforts of the S1 & S4 to link soldiers with weapons to effect weapons systems replacement operations (WSRO).

WSRO Weapons Systems Replacement Operations

XO Executive Officer

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Index

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