ATTP 4-41 (FM 10-23)

Army Field Feeding and Class I Operations

OCTOBER 2010

Headquarters, Department of the Army

This publication is available at
Army Knowledge Online (www.us.army.mil) and
General Dennis J. Reimer Training and Doctrine
Digital Library at (http://www.train.army.mil).

***ATTP 4-41 (FM 10-23)**

Army Tactics, Techniques, and Procedures
No. 4-41 (FM 10-23)

Headquarters
Department of the Army
Washington, D.C., 14 October 2010

ARMY FIELD FEEDING AND CLASS I OPERATIONS

Contents

Page

PREFACE vi

PART ONE ARMY FIELD FEEDING

Chapter 1 ARMY FIELD FEEDING SYSTEM OVERVIEW 1-1
Army Family of Rations 1-1
Capabilities 1-2
Modular Feeding 1-2
Modular Class I Supply 1-2
Planning 1-3
Environmental Training and Integration 1-4
AFFS in CBRN Environments 1-4

Chapter 2 SUBSISTENCE SUSTAINMENT AND RESPONSIBILITIES 2-1
Modular Force 2-1
Theater Sustainment Command 2-1
Expeditionary Sustainment Command 2-2
Sustainment Brigades 2-2
Subsistence Platoons 2-2
Support Organizations 2-3
Support Personnel 2-4

Chapter 3 CLASS I SUPPLY PLANNING 3-1
Coordination 3-1
Sequence for Training Exercises 3-1
Sequence for Operational Deployments 3-2
Ration Mix and Ration Cycle 3-2
Ration Mix and Ration Cycle Planning Factors 3-3
Other Class I Planning Factors 3-8
Distribution Methods 3-11

***This publication supersedes FM 10-23, 18 April 1996.**

Distribution Planning Factors 3-13
Ration Accountability 3-15
Theater Food Service Management Board 3-16

PART TWO RATIONS AND EQUIPMENT

Chapter 4 RATIONS AND MENUS 4-1
Rations 4-1
Individual Field Feeding 4-1
Group Field Feeding 4-4
Special Field Feeding 4-6
Meal Supplement and Meal Enhancements 4-7
Contingency Operations Menus 4-11
Health and Comfort Packs 4-12
Shelf Life Planning Data 4-13
Class I Ration Planning Data 4-14

Chapter 5 FIELD KITCHEN EQUIPMENT 5-1
Technical Manuals 5-1
Mobile Kitchen Trailer 5-1
Containerized Kitchen 5-4
Modular Field Kitchen 5-5
Kitchen, Company Level Field Feeding 5-7
Assault Kitchen 5-10
Food Sanitation Center 5-10
Immersion Heaters 5-12
Modern Burner Unit 5-13
M59 Field Range and Accessory Outfit 5-14
Field Kitchen Tents 5-15
Individual Ration Heating Devices 5-15
Insulated Food Container 5-16
Ice Storage Chests 5-17
Refrigerated Container System 5-17
Multi Temperature Refrigerated Containerized System 5-18
Water Sterilizing Bags 5-18
Lanterns 5-20

PART THREE OPERATIONS

Chapter 6 FIELD KITCHEN OPERATIONS 6-1
Waste Management 6-1
Predeployment 6-1
Field Kitchen Site Selection and Layout 6-3
Field Feeding Methods 6-5
Field Kitchens Operating Under a Push System 6-7
Field Kitchens Operating Under a Pull System 6-7
Strength Reporting 6-8
Estimating and Ordering Rations 6-8
Ration Receipt, Storage and Issue 6-12
Residual Ration Procedures 6-16

Personal Hygiene 6-19
Field Kitchen Safety 6-20
Serving Line Setup 6-22
Field Kitchen Washing and Sanitizing 6-23
Cold-Weather Field Feeding 6-27
Redeployment 6-28
Field Kitchen Records Maintenance and Review 6-29

Chapter 7 CLASS I OPERATIONS 7-1
Deployment 7-1
Class I Site Selection and Layout 7-1
Schedule of Issues and Class I Point Operational Procedures 7-5
Class I Tracking 7-7
Class I Operations Under a Push System 7-8
Class I Operations Under a Pull System 7-10
Ration Break Methods 7-14
Inspections 7-17
Subsistence Handling Principles 7-18
Perishable Storage 7-19
Semiperishable Storage 7-20
Pest Control 7-22
Sanitation at Class I Points 7-22
Class I Point Safety 7-23
Redeployment 7-24

Chapter 8 CONTINGENCY OPERATIONS 8-1
Types of Operations 8-1
Feeding Standard 8-1
Coordination and Responsibilities 8-2
Subsistence Supply 8-3
Transition Sequence 8-4
Contracting Considerations 8-5
Account Management 8-8
Account Management Procedures 8-8
SPV/Contractor Distribution Considerations 8-14
HNS Dining Facility Operations 8-15
Force Provider Food Service Operations 8-16

Appendix A TRAINING A-1

Appendix B DEPLOYMENT PLANNING CHECKLIST B-1

Appendix C DEVELOPMENT OF AN AIRDROP OPERATIONAL RATION SOP C-1

Appendix D SAMPLE SOP FOR FIELD KITCHEN MAINTENANCE D-1

Appendix E CHECKLISTS FOR EVALUATING CLASS I AND FIELD KITCHEN OPERATIONS E-1

Appendix F CHECKLISTS FOR REVIEWING AFFS RECORDS FOR CLASS I AND FIELD KITCHEN OPERATIONS F-1

Appendix G WATER TREATMENT AND WASTE MANAGEMENT G-1

GLOSSARY **Glossary-1**
REFERENCES **References-1**
INDEX **Index-1**

Figures

Figure 3-1. Theater feeding plan time line (condition based) 3-4
Figure 3-2. Requisitions and ration flow during training exercises 3-12
Figure 3-3. Requisitions and ration flow in a theater 3-12
Figure 5-1. Heavy duty coated Neoprene gloves 5-7
Figure 5-2. KCLFF/KCLFF-E operating procedures 5-9
Figure 5-3. Immersion heaters 5-13
Figure 5-4. Canteen cup stand 5-15
Figure 5-5. Water sterilizing bag and setup 5-19
Figure 6-1. SOPs that should be maintained in the field kitchen 6-3
Figure 6-2. Recommended field kitchen site layout 6-5
Figure 6-3. Completed unit DA Form 5913 to a supporting field kitchen 6-9
Figure 6-4. Example of a Class I spreadsheet 6-10
Figure 6-5. Sample DA Form 3294 field kitchen to Class I point 6-11
Figure 6-6. Sample DA Form 3294 unit request and Class I point issue on the same form 6-13
Figure 6-7. Sample DA Form 5914 6-15
Figure 6-8. Sample DA Form 3034 6-16
Figure 6-9. Sample DA Form 3294 used as a turn-in to a garrison dining facility 6-18
Figure 6-10. Sample DA Form 3294 used as a turn-in to a Class I point 6-19
Figure 6-11. Proper hygiene practices 6-20
Figure 6-12. Safety precautions to prevent burns and asphyxiation 6-21
Figure 6-13. Safety precautions for using knives 6-22
Figure 6-14. Immersion heater and FSC wash lines using hot water 6-24
Figure 6-15. Immersion heater and FSC chemical disinfecting method 6-26
Figure 6-16. Redeployment checklist 6-29
Figure 7-1. Suggested layout for a SSA Class I sustainment point 7-3
Figure 7-2. Suggested layout for a forward SSA Class I point 7-4
Figure 7-3. Effective security measures 7-5
Figure 7-4. Example of a Class I point schedule of issues while operating under the pull system 7-6
Figure 7-5. Sample DA Form 3294 field kitchen request to Class I point 7-12
Figure 7-6. Sample DA Form 3294 Class I point consolidated ration request for resupply 7-13
Figure 7-7. Sample DA Form 3294 unit request and Class I point issue on the same form 7-14

Figure 7-8. Unit pile method of ration distribution 7-15
Figure 7-9. Item pile method of ration distribution 7-16
Figure 7-10. Temperature log 7-19
Figure 7-11. General rules for Class I safety program 7-23
Figure 8-1. Headcount Register 8-11
Figure 8-2. Headcount Record 8-12
Figure 8-3. Headcount Report 8-13
Figure 8-4. Monthly Earnings and Expenditures Record 8-14
Figure A-1. STP training task A-6
Figure A-2. Sample outline for training personnel A-7
Figure B-1. Deployment planning checklist B-2
Figure D-1. Sample Field Kitchen Maintenance SOP D-2
Figure E-1. Class I operations E-2
Figure E-2. Field kitchen operations E-3
Figure F-1. Checklist for reviewing Class I operations records F-2
Figure F-2. Checklist for reviewing field kitchen operations records F-3
Figure G-1. Steps to test for chlorine G-2
Figure G-2. Steps for disinfecting water in 5-gallon cans G-2
Figure G-3. Steps for disinfecting water in 400-gallon water trailers G-3
Figure G-4. A grease trap and soakage pit G-4
Figure G-5. A soakage trench and grease trap G-4
Figure G-6. Inclined and cross-trench incinerators G-5

Tables

Table 4-1. Approved milk 4-8
Table 4-2. Authorized enhancements 4-9
Table 4-3. Package contents of the medical diet field feeding supplement 4-11
Table 4-4. HCP component items 4-13
Table 4-5. Shelf life planning factors 4-14
Table 4-6. Ration Pallet Planning Factors 4-15
Table 4-7. Ground vehicle ration pallet positions 4-16
Table 4-8. Pallet planning factors for 463L pallets and ISO containers 4-16
Table 5-1. MKT height, length, and width 5-3
Table 5-2. MKT weight dry and wet 5-4
Table 5-3. CK data without trailer 5-5
Table 5-4. Major differences between FSC-90 and FSC-2 5-11
Table 5-5. IFC NSNs 5-17
Table 6-1. Characteristics of a good field kitchen site 6-4
Table A-1. Sample MOS Training Plan A-5

Preface

Food is fuel for the Soldier. Providing nutritious and high quality subsistence to Soldiers is paramount to the Army's success and mission accomplishment on the battlefield. Field feeding directly affects the morale, combat effectiveness, and health of the combat Soldier.

The objective of the Army Field Feeding System (AFFS) is to provide Soldiers the right meal at the right place at the right time. Achieving this objective is an ever-evolving challenge because of modular force packaging that supports brigade-centric operations. The Army tailors modular force components based on the scope of the Army or joint mission. The modular Army force is faster, more agile and adaptive, multifunctional, lethal and capable of conducting full spectrum operations. Class I operations and field feeding systems must continue to evolve to ensure Army food service operations continue to serve as a ready and relevant force component.

This Army tactics, techniques, and procedures (ATTP) provides field food service doctrine through methods, techniques, and procedures for providing subsistence to Soldiers during the full spectrum of military operations. Commanders, logistic staff planners, food advisors, Class I managers, food operations managers, subsistence supply handlers, and food service specialists are the intended audience for this manual. Because no two missions are the same, personnel must adapt the doctrine in this manual to fit the needs of the given situation and mission.

Since this manual was last published, the Army has conducted many combat and stability operations that have greatly affected the way Class I is provided to Soldiers. This manual incorporates these lessons learned. Where appropriate, this manual references other food service doctrinal publications, such as Army Regulation (AR) 30-22, Department of the Army (DA) Pamphlet 30-22, and field manual (FM) 10-23-2. Army Food Program policy and operational procedures are also contained in these publications and should be used in conjunction with this manual to plan and conduct field food service and Class I operations during field training exercises, operational deployments, and contingency operations.

Part one of this manual provides an in-depth overview of the AFFS, modular subsistence sustainment, personnel responsibilities, and Class I supply planning considerations.

Part two of this manual discusses the Army family of rations and field kitchen equipment. Both areas continue to evolve based on current and future military operations.

Part three of this manual provides guidance and operational procedures for field kitchen operations, Class I supply operations, and contingency operations (CONOPS).

In the appendixes are several checklists that provide additional Class I supply and food service training, planning, and maintenance guidance.

Commanders, logistical planners, subsistence supply managers, food advisors, food operation sergeants, and food service personnel should continue to provide feedback based on their lessons learned during operations on the content and operational procedures presented in this manual. Your input is vital to the continued evolvement and success of the Army's Class I mission and to ensure that our Soldiers continue to be the best fed in the world.

The proponent of this publication is United States Army Training and Doctrine Command (TRADOC). Submit recommended changes on DA Form 2028 *(Recommended Changes to Publications and Blank Forms).* You should key each comment to the specific page and paragraph to which the comment applies. Provide your rationale for each comment. Forward the completed form to Commander, U.S. Army Quartermaster Center and School, Army Center of Excellence, Subsistence, ATTN: ATSM-CES-OC, 1201 22nd Street, Fort Lee, Virginia 23801-1601

This FM applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR).

PART ONE

ARMY FIELD FEEDING

Chapter 1

Army Field Feeding System Overview

The AFFS is a total system which supports battle doctrine through flexibility in feeding methods. It is designed to perform sustained tactical feeding to meet the commander's needs as determined by the mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) and logistical support available on the battlefield. It enhances the commander's ability to support personnel while under adverse conditions; provides for mobility and responsiveness; and reduces the administrative burden on unit commanders and food service specialists.

As a total system, the AFFS has three main elements. They are a family of rations; the equipment to support storage, distribution, and preparation of rations; and the personnel to operate the system. An overview of these elements are described in this chapter and expanded upon throughout the rest of this manual.

ARMY FAMILY OF RATIONS

1-1. The Army family of rations consists of individual rations, group rations, special feeding rations, a meal supplement, and meal enhancements. The only authorized meal supplement is milk (fresh or ultra high temperature [UHT]), which is required to ensure the nutritional adequacy of unitized group rations (UGRs). Enhancements, such as fresh fruit, salad, and bread, should be issued to improve variety and acceptability of all rations. Detailed information on the Army family of rations is in chapter 4.

1-2. It must be noted that all types of rations may not be available in each theater at the onset of hostilities. The theater food advisor and subsistence officer (with guidance from the theater commander) must determine the rations to be moved forward to supported units using the push system. When logistics personnel, rations, transportation, adequate storage, and equipment are in place, a pull system will be implemented. Using the pull system, the unit places a demand (ration request) and theater sustainment elements react to meet those demands. The push and pull ration distribution systems are discussed in chapter 3.

FEEDING STANDARDS

1-3. The approved feeding standard for the AFFS is three quality meals per day. This standard is achieved by using a combination of individual and group operational rations. Logistical staff planners must prepare the ration mix to support all ongoing operations and provide guidance to commanders on ration availability. Based on this availability and the commander's METT-TC, a combination of these types of meals may be used to meet feeding requirements on a daily basis during different battlefield situations. Specific feeding standards for field kitchens and field hospitals are discussed below.

Field Kitchens

1-4. The feeding standard for field kitchens utilizing modified table of organization and equipment (MTOE) is to move to a normal daily ration mix of UGR/individual meal/UGR (METT-TC dependent). Force structure and equipment is sufficient to distribute, prepare, and serve meals to this standard. The Army family of rations used to support this standard consists of individual and unitized group meals plus the authorized supplement and enhancements.

Field Hospitals

1-5. The feeding standard for field hospital patients is three hot (UGR or contractor-provided) meals daily. The medical diet field feeding supplement should be used for those patients that have sustained head and facial injuries. The meal ready-to-eat (MRE) is authorized for patients only in emergency situations when other rations are not available. Milk and enhancements will be added to the menu as they become available. The hospital staff follows the theater ration cycle unless the capability exists to feed those personnel at an improved standard. When supplies and other resources permit, hospital staff will be fed using the patient standard of three hot meals per day. (Additional guidance for Army medical field feeding operations is contained in FM 4-02.56.)

CAPABILITIES

1-6. Class I and food operations personnel will be required to support personnel in areas engaged in operations ranging from humanitarian assistance to full-scale war. Due to mission and employment tactics, there are differences in Class I supply and feeding operations. To support these operations, the AFFS provides a variety of Class I supply and field feeding methods and equipment that enable commanders to determine the optimal feeding method based on the METT-TC. The primary emphasis of the AFFS is to enable the commander to seize tactical opportunities as they occur. Detailed information on field feeding equipment is in chapter 5.

1-7. The key to successful field feeding and Class I supply operations is adequate coordination between logistical staff planners, food service support agencies (Department of Defense [DOD] and DA), Class I supply managers, and food service specialists. Commanders must also rely on the managerial and technical expertise of food service warrant officers and senior food operations noncommissioned officers (NCOs) to maximize the productivity of personnel and equipment resources provided.

MODULAR FEEDING

1-8. Under modularity, the operational Army is now brigade-centric. Brigade combat teams (BCTs) and sustainment brigades have food service specialists and equipment assigned at battalion level. By assigning resources to the battalions, commanders have the capability to respond to changing task organization and tactical situations. The AFFS provides the capability of feeding at company-level, battalion-level, or providing logistics package (LOGPAC) remote site feeding based upon the configuration of the composite force structure. Such structure aids cross attachment of units from brigade sustainment or combat teams to battalion or independent operations along with the necessary feeding assets. Commanders ensure that personnel are subsisted at the established standard by using area feeding, battalion level feeding, and remote site feeding. Unit food advisors play a critical role in task-organized or area feeding situations. They must be involved, beginning at the earliest possible planning phases for any operations. Through proper coordination, the food advisor can help ensure successful feeding operations during each training exercise and operational deployment.

MODULAR CLASS I SUPPLY

1-9. The theater sustainment command (TSC) is the senior logistics command in a theater of operations. The TSC commander has command and control (C2) of operational level logistics, including available transportation assets, and maintains visibility of the total theater distribution system. Sustainment brigades are subordinate to the TSC. The sustainment brigade is a modular organization and is comprised of a

headquarters and functional and multifunctional subordinate logistics units. Sustainment brigades are employed at the numbered army level, Corps, and division levels. Combat sustainment support battalions (CSSBs) are subordinate to the sustainment brigade. CSSBs are multifunctional in organization and provide C2 for the functional and multifunctional companies, platoons, and teams that execute sustainment operations. The quartermaster support company assigned to the CSSB establishes a supply support activity (SSA) for Class I and other classes of supply.

1-10. Modular subsistence sustainment activities and subsistence platoons provide the required personnel and equipment to support the level of subsistence supply required by the AFFS within an operational theater. These organizations work under the operational control of the Fixed Base SSA at the theater and Corps levels. They provide refrigerated storage and transportation assets to support the theater ration cycle and handle subsistence from the seaport of debarkation (SPOD) and aerial port of debarkation (APOD) to fixed and deployable SSAs. Detached teams from the subsistence platoons will operate at deployable Class I points. These support teams will be under the operational control of the supported deployable SSA unit commander while operating in the deployable SSA unit's area of operation.

PLANNING

1-11. The operations plan (OPLAN) and/or operations order (OPORD) provides Class I and food operations personnel with guidelines on the ration mix and ration cycle for the exercise or operational deployment based on the commanders' or units' METT-TC. Deployment plans for combat operations to an undeveloped area of operations (AO) should call for using MREs initially and, as the theater stabilizes, progressing to meal selection from the Army family of rations that includes both MREs and UGRs with the authorized menu supplement and enhancements. Food advisors and leaders assigned to units scheduled to deploy into an established AO must include and consider as a part of the unit deployment sustainment planning process the existing Class I and dining facility supporting infrastructure. Coordination with the theater food advisor, who is located at the theater sustainment brigade headquarters, to discuss sustainment operations, existing Class I, and dining facility support operations is a key point to consider and must be considered mandatory by all food advisory staff and logistics planners. The availability of existing facilities and infrastructure does not alleviate unit logistics planners and food advisory staff from ensuring that organic table of organization and equipment (TOE)/MTOE food preparation equipment is deployed with the unit and available to support food operations in the event of situational driven changes to operations within the AO.

Note. Class I planning for training exercises and operational deployments are discussed in chapter 3. Class I planning for Contingency Operations is discussed in chapter 8.

THREAT, VULNERABILITY, FORCE PROTECTION, AND LIMITATIONS

1-12. Military and contractor equipment and personnel required to provide Class I and food service support in the theater may be targets of opportunity for threat forces and are vulnerable to the entire spectrum of threat attack means. Civilian contractors may have a greater problem of providing support when main supply routes (MSRs) become targets of opportunity for insurgents. Subsistence supply operations can be diminished as trucks and personnel are targeted on the MSRs. Distribution vehicles will be subject to all levels of threat as they traverse the lines of communication from the port of debarkation (POD) to the forward areas of the division and brigade support areas. Fixed and deployable Class I points in the Corps operational environment are key targets of threat operations. Deployable Class I points in forward areas (maneuver brigades) have to maintain mobility while resupplying combat forces. Logistics leaders must be flexible. They must react to demands and maximize the use of throughput distribution to combat trains and combat battalions to provide essential supplies continually to units on the battlefield. The effects of chemical, biological, radiological and nuclear (CBRN) contamination will also seriously impede subsistence distribution and food service operations. Active risk management and force protection measures assist in countering these threats. Contingency stocks of rations must be maintained within operational areas to support mission requirements when interruptions in supply lines occur.

RISK ASSESSMENT AND FORCE PROTECTION

1-13. Risk assessment and force protection planning must be integrated into all Class I and field kitchen operations. Force protection planning at all operational levels minimizes the risk of losses due to hostile actions. Proper dispersion at Class I and field kitchen sites helps to reduce the chance of losses from hostile fire and terrorist actions. Food service leaders must enforce standards regarding maintaining active camouflage, enforcement of light and noise discipline at field kitchens and Class I operations, incorporating the use of organic security elements, and team developed field fortifications. These actions will reduce risk and chance of losses. In noncontiguous areas of the operational environment where field kitchens, subsistence convoys, and forward Class I operations often operate, the risk and force protection challenges increase. Often when hostile forces are unable to challenge Army units in conventional combat operations, they look for ways to frustrate vital support operations by resorting to asymmetric methods, weapons, and tactics. Army force protection measures counter these threats. Food operations leaders conduct risk assessments and implement appropriate force protection measures as required. Additional information regarding risk management and force protection can be found in AR 525-13 and FM 5-19.

ENVIRONMENTAL TRAINING AND INTEGRATION

1-14. Protection of natural resources has continued to become an ever-increasing concern to the Army. The Army's environmental vision is to be a national leader in environmental and natural resource stewardship for present and future generations. Environmental stewardship and environmental risk management must be an integral part of all unit training, deployments, and operations. The AFFS will provide required levels of food service support while permitting environmental concerns to be properly addressed. Soldiers and leaders are expected to serve as the Army's environmental stewards. Graduates of noncommissioned officer and officer training courses have received environmental awareness training. Each has a personal and professional responsibility to understand and support the Army's environmental program. Proper management of resources and protection of our environment must be integrated in all training and operations planning. Commanders must stay current with local, state, federal, and host nation (HN) laws regarding environmental concerns.

AFFS IN CBRN ENVIRONMENTS

1-15. Food may become contaminated from enemy employment of CBRN agents or from terrorist contamination of food procurement facilities and food supplies. CBRN agents may be introduced during production or in the storage area of the procurement facility; while the product is in transit, at the military storage facility, or at the unit food service facility. Regardless of where the agent is used, the effect is the same; personnel will become ill or die if they consume the contaminated food.

1-16. The AFFS permits food service operations in a variety of tactical situations, yet they must be curtailed in CBRN environments. Generally, food is not prepared or served in an environment contaminated by CBRN agents. The primary meal for use during CBRN operations is the MRE. The tactical situation and the priorities for decontamination will determine how long MREs are used. It is important to continue operations only after ensuring adequate individual and collective protection. Personnel and field kitchens must be moved to uncontaminated areas and decontaminated before food service can be resumed. Specific food contamination and decontamination guidance is contained in FM 4-02.7.

Chapter 2

Subsistence Sustainment and Responsibilities

This chapter discusses organizational and personnel responsibilities, the transformation of support, and sustainment operations and the development of the sustainment brigade as the Army's key logistical link to support the Soldier with Class I.

MODULAR FORCE

2-1. The Army's modular force brigades include five types of multifunctional support brigades that complement and reinforce the BCTs:

- Combat aviation brigades.
- Fires brigade.
- Battlefield surveillance brigade.
- Maneuver enhancement brigade.
- Sustainment brigade.

2-2. These brigades are organized as combined arms units. Each accomplishes a broad function, such as protection in the case of the maneuver enhancement brigade. Additionally, theater level single function commands (such as Theater Sustainment Command and Army Air and Missile Defense Command) provide additional capabilities for the modular force. The operational Army's modular brigades and organizations can be quickly assembled into responsive force packages able to rapidly respond and move wherever needed.

THEATER SUSTAINMENT COMMAND

2-3. The mission of the TSC is to plan, prepare, rapidly deploy, and execute operational-level sustainment (less health service support) within an assigned theater. The TSC is capable of planning, controlling, and synchronizing all operational-level Army sustainment operations for the ASCC. It provides centralized operational-level Army sustainment command and control (C2) structure in theater; simultaneously supporting deployment, movement, sustainment, redeployment, reconstitution, and retrograde.

2-4. The TSC executes its mission through the use of modular forces, to include expeditionary sustainment commands (ESC), sustainment brigades, combat sustainment support battalions, and other modular sustainment formations. Sustainment brigades, functional groups, combat sustainment support battalions, and functional sustainment units serve as the building blocks of the force structure designed to execute sustainment functions within the theater.

2-5. As required by mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC), the TSC may extend its operational reach by deploying multiple ESCs or sustainment brigades into specified areas of operations (AO)/ joint operational areas (JOA) in order to more effectively provide responsive support to Army forces. ESCs can serve as forward headquarters of the TSC and provide C2 for theater opening, theater distribution, and area support within and between specified AOs/JOAs. Depending on the command structure within the theater, ESCs and sustainment brigades may be employed to support specific Army forces (ARFOR) within a specific AO/JOA; or to support other ESCs or sustainment brigades with theater opening or theater distribution capabilities.

EXPEDITIONARY SUSTAINMENT COMMAND

2-6. The role of the ESC is to provide forward-based C2 of sustainment forces. The ESC does not represent a separate echelon of command but rather an extension of TSC C2 capabilities, such as an operational command post does for the Army headquarters. It normally deploys to the AO/JOA and provides command and control when multiple sustainment brigades are employed or when the TSC determines that a forward command presence is required. This capability provides the TSC commander with the regional focus necessary to provide effective operational-level support to Army or joint task force (JTF) missions. The TSC may employ multiple ESCs within the theater. The forward deployment of the ESC facilitates agile and responsive support by placing the ESC in relative proximity of the supported force and its operational environment. Positioned to provide a regional focus, the ESC is optimally placed to refine that portion of the TSC logistic preparation of the theater assessment applicable to the JTF area of operations and to array logistic forces accordingly. Each ESC provides a rapidly deployable, regionally focused, control and synchronization capability, mirroring, on a smaller scale, the organizational structure of the TSC. The ESC also oversees sustainment operations in accordance with TSC plans, policies, programs, and mission guidance. For more information on the TSC and ESC, see FM 4-93.4.

SUSTAINMENT BRIGADES

2-7. The sustainment brigade consolidates selected functions previously performed by corps and division support commands and area support groups into a single operational echelon and provides C2 of theater opening, theater distribution, and sustainment operations.

2-8. All sustainment brigades have the same general capability to manage theater opening, theater distribution, and sustainment operations. The sustainment brigade provides support within an assigned AO. Each sustainment brigade is a multifunctional organization providing support for multiple brigade-sized units. It is tailored and task organized and uses Combat Sustainment Support Battalions (CSSB) that can consist of up to eight companies. CSSBs are modular and task organized to support sustainment brigade missions. In the sustainment role, the brigade is primarily concerned with the continuous management and distribution of stocks, human resources support, execution of financial management support, and allocation of maintenance in the AO to provide operational reach to maneuver commanders. Greater detail on these missions and organization of the sustainment brigade is provided in FMI 4-93.2.

SUBSISTENCE PLATOONS

CONCEPT OF OPERATION

2-9. Subsistence platoons are organized under the Quartermaster Support Company in the sustainment brigade. The subsistence platoon in the theater sustainment brigade receives bulk rations from the SPOD/APOD/fixed SSA, stores them, and distributes them to a subsistence platoon or other support units assigned to the corps/division sustainment brigade.

- In a fixed SSA role, rations are transported forward from a subsistence platoon in bulk on 20- or 40-foot international standards organization (ISO) containers and on leased or contracted refrigerated containers or semitrailers.
- In its deployable SSA role, a subsistence platoon builds loads in the multi temperature refrigerated container system (MTRCS) and on container roll-in/roll-off platforms (CROPs) for distribution to its customers.

2-10. A subsistence platoon for the corps/division sustainment brigade will build loads for each field feeding section within the brigade. These loads are configured based on requirements submitted by each of the brigade support battalion (BSB) field feeding sections. The configured loads are distributed by the medium truck company, palletized load system (PLS) to each BSB. Loads configured by a subsistence platoon of the corps/division sustainment brigade are stored within MTRCS and on CROPs. MTRCS and CROP configured loads are distributed by the distribution company of the BSB to the individual field feeding or Class I sections via heavy expanded mobility tactical truck–load handling system (HEMTT-LHS)

and PLS trailer. After the initial delivery, this process becomes a trailer transfer type of operation. Should these enablers not be available, a Class I point must be established within each BSB.

SUPPORT ORGANIZATIONS

2-11. Several DOD and DA organizations have subsistence sustainment responsibilities. A brief description of the support and services provided by each organization is below.

DEFENSE LOGISTICS AGENCY (DLA)

2-12. As a staff headquarters, DLA is the DOD Executive Agent for subsistence and controls buying, inspecting, storing, and distribution of logistic support materials worldwide.

DEFENSE SUPPLY CENTER PHILADELPHIA (DSCP)

2-13. DSCP is an operating activity of DLA. DSCP acts as the single point of contact to establish strategic and operational relationships, capabilities and the system integration necessary for effective and efficient worldwide Class I supply chain support for the Department of Defense. DSCP operates a number of Continental United States (CONUS) and outside the Continental United States (OCONUS) storage and distribution centers. DSCP is responsible for managing the industrial base program and war reserve stock (WRS) levels. WRS levels are based on service contingency plans and the National Security Strategy.

U.S. TRANSPORTATION COMMAND (USTRANSCOM)

2-14. USTRANSCOM is the distribution process owner and provides common user airlift, sealift, and terminal services to deploy, employ, and sustain U.S. Forces on a global basis. USTRANSCOM's transportation component commands include: the Army's Surface Deployment and Distribution Command (SDDC), the Navy's Military Sealift Command (MSC), and the Air Force's Air Mobility Command.

THE ARMY G4

2-15. The Army G4 is the principal staff advisor to the Secretary of the Army and Army Chief of Staff on subsistence matters and is responsible for the operation and management of the Army Food Program including reviewing, coordinating, evaluating, and justifying programs and budgets.

U.S. ARMY MATERIEL COMMAND (USAMC)

2-16. USAMC directs the development and maintenance of Army materiel. It develops and maintains specifications for subsistence items. It determines Army mobilization and contingency plans for subsistence requirements and maintains the Army's contingency stocks. USAMC also develops contracts supported through the Logistics Civil Augmentation Program (LOGCAP).

U.S. ARMY NATICK SOLDIER RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

2-17. Natick manages the DOD's Combat Feeding Program and is responsible for research, development, integration, testing, and engineering for operational rations, food service equipment technology, and combat feeding systems.

TANK-AUTOMOTIVE AND ARMAMENTS LIFE CYCLE MANAGEMENT COMMAND (TACOM LCMC)

2-18. One of TACOM's business units is the Integrated Logistics Support Center (ILSC). ILSC is a business group of TACOM LCMC under USAMC. It computes and forecasts Army requirements for Class I war reserve material based on the DA field feeding plan. Requirements are provided to DSCP annually for planning purposes.

U.S. ARMY SUSTAINMENT CENTER OF EXCELLENCE (USASCOE)

2-19. USASCoE provides the Army with combat developments, training developments, and institutional training. The USASCoE also participates in the force structuring process and determines material requirements for the development, acquisition, and fielding processes for sustainment functions including subsistence.

U.S. ARMY QUARTERMASTER CENTER AND SCHOOL (USAQMC&S)

2-20. The commander of the USAQMC&S is responsible for carrying out the Army Food Program established by the Army G4. DOD Base Realignment plans for the USAQMC&S include all military services basic food service training being consolidated under a new academic food operations training organization, named The Joint Culinary Center of Excellence (JCCoE). As a department in the USAQMC&S, the Army Center of Excellence, Subsistence (ACES) provides—

- Garrison, field food service, and culinary arts training.
- Doctrinal and regulatory policy development and guidance.
- Oversight of the Army Food Program.
- Field and CONOPS master menu development.
- Technical assistance regarding the operation of the subsistence prime vendor (SPV) program.
- Subsistence management, storage, issue, and accountability procedures.
- Technical guidance on dining facility equipment and dining facility design.
- Development and maintenance of Army food service performance work statements for contracted food services.
- Executive Agency overview for the DA CONOPS Menu.
- Planning for the use of excess stocks and rotating WRS with DSCP.

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE (USACHPPM)

2-21. USACHPPM develops policy and programs for food sanitation, food safety, and preventive medicine. The field environmental health program manager is the executive health hazard assessment agent for sanitation and health hazard assessment.

SUPPORT PERSONNEL

2-22. Efficient subsistence management requires close coordination by personnel with different areas of responsibility. The primary personnel involved in subsistence sustainment and field food service operations are discussed below.

SUBSISTENCE SUSTAINMENT OPERATIONS

2-23. Personnel involved in the planning and operation of subsistence sustainment operations for both training exercises and operational deployments are listed below.

Theater Subsistence Officer

2-24. The theater subsistence officer is located at the TSC during an operational deployment and plays a key role in subsistence sustainment operations including:

- Ensuring that available resources such as equipment, facilities, and personnel are adequate to receive, store, and issue Class I supplies.
- Coordinating requirements with the theater food advisor, DSCP, the principal assistant responsible for contracting (PARC), other military services in the theater, and supported allies.
- Ordering all theater Class I stocks based upon the approved feeding plan.
- Managing the Class I E2E supply chain.

- Determining and managing the number of days of supply required in the theater, by ration type, and coordinating with the senders, movers, personnel managers, and financial managers.
- Developing requirement documents to contract for goods and services in the theater to support the Class I mission.

Theater Food Advisor

2-25. The theater food advisor is located at the TSC and is an essential member and the key food operations subject matter expert for Class I issues on the theater commander's staff. The theater food advisor provides technical supervision over theater food service activities and advises the commander on feeding operations, feeding options available, and the service capability within theater. The theater food advisor coordinates with DSCP, ACES, the theater subsistence officer, veterinary personnel, and contracting officers to acquire required menu components and helps the theater subsistence officer determine requirements, schedule issue and turn-in times, and decides the best methods for ration break down and distribution.

Veterinary Personnel

2-26. A veterinary officer should be included on the theater commander's staff and assigned in the office of the theater subsistence officer. Representatives of the Veterinary Command (VETCOM) responsibilities include—

- Conducting sanitation inspections as prescribed in AR 40-657.
- Inspecting and approving sources of both fresh and prepared subsistence within the HN for contract support.
- Recommending necessary changes to storage and issue of food items.
- Inspecting food production facilities prior to contract award for such items as ice, fresh bread, rolls, and pastries.
- Inspecting all perishable and semi-perishable subsistence as prescribed in AR 40-656.
- Inspecting excess subsistence turned in from field kitchens before it is accepted by the subsistence supply management office (SSMO) or Class I point.
- Inspecting damaged or deteriorated subsistence before recommending that it be force issued or dropped from accountability and destroyed.

2-27. The veterinary officer also serves as advisor to the commander on decisions related to the safety and wholesomeness of subsistence and on the appropriate ration or menu to be provided based on environmental, sanitation, threat conditions, and captured subsistence. In developed theaters, the decision to contract subsistence and Class I distribution operations to a commercial activity is made by and implemented by theater leadership. This type of service contract is known as a Subsistence Prime Vendor (SPV) contract. SPV contracts continue to be used successfully around the world by all branches of military services to provide subsistence and Class I support to garrisons and operations around the world. When a SPV contract is awarded to a commercial contractor in support of an AO, the commander of the supporting veterinary activity will normally assign senior veterinary services staff to provide oversight of government furnished material (GFM) being received, stored, and distributed from contracted SPV facilities.

Surgeon

2-28. The surgeon locates with the medical company in the BSB and advises the commander on food service issues covering nutrition, sanitation, hygiene, water potability, waste management, pest management, and environmental impacts. The surgeon may be co-located at both the G1 and/or the medical company in the BSB. Preventive medicine sections and detachments conduct food service sanitation training, unit field sanitation team training, and deployment medical threat briefings.

Subsistence Platoon Leaders

2-29. Subsistence platoon leaders are responsible for directing and controlling platoon operations related to receipt, storage, configuration (for unit piles), issuing, shipping, and accounting for subsistence supplies. Their specific duties vary depending on the location of the unit and the quantity and type of Class I supplies being used.

Class I Managers

2-30. Class I managers are responsible for the operation of Class I points at all levels, to include operation of the Class I management system (manual or automated) being used. They are responsible for acquisition, receipt, storage, configuration, shipments, and accountability of subsistence and health and comfort packs (HCPs). They supervise inventories and recommend resupply levels. They supervise the transshipment of rations throughout the theater. Class I managers are also responsible for computing tonnage requirements and loading plans.

Subsistence Supply Manager (SSM)

2-31. The SSM is the military, DA civilian, or contractor responsible for the operation of a SSMO. Operational rations will be ordered during training exercises from the SSMO through DSCP. DSCP will place orders with contracted distributors/assemblers for delivery of required operational rations. Close coordination with units on the length of the operation, number of personnel to be supported, and training sites must be provided so there is no or limited residual operational rations remaining at the end of the training exercise. Residual rations that cannot be used during the training exercise or transferred to another operational feeding site must be returned to the SSMO and/or the garrison dining facility. In instances where there is no supporting SSMO or large quantities of residuals remain on hand after training or deployment, the Class I manager should contact the Army Command or Army Service Component Command (ASCC) food advisor for disposition instructions. During training exercises or domestic emergency deployments, the SSMO will frequently serve as the theater level Class I sustainment activity, providing support to participating units. In some theaters, it may be possible for OCONUS SSMOs to continue to operate during hostilities. Depending on the level of hostilities, personnel assigned may be military, civilian, or contractor employees.

FOOD SERVICE OPERATIONS

2-32. The commander is responsible for the unit field food service operation. The commander's duties and those of other food service personnel are described below.

Commander

2-33. The commander must—

- Ensure that the unit has all authorized field kitchen equipment listed in the MTOE, TOE, DA equipment and authorization and usage program, and applicable common table of allowances (CTAs).
- Ensure that authorized administrative, medical, unit field sanitation teams, and supply personnel are available and trained.
- Ensure that the unit basic load (UBL), as prescribed in Army regulations (ARs) and Army command or ASCC policy (a minimum of three days supply of operational rations), is on hand or available in group storage.
- Ensure that adequate transportation support capabilities are available to move personnel, equipment, subsistence, ice, water, fuel, trash, and residual rations.
- Ensure that sufficient kitchen police (KP) support is available for field kitchens preparing UGR meals.
- Request food service technical support to assist the senior food operations sergeant (SFOS) before, throughout, and after the field mission.

- Ensure that personnel data (present-for-duty by service component, remote site feeding, and personnel paying by cash) is provided to the SFOS in a timely manner.
- Ensure that all Class I accounts are closed according to the major command's food program policy guidance.
- Ensure that all government furnished subsistence and operational rations are managed, accounted for, transferred, or properly turned-in or disposed of per Army food program regulatory policy.

Food Service Officer (FSO)

2-34. The FSO acts as a liaison between the commander and the SFOS in all matters pertaining to the food service operation. The FSO is designated by the commander and coordinates with the unit's food advisor.

Food Advisor, Food Service Technician, and Senior or Chief Food Operations Management NCO

2-35. The food advisor may be a commissioned officer, a warrant officer, a NCO, or a DA civilian, depending on the level of operation. The food advisor's main responsibilities are to advise commanders, assist Class I managers, assist the SFOS, and assist in resolving food service-related problems. The food advisor must be familiar with all areas of the AFFS and provide assistance in field operations from as early as possible in the planning phase until the mission is complete. Detailed guidance pertaining to performance of specific duties will be discussed throughout this manual.

Senior Food Operations Sergeant

2-36. The SFOS is the NCO in charge of the field kitchen operation. The SFOS must know all aspects of field feeding operations and make the most efficient use of assigned personnel, equipment, facilities, and supplies. The SFOS must coordinate closely with the commander, FSO, first sergeant, and the food advisor. The SFOS must be involved as early as possible in the operation planning phase and must continually improve the unit food service team's proficiency, by ensuring that all assigned personnel are properly trained to work as part of the team.

Food Service Specialists

2-37. The AFFS provides food service specialists (military occupational specialty [MOS] 92G) to prepare all meals in the Army family of rations (METT-TC dependent). Staffing is based on the feeding standards established in Chapter 1. Food service specialists are consolidated or assigned at battalion level as follows:

- For maneuver units (heavy brigade combat team [HBCT], interim brigade combat team [IBCT], Stryker brigade combat team [SBCT]): the forward support company from the BCT BSB supports each maneuver battalion, including the brigade headquarters and brigade STB.
- For support brigades (sustainment, fires, CAB, aviation, BFSB, CSB [ME]): the forward support company from the support brigade's BSB supports each modular unit that falls under its task organization.

KP Support

2-38. When the commander determines at which meals UGRs will be served, the unit must provide KP support to the food service team. Army unit TOE food service specialist staffing was not designed to handle the field kitchen sanitation workload without unit supplementation. The number of personnel required depends on the unit's feeding strength, mission, and remote site feeding requirements. Consult with the unit SFOS and food advisor when determining required KP staffing.

This page intentionally left blank.

Chapter 3
Class I Supply Planning

This chapter provides guidance on Class I supply planning for both field training exercises and operational deployments to an AO. Planning for CONOPS feeding is discussed in chapter 8. Class I planning during the predeployment stage is a critical element for success of the mission. This process begins with forecasting requirements and the possible pre-positioning of equipment and subsistence. Shortages or excesses may result if this phase is not accurate. In accomplishing this task, the food advisor, in coordination with logistics planners (DOD/Army G4/TSC/sustainment brigade, Class I material managers), and Class I support agencies, must play an active role in advising, coordinating, and developing a feeding plan with the commander to fit the deployment and mission criteria. Class I planners must thoroughly understand all Class I distribution and field feeding operational concepts discussed in this manual in order to develop effective Class I plans. Class I supply and feeding procedures are always in a stage of change as the Army transforms the way it conducts operations. Class I planners and operators must be flexible to these changes and adapt their methods to successfully accomplish the Class I mission.

Note. Ration planning factors for transportation and storage are discussed in chapter 4. Appendix B contains a Class I planning checklist for all personnel to ensure that Class I areas have been considered during predeployment and redeployment activities.

COORDINATION

3-1. Class I distribution is more than just moving rations through the supply system. Logistical support must be constantly coordinated at all food service and supply levels prior to and during the deployment. Prior coordination ensures that personnel are properly trained and prepared to fulfill their mission, required rations are in sufficient supply, and the required equipment is available and mission ready. Class I planners coordinate the feeding plan to supported units through the sustainment annex of the OPLAN or OPORD. Class I planning guidance can also be coordinated through:

- Operations letter of instruction or directives.
- External support plans.
- Unit standing operating procedures (SOPs).

3-2. Commanders, operations planners, logisticians, and food advisors must determine mission-specific Class I requirements which will satisfy unit tactical needs in the predeployment planning phase and then work together to fulfill these requirements. Class I plans must always support and never hamper the operational mission.

SEQUENCE FOR TRAINING EXERCISES

3-3. Training exercises are usually short and have a small number of participating troops when compared to an operational deployment. Due to the short duration, all rations are usually forecasted and ordered for the entire length of the exercise from the supporting Class I sustainment activity (SSMO or SSA or Class I point). Lines of supply are usually established, energized well in advance, and are supported from local

supply activities. Class I support from both a SSMO and SSA Class I point are normally sequenced as follows:

- SSMO—
  - Unit planners determine ration mix and ration cycle for the exercise.
  - Unit planners coordinate directly with the SSMO for subsistence support.
  - Units deploy with travel rations of MREs and 1 or 2 days of supply (DOS) drawn from the SSMO (according to the OPORD/OPLAN).
  - Units draw rations from SSMO for resupply.
- SSA Class I Point—
  - Highest participating headquarters logistics planners determine ration mix and ration cycle for units.
  - Units coordinate with unit food advisor and Class I point manager for subsistence support.
  - Units deploy with travel rations of MREs and 1 or 2 DOS received from the SSMO or Class I supply unit.
  - Class I supply units arrive before or at the same time at the training site as supported units with 2 or 3 DOS.
  - Class I supply units draw rations from the supporting SSMO or the SSMO has rations delivered directly to the Class I point for resupply.
  - Class I supply units issue MREs, UGRs (H&S and A), supplement, enhancements, and ice.

SEQUENCE FOR OPERATIONAL DEPLOYMENTS

3-4. The complexity and the number of Class I sustainment activities increases significantly during operational deployments to an AOR. Lead times are often short, force strength numbers surge, the length of the operation is not known, forces constantly reposition, missions change, and there may be no existing sustainment infrastructure established within the theater. Units may not have the luxury of choosing which rations they will consume. The OPLAN and the approved feeding plan will identify when distribution units and equipment will become operational and when the full Army family of rations will be available for issue. Establishing Class I support within a theater is normally sequenced as follows:

- Theater Class I planners determine ration mix and ration cycle for units.
- Theater Class I planners coordinate with DSCP for subsistence support.
- SSA Class I planners coordinate with theater planners for subsistence support.
- Units deploy with basic load of MREs and bottled water (according to the OPLAN/OPORD).
- Units coordinate with their designated Class I point for subsistence support.
- Class I points receive and issue MREs, bottled water, UGR-H&S, supplement, enhancements (non-refrigerated), and HCPs.
- Class I points receive and issue UGR-As, enhancements, and ice.
- If enduring presence is determined, CONOPS feeding (chapter 8) may be established.

RATION MIX AND RATION CYCLE

3-5. Once Class I planners receive the OPLAN/Logistics Estimate, the ration mix and ration cycle must be determined. The ration mix is the types of rations that will be available during the training exercise or operational deployment including operational rations (individual and group), supplement, enhancements, and ice. The ration mix for operational deployments to an AOR may include bottled water and medical diet feeding supplements. Based on the METT-TC and theater supply levels, unit commanders may choose to use the mix of rations differently than from the established ration cycle based on unit mission requirements.

3-6. The ration cycle specifies the type of rations to be served for each meal (breakfast, lunch, and dinner). The ration cycle is published in the sustainment annex of the OPORD and is normally expressed as a three letter combination such as M-M-M or U-M-U (MRE=M, UGR=U). Further guidance on which type of UGR (H&S or A) will also be stated. The ration cycle is approved by the operational commander as the

ration standard that all supported units will follow. For exercises, once the ration cycle is established, it seldom changes due to the short duration of the training. During operational deployments, the ration cycle changes based on the phase of the operation, ration availability, and distribution capabilities.

THEATER FEEDING PLAN TIME LINE

3-7. Theater Class I planners should use the theater feeding plan time line (figure 3-1) as a ration mix and ration cycle planning tool during the predeployment phase of an operational deployment. This time line shows the progressive movement of the ration cycle to an improved feeding standard over time. The time line is broken down into two periods; the expeditionary and the temporary. The expeditionary period reflects the period of time from the initial movement of forces into the AO up to the first six months. The planning factors discussed in this chapter are primarily for this period. The temporary period reflects the movement from initial operations (tactical field kitchens) to a higher standard of food service support (garrison-type dining facilities) once the theater commander determines that forces will remain in the theater for an extended period of time. For the purposes of this manual, the movement to the temporary period is called CONOPS feeding and is discussed in chapter 8. It is important to note that this time line is METT-TC and theater condition based. This time line is also based on initial deployment to a theater with a limited or no sustainment infrastructure. Units deploying to theaters with developed logistical infrastructures may immediately start at an improved ration cycle based on the supply levels and distribution capabilities available within the theater at that time.

RATION MIX AND RATION CYCLE PLANNING FACTORS

3-8. Class I planners should consider the factors listed below during the mission planning stages when developing the ration mix and ration cycle. These factors are not inclusive and all do not apply to both training exercises and operational deployments. Class I planners should determine which factors apply based on their unit METT-TC and the projected deployment area.

STRENGTH FORECASTING

3-9. Strength levels constantly change during training exercises and operational deployments. Class I planners must keep abreast of these changes to properly forecast ration requirements. Based on task organization, Class I planners should also determine the number of Joint and Coalition forces that should be included in the feeding plan. Other categories of personnel participating in the exercise or deployment may include Army and Air Force Exchange Service (AAFES), Morale Welfare and Recreation (MWR), Red Cross, contractors, and local-hire personnel. Finally, enemy prisoners of war (EPWs) must be considered. Different types of strength data and their use are discussed in the following paragraphs.

Authorized Strength

3-10. The total strength authorized for the command or theater by the MTOEs and table of distribution and allowances (TDAs) is the authorized strength. This strength should be used to determine the quantities and types of subsistence that should be available at the start of hostilities. It is also used to determine the quantities and types of rations that should be stocked as WRS or for projects under contingency plans. These figures should be used to compute gross requirements only. Using authorized strength as the sole basis for subsistence supply creates an excess at the levels least able to handle it.

<table>
<tr><th colspan="9">Theater Feeding Plan Time Line
(Condition Based)</th></tr>
<tr><td>Standard</td><td colspan="6">Expeditionary
<6 Months</td><td colspan="2">Temporary
<24 Months
Military LOGCAP</td></tr>
<tr><td>Ration Cycle</td><td>M-M-M</td><td>U-M-M</td><td>U-M-U w/one UGR-A meal every third day</td><td>U-M-U</td><td>U-M-U</td><td>U-M-U</td><td>DA CONOPS Menu</td></tr>
<tr><td rowspan="3">Theater Ration Mix</td><td rowspan="3">MRE 100%</td><td rowspan="2">UGR-H&S 34%</td><td>UGR-H&S 56%</td><td>UGR-H&S 34%</td><td>UGR-H&S 10%</td><td>UGR-H&S 05%</td><td rowspan="3">Force Provider, LOGCAP or Direct Contract 90 % Supported by SPV Platform

10% Combination of MREs, UGRs</td></tr>
<tr><td>MRE 33%</td><td>MRE 33%</td><td>MRE 20%</td><td>MRE 15%</td></tr>
<tr><td>MRE 66%</td><td>UGR-A 11%</td><td>UGR-A 33%</td><td>UGR-A+ 70%</td><td>UGR-A+ 80%</td></tr>
<tr><td>Facilities</td><td></td><td colspan="3">MKT, KCLFF, CK, Tents, Refers</td><td colspan="2">MKT, CK, Unit Tents, Force Provider, Refers</td><td>Force Provider LOGCAP & SPV</td></tr>
<tr><td>Deployment Days D+</td><td>1-20 days</td><td>21-30</td><td>31-60</td><td>61-90</td><td>91-180</td><td colspan="2">181 Days to 24 Months</td></tr>
<tr><td colspan="9">Note: Units deploying into developed areas may move directly into the temporary standard depending upon their mission and the theater logistical capabilities at that location.

Ration Legend:
MRE-M UGR-H&S or UGR-A – U UGR-A with Short Order Supplemental Menus – UGR-A+</td></tr>
</table>

Figure 3-1. Theater feeding plan time line (condition based)

Actual Strength

3-11. Actual strength gives the number of personnel in the theater, as reported by the G1/S1. It is used to plan wholesale subsistence supply operations after the theater becomes active. The theater subsistence officer and food advisor use the actual strength data to develop initial requirements for the theater ration cycle including operational rations, supplements, enhancements, religious meals, medical food supplemental items, HCPs, and bottled water.

Supported Strength

3-12. Supported strength is reported through subsistence channels to report the number of meals fed and the types of rations used. Under the AFFS, SFOSs report the number of personnel supported on a DA Form 5913 *(Strength and Feeder Report)* to their supporting Class I point no later than the third day after arrival at the field site. Use of these figures aids in cutting the buildup of excess stocks, especially at the lower levels in the distribution chain.

Stockage Strength

3-13. Stockage strength is not a reported strength. It is used as a basis for computing what the stockage should be at any given Class I point. This figure is developed using actual strength and subsisted strength and will normally fall between the two figures. Computing stockage on this developed strength allows the supply point to respond rapidly to changing requirements.

Enemy Prisoners of War

3-14. EPWs will be provided the same level of care consistent with the Geneva Convention. Captured subsistence can be used to initially support EPW feeding missions. The theater surgeon/nutritionist should be consulted on nutritional requirements and the theater or supporting chaplain should be consulted regarding any religious considerations or restrictions related to EPW feeding. Contracted feeding operations may be used for long-term sustainment. Consideration should be given on climate, work, and other factors associated with sustainment of the EPW. Additional planning factors for feeding EPWs are:

- The detaining power feeds EPWs a basic, daily food ration that is sufficient in quantity, quality, and variety to keep them in good health and to prevent weight loss and nutritional deficiencies.
- A medical officer, physician's assistant, or a nurse practitioner keeps the commander apprised of situational needs and the nutritional health of EPWs. Sustain the health of EPWs at a level that is equal to that of the U.S. forces guarding them.
- The theater food advisor must ensure that appropriate DOD funding codes are used for ordering special (ethnic or religious) meals provided for EPW feeding. Military Procurement, Army (MPA) or Operations and Maintenance, Army (OMA) fund sites will not be used for the purchase of these special meals.
- If dining facilities are unavailable, feed EPWs MREs or individual religious meals (described in chapter 4) or other subsistence as directed by the theater or unit supporting chaplain. These rations are easily stored and require no additional dietary supplements. When perishable food supplies (fresh vegetables, fruit, and meat) are available, substitute them as directed by the theater or unit chaplain.
- Always provide sufficient drinking water.
- Do not issue excess rations because EPWs can stockpile food and use it for escapes.
- The responsible commander may authorize EPWs to prepare their own meals under the supervision of U.S. personnel.

FIELD KITCHEN CAPABILITIES

3-15. Units must deploy with all of their available food service specialists and MTOE field kitchen equipment so they can prepare the entire Army family of rations. If they do not, they may not be able to move to an improved feeding standard based on the ration cycle. Class I planners should include field kitchen equipment requirements in the OPORD/OPLAN.

DLA/DSCP COORDINATION

3-16. For training exercises, Class I planners will coordinate all ration requirements with their supporting SSMO or SSA Class I point. If there is no supporting SSMO or SSA Class I point, Class I planners will coordinate with the Army Command or ASCC food advisor, who will designate a supporting SSMO or designate direct coordination with DSCP for all ration requirements. For operational deployments, SSA Class I planners will coordinate all ration requirements with theater Class I planners. Theater Class I planners will coordinate directly with DSCP for all ration requirements. For operational deployment purposes, DSCP maintains, on the internet, a worldwide logistics capability tool called the Support Planning Integrated Data Enterprise Readiness System (SPIDERS). Class I managers and planners can request access to this logistics planning tool at https://spiders.dla.mil. Requesting password access to SPIDERS should be accomplished by the theater food advisor and TSC Class I management and sustainment brigade logistics planners, as soon as information regarding deployments or scheduled training is available. DLA/DSCP will have Class I supply representatives directly supporting theater planners during all planning and operational phases of the operation and will deploy a strategic logistics cell to the AO as part of the Theater Force Opening Package. Theater Class I planners will coordinate the following with DLA/DSCP for operational deployments.

War Reserve Stocks

3-17. Class I WRS are Service-funded and owned. DLA house and manage WRS in DLA depots, commercial storage sites (CONUS, and on pre-positioned ships. DSCP maintains the worldwide war stockage status and will coordinate to move the stocks into the Theater when and where they are needed. Based on the anticipated troop strength and desired ration cycle, DSCP can advise theater planners whether the level of war stocks will give the industrial base enough time to ramp up to support future Class I requirements. This information is used to determine the overall theater feeding plan.

Industrial Base Production Capabilities

3-18. The industrial base has a limit to the amount of operational rations it can produce in a given time. DSCP or the Services cannot maintain an unlimited amount of operational rations in inventory due to shelf life requirements. DSCP will advise theater planners on industrial base capabilities for the types and quantities of rations required. After receiving the theater's ration requirements, DSCP will contract with these companies to produce the needed rations.

Ration Order and Shipping Time (OST)

3-19. The OST is the time from when the theater orders Class I from DSCP until the time the Class I is delivered to the theater subsistence sustainment base. This time is important to understand because it could also include the time to manufacture rations if needed. The OST is the main reason theater Class I planners are planning 90 to 180 days in advance. Commanders must take the OST into consideration for any future changes to the ration cycle. DSCP will coordinate the method of delivery (ground, air, ship, or rail) with the theater planners based on urgency of need and then arrange ration transportation from the manufacturer, depot, or storage facility to the theater subsistence sustainment base.

SPOD or APOD Facilities

3-20. The theater must have adequate warehouse and work space to receive ground, air, ship, or rail Class I shipments. If sufficient storage and working space is available, the theater may elect to operate the theater subsistence sustainment base from these areas.

Available SPV Platforms

3-21. DLA/DSCP maintains SPV contracts worldwide and can assist the theater in using these contracts to support operational deployments and CONOPS. As the ration cycle progresses from straight MREs, personnel will need milk, fruits, vegetables, bread, ice, and other fresh food enhancements. These perishable foods are usually contracted from within the AO due to their short shelf life. In areas that are not supported by a SPV contract, DLA/DSCP can initiate contracts with regional prime vendors to support the AO or establish new avenues of support based on the location of the supported forces. Based on the location of available SPV platforms, theater planners may coordinate with DSCP to utilize a SPV platform as the theater subsistence sustainment base.

Religious Meal Requirements

3-22. Religious meal requirements should be coordinated for both training exercises and operational deployments. During operational deployments, theater Class I planners should coordinate with supporting chaplains and DSCP well in advance (90 to 180 days) for any special religious meal requirements such as religious operational rations (Kosher/Halal) or event meals (Jewish High Holy Days/Passover). Individual religious operational rations may also be used during the initial stages of combat for EPWs or for supporting foreign military training before meal preparation can be contracted. Class I planners should always forecast on the high end for religious meals for the initial deployment because if they are not needed, all personnel can eat them. Once religious meal requirements can be validated as the theater stabilizes, the numbers of meals being ordered can be reduced.

Medical Diet Field Feeding Supplements

3-23. DSCP has developed a ration supplement to the UGR for troop patients that have sustained head and facial injuries. Theater Class I planners should coordinate these requirements with medical feeding staffs during the planning stages and ensure that these supplements are included in the theater ration mix.

Health and Comfort Packs

3-24. HCPs are a Class VI item but they are managed and moved within Class I supply channels. HCP requirements must be coordinated with DSCP early in the planning stages. HCPs should be ordered from DSCP to arrive at the theater subsistence sustainment base prior to units moving across the line of departure. Once units arrive in the operational area, they will want to maintain a 30 DOS of HCPs. HCPs must be issued to the entire force on a monthly basis until the theater commander determines that Army and Air Force Exchange (AAFES) facilities are in place to support the force's health and hygiene needs.

Special and Holiday Meals

3-25. American special events and holidays do not stop when Soldiers deploy. Special meals (Super Bowl, Army Birthday) and holiday meals (New Years Day, Independence Day, Thanksgiving, and Christmas) are American traditions. Getting special meals for these events during deployments is a matter of troop morale so the theater must plan for them. The theater coordinates menu requirements for these meals with DSCP up to 180 days in advance, depending upon the established OST.

Bread

3-26. Theater Class I planners should coordinate with DSCP to order bread for the initial phase of the operation. As soon as an approved source and the distribution and storage capabilities are in place, the theater should transition to fresh bread. DSCP can coordinate fresh bread with regional SPVs or via local market ready contracts.

Bottled Water

3-27. Bottled water has been used in operational deployments since Operation Desert Storm. If bottled water is used, theater planners will establish a bottled water planning factor based on the climate and temperature in the theater. Water consumption planning factors are contained in FM 10-52. Bottled water comes in many sizes depending upon the source. Bottled water should be shipped in 20-foot ISO shipping containers. Bottled water is not normally shipped in 40-foot ISO shipping containers due to the weight of the water. The advantage to using bottled water in hot tropic and arid climates is that the water can be placed where it is accessible to all troops, unlike water trailers. The disadvantage is that bottled water distribution takes up a tremendous amount of distribution assets. Once an enduring presence is determined and depending upon distribution distances, force protection measures, and threat levels within the theater, theater Class I planners should determine if bottled water delivery should be contracted out to capable prime vendors or bottled water plants should be established at selected base camps. The goal of contracting or establishing bottled water plants is to reduce the number of distribution assets (trucks, security, personnel, and material handling equipment [MHE]) required to move the bottled water on a daily basis.

Humanitarian Daily Rations (HDRs)

3-28. HDRs are ordered and controlled by civil affairs personnel and are used for feeding large populations of displaced persons or refugees under emergency conditions. Because these rations are distributed from DSCP, Class I planners will do cross coordination with civil affairs personnel on the storage and distribution of these rations within the AO.

ICE

3-29. The planning factor for potable ice is based on 2 pounds per Soldier per day in a temperate climate (32 to 80 degrees Fahrenheit) and up to 6 pounds per Soldier per day in hot tropic and arid climates (more

than 80 degrees Fahrenheit). Logisticians can adjust these figures to suit training exercises or operational deployments based on actual unit demands. All ice that comes in contact with subsistence or drinking water must be potable. Potable ice may be only procured in bag form (cube or chipped) from VETCOM approved sources (SPV or local contractor). Potable ice is used in field kitchens and garrison-type dining facilities to chill perishable subsistence and beverages. Potable ice may also be used in hot tropic and arid climates to chill bulk and bottled water prior to consumption. When establishing initial ice usage standards, logistical planners should consider the following factors:

- Climate.
- Mission.
- Ration cycle.
- Ice distribution capabilities at each level of supply.
- Class I and field kitchen storage capabilities.

Note. These ice planning standards do not include ice requirements for medical (non-feeding) or mortuary affairs operations. Ice planning requirements for these activities should be coordinated in the initial planning stages of the training exercise or operational deployment.

3-30. During operational deployments to an austere theater, potable ice may be limited. Generally, cultures in hot tropic and arid climates outside of CONUS do not produce and utilize large quantities of potable ice. If potable ice sources are limited, theater Class I planners should determine if potable ice plants should be established at selected base camps within the AO. Class I planners contract through LOGCAP to establish ice plants and distribute it as required. Just like with bottled water distribution, the goal of establishing potable ice plants is to reduce the number of distribution assets required to move it on a daily basis. Additional ice planning considerations for operational deployments include:

- **HN potable ice production capabilities—**Logistical planners should coordinate with VETCOM for approved sources for potable ice. For long-term operations, planners may have to establish ice production facilities within the theater to reduce the distribution assets required to move it or procure potable ice from outside of the HN.
- **Detached operations—**Soldiers performing guard duty, convoy, and patrolling operations in arid climates are often detached from logistical base camps for long periods of time and will typically subsist on MREs and drink bottled water. These Soldiers will have small ice chests at each guard post or on each vehicle to keep their bottled water cool. Logistical planners should establish ice points within the logistical base camp where Soldiers can pick up bagged ice on a daily basis to keep their bottled water cool.

OTHER CLASS I PLANNING FACTORS

TRAVEL RATIONS

3-31. Class I planners forecast the number of meals between the beginning of unit movement from home station until subsistence resupply can be accomplished at the destination for both training exercises and operational deployments. Units order and issue these meals to each Soldier as needed. In an AO, the theater Class I planners will provide this time estimate to all SSA Class I planners so they may plan accordingly.

UNIT BASIC LOAD

3-32. The Class I UBL (typically 9 MREs per Soldier) is a unit property book item. The purpose of the UBL is to sustain each Soldier for an initial three-day period during an operational deployment. UBLs are not normally used during training exercises because units are issued travel rations to cover the time from unit movement until the field kitchens begin operation. As soon as the UBL is consumed during operational deployments, Class I points reissue it. The UBL is then held in reserve for emergency use throughout the deployment and rotated periodically according to the theater ration cycle. During the initial planning stages, theater Class I planners, in coordination with operation planners, determine the number of

days of rations that the units will deploy with based on the METT-TC, theater supply levels, and distribution capabilities. This DOS will be prescribed in the sustainment annex of the OPORD.

BULK WATER

3-33. Class I planners must coordinate potable water requirements for field kitchens and garrison-type dining facility operations. Basic U.S. food service preparation and sanitizing water planning factors based on a U-M-U ration cycle are as follows:

- Field Kitchen 1.75 gallons per Soldier per day.
- Force Provider 2,063 gallons of water per day per Force Provider Package.
- EPWs 1.75 gallons of water per day per EPW.
- Hospitals 1.75 gallons each per patient and staff member per day.

RATION ISSUE FACTORS

3-34. Class I planners will establish standard issue factors for all subsistence except operational rations because they already have existing issue factors. Issue factors for foods such as milk, fresh fruits and vegetables (FF&V), bread, ice, bottled water, and warming and cooling beverages are based on climate, availability, transportation capabilities, storage, and usage. Class I planners should ensure sufficient refrigerated and other required storage space is available when developing issue factors.

SCHEDULE OF ISSUES

3-35. Class I planners must ensure Class I managers at every level of Class I supply establish a schedule of issues. This schedule lists the dates that its supported units will request, receive, or turn Class I into the Class I point. It also lists the UGR menu numbers that the supported units will receive during each resupply. This schedule adds predictability to the Class I point operation and prevents the issuing of the same UGR menus to the same units over and over. A sample schedule of issues is shown in Figure 7-4.

CONTINGENCY STOCKAGE LEVELS

3-36. During training exercises, Class I points do not normally keep contingency stockage levels. During operational deployments, each level of Class I supply maintains a predetermined amount of operational rations as a contingency stockage level. The higher the level of on-hand supply requirement, the greater number of DOS that the Class I sustainment activity maintains. During initial operations, the theater could maintain up to 30 DOS while the sustainment brigade supporting a Division typically would maintain up to a 10 DOS. The contingency stockage level is a safety level that allows units to maintain operations if supplies do not get through as scheduled and it allows maximum flexibility to the commanders to feed their forces based on their operational missions. All food advisors and Class I managers should continually monitor and reevaluate contingency stockage levels as well as advise and brief the commander on these levels to prevent excesses or shortages of Class I supplies within the theater. As the theater sustainment infrastructure matures and Class I support becomes consistent with the movement to CONOPS feeding, operational ration contingency stockage levels should be reduced to prevent waste.

STOCKAGE LEVEL REPORTS

3-37. In order to effectively determine future requirements and to prevent excesses and shortages, theater Class I planners and managers must know what the Class I levels are at each SSA Class I point. DOS stockage reports should be sent from the SSA to the theater on a daily basis. Class I planners should ensure that the OPLAN or OPORD provides a sample reporting format for all subordinate commands to use.

RATION RETROGRADE AND CROSS-LEVELING

3-38. Class I planners must establish retrograde (turn-in) procedures during the initial planning stage and coordinate these procedures with all Class I sustainment activities. Prior to turning Class I back into the SSMO or theater, SSA Class I points should attempt to cross level between their supported units. Residuals

which can or cannot be turned in to the Class I point must be identified and specific disposition plans established in coordination with VETCOM.

HOST NATION SUPPORT (HNS)

3-39. HNS results from agreements which are normally negotiated by U.S. Government agencies to provide support to deployed forces from HN resources. HNS may include billeting, food, water, fuel, transportation, and utilities. HNS also encompasses other preplanned agreements for support such as Status of Forces and assistance in kind (AIK).

CONTRACTING SUPPORT

3-40. Class I planners should determine if contracts for supplies or services will be needed during training exercises or operational deployments. Contracting for support can be used to augment the logistical support structure during each phase of the operation including during deployment and redeployment. Contracted Class I support in a theater may include subsistence procurement, Class I handling, distribution, and food preparation. Contracting for support may be done through the TSC's Head of Contracting Activity (HCA), the appointed contracting support brigade or PARC for contingency contracting, or LOGCAP. Additional information on contracting food service functions in an AO is discussed in chapter 8.

VETCOM COORDINATION

3-41. VETCOM representatives conduct sanitation inspections and inspect and approve sources of fresh subsistence, prepared subsistence, and food production facilities within the HN prior to contract award. Veterinary personnel inspect storage and handling operations and make recommendations to Class I managers. They inspect excess subsistence turned in from field kitchens before it is accepted by the Class I points. They also inspect damaged or deteriorated subsistence before recommending disposition or destruction. VETCOM maintains a worldwide approved food service source listing. Theater and unit Class I planners should coordinate with VETCOM prior to establishing any contracts for subsistence procurement within the AOR. The OPLAN and OPORD will include procedures for the certification and procurement of HN subsistence during each stage of the operation.

CAPTURED SUBSISTENCE

3-42. Captured subsistence is primarily used to feed EPWs. It is also used to feed the local population if there is a need. Captured subsistence must be inspected and released by VETCOM prior to its use. Captured subsistence is used to feed U.S. military personnel only as a last resort when authorized by the theater commander and after it has been thoroughly inspected by the appropriate medical authority for safety and quality.

SUBSISTENCE DONATIONS

3-43. During operational deployments, individuals and organizations will want to donate subsistence, equipment, and in some cases, services to the theater. All donations must first be coordinated and approved through theater G-1 channels. After approval, theater Class I planners will coordinate with both the donating agency and the receiving unit(s). There are two important factors that Class I planners should remember when working with donations. The first is that the subsistence must have adequate shelf life remaining (at least 180 days) to make the donation feasible. The second is that the delivery to the theater subsistence sustainment base should be included as part of the donation. Many agencies will want their donations picked up in CONUS and delivered to the theater. In these cases, theater Class I planners must determine the cost effectiveness of the donation. For instance, if an agency wants to donate 5,000 steaks with an approximate cost of $30,000 to the theater, but the cost of the military to air ship them into the theater will cost $280,000, it would not be cost effective to accept the donation.

DOCUMENTATION OF SUPPLY SUPPORT

3-44. Class I planners and managers at all levels of Class I supply should maintain good records outlining the support their organizations have provided to their supported units. This documentation of support will be beneficial when the supporting command is called upon to answer congressional inquiries dealing with the level of Class I support being provided or not being provided.

DISTRIBUTION METHODS

PUSH SYSTEM

3-45. A push system of Class I distribution is used to initially fill the supply pipeline during the early stages of an operational deployment. Under a push system, the theater Class I planning cell orders the types and quantities of rations needed from DSCP based upon the approved theater feeding plan. Once the rations are shipped to the theater Class I sustainment base, the theater Class I planning cell, in coordination with the SSA Class I planning cells, determines the types and quantities of rations to be shipped to each Class I point. The types and quantities of rations shipped to each Class I point are based on the anticipated troop strength, unit locations, type of operation, and feeding capabilities. During limited duration or high intensity conflicts, the push system may be used exclusively without conversion to the pull system.

PULL SYSTEM

3-46. A pull system of Class I distribution has the lowest user element (field kitchen) placing a demand on the Class I supply system which is processed through the Class I supply system. Then subsistence is sent forward to satisfy the request from the field kitchen. During training exercises, field kitchen requests are submitted through the supporting SSMO or SSA Class I point (when used). During operational deployments, field kitchen requests are submitted through their respective SSA Class I point, which are then processed to the theater Class I sustainment base. The subsistence is then pulled from in-theater stocks and sent forward. A pull system is responsive to the user; however, it may require longer lead times for ordering.

RATION FLOW

3-47. Figure 3-2 depicts the flow of rations during training exercises when using a SSMO or SSA Class I point under a pull system. Figure 3-3 depicts the flow of rations during an operational deployment under a pull system. The exact flow of rations in an AO will be established by the theater distribution planners. Some types of rations (MREs, FSRs, UGR-H&S, UGR-E, and bottled water) may go to a SSA Class I point for break and issue to several SSA Class I points which in turn will break and issue to the field kitchens. Perishable rations (UGR-A, FF&V, and ice) may be configured at the theater for direct throughput to forward SSA Class I points to eliminate additional handling and storage requirements.

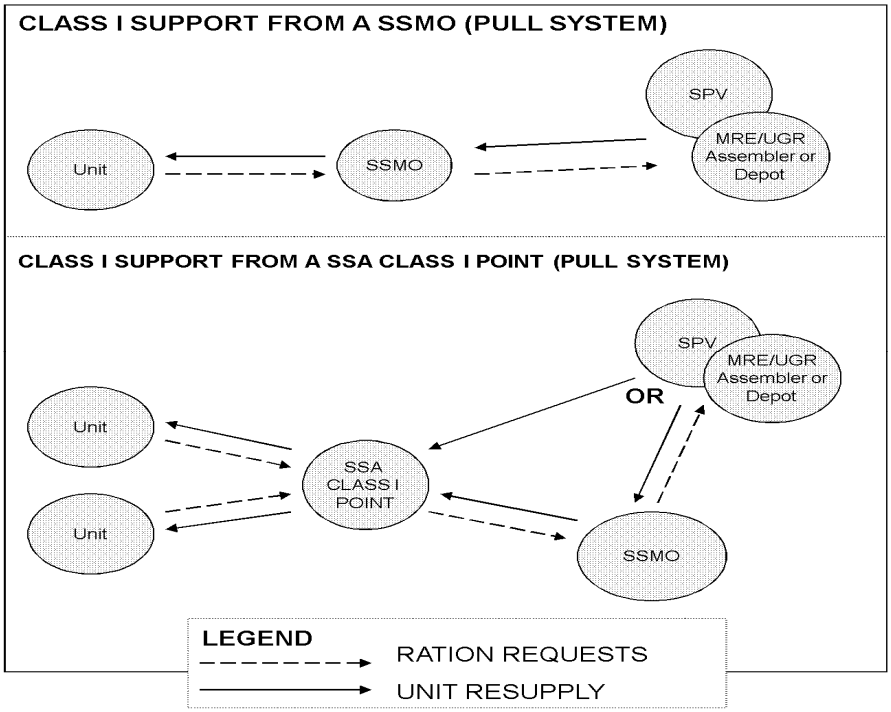


Figure 3-2. Requisitions and ration flow during training exercises

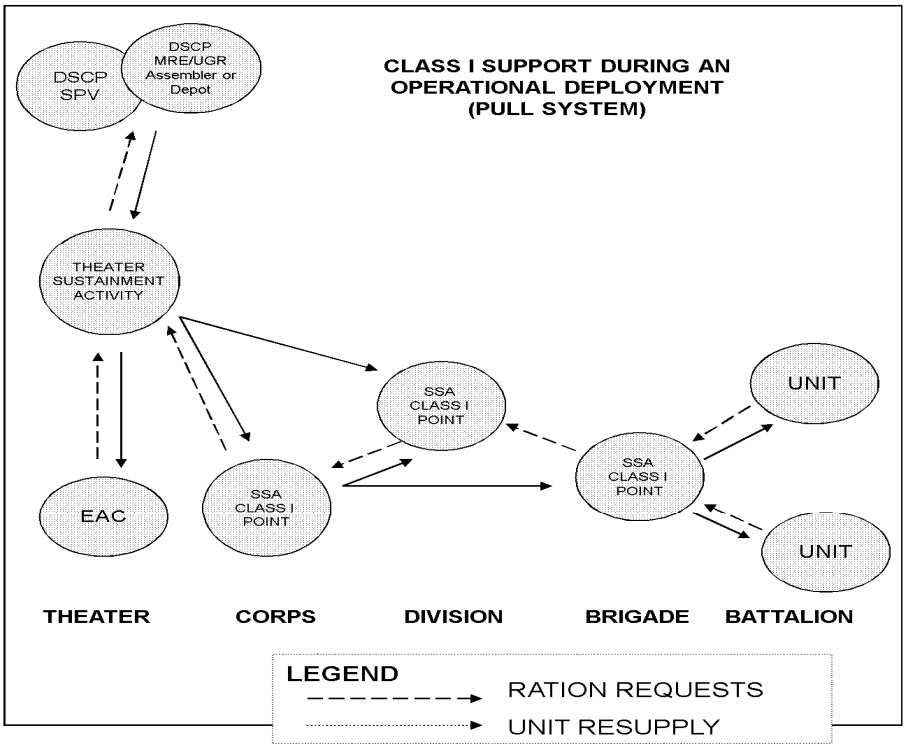


Figure 3-3. Requisitions and ration flow in a theater

DISTRIBUTION PLANNING FACTORS

3-48. Class I distribution planning factors are discussed in the following paragraphs. Class I planners should coordinate Class I requirements early in the planning process with the distribution planning cells. Once Class I planners determine the ration mix and ration cycle, they will need transportation and Class I sustainment activities. Initially within an AO, distribution planners focus on establishing the sustainment infrastructure for force generation. As the flow of force projection resources begins to arrive at theater reception nodes, the distribution system focus begins to shift from theater opening to theater sustainment. As the theater develops, distribution system efforts shift to force sustainment and distribution management capabilities responsive to theater requirements.

REQUIRED CLASS I SUSTAINMENT ACTIVITIES

3-49. Based on the Class I plan and the volume of Class I that will be distributed on a daily basis for the training exercise or operational deployment, Class I planners will advise the commander on the number and size of the Class I sustainment activity or activities that will be required to perform distribution tasks at each level of Class I supply (theater and deployable SSAs). For operational deployments, this analysis needs to be conducted early in the planning phase so the appropriate Class I sustainment units can be alerted for movement to perform the function of the theater subsistence sustainment base or these functions must be contracted out. Units that have responsibilities for receiving, storing, and issuing Class I supplies are discussed in chapter 2.

RATION TRANSPORTATION AND STORAGE FACTORS

3-50. Ration tonnage and cube figures are important in planning Class I transportation and storage requirements. These figures are high because of the constant demand for three meals a day. The tonnage and cube figures for the MRE can be computed with a high degree of accuracy since the weight and volume of the case is always the same. When UGRs are employed, tonnage and cube figures will vary depending on the menu number. Data is also affected by using supplement, enhancements, and line item A-rations required for menus. Class I managers should be aware that tonnage and cube figures will be greatly affected based on the ration mix. The type of ration used will determine the weight and space used to transport the subsistence. Ration planning factors are shown in chapter 4.

REFRIGERATED TRANSPORTATION AND STORAGE

3-51. The movement to an improved feeding standard is predicated on units being able to distribute, store, and prepare perishable rations (enhancements, UGR-As, ice, line item A-rations). Class I planners must calculate refrigerated transportation and storage requirements based on the proposed ration cycle. Inherently, the Army does not have a sufficient amount of military refrigerated transportation or storage. For training exercises, refrigerated transportation and storage must be contracted for and taken to the field site. During operational deployments, refrigeration must either be purchased or contracted for at home station or within the AO. For operational deployments, DSCP ships all perishable rations in 40-foot refrigerated ISO commercial shipping containers. These containers must have a constant source of electricity to operate. Class I planners must ensure there are adequate electrical plug-ins at the POD (air or sea) and theater Class I sustainment base or that clip-on generator sets to ensure continued operation have been procured.

CONTAINER DELIVERY

3-52. The SSMO or DSCP will advise Class I planners if rations will be delivered in commercial shipping containers (20-foot and 40-foot ISO). If containers will be used, Class I planners will need to coordinate for container MHE. For operational deployments, all semiperishable subsistence will be moved in commercial shipping containers and perishable subsistence will be moved in refrigerated trucks or refrigerated commercial shipping containers. Distribution at the division level and below revolves around the PLS which can only handle 20-foot containers. Because of this, units will keep the 20-foot containers

for their internal distribution. This can cause problems with retrograde of these containers at the theater level.

MATERIAL HANDLING EQUIPMENT

3-53. Adequate MHE is needed at all levels of Class I supply to load and offload Class I. During the initial planning, Class I planners at every level should identify any MHE shortages so that MHE can be cross-leveled within the command or contracted for.

CONFIGURED LOADS

3-54. Class I must be configured and shipped to the lowest possible user element to prevent excessive handling at each level of supply. Theater subsistence supply activities normally ship bulk rations to SSA sustainment supply levels only. SSA sustainment supply levels configure and ship rations to supported forward SSA Class I points.

ISSUE CYCLE

3-55. The issue cycle is the number of DOS the Class I points issue to their supported units each time they draw rations. The issue cycle is expressed in a three number combination such as 2-2-3, 2-2-2, or 4-4-4. For example on a 2-2-2 issue cycle, the Class I point will issue 2 days of rations during each issue and the supported unit will draw rations every other day. On a 4-4-4 issue cycle, the Class I point will issue 4 days of rations to the supported unit every 4th day. All supported units are not necessarily issued rations on the same days. The number of supported units issued rations each day depends upon the size the Class I point and the number of units its supports. Class I planners will establish the issue cycle based on the ration cycle, tactical requirements (for example, convoy security), distribution capabilities, and storage capabilities at each level of Class I supply and field kitchen.

COMMERCIAL SHIPPING CONTAINER DEMURRAGE

3-56. Units, organizations, or activities that delay, hold, or use commercial shipping containers at their location for storage of subsistence or unit property are incurring container demurrage charges for the U.S. Government on a daily basis. In most cases and depending on the length of time, final demurrage charges paid by the government may in fact exceed the cost of the container. Commercial shipping containers (SEALAND/P&O and so forth) arriving at the SPV or Class I point must be emptied and returned as soon as possible to the commercial carrier to avoid accruing container demurrage penalties passed by the owner of the container to the U.S. Government. More information on container management can be found in FM 4-01.52.

CONVOY MANAGEMENT

3-57. The movement of supplies within an AO is mainly accomplished through the use of ground transportation. The coordination and security of convoys require intense management between Class I planners, transportation planners, distribution planners, contractors, and the military police or other forces for security. Theater and subordinate commands will conduct daily movement boards to synchronize all vehicle movements. The TSC DMC or sustainment brigade distribution leaders will also publish a daily convoy matrix identifying each vehicle by class of supply and destination which will assist the security planners in allocating the appropriate number of escort vehicles to the convoy serials. Additionally, distribution planners maintain the constant tracking of all convoy serials from the time they leave the theater subsistence sustainment base to the time they reach their intended destination. Class I planners should coordinate closely with the distribution planners and become very familiar with their operational procedures in order to be effective in moving Class I within the AO.

Priority Movement of Classes of Supply

3-58. During all phases of the mission, the theater will designate priority classes of supply for movement based on the tactical situation. Transportation and security assets will be allocated to these classes of

supply based on this priority. For instance, during an ongoing battle, Class V (ammunition) is of the greatest importance to the Soldier and will be moved first. Class I planners have to understand this because it could cause a back up of Class I at every level of supply or prevent the transition to a new ration cycle.

Asset Visibility

3-59. DOD uses In Transit Visibility (ITV) automatic information technology to provide near real-time data to collaboratively plan and prioritize logistics operations, the capability to track and redirect unit equipment and supplies that are en route, and the ability to view the contents of shipments. ITV systems includes the Movement Tracking System (MTS); DYNAFLEET Commercial Tracking Device (Volvo System); Defense Tracking, Reporting and Control System (DTRACS); VISTAR GPS Tracking Device; PANATRACS GPS Tracking Device; Global Transportation Network (GTN); and Global Distribution Management System (GDMS) for tracking distribution assets and radio frequency identification devices (RFID) for tracking supplies including all Class I.

3-60. Army modular and non modular units including all sustainment units from the theater down to the forward support company in support of maneuver battalions/BCTs use the Battle Command Sustainment Support System (BCS3) to fuse various ITV systems' information into one Logistics Common Operating Picture (LCOP). The BCS3 provides the latest available, continuous graphical representation of the current situation within the AO to include all logistics unit locations and unit status and improves planning for future operations by providing in-transit asset visibility of convoy, ship, air, and rail shipments of Class I. Class I planners at all levels should use the ITV and BCS3 technology to manage and track Class I from the factory/depot to the fighting position.

Container and Refrigeration Van Marking and Security

3-61. Theater Class I planners, in coordination with theater distribution planners and operators, must establish procedures for marking and securing shipping containers (ISO 20- and 40-foot) and refrigeration trucks leaving the theater Class I sustainment base to SSA Class I points. This marking must identify at a minimum a tracking material release order (MRO) number, the intended unit, and destination. Additionally, the driver must be provided a packing slip listing all contents of the delivery. The driver should provide this packing slip to Class I personnel at the destination. Containers and refrigeration trucks must also be secured to prevent tampering until the subsistence reaches its intended destination. Secure locking devices (key or combination locks) are not feasible due to the large number of containers and trucks required to move subsistence. Class I planners should use plastic seals to secure the subsistence. Seals cannot be removed and put back on the container or truck thereby letting Class I personnel know that the shipment has been opened. Class I personnel should contact VETCOM personnel for subsistence inspection if the seal has been broken on any shipment.

Movement of UGR-As

3-62. The transition to UGR-As in the ration cycle requires additional emphasis and coordination between Class I and distribution managers. The UGR-A module contains one box that must be transported frozen and two boxes that are semiperishable and do not require to be transported under refrigeration. Distribution managers must understand that these three boxes make up one module for feeding purposes and that they must be transported together at all times to arrive at their intended destination at the same time.

RATION ACCOUNTABILITY

3-63. Ration accountability is the same for both training exercises and operational deployments. Rations must be accounted for at all times at each level of Class I supply. The Class I manager, food advisor, and SFOS have equally critical roles for accountability. They must ensure the right amount of the right types of rations are ordered for the operation and accounted for properly. Specific accountability procedures and forms are discussed in chapters 6 and 7 of this manual, AR 30-22, chapter 4, and DA PAM 30-22, chapter 4.

THEATER FOOD SERVICE MANAGEMENT BOARD

3-64. Once it is logistically possible, the theater food advisor will establish the theater Food Service Management Board (FSMB) to manage the theater food program. The primary function of the theater FSMB is to provide an interchange of information between all theater commands, Class I sustainment activities/planners, food service operators, supporting personnel, and subsistence providers (DSCP/SPV/Contractors) regarding subsistence requirements and operational procedures. The primary focus during initial operations is to move the theater ration cycle to a higher feeding standard. The FSMB provides a forum for this movement to resolve issues related to all subsistence distribution and feeding operations. Additional information on the theater FSMB during CONOPS feeding is discussed in chapter 8.

3-65. The theater food advisor chairs the theater FSMB and calls it to order. Due to the distances and force protection situation/requirements, it may not be possible for all personnel to attend the FSMB. In these instances, the theater or local commands may elect to use electronic means to provide representation at the boards such as telephone conferences or video teleconferences. Members of the board should include:

- Food Advisors
- SSA Class I Managers
- VETCOM Representatives
- Preventive Medicine (PREVMED) Representatives
- Dietician Representatives
- DLA/DSCP Strategic Logistic Cell Representatives
- Theater Distribution Planners/Operators
- Subsistence Provider Representatives (SPV/Contractors)
- LOGCAP/Contingency Contract Representatives
- USAMC LOGCAP/Defense Contract Management Agency (DCMA) Representatives
- PARC Representatives
- ACES Representatives

PART TWO

RATIONS AND EQUIPMENT

Chapter 4

Rations and Menus

This chapter provides an overview and distribution planning factors for the Army family of rations and menus used for training exercises, operational deployments, and CONOPS feeding. Commanders, with input from unit food advisory personnel and Class I managers, must choose the appropriate ration cycle according to their tactical situations and logistical capabilities to ensure overall mission success. New combat ration menus and components for individual and group rations including new menu items are introduced each year as a direct result of Soldier input. Soldiers should use DA Form 7590 *(Operational Ration Quality Feedback)* to recommend changes to existing rations or report unsatisfactory subsistence. Refer to DA Pamphlet 30-22 for detailed preparation instructions of the DA Form 7590. A copy of DA Form 7590 is available on the Army Publishing Directorates Webpage, http://www.apd.army.mil/. Completed forms should be submitted to the Chief, Quality Assurance Division, Army Center of Excellence, Subsistence, 1201 22nd Street, Fort Lee, Virginia. 23801 or electronically by using the Contact Us feature found on the ACES webpage (http://www.quartermaster.army.mil/aces/). For the most current operational ration updates, consult the ACES webpage.

RATIONS

4-1. Rations are divided in name by operational objective and are referred to as individual meals, group meals, or special meals. Individual operational ration meals, such as the MRE, are packaged, pre-cooked foods that will provide one Soldier one complete individual meal. Individual operational rations are used when mission conditions dictate group operational rations cannot be issued or prepared. Group rations, as the name implies, feed more than one Soldier. Group rations provide meals in either 18 or 50 person modules depending on the specific group of ration selected. Special operational rations and commercial food sources are available to support unique situations such as training, survival, special religious requirements, and humanitarian assistance. The mandatory supplement, milk, and other meal enhancements such as bread, salad, and fruit are necessary to provide a fully balanced dining experience. The authorized milk supplement and enhancements are addressed later in this chapter.

INDIVIDUAL FIELD FEEDING

4-2. The MRE, Tailored Operational Training Meal (TOTM), Meal, Cold Weather/Long Range Patrol (MCW/LRP), and First Strike Ration (FSR) are the only four individual operational rations. Other types of individual feeding rations are discussed on pages 4-9 and 4-10.

MEAL, READY TO EAT

4-3. The MRE is the primary and most familiar individual operational ration meal. It is continually reviewed and new menus are added annually to avoid menu boredom. MREs are packaged meals designed for consumption either as an individual meal or in multiples of three as a complete day's ration. This ration is used to sustain individuals during operations that prevent the use of organized food service facilities.

Note. The Surgeon General's current policy allows MREs to be consumed as the sole source of subsistence for up to 21 days. When available, bread, fruit, as enhancements, and milk as a supplement to the MRE are recommended. Supplementation and enhancement of the MRE is required if the MRE is the only meal used to support Soldier feeding in excess of 21 days.

Operational Considerations and Characteristics

4-4. Each meal contains an entrée/starch, cracker/bread, a spread, a dessert/snack, beverages, accessories, and a plastic spoon. Except for the beverages, the entire meal is ready to eat. While the entree may be eaten cold when desired or operationally necessary, it can also be heated in a variety of ways. A flameless ration heater (FRH) is packaged with each meal and is used to heat the entrée. An alternate heating method, when available, is immersion of the entrée in hot water while still sealed in its unopened individual entree package.

Packaging

4-5. Currently there are 24 different MRE menus. Menus 1 through 12 are packed in case A and menus 13 through 24 in case B. Each case contains 12 meals, two of which are vegetarian; the remaining menus include beef, pork, poultry, or seafood entrees.

Nutritional Data

4-6. Each meal provides an average of 1,300 kilocalories (13 percent protein, 34 percent fat, and 53 percent carbohydrate). When enhanced with bread, an additional 200 kilocalories are provided (12 percent protein, 33 percent fat, and 55 percent carbohydrate). The Office of the Surgeon General approves all MRE menus.

Flameless Ration Heater

4-7. The FRH is a chemical heating device for the MRE. The heating properties of the FRH are activated by adding the correct amount of water as prescribed on the package. The FRH when activated and used as directed will result in a hot entrée or meal component for the Soldier. Do not use the remaining hot water in the FRH after completion of the heating process for beverages or other meal purposes. Considerations for the disposal of the FRH are as follows.

Used FRHs

4-8. Used FRHs (for example, individual FRH heaters that have been water activated to heat an entrée) may be disposed of as ordinary waste. FRHs should be used to enhance the quality of the MRE meal. Leaders should ensure that their subordinates are familiar with the correct use of the FRH as an enhancement item. The FRH provides the Soldier with the capability to have a hot meal, when they want a hot meal.

Unused FRHs

4-9. Unit leadership must establish a unit SOP for the collection, reutilization, and/or disposal of inactivated FRHs. Inactivated FRHs that have been collected and protected from damage may be reissued to Soldiers for use with the MRE. Disposal of accumulated unit inactivated FRHs must be coordinated with the Installation Environmental Safety Office for proper disposal instructions that conform to local

environmental laws and/or status of forces agreements. Unit leadership is responsible for ensuring that proper disposal of residual FRHs is accomplished according to the installation environmental and state environmental policies.

TAILORED OPERATIONAL TRAINING MEAL

4-10. The purpose of the TOTM is to provide an alternative operational training meal that addresses limited training and budget concerns of the Reserve Component (RC). The TOTM is used in lieu of commercial sack lunches and catered commercial meals for RC organizations that engage in inactive duty training (IDT). The TOTM is used in situations where employment of traditional operational ration meals is not mandated. The TOTM is designed to be a just in time direct vendor delivery (DVD) item with a 7 to 10 day delivery time. Orders by individual RC units should be accomplished using the unit's supporting United States Property and Fiscal Officer (USPFO) activity. The TOTM is currently only available within CONUS.

Operational Considerations and Characteristics

4-11. The TOTM is provided to promote the "train as you fight" philosophy, while meeting the customers' budgetary needs. As a training tool, this meal will aid units in gaining familiarity with the preparation, usage, consumption, and disposal of a pre-packed meal similar to the MRE; however, it employs commercial packaging to reduce costs. The TOTM is not designed to take the place of the MRE.

Packaging

4-12. There are three sets of menus available and each set is comprised of twelve menus. There are twelve meals per case. This ration employs many of the same components as the MRE. Menus typically contain an MRE entrée, wet-pack fruit, a beverage base, FRH, dining kit, and other assorted components. The TOTM may also be easily adapted for disaster relief efforts.

Nutritional Data

4-13. The contents of one TOTM meal bag provide an average of 997 calories. When supplemented with bread, an additional 200 kilocalories are provided (12 percent protein, 33 percent fat, and 55 percent carbohydrate).

MEAL, COLD WEATHER AND THE FOOD PACKET, LONG RANGE PATROL

4-14. The MCW/LRP ration provides an operational ration for two separate operational scenarios. The MCW is intended for cold weather feeding and the LRP is intended for special operations.

Operational Considerations and Characteristics

4-15. The MCW will not freeze and supplies extra drink mixes for countering dehydration during cold weather activities. The LRP is a restricted calorie ration meant for where resupply is not available and weight and volume are critical factors. Each menu contains dehydrated entrée items as well as other accessory items that are prepared by the individual Soldier.

Packaging

4-16. The MCW is packaged in a white camouflage pouch. It can be issued at three per day for a complete cold weather ration. The LRP is packaged in a tan camouflage menu pouch similar to the current MRE. It is issued at one per Soldier per day for up to ten days. Each case consists of twelve ration/meals packets.

Nutritional Data

4-17. Each menu provides an average of 1,540 kilocalories (15 percent protein, 35 percent fat, and 50 percent carbohydrate). The MCW, if used for three meals, provides the minimum 4,500 kilocalories required for heavy exertion in extreme cold. Limits on protein and sodium help reduce the risk of

dehydration in cold weather environments. The LRP is a restricted calorie ration that is approved for use at an issue of one packet per man per day for up to ten days that provides the average of 1,540 kilocalories for each day.

FIRST STRIKE RATION

4-18. The FSR is a restricted ration designed to be eaten on the move during initial periods of highly mobile or highly intense combat operations.

Operational Considerations and Characteristics

4-19. The FSR includes ready-to-eat components and substantially reduces the Soldier's weight, cube, load, and preparation time as well as promotes performance enhancement during periods of high mobility. It is a more compact ration that provides the Soldier with the ability to carry enough subsistence for several days. The FSR is comprised of a variety of caloric dense, eat-out-of hand, performance-enhancing foods that require no preparation by the Soldier.

Packaging

4-20. The FSR has three different menus. FSRs have been designed to be about the size of one MRE meal bag, but with a sufficient amount of nutrition to replace three MRE meals. When compared to three MREs, the recent FSR substantially reduces the weight and cube load by approximately 42 percent and 48 percent respectively, as well as enhances Soldier physical performance, mental acuity, and mobility.

Nutritional Data

4-21. Each FSR provides on average 2,900 calories. The FSR three day menu has been approved by the Office of The Surgeon General and meets the nutritional standards for restricted rations as outlined in AR 40-25, table 2-2.

GROUP FIELD FEEDING

4-22. Group field feeding is accomplished by the use of three types of unitized rations. The Unitized Group Ration – Heat and Serve (UGR-H&S) and Unitized Group Ration – A (UGR-A) modules each feed up to 50 Soldiers and the Unitized Group Ration – Express (UGR-E) module feeds up to 18 Soldiers.

4-23. The UGR is a modularized ration that reduces the number of line items handled by Class I sustainment activities and provides commanders the condition based (METT-TC) flexibility to serve group meals in a variety of situations. The UGR-A and UGR-H&S are used to sustain groups of military personnel during field operations that allow the use and employment of organized food service facilities, such as the mobile kitchen trailer (MKT) and containerized kitchen (CK). The UGR-E is used for remote sites where food service specialists and field kitchen equipment are not available. The UGRs utilize branded commercial products and by design provide a quality standard meal across the operational environment. The use of off-the-shelf products (like instant gravies and sauces) permits easier, less labor intensive food preparation. Other separate line items (supplement and enhancements) are considered necessary to provide a complete meal.

UGR-H&S RATION

4-24. The UGR-H&S ration has been designed to sustain the Army in highly mobile field situations when refrigeration is restricted or absent, yet there are field kitchen equipment and food service personnel.

Operational Considerations and Characteristics

4-25. Each UGR-H&S module provides all menu and service (paper and flatware) components that are needed to serve 50 Soldiers a high quality, hot meal in a restricted environment. Milk is a mandatory supplement to the UGR-H&S. Enhancements such as bread, fresh fruits, vegetables, and cereal to

compliment the meal should be ordered by the SFOS for the using unit. UGR-H&S menus are assembled at government depots for delivery to installations and theaters as required to support training exercises and operational deployments.

Packaging

4-26. Each UGR-H&S module consists of three semiperishable boxes. This ration includes a variety of fully cooked polymeric tray pack or institutional pouch entrees, vegetables, desserts, and starches. The polymeric tray is a thermally stabilized, low profile, rectangular, half steam table sized heating and serving vessel. Some foods may be packaged in polymer bags called institutional pouches. Because the packaged food is fully cooked, immersion in hot water following the package instructions is the primary preparation method. The UGR-H&S has 3 breakfast and 14 lunch/dinner menus.

Nutritional Data

4-27. Each UGR-H&S menu is certified by the Office of The Surgeon General and meets the nutritional standards when served with milk. Each meal provides an average of 1,450 kilocalories (14 percent protein, 32 percent fat, and 54 percent carbohydrate). The meals are complete when supported by milk and meal enhancements such as bread, salad, fruit, and cereal.

UGR-A RATION

4-28. The UGR-A includes perishable and semiperishable items that require refrigeration, increased transportation, fuel, equipment, and potable water requirements. Perishable items in the ration modules may be frozen precooked or frozen raw commodities. Concurrent with the introduction of perishable rations into the field or the AO, refrigerated transportation and storage assets are mandatory. Sources of refrigeration include existing TOE assets, the emerging MTRCS, and HNS or local lease/purchase from commercial sources.

Operational Considerations and Characteristics

4-29. Each UGR-A module provides all menu components required to serve 50 Soldiers a high quality, hot meal. Milk is a mandatory supplement to the UGR-A. Enhancements such as bread, fresh fruits and vegetables, and cereal to compliment the meal should be ordered. UGR-As are not stocked by DLA and are assembled and delivered by commercial contracts only when they are requested by units to meet feeding requirements.

Packaging

4-30. Each UGR-A module consists of one perishable box (requires refrigeration) and two semiperishable boxes. UGR-As are palletized according to menu number. The number of meals and boxes on each pallet varies depending upon the menu number. The UGR-A is a build to order ration with assembly and direct delivery by the vendor. The UGR-A has 7 breakfast and 14 lunch/dinner menus.

Nutritional Data

4-31. Each UGR-A menu is certified by the Office of The Surgeon General and meets the nutritional standards when served with milk. Each meal provides an average of 1,450 kilocalories (14 percent protein, 32 percent fat, and 54 percent carbohydrate). The meals are complete when supported with milk and enhancements such as bread, salad, fruit, and cereal.

UGR-E RATION

4-32. The UGR-E provides an alternative to individually packaged operational ration meals as the only available method for small group remote feeding when food service specialists and field kitchen equipment are not available. Army combat and support units that will benefit the most from this ration include those that operate in remote locations for accomplishment of their mission.

Operational Considerations and Characteristics

4-33. The UGR-E is a compact, self-contained module that provides a hot meal for up to 18 Soldiers. Like other currently utilized group meal rations, the "E" also includes individual serving trays and other diner eating utensils. The food is heated with a simple pull of a tab. The function of this tab is to permit an activation fluid to mix with a chemical pad which results in the generation of heat. This heating action is similar to the current FRH included in the MRE. Any Soldier who understands basic sanitation, food safety, and portion control can activate (heat) and serve the UGR-E.

Packaging

4-34. When the Soldier responsible for the preparation of the meal opens a UGR-E, the module will contain an entrée, vegetable, starch, dessert, dairy shakes, beverages, and other snack items. After removing these accessories and equipment, the entrée, vegetable, and starch is prepared with the pull of a tab as a saline solution is distributed to the integral heaters (chemical pads) and the heating reaction is initiated. Currently there are six lunch/dinners menus available for the UGR-E. UGR-E breakfast menus are under development.

Nutritional Data

4-35. Each UGR-E menu is certified by the Office of The Surgeon General and meets the nutritional standards when served with milk. Each meal provides an average of 1,300 kilocalories (12 percent protein, 38 percent fat, and 50 percent carbohydrate). The meals are complete when supported with milk and authorized enhancements.

SPECIAL FIELD FEEDING

4-36. Special field feeding meals have been developed to address unique subsistence and mission driven feeding requirements. The Army has approved the use of many commercial rations to address special subsistence requirements, including special religious meals and warming and cooling beverages for field-like conditions during troop movement or short duration exercises such as ranges.

MEAL, RELIGIOUS, KOSHER/HALAL

4-37. The Meal, Religious, Kosher/Halal is used to serve those individuals in the Military Services who maintain a strict religious diet. Each meal consists of two components: an entrée (pouch in box) certified and labeled as Glatt Kosher or Dhabiha Halal and a common accessory pack certified by both Kosher and Halal authorities. These meals are available from commercial sources. Unit food advisors should receive guidance from unit chaplains to satisfy troop requirements.

Packaging

4-38. For each ration, entrees are packed in a mixed case of 12 meals, and the accessory packs are packed in a separate carton of 12. Both the entrée case and the accessory pack case are then packed side-by-side in a master case.

Nutritional Data

4-39. Each menu provides approximately 1,200 kilocalories (11 to 13 percent protein, 37 to 40 percent fat, and 48 percent carbohydrate).

MEAL, RELIGIOUS, KOSHER FOR PASSOVER

4-40. The Meal, Religious, Kosher for Passover is used to feed those individuals in the Military Services who maintain a Kosher for Passover diet by providing three meals per day for not more than eight days during their observance of Passover. Like the MRE, it is a totally self-contained meal combined in one single flexible meal bag. Order lead-time for these unique meals may be longer than associated with other

operational ration meals. Unit food advisors should coordinate in advance of the start of Passover (March – April period) with unit chaplains to ensure availability of this meal when required.

Packaging

4-41. Each meal bag contains one of four different menus (4 chicken, 4 beef stew, 2 salmon, and 2 gefilite fish per case). The program is intended to provide 2 cases per person or 24 meals for 8 days of Passover. Each meal bag consists of an entrée, complementary food item, and accessory items (for example, salt, sugar, spoon, matches, toilet tissue, moist towelette, and FRH). Additionally, each case has a box of Matzo crackers and a feedback survey. The entire food contents of each meal are certified Kosher for Passover.

Nutritional Data

4-42. The contents of one meal bag shall provide a minimum of 1,200 calories. The complete contents of each meal bag, supplemented with Matzo crackers contain the following minimum nutritional requirements: fat 29 to 42 percent, protein 9 to 13 percent, and carbohydrate not less than 48 percent.

COMMERCIAL MEAL KITS (CMK)

4-43. CMK are compact, self-contained meals that offer opportunities for cold or hot dining. These meals are to be used as meal alternatives for activities, convoys, or range training. The meals offer a wide variety, such as cold cut sandwiches or stews, with drinks and snacks. These kits fit the "niche" when standard operational rations are not used.

Packaging

4-44. The meals may be boxed or bagged in commercial packing. The meals may be frozen as "thaw and serve" and some offer flameless heater technology to make a hot meal.

Nutritional Data

4-45. A nutritional review is conducted to identify approved meal kits. A number of commercial meal kits have been reviewed and approved for use. A listing is maintained on the ACES website.

WARMING AND COOLING BEVERAGES

4-46. Warming and cooling beverages are authorized by and administered by the Major Command/ASCC food advisor. Coordination for annual funding to support warming and cooling beverages for travel or training is developed by requesting units and forwarded annually as part of the command operating budget to the command food advisor. The management and use of funding to support warming and cooling beverages is coordinated directly between the food advisor of the requesting subordinate unit, the Major Command/ASCC food advisor, and the SSM. Warming and cooling beverages are used to provide additional beverage consumption in cold or hot training environments. Subsistence items considered warming beverages are coffee, hot tea, hot chocolate, and soup. Cooling beverages are cool water with or without a flavored beverage base. Each Major Command food advisor must forecast warming and cooling beverage requirements as special food allowances through command channels as part of their command-operating budget according to AR 30-22.

MEAL SUPPLEMENT AND MEAL ENHANCEMENTS

MEAL SUPPLEMENT

4-47. Meal supplements are mandatory additions to group feeding operational rations required to provide the total nutritional adequacy of the meal. The Office of the Surgeon General has determined that milk is the only current mandatory supplement. As a supplement, milk must be available with each UGR meal and when MREs are the sole source of nutrition for periods over 21 days. Milk may be fresh or UHT. Two

half-pint containers of milk are served for breakfast with cereal, and one half pint container is served for lunch and/or dinner.

Note. Milk is issued separately and is not a part of ration modules. You must calculate your requirements for milk based on the number of Soldier/diners and order accordingly.

UHT Milk

4-48. UHT milk (table 4-1) is fresh milk, which has been processed with a technology called ultra high temperature. The UHT treatment ensures maximum microbe inactivation, while preserving the maximum flavor, taste, and nutritional value. The aseptic packaging system protects the product from air and light and guarantees long shelf life without the need for refrigeration. This item is used by the Armed Forces as a mandatory supplement for operational ration feeding during operations which do not have refrigeration capability or have very limited capability. It is used in situations that do not permit resupply of perishable foods. Available flavors include chocolate and strawberry as well as common white milk used with cereal or as a drink. Food service operators should note that lactose-free UHT milk is also available for diners who are lactose intolerant.

Table 4-1. Approved milk

Milk, Fresh 1%, ½ Pint Container	**Local NSN**
Milk, Reduced Fat, Shelf Stable, UHT, ½ Pint Container	**NSN**
Chocolate	8901-01-474-2621
Strawberry	8901-01-474-2680
White	8910-01-474-2623
Milk, Soy, Shelf Stable, ½ Pint Container	**NSN**
Chocolate	8910-01-506-5245
Strawberry	8910-01-506-5249
White	8910-01-506-5239

MEAL ENHANCEMENTS

4-49. Enhancements are additional item components added to operational rations to provide increased Soldier acceptability. Enhancements are authorized for MREs when they are the sole daily diet for a period to exceed 21 days. Enhancements for the MRE should include hot or cold beverages, soups, hardy fresh fruits, vegetables, cereal, and bread. Authorized enhancements (table 4-2) should be issued with all UGR menus.

Table 4-2. Authorized enhancements

ITEM	*ISSUE FACTOR*	*NSN*
FRESH FRUITS	Two different fruit varieties per meal are authorized	
Apples	18 pounds (lb) per 50 persons	8915-01-088-8749
Bananas		8915-00-126-8748
Oranges		8915-00-616-0211
Pears		8915-00-126-8805
Plums		8915-00-126-8806
SEASONAL FRUITS		
Cantaloupes	21 lb per 50 persons	8915-00-126-8801
Honeydew Melons	21 lb per 50 persons	8915-00-127-4360
Nectarines	18 lb per 50 persons	8915-00-238-7120
Watermelons	26 lb per 50 persons	8915-01-077-6178
ASSORTED DRY CEREAL (BOWL PACKS)	50 Individual packs per 50 persons for each breakfast meal.	
SALAD ITEMS	Issued for each lunch/dinner meal.	
Salad, Mixed, Bag	5 lb per 50 persons	8915-01-416-5712
Cucumbers	2 lb per 50 persons	8915-00-252-3788
Onions, Yellow Dry	2 lb per 50 persons	8915-00-228-1947
Radishes, Fresh Red	1/2 lb per 50 persons	8915-00-816-0027
Spinach	2 lb per 50 persons	8915-01-407-5790
Lemons	2 lb per 50 persons	8915-00-582-4071
SALAD DRESSING, INDIVIDUAL PACKS	(Lite or Regular)	Two different salad dressings per meal may be issued.
Blue Cheese	150 7/16 oz packages per 50 persons	8950-00-328-6725
French		8950-00-975-3509
Italian		8950-01-031-9148
Ranch		8950-01-361-6889
Thousand Island		Use local NSN
VEGETABLES FOR HAMBURGER MEALS		
Tomatoes	6 lb per 50 persons	8915-00-582-4059
Lettuce	4 lb per 50 persons	8915-00-117-3358
Onion, Yellow	3 lb per 50 persons	8915-00-228-1947
Cheese, American, Processed, Sliced	5 lb	8915-00-656-0993
ITEMS FOR STEAK MEALS		
Potatoes, White, Fresh, Baking	28 lb per 50 persons	8915-01-E19-2513
Sour Cream, 1 ounce (oz) package	50 packages per 50 persons	8910-01-E09-2553

Table 4-2. Authorized enhancements (continued)

ITEM	*ISSUE FACTOR*	*NSN*
OTHER MENU COMPONENTS		
Crackers, Soda, Salted, 2 per Package	100 each per 50 persons	8920-01-E09-5958
Sugar, Refined, White, Granulated	10 lb per 50 persons	8925-01-E09-2553
Sugar, Substitute, PC	200 each per 50 persons	8925-01-E19-1225
Tea Bags, Individual Serve	50 each per 50 persons	8955-01-E19-3754
BREAD		
Commercial Sliced Breads (White, Wheat, Rye, Raisin, Multigrain)	100 slices per 50 persons (May be specified per local contract authority).	8920-01-373-8980 8920-01-373-8979 8920-01-303-3288
Specialty Sandwich Breads (French, Buns, Pita, Flour Tortillas (Fajitas))	NSNs may change without notice. Always check with the ordering activity.	8920-01-527-8377 8920-00-492-8401

ARCTIC SUPPLEMENT TO THE UGR-H&S

4-50. The arctic supplement to the UGR-H&S is a supplement only to be used to augment the UGR-H&S. It contains Styrofoam clamshell trays and hot cups with lids and provides additional snacks and hot beverages. The NSN is 8970-01-470-5075 and provides an additional 914 kilocalories. The unit of issue is module.

THE ENHANCEMENT BOX OR "E" BOX

4-51. The "E" Box is a supplement module to be used for group feeding. It contains a menu of assorted enhancements which are unitized to supplement and enhance the UGR-E and provides products for 18 Soldiers. As a unitized module to support logistics and handling, the "E" Box contains milk, bread, and snacks to support and complement restricted operations like remote site feeding. The unit of issue is module. At the time this doctrinal publication was being developed, the Enhancement or "E" Box is still in the developmental process. At some point in time in the near future, this enhancement box will become a reality. As you read this, it in fact may now be available. Do the research and check with ACES.

MEDICAL DIET FIELD FEEDING SUPPLEMENT

4-52. The medical diet field feeding supplement, used in combination with the UGR, provides medically unique food components required to prepare modified diets for consumption by patients in medical treatment facilities. The supplement was designed to simplify and streamline the ordering process of medically unique food items. The supplement is not a stocked item; it is ordered and purchased on an "as needed" basis.

Characteristics

4-53. The medical diet field feeding supplement is comprised of liquid and soft foods and is designed for troops with cranial and facial injuries that may impede chewing and the consumption of food. Table 4-3 lists the package contents of each supplement. Each medical supplement is shipped in a tri-wall container.

Table 4-3. Package contents of the medical diet field feeding supplement

ITEM	*CASE (CS) QUANTITY*	*TOTAL UNITS*
Instant Breakfast, Assorted Flavors	9	540
Beef Broth, Dehydrated, Regular	2	192
Chicken Broth, Dehydrated, Regular	2	192
Cream Chicken Soup, Condensed, 2 Servings/Can	1	48
Cream Tomato Soup, Condensed, 2 Servings/Can	1	48
Gelatins, Individual Dessert Cup:		
Strawberry 4 Packs	3	144
Strawberry/Orange 4 Packs	3	144
Gatorade, lemon-lime, powder	1	384
Ensure (Ross Labs), 8 oz, Liquid Cans		
Chocolate Plus	2	48
Vanilla Plus	2	48
Sugar Packet	1	1,200
Sandwich Bags	1	600
Plastic Spoons	1	1,200
Straws, Flexible, Individually Wrapped	1	1,000
.25 Liter (8 oz) Hot Cups	1	1,000
Cup Lids with Straw Hole	1	1,000

CONTINGENCY OPERATIONS MENUS

4-54. ACES developed two menus using line item A-rations for CONOPS that move beyond strict use of operational rations with milk supplement and authorized enhancements. Additional information on using CONOPS menus is discussed in chapter 8.

Note. The transition to line item A-rations must be approved by HQDA G4 according to AR 30-22 and all supporting requirements (personnel, equipment, sufficient refrigeration, storage, transportation, and a SPV platform) must be in place prior to the transition.

UGR-A SHORT ORDER SUPPLEMENTAL MENUS

4-55. These menus consist of easy to prepare breakfast and lunch/dinner short order items such as hamburgers, hot dogs, ribs, chicken, pizza, burritos, breakfast sandwiches, and desserts. These menus are used to provide Soldiers (who are consuming UGR-As) with additional menu choices during extended deployments when field kitchens are still primarily being used for feeding.

DA CONOPS MENU

4-56. The DA CONOPS Menu uses line item A-rations and is mandatory for use in all garrison-type dining facility operations established within an AO. This cyclic menu has been developed by ACES to provide quality menu choices for three meals per day and is nutritionally adequate to sustain forces in all types of environments.

CONOPS MENU EXCEPTIONS TO POLICY

4-57. The theater FSMB may adjust the issue factors for milk, authorized enhancements, items in the UGR-A Short Order Supplemental Menus, and DA CONOPS Menus based on usage factors and may vary the fruit and salad items based on seasonal and region availability. Theater FSMBs are not authorized to add additional supplemental and enhancement items or change menu items in the DA CONOPS Menu. Requests for an exception to the DA CONOPS Menu policy must be submitted to the Chief, Concepts, Systems and Policy Division, Army Center of Excellence, Subsistence. 1201 22nd Street Fort Lee, Virginia 23801. Electronic requests should be sent to Chief, Concepts Systems and Policy Division, Army Center of Excellence, Subsistence. Web address: http://www.quartermaster.army.mil/aces/.

HEALTH AND COMFORT PACKS

4-58. HCPs (table 4-4) provide deploying and forward area troops with routine necessities required for their health and comfort. There are three types of HCPs:

- Type I HCP contains articles used by both males and females. It will supply 10 individuals for approximately 30 days. Each shipping container contains 10 prepackaged polyethylene bags with a drawstring closure containing a designated quantity of items for issue to 10 individuals. The Type I container also contains other items intended as general supply for replacement or issue as needed which are not stored in the bags.
- Type II HCP is for female Soldiers and contains articles for feminine hygiene. It will supply 10 females for approximately 30 days.
- Type III HCP consists of a personal body wipe packet, bulk packed with 40 packets per box. Each packet contains 10 washcloth-size body wipes. Contents of each box are intended for 10 individuals.

POLICY FOR USE

4-59. Theater commanders may authorize HCPs for OCONUS contingency operational deployments in excess of 15 days. HCPs are only authorized for use at austere or remote camp or base environments where AAFES exchange support is not available or cannot be readily established. Unit logistical planners must ensure HCPs are requisitioned early in the deployment planning stages to ensure an adequate supply is in the theater at the beginning of the operation. During peacetime operations, requests for use and funding of HCPs for tactical exercises are to be submitted through their Army Command/ASCC G4 through ACES (Concepts, System and Policy Division) to the Army G4 (Food and Liquid Division). ACES functions as the Quartermaster Center and School proponent for HCP makeup and design. Recommendations for change and improvements can be submitted on DA Form 7590.

PACKAGING

4-60. Each type of HCP is packaged in cardboard cases. The NSN for Type I, is 8970-01-368-9154 at 58 lb. and 3.3 cube. The NSN for Type II is 8970-01-368-9155 at 18 lb and 1.9 cube. The NSN for Type III is 8970-01-487-7488 at 22 lb and 2.2 cube.

Table 4-4. HCP component items

TYPE I	*TYPE I (Supplemental Items)*	*TYPE II (Female)*	*TYPE III (Male and Female)*
Toothbrush	Detergent, laundry, regular (2)	Napkins, sanitary, regular (48)	Personal Hygiene body wipes (40)
Toothpaste	Comb, hair, flexible rubber (2)	Napkins, sanitary, super (72)	
Floss, dental	Sewing kit, military	Tampons, regular (60)	
Razor, shaving (5) and shaving cream or foam dispenser (1)	Band-Aids	Panty shields (200)	
Soap, bar	Mirror	Bag, plastic, self seal, 1 gallon (20)	
Food powder		Disposable bag, 3x7 (150)	
Tissues		Bag, plastic (10)	
Shampoo		Ponytail holders (10)	
Deodorant, stick		Brush, hair, grooming (1)	
Lip Balm (2)		Comb, plastic (10)	
Personal hygiene body wipe (8 pack)(3)		Bobby pins (50)	
Bag, plastic, self-seal		Personal hygiene body wipes (10)	
Lotion, sunscreen			
Toilet paper			
After shave, cleanser			
After shave, lotion			

SHELF LIFE PLANNING DATA

4-61. Rations and personal use hygiene items have shelf life limits based upon the temperature and locations where they are stored. Table 4-5 provides shelf life planning data for rations and personal use hygiene items.

Table 4-5. Shelf life planning factors

Estimated maximum storage life in months			
Item	***40°F***	***80°F***	***100°F***
MRE	60	36	6
MCW/LRP	84	48	18
UGR-H&S	24	18	3
UGR-E	24	18	3
UGR-A	3 months for CONUS delivery and 5 months for OCONUS delivery (at 0°F for perishables and 80°F for semiperishables)		
UHT Milk	10 months at 80°F (unopened)		
Religious Meals	6 months at 80°F		
TOTM	12 months at 80°F from time of delivery to the customer		
FSR	24 months at 80°F		
Medical Diet Field Feeding Supplement	12 months at 80°F		
HCPs (Types I, II, III)	24 months under storage conditions of 50°F to 72°F		

CLASS I RATION PLANNING DATA

4-62. Class I planners can use the ration planning data in tables 4-6, 4-7, and 4-8 in determining transportation and storage requirements. Individual operational ration requirements can be computed with a high degree of accuracy since the weight and volume of the case is always the same. When UGR-H&S and UGR-As are employed, tonnage and cube figures will vary depending on the menu number. Data is also affected by the use of the milk supplement and authorized enhancements. Class I managers should be aware that tonnage and cube figures will be greatly affected based on the ration mix and ration cycle. The type of rations used will determine the weight and space used to transport the subsistence. The most accurate estimates of tonnage and cube figures for operational rations are located on the DLA Support SPIDERS website: (https://spiders.dla.mil/Spiders/Home.asp).

Table 4-6. Ration Pallet Planning Factors

Ration/Item	*U/I*	*Servings per U/I*	*U/I per pallet*	*Servings per pallet*	*Pallet Weight*	*Pallet Cube*	*Pallet Dimension (l/w/h)*
MRE	cs	12	48	576	1098	56.9	43x52x44
MCW/LRP	cs	12	48	576	758	56.9	43x52x44
HDR	cs	10	48	480	1237	56.9	43x52x44
Religious Meals	cs	12	30	360	540	56.9	43x52x44
FSR	cs	9[1]	48	432[2]	1098	56.1	43x52x44
UGR-H&S	mod	50	8	400	1036[3]	47.8	48x40x42
UGR-A (1 box) Perishable	mod	50	24	1200[4]	642[5]		48x40x40
UGR-A (2 boxes) Semiperishable	mod	50	12	800	844[5]		48x40x40
Pouch Bread	bx	96	15	1440	330	51.1	48x40x46
UHT Milk	cs	27	120	3240	1970	42.8	48x40x43
Cereal	cs	72	50	3600	460	50.0	48x40x65
HCP I	bx	10	12	120	736		48x40x48
HCP II	bx	10	16	160	328		48x40x48
HCP III	bx	10	16	160	328		48x40x48
Ice					1960[6]		48x40x48
FF&V					1500[6]		48x40x48
Bottled Water (24 x 0.5 Liter)	cs	24	72	1728	2128		48x40x48
Bottled Water (18 x 1.0 Liter)	cs	18	60	1080	2620		48x40x48
Bottled Water (12 x 1.5 Liter)	cs	12	50	600	2140		48x40x48

Notes:
1. The serving consists of a full day's food for one Soldier and is equivalent to three MREs.
2. A pallet of FSR provides 1,296 meals (432 rations each containing the equivalent of three meals).
3. The weight for UGR-H&S pallets is an average of all the menus only. Each menu weighs a different amount based on the menu.
4. The number of servings on each UGR-A perishable pallet will differ depending upon the menu number.
5. The weight for UGR-A pallets is an average of all the menus only. Each menu weighs a different amount based on the menu number.
6. Pallet weight planning factors for bagged ice and FF&V are estimates only.

Table 4-7. Ground vehicle ration pallet positions

Vehicle	*Pallet Positions*
5 Ton Truck Gate Up	4
5 Ton Truck Gate Down	6
M871 22.5 Ton Trailer	12
M872 34 Ton Trailer	18
M977/985 MEMTT Truck	8
M1078 LMTV, 2.5 Ton	3
M1085 MTV, 5 Ton	4
PLS Flatrack	10

Table 4-8. Pallet planning factors for 463L pallets and ISO containers

Ration/Item	*463L Pallet*	*20-FT ISO Container*	*40-FT ISO Container*
MRE	8	16	36
MCW/LRP		20	40
HDR		16	32
Religious Meals	8	20	40
UGR H&S	8	20	40
UGR A Perishable		20	40
UGR A Semiperishable		20	40
UGR E		20	40
UHT Milk	4	10	20
Pouch Bread	8	20	40
Cereal			
HCPs (Types I, II, III)		16	40

Chapter 5

Field Kitchen Equipment

This chapter provides an overview of unit MTOE and CTA field kitchen equipment. The Army's inventory of field food equipment ranges from heating devices used by the Soldier to heat individual rations to major end items of equipment used to operate mobile field kitchens capable of feeding hundreds of meals daily. Army hospital units use the same kitchen equipment sets that are described in this chapter. This assemblage and variety of equipment provides food operation team members the ability to prepare and serve quality meals to unit members and hospital in-patients during both training exercises and operational deployments.

TECHNICAL MANUALS

5-1. Leaders should ensure their food service specialists have all applicable TMs cited for the equipment sets discussed in this chapter. If TMs are not available to the unit prior to deployment or field training exercise, the responsible SFOS can download electronic copies of these references at the USAMC's Logistics Support Activity (LOGSA) website at: https:// www.logsa.army.mil. As a minimum, units should have one copy of all TMs or downloaded copies on a CD or external drive. Remember, when you deploy, you may not be able to access the web for required publications. The reference publications outline necessary preventive maintenance checks and services (PMCS) as well as national stock numbers (NSN) for repair parts. Leaders should also ensure that the supporting units bench stock, shop stock, combat repair team/field maintenance team stock and on board spares contain the required repair parts for field kitchen equipment. Rapid deployment units without these stocks on-hand can find themselves deployed forward with no equipment repair parts. This can make the difference between your capabilities to serve hot or cold meals to your Soldiers. The reference lists the TMs for the equipment discussed in this chapter.

MOBILE KITCHEN TRAILER

5-2. The MKT is a complete kitchen unit mounted on a trailer chassis that can be towed by a standard 2½-ton truck, Light Medium Tactical Vehicle (LMTV), 5-ton truck, or Medium Tactical Vehicle (MTV). Currently, there are eight models of the MKT in use. They are the MKT-75, MKT-75A, MKT-82, MKT-85, MKT-85S, MKT-90, MKT 95, and MKT 99. The MKT is normally issued to those Army units with an expeditionary mission including BCTs, support brigades, sustainment, and selected mobile surgical hospital units.

Note. The Army has established a reset program for all versions of the MKT. Once the MKT has been upgraded through the reset program, it will then equal the capability of the model MKT 99.

MKT-IMPROVEMENT KIT (MKT-I KIT)

5-3. An improvement kit has been made available that will permit the unit to replace and therefore upgrade many of the components included in older model of the MKT. The MKT-99 already has all of the enhancements offered in the MKT-I kit and does not require modification. The MKT-I kit includes the following components: fluorescent lighting, 110-VAC convenience receptacles, exhaust/circulation fan, vinyl-coated polyester fabric walls, cold weather rubber matting and ground skirt, durable electric can

opener, new griddle top, and new ice chest. These items are authorized for purchase by individual units. The kit is available in green (7360-01-469-5482) and tan (7360-01-496-3869).

SETUP AND FEEDING CAPABILITY

5-4. Four trained food service specialists can set up the MKT for operation in approximately 30 minutes. The MKT can support approximately 250 Soldiers per meal when using UGR-As and 300 Soldiers per meal when using the UGR-H&S.

SITE REQUIREMENTS

5-5. Tactical operational environments are commonly linear with deep, close, and rear components. When selecting a site for the operation of the MKT, or any of the other Army field kitchen equipment, the first consideration is accomplishment of the mission, followed by security and safety. Commanders, leaders, and the SFOS must use all available resources including maps to identify terrain that will protect the field kitchen from enemy observation and fires while providing observation and fires into the possible engagement area. Additionally, leaders use intelligence updates to increase their situational awareness and understanding, reducing the possibility of the enemy striking at a time or in a place for which the supported unit and field kitchen is unprepared. Unit and food service leaders at the tactical level of operations must consider all aspects of three-dimensional battle and use standard control measures to organize security within their AO. Deployment of the MKT to support unit food service operations requires an area that is on firm and level ground with good water drainage and clear of large rocks and trees. The desirable area for normal operation is 30 feet by 30 feet with an overhead clearance of 11 feet. A minimum of 4 feet should be allowed between the kitchen (when it is packed up for travel) and any large obstacles in order to have sufficient space to expand the unit and install the ramps.

CONFIGURATION

5-6. The MKT contains a metal roof that can be lowered for storage and transport or raised when food is prepared. After the roof has been extended to its full operational position, mosquito netting should be attached to keep flying insects out of the kitchen area. The kitchen also has detachable fabric sides to protect Soldiers from inclement weather.

OPERATIONAL CONDITIONS

5-7. The MKT is designed for operation in extreme weather conditions, such as snow, high winds, rain, and extreme temperatures. All MKTs are equipped with fabric curtains and screens for operation in a variety of weather conditions. Follow the steps below to prepare the MKT for operation during cold or inclement weather:

- Partially close roof air vents to prevent entry of outside elements.
- Remove six fabric curtains from storage.
- Install the longest curtains on the sides and fasten them to the roof fabric flap.
- Install the two smallest curtains on the right side of the roof fabric flap (both ends).
- Install the two remaining curtains. Secure the bottom edge of the curtains to the ramps with rope tie-downs.
- Open and close kitchen exits as required with Velcro hook-pile tabs. Secure all ties around the tent poles rails, except at the entrances and exits.
- Install the cold weather skirt assembly (MKTs with the MKT-I kit).

CAUTION

Restrict the use of the MKT (without the MKT-I kit) in cold weather to temperatures above 32ºF. Commanders and food operations leaders must complete composite risk management (CRM) when deploying all MKTs in temperatures below 32ºF. Risks are associated with poor heat distribution (from the waist up) within the MKT, significant condensation (condensation rapidly turns to ice at the end of the cooking process) buildup as part of the cooking process inside the MKT, and risk associated with mobility problems related to frame rigidity during transport of the MKT in severe cold weather.

OPERATION IN HIGH WINDS

5-8. When positioning the MKT, ensure that you adjust and position the kitchen so that the diner rear entry will be on the side away from the prevailing wind. For additional information on how to prepare the MKT for operation under unusual conditions, refer to TM 10-7360-206-13, chapter 2.

PACKING PROCESS

5-9. After meals have been served, the kitchen can be packed into the travel mode. The packing process is *very important.* If not properly packed, the trailer can be permanently damaged. It is imperative the SFOS trains food service specialists to use the packing standards outlined in chapter 2 of TM 10-7360-206-13. Training to these standards will enhance proficiency, safety, and prevent any unnecessary damage to the MKT.

SHIPPING REQUIREMENTS

5-10. The MKT-90, MKT-95, and MKTs upgraded to the MKT-99 standard from the reset program have the capability to be sling loaded by single point lift by the CH-47A/B/C/D helicopter and are easily transported by truck, rail, and sea. When preparing the MKT for rail, air, or sea shipment to a major training area or deployment, the MKT's height, length, width, and weight must be considered prior to shipment. Food service specialists should review unit SOPs for all shipping requirements. Table 5-1 provides MKT specification data. Table 5-2 provides the MKT weight dry and wet.

Table 5-1. MKT height, length, and width

Height	*Length*	*Width*
93 inches (travel)	171 inches (travel)	92 inches (travel)
132 inches (operational)	201 inches (operational)	152 inches (operational)

Table 5-2. MKT weight dry and wet

Model	*Weight Dry (lb)*	*Weight Wet (lb)*
MKT-75	5,480	6,020
MKT-75A	4,680	5,220
MKT-82	4,500	5,100
MKT-85	4,680	5,220
MKT-85S	4,680	5,220
MKT-90	4,600	5,260
MKT-95	4,600	5,260
MKT-99	6,100	6,731
Note. The dry weight of the MKT is without fuel and water. The wet weight of the MKT includes fuel in MBU units and water.		

CONTAINERIZED KITCHEN

5-11. The CK is a mobile, self-contained field kitchen configured in an 8-foot by 8-foot by 20-foot ISO container. The CK can be transported and deployed separately or mounted on its trailer (Chassis, Containerized Kitchen Trailer: 7½ Ton, 4-wheel Vehicle).

SETUP AND FEEDING CAPABILITY

5-12. Five trained food service specialists can set up the CK for operation in approximately 45 minutes. The CK can support approximately 800 Soldiers per meal using any of the group meals in the Army family of rations. The average meal preparation time is approximately three hours. The CK provides approximately 360 square feet of food preparation and service area protected from environmental elements.

SITE REQUIREMENTS

5-13. When the CK arrives at the deployment site, all equipment necessary for setup and operation is packed inside the container. If the CK is mounted on a trailer, the selected site must have a minimum of 50 feet by 30 feet of level, open space to provide maneuvering room for the tow vehicle and trailer. The site must be level to a maximum elevation difference of 6 inches in 10 feet. The terrain must be firm, well drained, and relatively free of surface rocks and stones. If soil at the site is not dry and well packed, dunnage or other support materials must be placed under the jack base plates of the CK to prevent them from sinking into the ground. The slope of the terrain must not exceed 18 inches over the projected floor area of the expanded shelter (approximately 20 feet by 22 feet).

CONFIGURATION

5-14. The overall layout of the CK is oriented around a central cook center located in the shelter core. The cook center houses four MBUs which can heat any of the following: the griddle, the steam table, two 10-gallon or 15-gallon cook pots, and two baking and roasting pans (square heads) which can be set up on either the left or right half of the cook center. The cook center also serves as the dividing line between the food preparation and the serving areas. An aisle way allows personnel to freely move between the two areas without exiting the shelter. Integral to the cook center are provisions for both electrical and fuel connections for five MBUs. Four of these connections are fixed within the cook center to accommodate 10-gallon and 15-gallon pots, griddle, and one steam table. A fifth connection at the aisle way supplies the tray pack heater or the cook pot cradle assembly. The cook center also has a tray slide on the serving side for diner use. In the center of the work space, two tables are set up as a food preparation island which is accessible from all areas of the kitchen. The refrigerators, warming cabinet, sink, tray pack heater, oven, and pan rack are located along the perimeter of the expandable sidewalls. The tray pack heater and the

oven are located at the mechanical room end, with electrical and fuel connections provided. The CK has two refrigerators located next to the personnel access door. In the serving area, two field tables and two storage cabinets are provided. The CK provides two access doors to the serving area. Personnel enter one door and exit the other. The field tables can be used as an extra length of food preparation surface or for laying out condiments while food is being served.

PACK-OUT PROCEDURES

5-15. The CK's pack out procedures for movement are contained in TM 10-7360-226-13&P, chapter 2. Personnel should note all ***Warnings*** and ***Procedures*** prescribed in the TM before preparing the CK for movement. When packing the CK for movement, all loose food and equipment items should be secured in their appropriate place. However, in specific tactical situations, the commander or unit SOP may direct that the CK be packed out and moved with food or other items on board. In such cases, pack out procedures may be locally modified as required.

SHIPPING REQUIREMENTS

5-16. The CK meets ISO container standards and is easily transported by truck, rail, or sea. In addition, it is transportable in C-130 and larger Air Mobility Command aircraft. The container meets all ISO requirements for safe containers, including nine-high stacking in container storage areas. Table 5-3 provides the CK trailer equipment data.

Table 5-3. CK data without trailer

Length	20 ft (6.1m)
Width	8ft (2.44m)
Height	8 ft (2.44m)
Weight (dry)	14,080 lb (6392 kg)

MODULAR FIELD KITCHEN

5-17. The MFK provides responsive, flexible, and mobile food service support to medical units in the field. The Food Container, Insulated Hospital Ward (FCIHW) and food preparation and service sets furnish addition items to support the patient feeding mission. The MFK is housed in a tent while subsistence storage and dining eating areas use MGPTS tents based on the unit's MTOE. The MFK is designed to support up to 250 personnel and patients. The MFK can be transported by a 5-ton truck or LMTV with a 1 ½-ton trailer.

CONFIGURATIONS

5-18. The MFK is configured in two sections to support staff and patients by authorized beds per command level. Refer to FM 4-02.56, chapter 3, para 3-2, on number of authorized MFK per command level. The equipment is arranged to provide food preparation and cooking areas and serving lines. The TEMPER tent is equipped with one 8-foot fabric section with doorways on each side and screened roof vents with flaps. The fabric for the other section is provided with windows on each side and one stove pipe opening. The roof vents are designed to remove excess kitchen heat and/or fumes. Because the MFK is modular, it can be consolidated with other MFK modules to feed larger units. In cold regions, entrances to the tents should have vestibules with doors attached to cut down on air exchange. The MFK and FSC can be made into a complex by connecting vestibules. For additional information on how to prepare the MFK for operation under normal and unusual conditions, refer to TM 10-7360-208-13&P, chapter 2.

BASIC COMPONENTS AND ACCESSORIES

5-19. Major components of the MFK includes—

- ***Griddle, oven, and pot cradle.*** The griddle, the oven, and the pot cradle assembly, along with the MBU are provided for roasting, baking, grilling, boiling, and maintaining the serving temperatures of hot foods.
- ***Steam table.*** The steam table with MBU burner is used to keep hot foods hot on the serving line throughout the serving period.
- ***Steam table adapters.*** The MFK comes with three adapters to aid serving procedures. There are one-hole, two-hole, and three-hole adapters. They are used with baking and roasting pans, line pans, tray packs, and plastic inserts for serving. When the one-hole adapter is used with two baking and roasting pans, the adapter is placed all the way to one end of the steam table. The two-hole adapter can be used with a baking and roasting pan and tray packs, plastic inserts, or line pans.
- ***Food storage cabinets.*** These cabinets are used mainly to store food and to maintain pastries and desserts.
- ***Heater tank assembly.*** The heater tank assembly, filled with water and with the MBU in place, heats up to 24 tray packs at one time.

ADDITIONAL KITCHEN COMPONENTS

5-20. The FCIHW is a lightweight litter-borne food transport system (on a wheeled gurney or is two-person portable) used to protect food, maintain temperatures, and transport and serve complete regular and/or modified diet meals. It is used in field medical units required to provide food service to patients unable to go to a central feeding and dining area.

Function

5-21. The basic unit consists of two, four sectioned wall units, two accessory boxes, and a beverage and utility unit. It can transport 20 complete regular and five special diet meals. A supplemental litter-borne carrier will be used to transport liquid diet components separately, as required, using nine additional 1.5 to 2-gallon beverage containers. Required trays, flatware, and glasses are pre-positioned on each ward. A ward serving line is set up by supporting FCIHW transporters on litter stands or wheeled gurneys. After the meal service, the FCIHW will be loaded with soiled utensils, dinnerware, and meal refuse. It is returned to the sanitation center for cleaning and sanitizing.

Transport

5-22. The capacity of each transport unit, coupled with the ward census, may permit service of multiple wards from one transporter. FCIHW units will be mounted on a standard North Atlantic Treaty Organization (NATO) litter for movement toward locations. The basic unit (with or without the use of a wheeled gurney) will be transported to ward locations by two unit personnel. A four-person litter team or a wheeled gurney may be required to transport the supplemental carrier or rack when it is fully loaded with liquid components.

OPERATION UNDER UNUSUAL CONDITIONS

5-23. The MFK has a tent fly to reduce solar heating in hot environments and to permit the roof vents to be opened in inclement weather. For cold weather operations, the TEMPER is equipped with a cotton liner and, if needed, an additional insulated liner. When operating in ***Extreme Cold***:

- Erect the tent, hang the arctic liner, and install the tent liner.
- Ensure that all windows, doors, and weather seals are properly installed. Place heaters along the base of the MFK using duct work. If you are using a large number of sections, alternate the heat ducts. The Army's 120,000 British Thermal Unit (BTU) space heaters work well in subzero temperatures. Place a ground cloth on the ground and then erect the tent.
- Becketing hooks help when untying frozen laces in cold weather or when wearing insulated gloves.

Note. No special tools or equipment are required by operator or crew personnel for maintaining the MFK/TEMPER. However, in arctic regions, the becketing hook is essential, especially in untying frozen laces. A pin puller is also essential when tent pins are frozen in the ground. Both items can be manufactured locally. A 2 ½-pound sledge hammer is also useful in arctic regions.

KITCHEN, COMPANY LEVEL FIELD FEEDING

5-24. The KCLFF is designed for feeding company-sized units at forward locations. The KCLFF is authorized for selected BCTs, Fires, MEB, and BFSBs. Units authorized the KCLFF have either been issued the standard KCLFF or the standard KCLFF with the enhancement (KCLFF-E). The KCLFF is operated by two Soldiers with the capability to feed one UGR-H&S per day for up to 250 Soldiers. Using the range outfit, griddle assembly, and ice chest provided with the KCLFF-E enables one food service specialist to prepare limited UGR-A and UGR-H&S rations for up to 150 Soldiers.

BASIC COMPONENTS AND ACCESSORIES

5-25. KCLFF major components include the heater tank assembly with MBU; cooking pot cradle assembly with MBU; table assemblies; dispenser, liquid, insulated (5-gallon); and insulated food container (IFC). The KCLFF-E includes all of the major components of the KCLFF plus the range outfit, the griddle assembly, the ice chest, the accessory outfit, and twelve additional IFCs.

Heavy Duty Coated Neoprene Gloves

5-26. Heavy duty coated Neoprene gloves (figure 5-1) will replace the lifter, tray pack and lifter, tray pack serving. The NSN for the gloves is 8415-01-511-4637. The current two lifters do not work with the new UGR polymeric tray packs. The insulated gloves must be used to remove the hot tray packs from the hot water and while transferring hot tray packs into IFCs**.**

Figure 5-1. Heavy duty coated Neoprene gloves

SITE SELECTION REQUIREMENTS

5-27. Although the KCLFF/KCLFF-E has the capability to be employed wherever necessary, consider the following desirable site selection criteria when selecting a site for set up:

- Good natural cover is ideal to shield troops from the enemy and to protect them from sun, heat, and cold winds.
- High, dry ground near a protected slope is ideal and a site with good drainage to avoid pooling of water and protection from the wind.
- Sufficient space to keep from crowding the troops into a small area is required. It also allows you to spread out your equipment enough to work efficiently.
- If possible, locate close to a source of potable water.
- Sandy loam or gravel soil is the best surface to set-up on since there is natural drainage.
- Leaders must be aware of their surroundings and the tactical situation. Situational awareness is an imperative at all time on the battlefield. Consider desirable force protection capabilities and available exit routes.

OPERATIONAL PROCEDURES

5-28. Before operating the KCLFF/KCLFF-E, leaders must ensure their personnel follow the procedures for the safe and efficient set-up of the component parts. Follow the steps in (figure 5-2) for the operation of the KCLFF/KCLFF-E.

1. Erect the two serving tables within 5 to 6 feet of the UGR tray pack heater.
2. Place a fire extinguisher conveniently near the heater.
3. Fill the heater with 20 gallons of water (about 8 inches deep).
4. Carefully slide the MBU in the burner rack under the heater tank. DO NOT FORCE IT.
5. While the water is being heated, ready the UGR packs for loading. The tray packs are loaded *after* the water begins to boil.
6. Place eating and serving utensils, UGR trays, bread, and condiments in a convenient place on one of the serving tables.
7. If a hot beverage is to be served, assemble a 15-gallon stock pot, cradle, and burner rack.
8. When the water in the heater tank has started to boil, load a maximum of 24 tray packs into the tank as follows:
   - Arrange the UGR tray on their edges in two rows of 11 with two UGR trays between the rows.
   - Place the first UGR tray in the tank with the bottom of the tray against the side of the tank and the short side down. Load entrée tray packs requiring the full amount of heating time and others progressively so the full menu may be served together.
   - Close the cover on the tank.
9. After 45 minutes, the UGR trays should have reached the serving temperature (some items, such as vegetables, may take only 15 minutes to heat).
10. If the trays are not served immediately, or if they are to be taken to a remote site, take them from the heater and put them into IFCs to maintain the serving temperature.
11. To load the IFC, remove the tray packs from the heater cabinet using the insulated gloves.
12. Transfer the tray packs using the insulated gloves or hot pads. Place the UGR tray packs into the IFC.
13. Load utensils and condiments into a box and close the box.
14. Use the hot water in the UGR tray pack heater and stock pots for sanitation purposes. Add one half cup of dishwashing compound (hand) for each 5 gallons of water to the UGR ration heater. If the alternative method is used, add half of a packet of food service disinfectant for each 5 gallons of unheated water in the remaining stock pot. Clean the utensils, tables, insulated food containers, and beverage dispensers using the water in the heater cabinet for washing and the stock pots for rinsing.
15. After the unit has cooled, drain the water from the tank by opening the drain valve on the bottom of the unit. The drain hose should be attached so that the cooking area does not get muddy. Run the drain hose onto a soakage pit to prevent standing water that could breed insects. When the water is contaminated with foodstuff and/or other waste, dumping must be according to local environmental regulatory requirements. Never dump contaminated water directly on top of the ground.

Figure 5-2. KCLFF/KCLFF-E operating procedures

DETAILED SERVERS

5-29. Food service Soldiers operating the KCLFF/KCLFF-E will require unit furnished servers to assist at meal service time. The number of detailed servers depends on the number of personnel to be fed. The senior food operations leader present at the kitchen site should direct detailed servers to brush off as much dirt or loose debris from their uniforms prior to assuming server duties and to thoroughly wash their hands prior to instructing them on serving procedures. Single-use disposable plastic food service gloves (if

available) should be provided to servers for use during the meal period. If the gloves become soiled with food or are otherwise contaminated during serving, the gloves must be changed. Examples of how to use servers follows:

- One server should serve the entree, starch, and vegetable.
- One server should serve the salad, bread, and dessert.
- One server should serve the beverages (server fills cups) and condiments.

OPERATIONS DURING INCLEMENT WEATHER

5-30. Appropriate shelter should be provided for the KCLFF/KCLFF-E during inclement weather. Field expedients methods such as buttoning two or more ponchos together or using clean canvas to place over the serving line to protect the food from rain or snow can be used. Units can order canvas or prefabricated shelters to support the KCLFF/KCLFF-E in poor weather; however, transportation assets and cargo space are critical and tents may not be transportable. Lightweight portable shelters currently available in the Army supply system can be researched through unit supply channels. One example of suitable tentage is the MGPTS.

MOVEMENT REQUIREMENTS

5-31. The KCLFF/KCLFF-E can be transported easily by truck, rail, and sea. A High Mobility Multipurpose Military Vehicle (HMMWV) and cargo trailer is authorized by unit TOE for the transport of the KCLFF/KCLFF-E. The company basic load of operational rations, camouflage nets, and other items to support the KCLFF/KCLFF-E must be transported on other company vehicles; normally the unit supply section will haul these items.

ASSAULT KITCHEN

5-32. The AK is an emerging system; currently it has been fielded to select BCTs. The AK provides the ability to heat-on-the-move utilizing the UGR-H&S and feeds up to 250 personnel spread out over multiple locations. The AK ***does not*** have the capability to prepare all components of the UGR-A.

Note. AK general fielding is scheduled for the fiscal year 2009 time frame.

SET UP AND HEATING CAPACITY

5-33. The AK can be set up in as little as 10 minutes with two trained food service specialists. The AK consists of a cargo HMMWV and trailer packed with food preparation equipment on a mobile platform. The AK heater tank can operate for up to 10 hours on 5 gallons of fuel. The portable, stainless steel water tank can heat up to 18 UGR-H&S tray packs in 30 to 45 minutes.

BASIC COMPONENTS AND ACCESSORIES

5-34. The components and the packing location of the AK include six insulated beverage containers, three pan carriers to keep food trays warm, five IFCs, a 5-gallon fuel can, fire extinguisher, utensil box, maintenance kit for the ration heater, and a ration heater to prepare UGR-H&Ss on the cargo HMMWV. The trailer can hold eight water cans, an ice chest, three tables, cargo netting to hold UGR-H&S boxes, stock pots, a cradle for use in preparing hot beverages, and an awning to cover the serving area during inclement weather.

FOOD SANITATION CENTER

5-35. The FSC provides sanitizing service for field kitchens serving up to 400 Soldiers on a sustaining basis and requires water, JP-8 fuel, and a generator to operate. One FSC is authorized for each MKT, CK, and MFK. The FSC is configured to be carried in one truck; can be set up on site within 1 hour by four

Soldiers; and can be prepared for movement within 30 minutes. The FSC is fielded in two models: the original model, FSC 90, and the FSC-2. To support sanitizing requirements, the tools and ancillary items supplied with the MFK, MKT, and CK will be used jointly to service and support the FSC.

FSC COMPONENTS

5-36. The FSC-90 and FSC-2 have major component differences between the two models as identified in table 5-4.

Table 5-4. Major differences between FSC-90 and FSC-2

Feature	*FSC-90*	*FSC-2*
Tent	16 X 20 TEMPER or MGPTS	MGPTS, small with internal Y-pole
CO monitor	N/A	CO monitor
Grease separator	N/A	Grease separator with 50-ft drain hose
Sink fill pump assembly	N/A	Sink fill pump assembly
Sinks and sink drain hoses	Different models from FSC-2 (see WP 0056 00, Repair Parts and Special Tools List – Group 04 Sink Assembly); sink painted green	Different models from FSC-90 (see WP 0056 00, Repair Parts and Special Tools List – Group 04 Sink Assembly)
Step ladder	N/A	One 6-ft step ladder
Water supply hoses and nozzle	N/A	One 50-ft fresh water supply hose, one 15-ft fresh water supply hose, and one hose nozzle used with sink fill pump assembly
Work tables	Stainless steel with replaceable folding legs	Aluminum with permanently affixed folding legs

SITE SELECTION FOR THE FSC-90

5-37. Approximately 600 square feet is needed to set up the TEMPER tent. Approximately 1,156 square feet is needed to set up the MGPTS. Site selection considerations for the FSC includes—

- Choose a site clear of large rocks and trees with firm ground and good water drainage.
- If possible, avoid dusty or sandy conditions.
- Use gravel or the other suitable material for the base floor of the FSC if ground conditions are wet or poor drainage is evident.
- Ensure that there is room to position the FSC within 50 feet from the kitchen.

SITE SELECTION FOR THE FSC-2

5-38. A flat, clear area of at least 18 feet by 18 feet is required for the MGPTS. An additional 600 square feet (56 square meters) is needed for the MFK if used with the FSC. An additional 900 square feet (83 square meters) is needed for the MKT if used with the FSC. An additional 1,500 square feet (139 square meters) is needed for the CK if used with the FSC. Site selection considerations for the FSC-2 includes—

- Choose a site clear of large rocks and trees with firm, level ground, and good water drainage.
- Avoid dusty or sandy conditions if possible.
- Use gravel or the other suitable material for base where the ground is wet.
- If the FSC is used with the CK, orient the FSC and CK according to TM 10-7360-211-13&P.

DANGER

To prevent fires, do not use flammable material as a base for the FSC. Fire will cause injury to personnel and damage your equipment and your capability to support the mission. Do not allow unit personnel to sleep in the FSC. Be aware that Carbon Monoxide can build up in completely enclosed spaces when operating MBUs. Ensure adequate ventilation exists; safety is a leader responsibility.

OPERATION

5-39. The operating procedures for the FSC are discussed in chapter 6. All food service specialists working with the FSC should be familiar with the safety procedures outlined in TM 10-7360-211-13&P and all recent Army safety messages prior to operation.

OPERATION DURING INCLEMENT WEATHER

5-40. The FSC includes fabric curtains and screens for operating during inclement weather. To prepare the FSC for unusual environmental conditions such as extreme cold, extreme heat, dusty or sandy areas, rainy and humid conditions, salt water areas, high altitudes, and under windy conditions, refer to TM 10-7360-211-13&P, chapter 2.

SHIPMENT REQUIREMENTS

5-41. Disassembly and preparation for movement of the FSC-90 and FSC-2 is addressed in detail in TM 10-7360-211-13&P, chapter 2. When two FSCs are consolidated and used with two hospital MFKs, the equipment can be packed, transported, and loaded on four standard 2-1/2 ton or 5-ton tactical vehicles, or two vehicles with 1-1/2 ton cargo trailers.

IMMERSION HEATERS

5-42. Immersion heaters remain in the Army equipment inventory as a method of heating water for sanitation operations at field kitchens when units have not been issued the FSC. The Army plans to replace immersion heaters with the fielding of the FSC. There are two types of immersion heaters; the Model M-67 and the Preway Model (figure 5-3).

WARNING

The SFOS must ensure that their food service specialists are properly trained on the use of the immersion heater to prevent explosion or fire as a result of incorrect lighting or operation.

OPERATION

5-43. Both models look very similar in design and the principal of operation is exactly the same, with the only significant difference being the lighting procedures. Operating instructions are on the data plate attached to the burner unit cover and in TM 9-4540-202-12&P and TM 10-4500-200-13. Details for the set up and operation of the immersion heaters are also contained in chapter 6.

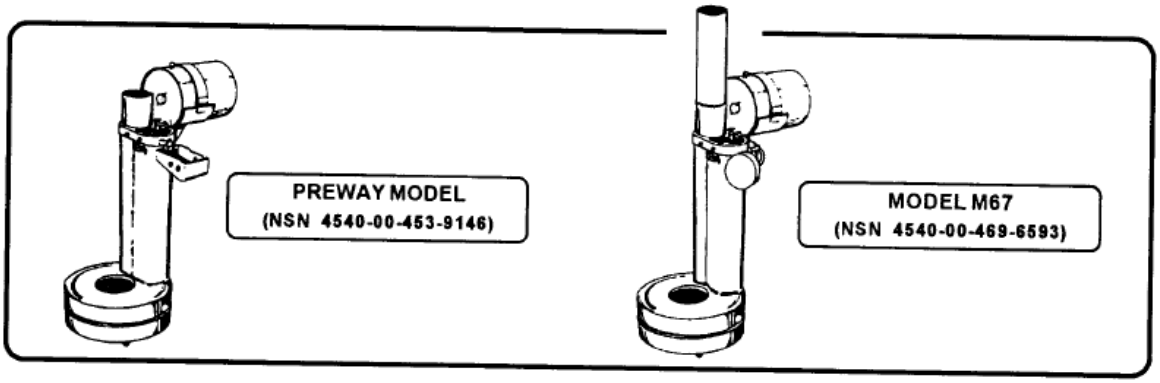


Figure 5-3. Immersion heaters

MODERN BURNER UNIT

5-44. The MBU is the primary heat source for the kitchen and sanitation equipment found within all Army field feeding systems (KCLFF, MKT, CK, MFK, and FSC). The MBU features an automated ignition and uses JP-8 or alternate approved diesel fuel for normal operation. The MBU uses 75 watts of 28 volt DC power, reducing the risk of electrical shock. Its electronically controlled components also reduce hazardous combustion emissions. The SFOS must ensure food service specialists operate MBUs safely and in a manner that protects both the operator and the equipment.

WARNING

Never use gasoline in the MBU under any circumstances.

FIRE PREVENTION AND ENVIRONMENTAL PROTECTION

5-45. Be sure that all personnel follow these rules when refueling the MBU:

- In cases where the MBU is required to be fueled manually, petroleum absorbent material will be placed under the burner to catch any fuel that may be spilled.
- In the event that fuel is spilled on the ground, immediate action will be taken to contain the spill and the appropriate environmental personnel notified.
- Fill fuel tank using a fuel can with attached fuel spout to the bottom of filler neck opening with JP-8 or approved alternate diesel fuel, and re-install fill plug.
- Clean up any spilled fuel with a rag.
- Dispose of rag and/or absorbent material according to local disposal procedures.
- ***NEVER*** put more than one MBU in the M59 field range.
- Do not attempt to connect a fuel line to the MBU in the vicinity of any open flame.
- Ensure that the fuel hose connections are made properly to avoid fuel spillage.

Note: Prevent a possible fire hazard by having rags on hand to absorb any spillage. Failure to observe safety precautions may result in injury or death to personnel.

CAUTION

When fueling the MBU, all burners that are connected and/or within 10 feet of the burner being fueled must be shut down. Fuel storage must be at least 50 feet away from tents and vehicles.

M59 FIELD RANGE AND ACCESSORY OUTFIT

5-46. The M59 field range (LIN R14154) is portable and can be adapted to many different cooking configurations. One field range may be used to cook for up to 50 Soldiers. Field ranges may be grouped together to cook for more than 50 people. Each field range comes with pots, pans, and cooking and serving utensils. One accessory outfit is authorized for every one to four ranges.

USING THE M-59 FIELD RANGE

5-47. The M-59 field range can be used by food service specialists to bake, roast, boil, grill, and deep-fat fry foods. The range may also be used as a hot line or steam table. Regardless of the type of cooking you are doing with the field range, the MBU will always be located in the bottom position of the M-59.

Roasting

5-48. Place the baking and roasting pan on the top of the field range and preheat it to the proper temperature. Place roasts in the pan. Cover the pan if you are cooking the roasts by the moist-heat method. Close the door and detachable lid.

Baking

5-49. Three baking racks come with the field range as a component part of the accessory outfit. You can bake foods inside the cabinet or in the baking and roasting pan. You can prepare cakes, bread, biscuits, cobblers, or cookies using the baking rack set and the burner unit in the bottom position. Preheat the cabinet to the proper temperature. Place a pan on each shelf. During the baking time, be sure to rotate the pans.

Deep-Fat Frying

5-50. Put the baking and roasting pan on top of the field range. Fit the long arm protector over the front side of the cabinet and the edges of the pan. Fit the short arm protector over the edge of the pan on the side where you plan to work. Fill the pan one-third to one-half full of shortening. Heat the shortening to the required temperature. Check the temperature with a thermometer or drop a bread cube into the hot shortening. If the bread browns in 20 seconds, the shortening is hot enough to use. After you have fried the food, use the skimmer to remove the food from the pan.

Grilling

5-51. Turn the cover of the baking and roasting pan upside down and fit it onto the griddle supports. Fit the long arm protector over the front edge of the griddle and cabinet. Fit the short arm protector over the side edge of the griddle and cabinet where you are working. You may need to grease the griddle lightly.

Hot Line

5-52. Put the baking and roasting pan on top of the range, fill the pan one-third to one-half fill of water. Place a one, two, or three hole adapter inside of the baking and roasting pan to form a holder for up to three inserts. Fit the long arm protector over the front side of the cabinet and the edge of the pan. Fit the short arm protector over the edge of the pan on the side you plan to work and/or serve the food. Heat the water in the pan to maintain the internal temperature of the food products at 140 degrees Fahrenheit or above. Place

the inserts with the hot food products inside the warmer adapter as needed during the meal service period. A product thermometer must be used to check food temperatures.

FIELD KITCHEN TENTS

5-53. Tents may need to be used for field kitchens depending upon the climate or availability of the MKT or CK. The type of unit being supported and the physical location of the field kitchen operation will dictate the type of equipment needed. Safety precautions must be followed no matter which type of tent is used for the field kitchen. The following are types of tents that can be used for field kitchens:

- TEMPER
- MGPTS

INDIVIDUAL RATION HEATING DEVICES

5-54. There are two individual ration-heating devices available to heat individual MRE entree packets besides the FRH discussed in chapter 4 (paragraph 4-7, page 4-2). These devices are the canteen cup stand and the mounted water ration heater (MWRH), which is used in armored vehicles. These pieces of equipment allow Soldiers to have a hot meal at the time and place of their choosing or heat water for instant soups and beverages.

CANTEEN CUP STAND

5-55. The canteen cup stand is a reusable, lightweight, aluminum stand that fits over the standard Army canteen cup for travel. The stand allows the Soldier to heat the MRE by immersing it in a canteen cup of hot water. The water is heated by a standard trioxane heat tablet or, if necessary, any other combustible material. The stand can also be used to heat water for coffee, soup, or hot chocolate.

MOUNTED WATER RATION HEATER

5-56. The MWRH provides vehicle crews with onboard hot water for heating MREs, preparing soup, beverages, and personal hygiene. It supports Soldiers by providing enhanced subsistence capability for vehicle crews. It can be mounted and plugged into an auxiliary receptacle on a crew-served combat vehicle and is capable of heating one gallon of water in 40 minutes or five MREs and 40 ounces of water for beverages in 45 minutes.

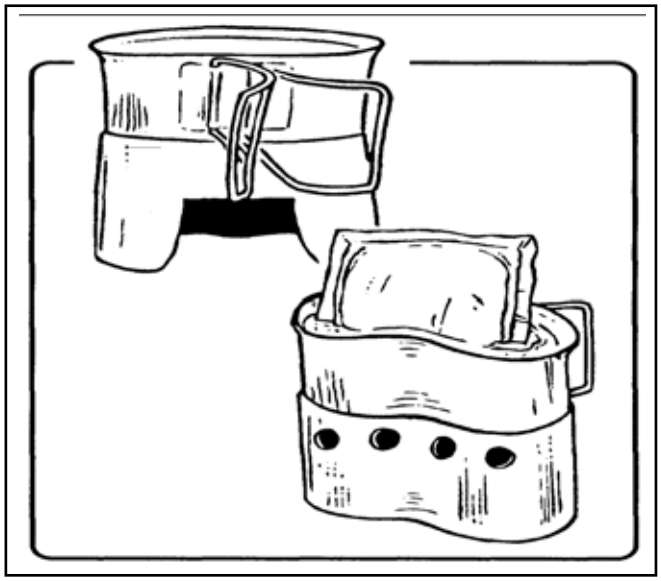


Figure 5-4. Canteen cup stand

5-57. The MWRH consists of a stainless steel main container and a stainless steel removable container. A three-position switch allows selection of **off (0),** or **thermostatically controlled heating (I),** or **boiling (II)** settings. A green indicator light illuminates when the switch is positioned to either of the two power settings and a white indicator light illuminates when the electrical heating element is active. The unit is well insulated to minimize heat loss and prevent injury to personnel.

INSULATED FOOD CONTAINER

5-58. The IFC is used to keep hot foods hot and cold foods cold. Each container has three inserts with tight fitting covers. Each plastic insert may be filled to 5 1/3-liters-(5 2/3-quart) capacity. Hot and cold food should be stored in separate containers. The IFC may also be used to transport tray packs.

HEATING AND FILLING

5-59. A properly heated container will keep food hot or cold for three to five hours. However, keep in mind that TB MED 530 states that potentially hazardous foods (PHFs) held in an IFC for more than four hours must be discarded. Before you put hot food in the container, heat the container as follows:

- Remove the inserts.
- Pour 2 quarts (1.9 liters) of boiling water into the container.
- Replace the inserts.
- Close the container lid and secure the latches diagonally.
- Let stand for at least 30 minutes.
- Open and remove the inserts.
- Pour water from the container.
- Put hot food in the inserts and replace the insert covers (with gasket).
- Place the filled inserts in the container.
- Close and fasten the container lid by securing the latches diagonally.

Note. Polymeric tray packs become flexible when heated. Use divider bars provided with each IFC when placing tray packs onto shelves in the container.

CHILLING AND FILLING

5-60. If you need to chill a container before you put cold food into it, follow the steps described below:

- Remove the inserts.
- Put crushed ice or 2 quarts of ice water in the container.
- Replace the inserts.
- Close the container lid and secure the latches.
- Let stand for 30 minutes.
- Open and remove the inserts.
- Pour ice or water from the container.
- Put food in the inserts and fasten the lids.
- Place the filled inserts in the container.
- Close and fasten the container lid by securing the latches diagonally.

LABELING CONTAINERS

5-61. Label each food container after you fill it. A good label can be made by placing a strip of masking tape across the top of the container lid. Write the menu item, the number of servings, the date, the time the item was placed in the container, and "consume by or discard" (fill in the time 4 hours after the container was filled) on the tape.

TRANSPORTING FOOD

5-62. If the food is to be carried to other sites, use a code letter or color to identify each site. Make sure that each site has a complete menu. Write the menu items, the number of servings, the date and time prepared, "consume by or discard", and the site code on each container label. For feeding small units, put a separate insert of meat, starch, and vegetable in each IFC.

CLEANING CONTAINERS

5-63. Clean the IFC and the inserts before and after every use. Never immerse the container itself in water. Remove the inserts and gaskets and wash them in hot, hand-dishwashing compound solution. Then rinse and sanitize the parts in water at 171 degrees Fahrenheit or greater. After you have washed the gaskets from the food container, put them back on the container with the flat sides down and let them dry that way. Place the gaskets from the insert covers back on the insert covers and let them dry. If you take care of the rubber gaskets properly, they will not warp or lose their shape.

ORDERING REPLACEMENT PARTS

5-64. If components of the IFC become unserviceable or are misplaced, you can order replacements through normal supply channels. Table 5-5 shows the NSNs for IFC pans and covers.

Table 5-5. IFC NSNs

IFC (Complete)	***NSN***
Olive Drab, deep (3) plastic pans with covers	7360-01-517-4826
Desert Sand, 12 ¼ deep (3) plastic pans with covers	7360-01-517-4839
PARTS	***NSN***
A- 1/3 size plastic insert pan	7360-01-234-2189
B- 1/3 size plastic insert pan cover	7360-01-514-4865
C- full size plastic insert pan	7360-01-517-4861
D- full size plastic insert pan cover	7360-01- 517-4867

STORING THE CONTAINER

5-65. Store containers with the lids closed but unlatched. Make sure the food container lids are pushed back slightly to allow air to circulate. This will reduce mold or mildew.

ICE STORAGE CHESTS

5-66. There are two ice storage chests authorized for use in the field. They are the 200-pound capacity (NSN 4110-00-142-2445) used with the KCLFF-E and the 400-pound capacity (NSN 4110-01-452-7317). Store perishables in the ice chest for up to 24 hours when there is no other refrigeration available.

5-67. When block ice and perishables are stored in the chest, use enough ice to keep the temperature below 50 degrees Fahrenheit. Potable ice that has been used to chill perishables must not be used to chill drinks, except in emergencies. When it is necessary to use ice in a drink, make sure perishables are packed in clean, moisture-proof wrappers so they do not contaminate the ice. Also, rinse the ice with potable water before adding it to drinks. Clean the chests and gaskets with a mild detergent and warm water. Rinse the ice chest with clean water and let it air dry with the top open.

REFRIGERATED CONTAINER SYSTEM

5-68. The RCS consists of a 9,000 BTU refrigeration unit and an 8-foot by 8-foot by 20-foot insulated container with 800 cubic foot of storage space. A 10 KW Tactical Quiet Generator provides electrical power for the refrigeration unit and interior lighting. The RCS provides mission-critical refrigeration capability at forward areas for military units. The electric refrigeration unit can be set to either refrigerate

or freeze. It is used to transport perishable rations for field feeding units or remains for hospital and mortuary affairs units.

MULTI TEMPERATURE REFRIGERATED CONTAINERIZED SYSTEM

5-69. The MTRCS is a new system to replace the single temperature RCS. The MTRCS will be authorized with and support MKT, MFK, and CK feeding platforms and be capable of supporting up to 800 personnel for a three day period when utilized in conjunction with a trailer mounted CROP. The MTRCS is a highly mobile multi-temperature, partitioned refrigerated 8-foot by 8-foot by 20-foot ISO system that provides the capability for simultaneous transport and storage of frozen, chilled, and/or semiperishable ration components on a single platform directly at the field kitchen site. The MTRCS also contains advanced vacuum insulation enabling it to keep initially frozen rations in a serviceable state for a period of at least 12 hours.

TRANSPORTABILITY AND SET UP

5-70. The MTRCS is transportable by both military and commercial modes of transit and is fully operable on the move. It is equipped with an integral bale bar to allow for transportability on both the HEMTT and the PLS vehicles. In addition, the MTRCS is certified for both internal air transport aboard the C-130 and also externally sling transportable by CH-47D and CH-53 helicopters. The MTRCS can also be transported by commercial rail and ship as it is an ISO based platform. The MTRCS can be fully offloaded from the HEMTT or PLS within approximately 5 minutes. It is recommended that the MTRCS be shut down during loading/unloading operations but it can be immediately started back up upon being placed on the ground. The MTRCS can be operated by its integral engine drive (JP-8 powered), through 220-volt shore power or 440-volt shipboard power.

BASIC COMPONENTS AND ACCESSORIES

5-71. The MTRCS comes fully equipped with an adjustable cargo restraint system to properly secure up to 14 full pallets of rations of dimension 40-inch width by 48-inch depth by 40-inch height, a removable partition that is placed to separate the refrigerated from the freezer section of the container, a chart recorder which records product temperatures in the event that the system is not operational, a 75-gallon fuel tank that can supply enough fuel for 3 continuous days of operation, a 5-gallon fuel container that is utilized for air transport as the 75-gallon tank must be fully emptied in advance of flight, and a set of ramps to allow for forklift loading.

LOAD OUT

5-72. The MTRCS can be loaded via the M4K rough terrain forklift and also via the ATLAS 10K forklift. The M4K will require side shifting according to the MTRCS TM in order to most expeditiously and safely load out the container. Loading is currently accomplished by loading individual pallets and then double stacking once inside the container. Each double-stacked pallet configuration can then be strapped in place though the use of a ratcheting cargo restraint and the floor mounted attachment points. Upon placement of the final set of strapping, all ISO container doors are closed, and the MTRCS is temporarily shut down until it has been uploaded on the HEMTT or PLS.

WATER STERILIZING BAGS

5-73. Water sterilizing bags (figure 5-5) are used to dispense treated drinking water in the company bivouac area. These 36-gallon canvas bags are authorized one for each 100 Soldiers supported at the field kitchen. Treated water to fill the bags is brought to the area in water trailers, tank trucks, or water cans. Direct personnel to set up and fill the bags as described below.

SELECT AN AREA TO SET UP

5-74. The area should be readily accessible to users. It should have good drainage and overhead protection. If you have only one bag, locate it in the bivouac area.

SET UP THE BAGS

5-75. The bags can be hung from a tree limb or from a tripod. To build a tripod, lash three poles together as shown in figure 5-5. Dig a sump pit under the bag and fill the pit with gravel or stones.

FILLING THE BAGS

5-76. Untie each bag and lift its cover. Inspect the bag for cleanliness. If it is dirty, clean and sanitize it with food service disinfectant. Fill the bag only with potable water. Check the spigots for leaks and tighten them if necessary. Replace the cover and secure it tightly. Finally, check the water for chlorine residual. Minimum chlorine residual should be 100 parts per million (ppm). Commanders and unit leaders must ensure that the unit field sanitation team checks the chlorine residual each time the bag is filled with potable water.

CLEANING THE BAGS

5-77. Scrub the inside of the bag with a chlorine solution. Use 2 tablespoons of calcium hypochlorite, NSN 6810-00-255-0471, stirred into 1 gallon of water. Rinse the bag several times with clean, fresh water to get rid of all the cleaning solution. Hang it up until it is completely dry.

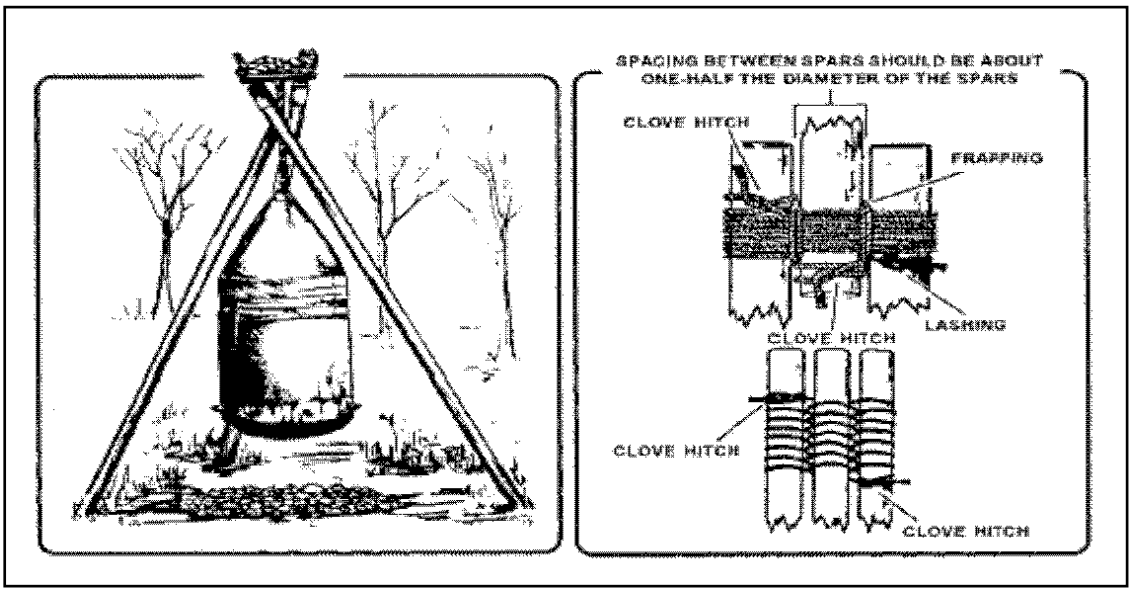


Figure 5-5. Water sterilizing bag and setup

STORING THE BAGS

5-78. Fold the dry bag and wrap it in Kraft paper (NSN 8135-00-160-7752). Store it in a new fiberboard box (24 by 24 by 10 inches) in a clean dry place. The NSN for the fiberboard box is 8115-00-428-4124 and comes packed 10 each when ordered.

LANTERNS

5-79. The CK has an interior lighting system. The MKT (without the MKT-I kit) and MFK require external light sources such as generator powered light sets or lanterns. The primary lantern fielded to units as part of their field kitchen equipment is the gasoline lantern (NSN 6260-00-170-0430); however, the gasoline lantern does not meet the Army single operational environment fuel requirement. A multi-fuel lantern is available for unit procurement. The NSN of the multi-fuel lantern is (NSN 6260-01-535-1647). Operation and maintenance instructions for the gasoline lantern can be obtained by contacting the Facilities and Equipment Division of ACES.

PART THREE

OPERATIONS

Chapter 6

Field Kitchen Operations

This chapter provides guidance on the operation of field kitchens for training exercises and operational deployments. The food advisor and SFOS should advise commanders of any special field kitchen requirements during the initial planning phases for both types of operations. Commanders must ensure that deployment plans specify the earliest possible movement of food personnel, equipment, and rations to support the unit mission. Class I planning is discussed in Part One. Rations and field kitchen equipment are discussed in Part Two. A checklist for evaluating the operational effectiveness of field kitchen operations is located at Appendix E.

WASTE MANAGEMENT

6-1. Field kitchen operations generate a large quantity of liquid and solid waste (trash and garbage). All waste must be disposed of according to federal, state, local, or HN laws. Field kitchen waste disposal procedures are discussed in Appendix G.

PREDEPLOYMENT

CLASS I SUPPLY COORDINATION

6-2. Upon notification of a training exercise or operational deployment, the SFOS should begin immediate coordination with the food advisor and the Class I sustainment activity (SSMO or Class I point) that will be providing subsistence support. Although the AFFS establishes a single system to account for all field rations for both training exercises and operational deployments, each Class I sustainment activity will establish specific SOPs for ration ordering, issuing, and turn-in. Once the ration cycle has been established, the Class I manager will establish a schedule of issues for their Class I point. Class I point operational procedures are discussed in Chapter 7.

TRAINING

6-3. All food operations and distribution team members, sergeants, food service specialists, and Class I operations managers and operators must be trained to operate effectively within the AFFS. Training should be aimed at the individual's job requirements, level of responsibility, and team building. Training should include a working knowledge of force protection measures; risk assessment; operation and maintenance of TOE equipment; subsistence planning, requisitioning, receipt, storage, accountability, issue, and distribution procedures; safe food handling; preparation and serving; environmental stewardship responsibilities; sanitation procedures; and retrograde operations.

MEDICAL THREAT

6-4. All deployable personnel including staff, senior officers, and commanders will receive medical threat briefings prior to deployment. Medical threat briefings will include insect and rodent hazards and required chlorine residual levels for potable water.

UNIT FIELD SANITATION TEAM

6-5. Trained unit field sanitation teams are the commander's first line of defense regarding the implementation and enforcement of sanitary conditions in the unit operational area. Ensuring functional hand washing facilities are in place, latrines and other sanitation systems are properly constructed and maintained, and trash and gray water is managed and evacuated is the key to ensuring the health of individual unit Soldiers. A fully functional and competent unit field sanitation team is a combat multiplier.

CONTINUITY OF OPERATIONS

6-6. Units should maintain current references and TMs for field operations and equipment. FMs, TMs, and ARs are available electronically via the internet at the Army Knowledge Online (AKO) website, (http://www.adtdl.army.mil/) using the drop down menu for publications. Required publications can also be found at the Army Publishing Directorate webpage (http://www.apd.army.mil). These references are necessary for establishing and implementing correct operational and tactical procedures. SOPs control the use of field expedients, and provide the "how to" in the absence of precedents. Basic SOPs are required to ensure continuity of operations. Figure 6-1 lists SOPs that should be maintained in the field kitchen.

SECURITY

6-7. Commanders, leaders, and SFOS' must use all available force protection resources including maps, global positioning system (GPS) data, and organization G2 intelligence estimates to identify terrain and locations that will protect the Soldiers and field kitchen from enemy observation and fires while providing observation and fires into the possible engagement area. Additionally, leaders use intelligence estimate updates to increase their situational awareness and understanding, reducing the possibility of the enemy striking at a time or in a place for which the unit and supporting field kitchen is unprepared. The use of secure or protected lines of communication for supply of subsistence, water, or other kitchen requirements is fundamental to unit security and operations. Procedures for securing subsistence, supplies, funds, and equipment must be established in advance. Include requirements for special items such as sand bags and concertina wire for fighting positions and security. Locks for containers or storage should also be included. Subsistence must be inventoried and secured to prevent contamination, theft, and loss due to improper storage. Discuss duties of guard personnel patrolling subsistence and supply stocks. Subsistence being transported in containers and vehicles must be secured to prevent possible tampering while en route to the supporting or supported units.

RECORDS AND LOGS

6-8. Food service specialists should maintain records and logs that reflect unit activities that may impact future missions. Records of training, equipment (maintenance and replacement), ration accounting, personnel supported, problems encountered, and solutions used should be recorded. Operational "lesson's learned" and recommended changes to ARs and FMs for future deployments and operations should be submitted to ACES electronically at http://www.quartermaster.army.mil/aces/ using the Contact Us feature for possible incorporation into future publications. Suggestions on improvement of tactics, techniques, and procedures are the backbone of a continually developing modern Army feeding mission.

1. Procedures for establishing and disestablishing the field kitchen site.
   - Diagram of field kitchen site.
   - Layout of inside of kitchen shelter and sanitation center.
   - Camouflage procedures.
   - Job responsibilities and schedules for personnel.
   - Operations during blackouts.
   - Operations under CBRN conditions (include procedures for decontamination and reclamation of contaminated foods).
   - Headcount, cash collection, and cash turn-in procedures (include samples of completed forms).
   - Strength estimates and strength reporting (include sample of completed forms).
   - Operational ration procedures.
   - Night meal procedures.
2. Procedures for requesting, receiving, storing, issuing, and accounting for subsistence (include samples and instructions on completing forms).
3. Sanitation procedures for the field kitchen, dining areas, storage areas, wash line, sanitation centers, and water trailers.
4. Safety and security procedures for the kitchen, dining area, supplies, subsistence, vehicles, equipment, and cash.
5. Equipment maintenance (include vehicles).
6. Vehicle loading plans and procedures (list necessary equipment needed for mobilization).
7. Contents of basic load for subsistence.
8. Environmental protection requirements for handling of fuels and liquid and solid wastes.
9. Procedures for coordination for inspection and assistance from supporting veterinary and preventive medicine units.

Figure 6-1. SOPs that should be maintained in the field kitchen

EQUIPMENT STATUS

6-9. Leaders are proactive! Do not wait until notification of training exercises or operational deployments to determine the operational status of your field kitchen equipment. Each equipment operator's manual provides a listing of prescribed repair parts that should always be on hand in your on board spares. Always ensure essential replacement parts and equipment needs are identified and placed on valid requisition, then follow-up with your supply support activity. The old saying "you cannot cook with a requisition" is a truism. Leaders are not looking for excuses or finger pointing when it is time to feed unit Soldiers. In the event funds are not available, prepare a list of requirements and maintain completed requisitions ready for immediate submission when your unit is notified of fund availability or impending deployment.

FIELD KITCHEN SITE SELECTION AND LAYOUT

UNIT MOVEMENT

6-10. Movement information from home station to the deployment location is vital. The unit movement control officer and the transportation officer prepare the unit movement plan. They will provide detailed information on when units will deploy, how they will deploy (air, sea, or ground), unit movement timetables, and convoy routes. Based on this information, food service specialists may be required to serve

meals or warming and cooling beverages at convoy rest halts, railheads, and alert holding areas. Commanders must ensure appropriate food service assets and food service staff accompanies the unit and are on hand at the intermediate staging area.

SITE SELECTION

6-11. The unit commander or FSO specifies the general location of the field kitchen site; however, the SFOS must advise the commander on the characteristics of a good field site, as shown in table 6-1. The following should also be considered in selecting and setting up the field kitchen:

- Tactical or non-tactical operation.
- Force protection considerations.
- Extent of time area will be occupied.
- Method of solid waste disposal (burn, bury, or backhaul).
- Resupply operations. Availability and accessibility of roads (water for water trailer and FSC, fuel, subsistence, and nonfood supplies).
- Use of CK, MKTs, FSC, KCLFFs, AKs, tents, and buildings.
- Location of unit billeting area.
- Available equipment and space for proper arrangement.
- Location away from latrines or any source of contaminants.
- Sufficient refrigeration requirements for ration mix supported (unit assets or contracted).
- Force protection measures.

Table 6-1. Characteristics of a good field kitchen site

CHARACTERISTIC	*IMPORTANCE*
Good natural cover	Shields troops from the enemy and protects them from sun, heat, and cold winds. Improves force protection measures.
Good access roads	Ensures supply trucks can move freely.
High and dry ground near a protected slope	Ensures good drainage and protection from the wind.
Enough space	Eliminates crowding of the troops and facilities spreading out the equipment so that personnel can work efficiently. Improves survivability.
Near source of potable water	Used in preparation of foods and beverages.
Sandy loam or gravelly soil	Allows excess water to seep away and helps soakage pits and trenches to work well.

SITE LAYOUT

6-12. Figure 6-2 shows a site setup showing recommended distances for the sanitary and safe operation of the field kitchen. The field kitchen area should be camouflaged to hinder detection by enemy aircraft, ground forces, or infrared sensors. Passive measures should include dispersion, camouflage, cover and concealment, and light and noise discipline. Survivability such as covering vehicle tracks into the field kitchen site and staggering ration distribution to eliminate congestion of the site should always be included as considerations for site layout and operations. The following are some precautions that leaders must enforce*:*

- Do not let the troops gather in large groups to eat.
- Make sure the area and equipment cannot be seen from the air.
- Screen the dining area from ground observation if it is set up near the front lines.
- Bury or retrograde disposable dishes and utensils, tin cans, and litter from packaged rations.
- Camouflage the area where refuse is buried.

- Field kitchen and unit field sanitation team members must be aware of the policy on garbage disposal in their AO.
- Camouflage equipment and other things that might reflect light and keep them out of sunlight. Specifics about using camouflage are contained in FM 20-3.

BLACKOUT PROCEDURES

6-13. Use light discipline when required. If the kitchen has to black out completely, stop cooking. Since kitchens are hot, infrared sensors could find the kitchen area. Eat MREs during these periods.

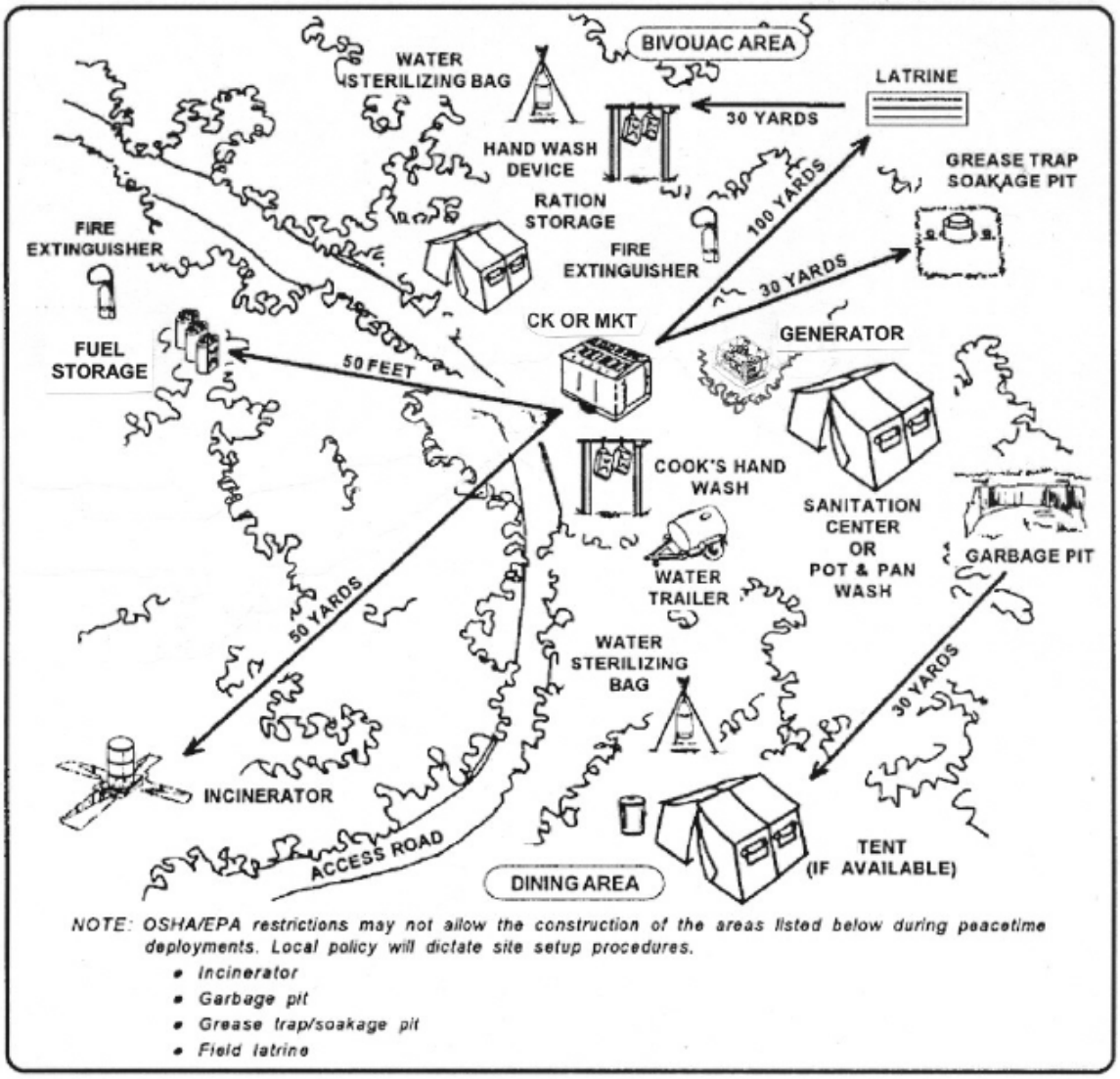


Figure 6-2. Recommended field kitchen site layout

FIELD FEEDING METHODS

6-14. Field feeding methods are determined by the availability of equipment, personnel, capability of the logistics system, availability of rations, and total sanitation requirements. Other considerations include the number of personnel to be fed, feeding times, METT-TC, and location. The AFFS gives the commander the flexibility to tailor the field feeding system to the tactical situation and unit mission in both training and

operational environments. For example, some non-divisional units in the Corps or EAB may not require rapid mobility. Therefore, the commander may consolidate the field kitchen operations near troop concentrations. Divisional and non-divisional units, which require a high degree of mobility and move often on short notice, can distribute MKTs, CKs, KCLFFs, and AKs to operate in several locations. Different feeding methods are discussed below.

REMOTE FEEDING USING IFCS

6-15. Units may send hot meals forward to remote units using IFCs. Providing hot food to Soldiers using this method requires intensive management by commanders, unit leaders, and unit food service specialists. It is essential that prepared food placed in IFCs not be served after the annotated time limit (4 hours after preparation) to preclude food-borne illness outbreaks. Mandatory labeling of all food containers will be accomplished by the food operations team. Labeling will include, as a minimum, the contents of each IFC and the time to discard the product. Serving products after the maximum 4 hours is prohibited for obvious food safety reasons.

Note. The 4-hour food safety time limit is the maximum time that foods may be held in IFCs. The quality of the food deteriorates the longer it is held in IFCs. To ensure the freshest food is served to Soldiers, food service specialists should use batch preparation and progressive cookery to the maximum extent possible and only prepare and place foods in the IFC for the minimum time needed to meet mission requirements.

CONSOLIDATED (AREA) FEEDING

6-16. Feeder units provide support to units in or passing through their area depending on its strength, number of authorized food service specialists, location, duration of the mission, and other tactical, administrative, and logistical considerations. These supporting units also prepare and ship meals to remote sites when required.

MEALS PREPARED FORWARD USING THE KCLFF AND EN ROUTE OR FORWARD USING THE AK

6-17. When feasible, the battalion may send two food service specialists forward to the remote unit location with a HMMWV and the KCLFF or AK for on-site or en route hot meal preparation (METT-TC dependent). In most cases, the majority of the food items will be prepared or cooked and packaged at the field kitchen and transported forward with the LOGPAC. Unprepared foods that require no cooking such as fresh fruits or UHT milk will be sent forward on the LOGPAC for service to complete the meal. All UGR-H&S components can be prepared or cooked at forward locations including beverages, soups, eggs, pancakes, French toast, meats, sauces, and gravies. Food service leaders must check to ensure that correct quantities of food, equipment, paperware products, and utensils are being packed for shipment forward to support unit feeding requirements.

LOGPAC SUBSISTENCE DISTRIBUTION TO FORWARD TASK FORCE

6-18. The LOGPAC method is when resupply elements are organized in the battalion field trains and moved forward daily for routine resupply. The LOGPAC moves along the MSR to the logistics release point (LRP). From the LRP, the company first sergeant controls the LOGPAC and conducts resupply. The unit supply truck normally contains the subsistence (prepared meals, UGRs, and MREs). However, special procedures may be required for resupply. For example, a scout platoon may have each truck individually pull off line and move to the pre-positioned LOGPAC or it may be resupplied as the platoon repositions between missions. Commanders must be aware of the feeding plan and know their equipment, time, and personnel limitations. The SFOS must be included in all LOGPAC planning. The equipment and ration mix must be able to complete the cycle for resupply of the LOGPAC. If the equipment cannot be returned in time for cleaning and to send the next meal out, the LOGPAC ration mix must be looked at critically.

FIELD KITCHENS OPERATING UNDER A PUSH SYSTEM

6-19. As discussed in Chapter 3, a push system is used to initially fill the supply pipeline during operational deployments. Under a push system, the theater Class I planning cell orders the rations needed from DSCP based upon the approved theater feeding plan and the theater/SSA Class I sustainment activities determine the type and quantities of rations to be shipped to each Class I point. Types and quantities of rations shipped under the push system are based on anticipated troop strength, unit locations, type of operation, and feeding capabilities of the field kitchens. The rations may be delivered to the field kitchens or the field kitchens will be directed to the Class I point to draw rations. The field kitchen will have limited or no control over the type of rations available. Once the theater stabilizes and Class I distribution system personnel and equipment are in place, the theater may transition the field kitchens to a pull system.

FIELD KITCHENS OPERATING UNDER A PULL SYSTEM

6-20. When field kitchens move from a push to a pull system, the Class I manager will provide guidance to all supported field kitchens on ordering lead times and procedures. Under the pull system, field kitchens request the types and quantities of rations from the supporting Class I point according to the Class I point's published schedule of issues, the ration mix, and the ration cycle. Then subsistence is sent forward to satisfy the request from the field kitchen.

Note. Complete AFFS accountability requirements, procedures, and instructions are discussed below and are contained in AR 30-22, chapter 4, and DA PAM 30-22, chapter 4.

Pull System During Training Exercises

6-21. Using the pull system for training exercises requires special attention. Training exercises are usually short with a limited number of participating troops when compared to an operational deployment. The SFOS must often forecast and order the required types and numbers of rations for the entire training exercise from the supporting SSMO or SSA Class I point (when used) prior to movement to the training site. The supporting SSMO will coordinate with DSCP to have the required rations shipped to the SSMO for pick up or directly to the supporting SSA Class I point for break and issue to the supported units. Since the SSMO does not normally stock rations, it is crucial for the food advisor and SFOS to provide accurate ration forecasts to prevent an excessive amount of rations remaining on-hand or left over at the end of the training exercise.

Pull System During Operational Deployments

6-22. During operational deployments, field kitchens submit orders to their respective SSA Class I point. The SSA Class I point consolidates all unit orders and submits them through the SSA Class I sustainment activity to the theater Class I sustainment base. The theater fills these orders from in-theater stocks.

ADJUSTMENTS AND CROSS LEVELING

6-23. Food advisory personnel and the SFOS have to be constantly aware of the operational status of their units, the ration cycle, the strength status, and inventory level of ration stocks on hand at the field kitchen. Unit food advisory personnel must ensure unit commanders and leaders are fully briefed on ration issues and understand operational ration forecasts to support unit strength for the period of the exercise. Ration orders may not be able to be cancelled because of poorly prepared unit requirement forecasts or command-directed short notice change in mission or exercise ending times. They must monitor incoming rations and assist in cross leveling of residual on-hand stocks to accommodate meal schedule changes that result from the METT-TC and other operational changes. The SFOS must manage ration supplies so only quantities required to support unit Soldiers are ordered. The SFOS must ensure that all menu items included for meal service are prepared and offered for service. At the completion of unit training exercises, unit leaders will ensure that all residual rations are inventoried and reviewed for wholesomeness by supporting veterinary

services staff. Ration stocks identified as fit for service will be cross leveled to a sister unit still training or, in coordination with the garrison food program manager, issued to a garrison dining facility. Complete unopened cases or modules of operational rations will be returned to the supporting SSMO. Under no circumstances will unit leaders allow food service specialists to dump or destroy operational rations or perishable subsistence that have not been condemned by veterinary services staff.

STRENGTH REPORTING

6-24. During the predeployment planning phase, the food advisor and SFOS coordinate with the unit commander and FSO to forecast the estimated number of personnel that will be participating in the training exercise or operational deployment. The unit requesting support from the field kitchen provides this forecast as a present-for-duty strength to the supporting field kitchen on DA Form 5913. DA Form 5913 identifies by service component the number of personnel scheduled to be present-for-duty each day for feeding purposes.

6-25. If the field kitchen is being supported directly by a SSMO, the field kitchen must submit the DA Form 5913 to the SSMO prior to picking up any rations. If a SSA Class I point is supporting the field kitchen, the field kitchen must submit each supported unit's DA Form 5913 to the Class I point within three days of arriving to the field site. The DA Form 5913 is submitted only once to the field kitchen. Figure 6-3 shows a completed unit DA Form 5913 to a supporting field kitchen.

6-26. An important point to remember is that under the pull system, the DA Form 5913 is not used as a ration request. The DA Form 5913 is used as a basis for the ration request because unit's actual present-for-duty strength may change during the exercise or deployment.

ESTIMATING AND ORDERING RATIONS

ESTIMATING RATION REQUIREMENTS

6-27. Present-for-duty strength (DA Form 5913), remote feeding site requirements, and the METT-TC are the primary basis for ordering rations. Using these figures, the SFOS computes the amount and type of each meal, supplements, enhancements, warming and cooling beverages, and other rations required to subsist the Soldiers. Other factors must be used when estimating ration orders including:

- Experience from past exercises or deployments.
- Task organization (attached or detached units).
- Availability of field kitchen equipment and personnel.
- Current subsistence inventory at the field kitchen site (when reordering during operations).

6-28. The SFOS and unit food advisor can prepare a Class I spreadsheet (figure 6-4) to identify the types and quantities of rations needed for individual field kitchens and the brigade task force. Each unit SFOS will submit a DA Form 5913 with requirements to the ordering activity. The SFOS lists each unit and remote site supported by the field kitchen by day of the exercise including the desired ration mix and present-for-duty strength. Each day's rations are then totaled up to provide the SFOS with a ration forecast. The SFOS can then calculate the required supplements and enhancements based on their issue factors and can also determine required transportation and the storage space needed at the field kitchen. As part of the predeployment planning phase, the SSMO or Class I point will provide their supported units with ordering guidelines and the issue factor for each ration being used. Some general ration ordering guidelines are as follows:

Note. Specific examples of how to compute individual rations, UGRs, supplement and enhancements, warming and cooling beverages, ice, and bottled water are described in paragraphs 7-27 through 7-34.

STRENGTH AND FEEDER REPORT
For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. UNIT/ORGANIZATION	2. TO	3. DATE (YYYYMMDD)
Co A, 236th BN	HHC, 236th BN	20060721

4. REPORT DATES (YYYYMMDD)				5. ☐ REQUEST ☐ REPORT
	20060721			

6. PERSONNEL PRESENT FOR DUTY BY SERVICE COMPONENT				
U.S. ARMY (Active)	223			
U.S. AIR FORCE (Active)	4			
U.S. NAVY (Active)				
U.S. MARINES (Active)				
ARNG	24			
USAR				
7. SUPPORTED UNITS				
ROK	6			
KATUSA	4			
HHC, 1st BDE	61			
8. MEALS SOLD FOR CASH				
9. GRAND TOTAL	322			

10. REMARKS

Remote Site Feeding:
Site #1 (125)-B (50)-D
Site #2 (25)-B (25)-D
Site #3 (18)-B (25)-D

Start Exercise Date: 20060721
End Exercise Date: 20060731

11a. SIGNATURE	11b. RANK	11c. DATE (YYYYMMDD)
Steven Jones	1SG	20060721

DA FORM 5913, MAR 2006 — DA FORM 5913-R, JUL 2002, IS OBSOLETE. — APD V1.00ES

Figure 6-3. Completed unit DA Form 5913 to a supporting field kitchen

Travel Rations

6-29. Unit personnel must be provided subsistence from the time they leave home station until the field kitchen becomes operational at the field site. The food advisor and SFOS must coordinate with the SSMO

or SSA Class I point to request and issue the appropriate number and types of rations to units or individuals prior to movement.

UNIT	DAY OF EXERCISE				
	D	D+1	D+2	D+3	D+4
Unit 1 *PFD	M-M-M 50/50/50	M-M-M 100/100/100	U(H&S)-M-U(H&S) 100/200/200	U(H&S)-M-U(A) 220/200/150	
Unit 2 *PFD	M-M-M 10/10/10	M-M-M 10/50/50	U(H&S)-M-U(H&S) 50/50/50	M-M-U(A) 50/40/40	
Unit 3 *PFD	M-M-M 15/15/5	M-M-M 15/15/25	U(H&S)-M-U(H&S) 25/25/90	M-M-U(A) 90/90/90	
Estimated Rations Needed (round to next cs/mod)	M-18 cs	M-39 cs	U(H&S) B- 4 mods M-23 cs U(H&S) L/D-7 mods	U(H&S) B-5 mods M-28 cs U(A) L/D- 6 mods	
Note: *Present-for-duty strength. Any remote feeding must be included in your computations					
Ration Legend: M = MRE U(H&S) = UGR-H&S U(A) = UGR-A UGR Meal Legend: B = Breakfast modules L/D = Lunch/Dinner modules					

Figure 6-4. Example of a Class I spreadsheet

MRE Requirements

6-30. Individual rations (MRE, MCW/LRP, FSR, and religious meals) are requested by the case or box. Religious ration requirements should be coordinated with unit chaplain personnel.

UGR Requirements

6-31. UGRs are requested by the module. Each UGR-H&S and UGR-A module supports up to 50 Soldiers and each UGR-E module supports up to 18 Soldiers. UGR requirements are determined by the total number of Soldiers to be fed at each site divided either by 50 or 18. Any resulting fraction must be rounded up to the next higher module.

Supplement and Enhancement Items for UGRs

6-32. Ration supplement (milk) and enhancements are requested by the unit of issue (lb, cs, loaf [lf]), each [ea], can [cn], or by servings. When the SFOS requests by servings, the SSMO or Class I point will calculate the required amount of the rations needed based on the number of servings in each unit of issue. Milk is the only mandatory supplement but the food advisor and SFOS should ensure that all units are ordering and receiving all authorized enhancements. (See Chapter 4 for authorized supplement and enhancement information.)

Warming and Cooling Beverages

6-33. Warming and cooling beverages are requested by the established unit of issue (pound [lb], case [cs], loaf [lf], and can [cn]). Warming and cooling beverage items and issue factors are established by the Class I planners for both exercises and operational deployments. (See Chapter 4 for warming and cooling beverage information.)

Ice Requirements

6-34. All requirements for ice that may come into contact with subsistence or drinking water must be certified as potable and checked by VETCOM. Ice requirements at the field kitchen will depend upon the weather, unit strength, and the ration cycle. During predeployment planning, the Class I logistics planning cell will determine the issue factor for ice. Ice storage at the field kitchen level requires the SFOS to have a storage plan and a designated storage area which avoids direct heat and exposure to the elements. Field expedient storage can be constructed and used. Potable ice can become a critical issue to the command very quickly when it is not available. Take the time to do the planning!

RATION REQUESTS

6-35. Under the pull system, the SFOS can use the DA Form 3294 *(Ration Request/Issue/Turn-in Slip)*, available electronic system, or voice communications to request rations from the supporting Class I point. The DA Form 3294 has been designated as a multi-use form used to request, receive, transfer, and turn-in rations. A DA Form 3294 facsimile may also be used when an automated ordering system, such as web-based Subsistence Total Ordering and Electronic Receipting System (STORES) or the Army Food Management Information System (AFMIS) are available. Prior to the deployment, the SSMO or the SSA Class I point may issue preprinted DA Form 3294s listing the rations available and units of issue to all of their supported units for ease of ration ordering. The SFOS may order up to three days rations using one DA Form 3294. Figure 6-5 shows an example of a two-day ration request from a field kitchen to the Class I point.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD): 20060718

TO: 43D SUSTAINMENT BRIGADE — REQUEST: X
FROM: HHC, 236TH BN — ISSUE:
CONSUMPTION DATE(s): 21-22 JULY 2006 — TURN-IN:
NUMBER OF MEAL(s) REQUESTED: 435 435 435 435 435 435 — ISSUE date:

ITEMS	UI	B	L	D	B	L	D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO	9									9			
8970-01-432- UGR H&S DIN #	MO			9							9			
8970-01-433-0562 UGR H&S BRK #2	MO				9						9			
8970-01-432- UGR H&S DIN #	MO						9				9			
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS		37			37					74			
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS	33		16	33		16				98			
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS	16		16	16		16				64			
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS	13			13						26			
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX	10		9	10		9				38			
8915-01-088-8749 APPLES, 40 LB CS	CS	4		4			4				12			
8915-00-616-0211 ORANGES, 35 LB CS	CS			5	5		5				15			
8915-00-126-8748 BANANAS, 45 LB CS	CS	4			4						8			

REQUESTED BY: Earl Jones SFC — ISSUED BY: — ISSUED BY: — TOTAL DOLLAR
RECEIVED BY: — RECEIVED BY: — RECEIVED BY: — CONTROL NO.
PAGE NO. 1 — NO. OF PAGES 3 — REMARKS:

DA FORM 3294, JUL 2002 — DA FORM 3294-R, JUN 1990, IS OBSOLETE. — USAPA V1.00

Figure 6-5. Sample DA Form 3294 field kitchen to Class I point

RATION RECEIPT, STORAGE AND ISSUE

6-36. All ration issues will be according to the established Class I point schedule of issues (figure 7-4, page 7-6). Depending upon the predeployment planning and the METT-TC, rations may be delivered to the field kitchen or the field kitchen may have to pick the rations up utilizing their own transportation at the Class I point. Vehicles used to transport subsistence should be clean, free of moisture, and have pallets to keep subsistence off the bed of the truck. The front and rear flaps must be lowered and secured during transport. Subsistence vehicles are not to be used to transport garbage or petroleum products while transporting subsistence. The bed of the truck should be free of harmful protrusions such as nails that could puncture food containers. Ice chests or other insulated containers should be used to transport perishables when time, distance, and the outside temperature could cause the storage temperature to rise above required safe levels for refrigerated items and frozen items.

RATION RECEIPT

6-37. The field kitchen receiving representative must verify and sign for all quantities of subsistence listed on the automated issue document or DA Form 3294 in the next available "received by" block. When the DA Form 3294 is used as the request and issue document, two copies are kept by the Class I point. Figure 6-6 shows a sample DA Form 3294 when the Class I point issues rations on the same document the unit requested the rations on. Check the amount issued by counting the items. When you receive less than you ordered, enter only the amount received on the issue document. Let Class I personnel know at once so they can make up the shortage before you need the food. All rations must be inspected for condition before the issue documents are signed. Food service specialists must also inspect subsistence when cans are opened and when food items are in their preparation phase. Whether food is picked up or delivered, check its shape, color, and odor. If you believe that the food is not safe to eat, make a note on the issue document and ask veterinary personnel to check the items. Do not throw out or destroy food until instructed to do so by veterinary personnel or the Class I manager.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD)

TO: 430 SUSTAINMENT BRIGADE — REQUEST X 20060718
FROM: HHC, 236th BN — ISSUE X 20060720
CONSUMPTION DATE(s): 21-22 JULY 2006 — TURN-IN
NUMBER OF MEAL(s) REQUESTED — ISSUE date

ITEMS	UI	435 B	435 L	435 D	435 B	435 L	435 D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO	9									9	9		
8970-01-432- UGR H&S DIN #	MO			9							9	9		
8970-01-433-0562 UGR H&S BRK #2	MO				9						9	9		
8970-01-432- UGR H&S DIN #	MO						9				9	9		
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS		37			37					74	74		
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS	33		16	33		16				98	98		
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS	16		16	16		16				64	64		
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS	13			13						26	26		
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX	10		9	10		9				38	38		
8915-01-088-8749 APPLES, 40 LB CS	CS	4		4			4				12	12		
8915-00-616-0211 ORANGES, 35 LB CS	CS			5	5		5				15	15		
8915-00-126-8748 BANANAS, 45 LB CS	CS	4			4						8	8		

REQUESTED BY: Earl Jones SFC — ISSUED BY: John Sary 556 — ISSUED BY: — TOTAL DOLLAR
RECEIVED BY: — RECEIVED BY: Bill Morris 567 — RECEIVED BY: — CONTROL NO.
PAGE NO. 1 — NO. OF PAGES 3 — REMARKS:

DA FORM 3294, JUL 2002 — DA FORM 3294-R, JUN 1990, IS OBSOLETE. — USAPA V1.00

Figure 6-6. Sample DA Form 3294 unit request and Class I point issue on the same form

Semiperishables

6-38. Once tray packs or cans have been opened, inspect the contents for signs of deterioration or spoilage before serving. Segregate for veterinary inspection items with any of the following defects:

- Items that show any evidence of leaks, significant rusting, or product stains on the exterior. Items with any pin holes, seam fractures, or incomplete seals.
- Rust that actually penetrates the can, causing leakage or excessive end seam rust that cannot be removed with a soft cloth and which enter the product when it is opened.
- Dents that are so severe that they cause leakage or that make it impossible to open the product safely.
- Swollen or outwardly distended lids bulging from internal pressure or swells caused by physical damage such as dents.
- Buckles or bends in the top and extending into the end seams.

Dry Stores

6-39. Check dry stores, such as cereal, flour, and sugar for signs of exposure to grease or moisture or contamination from insects or rodents. Do not accept open containers unless it is clear they were opened during ration breakdown operations. If a container is discolored, open it and make sure the food is not damaged or spoiled.

Perishables

6-40. Check the condition of all perishables received. Inspect foods as discussed below.

Fresh Fruits and Vegetables

6-41. Check fresh fruits and vegetables for mold, wilt, rot, and other defects. Check case weight to ensure you received the quantity ordered. Remove the bad items and store the rest.

Meats and Poultry

6-42. Inspect meats and poultry for color, odor, damage, and slime. Unfrozen meat should be firm and elastic to the touch. No meat should feel slimy, sticky, or dry. There should be no blotches or evidence of slime or sour smell. Check poultry and cuts of meat to see if they are the same as those listed on the issue slip and menu.

Frozen Foods

6-43. Check frozen foods for firmness and for signs of thawing and refreezing. If the package of food has ice on the inside, this is a sign that the food has thawed and been refrozen. Do not accept this food.

RATION STORAGE

6-44. The field kitchen must have enough dry and refrigerated storage space to prevent possible spoilage and contamination of rations. Improper storage causes loss from rodent or insect infestation or from deterioration because of excessive heat or moisture. Follow the recommendations listed below for storage of perishables, semiperishables, and prepared foods.

Perishables

6-45. Units are authorized ice chests in accordance with CTA 50-909. Every effort must be made to keep the temperature of food in the ice chest below 40 degrees Fahrenheit. The CK is equipped with a combination freezer/refrigerator and the MKT and the KCLFF-E are equipped with ice chests. These ice chests/refrigerators provide the field kitchen with limited refrigerated ration storage capabilities. Additional refrigerated storage at the field kitchen site is required when enhancements and the UGR-A is introduced into the ration cycle. The unit may procure the RCS (paragraph 5-68) as part of their TDA authorization or may elect to contract for mobile refrigeration (vans/trucks) during training exercises and operational deployments.

Semiperishables

6-46. Semiperishable foods last longer than perishable foods, but you must still store them properly. They can be affected by heat, humidity, insects, and rodents. Storage racks or containers must be at least four inches above the ground. The following are some considerations for safe storage:

- Cover bulk food items to prevent contamination from dust and other debris.
- Leave and store items like flour, sugar, and rice in their original containers and place them in metal containers with tightly fitted lids to protect them from excessive heat, moisture, and infestation.
- Store hardy fruits and vegetables, such as potatoes and onions, in a dry place on dunnage to permit air to circulate around them to retard decay and spoilage. Highly perishable vegetables, such as bagged salad or lettuce, should be placed in an ice chest if possible. Only those quantities of highly perishable vegetables, bagged salads, and lettuce that can be used in a short period of time should be requisitioned.

Prepared Foods

6-47. There are several types of prepared foods, including heat and serve or ready-to-eat entrees, vegetables, starches, salads, desserts, and so forth. Depending on the type of product, they should be stored in ice chests and organic field IFCs.

RATION ISSUES TO THE KITCHEN FOR PREPARATION

6-48. When the SFOS issues UGRs to food service specialists for preparation at the field kitchen, they must be posted to DA Form 5914 *(Ration Control Sheet)*. The SFOS uses DA Form 5914 to provide an audit trail for individual operational rations and UGRs from receipt through disposition. Only one type of ration is accounted for on each DA Form 5914 and the breakfast and lunch/dinner UGRs are accounted for on separate DA Forms 5914. Rations are posted to the DA Form 5914 by unit of issue (case or box for individual rations and module for UGRs) and then converted and accounted for by meals. The objective at the end of training for all field kitchens is a zero balance between the number of meals received and the documentation of meals issued, turned-in, transferred, or destroyed. For rations issued by the kitchen for airlift, post the number issued, the date, and the aircraft tail number on the DA Form 5914. Figure 6-7 shows a sample completed DA Form 5914 used for UGR-H&S lunch/dinner meals.

RATION CONTROL SHEET
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. PAGE 1 OF 1

2. UNIT: HHC, 236th BN, FT SILL OK

3. TYPE OF RATION: [X] UGR-H&S [ ] UGR-A [ ] MRE [ ] OTHER LUN/DIN MODS

4. PERIOD: 21-31 JULY 2006

a. DATE (YYYYMMDD)	b. MODULES DRAWN	c. MEALS DRAWN	d. MEALS RETURNED	e. MEALS ISSUED	f. CUM BAL MEALS ON HAND	g. NO. OF PERSONS SUPPORTED	h. UNIT, INDIVIDUAL ACTIVITY ISSUED TO	i. SIGNATURE OF INDIVIDUAL RECEIVING MEAL	j. ISSUED BY
20060721	20	1000			1000		HHC, 236th BN	John Morris, SFC	
20060721				250	750	248	(MKT) HHC, 236th BN	Pete Smith, SSG (1st cook)	JM
20060724				50	700	32	Airlift N8533T	John Morris, SFC	JM
20060722				250	450	235	(MKT) HHC, 236th BN	Pete Smith, SSG (1st cook)	JM
20060722				50	400	21	Co A 236th BN	Andrew T. Scott, SGT	JM
20060723	20	1000			1400		HHC, 236th BN	John Morris, SFC	
20060723				250	1150	240	(MKT) HHC, 236th BN	Pete Smith, SSG (1st cook)	JM
20060723				100	1050	55	Co A 236th BN	Andrew T. Scott, SGT	JM
20060723			50 (1)		1100		HHC, 236th BN	Pete Smith, SSG (1st cook)	AS
20060724				300	800	270	(MKT) HHC, 236th BN	Pete Smith, SSG (1st cook)	JM
20060725				400	400	367	(MKT) HHC, 236th BN	Pete Smith, SSG (1st cook)	JM
20060725			50 (2)		400		DISCARDED	Charles William, CPT	
20060731				350 (3)	50		430 SB	Matthew Dodds, MSG	JM
20060731			50 (4)		Ø		DFAC, QM BDE		JM

5. REMARKS
1- 50 entrees returned from Co A, 236th BN (heated once)
2- 50 entrees returned from MKT, DISCARDED (heated twice)
3- 7 unopened Modules returned to Class I point
4- 3 entree pans from open module issued to QM BDE DFAC

6a. REVIEWED BY

6b. DATE (YYYYMMDD)

DA FORM 5914, JUL 2002 — REPLACES DA FORM 5914-R, JUN 1980, AND DA FORM 5309-R, AUG 1984. — USAPA V1.00

Figure 6-7. Sample DA Form 5914

6-49. In addition to the DA Form 5914, field kitchens must also document the disposition of all UGR-A menu components used for preparation at the field kitchen site. To document the disposition of the UGR-A (breakfast and lunch/dinner meals), the SFOS will complete the DA Form 3034 *(Production Schedule)*. Figure 6-8 shows a sample of a completed DA Form 3034.

PRODUCTION SCHEDULE

For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. UNIT: HHC, 236th BN, FT SILL OK 73502
2. SERVING PERIOD: 1700-1800
3. DATE (YYYYMMDD): 20060308
4. MEAL: B ☐ L ☐ D ☒ BR ☐ S ☐ SO ☐ N ☐ B/L ☐
5. PROJECTED HEADCOUNT: 48
6. ACTUAL HEADCOUNT:

7. PERSON ASSIGNED	8. RECIPE NUMBER	9. RECIPE NAME	10. PREP TIME	11. PORTIONS TO PREPARE	12. ACTUAL PORTIONS PREPARED	13. LEFTOVER/ DISCARD	14. SPECIAL INSTRUCTIONS
ROY	D-7	Grilled Steak		50			cook to ORDER
ROY	D-7	Mashed Potatoes		50			
ROY	D-7	BROWN Gravy		50			
Turner	D-7	Buttered Corn		50			
Turner	D-7	Peppers & onions		50			
Turner	D-7	Chocolate chunk Brownie		50			
Turner	SOP 6	Baked Potatoes		28 lb			
Turner	D-7	Lemon Lime Gatorade		50			
Smith	D-7	Asst. Condiments		50			
Smith	SOP-1	Asst. UHT MILK		54 co			Suppkment
Smith	SOP 2	Asst. Breads		4 lb			enhancement item
Smith	SOP 3	Salad MIX		5 lb			enhancement item
Smith	SOP 4	Asst. Fresh Fruits		18 lb			enhancement item
Smith	SOP 5	Asst. Salad Dressings		150 ea			enhancement item
Smith	SOP 7	Sour Cream		50 ea			enhancement item
Smith	SOP 8	Tomatoes		6 lb			enhancement item
Smith	SOP 9	Margarine, IND		1 BX			enhancement item

15a. FOS/MANAGER SIGNATURE: Steven Nasser — 15b. RANK: SFC
16a. SHIFT LEADER SIGNATURE: Micheal Henderson — 16b. RANK: SGT

DA FORM 3034, MAR 2006 — DA FORM 3034, JUL 2002, IS OBSOLETE. — APD V1.00ES

Figure 6-8. Sample DA Form 3034

RESIDUAL RATION PROCEDURES

6-50. Residual rations are ration components, usually left over UGR-H&S tray pans or number ten cans remaining in your possession at the conclusion of the training exercise or operational deployment. Class I

managers, food advisors, and the SFOS can keep the amount of residual rations to a minimum through effective predeployment Class I planning and by utilizing ration adjustments, meal substitutions, deletions, and cross leveling during the deployment. It is an unrealistic goal to expect that there will not be some residual rations remaining at the end of the deployment. By actively overseeing rations at all levels of supply throughout the deployment, the amount of residual rations will be manageable. Residual rations can be incorporated in future feeding requirements (requires veterinary inspection) thereby preventing a loss to the government.

RATION TURN-IN AND TRANSFER

6-51. If rations are present at the end of the training exercise or operational deployment, the food advisor, in coordination with the Class I manager and the SFOS, will determine whether the rations will be transferred to another field kitchen or garrison dining facility or turned-in to the supporting Class I point/SSMO. The Class I manager will determine what types of rations (unopened modules, boxes of MREs, and loose semiperishable items) that will be accepted as turn-ins. All ration turn-ins will be according to the SSMO or Class I point schedule of issues. All rations turned-in to the Class I point, SSMO, or garrison dining facility will be inspected by veterinary services personnel (VSP) prior to turn-in.

6-52. Field kitchens use DA Form 3294 or an automated issue document to transfer or turn-in residuals. Items are listed on the form by type of menu item (entrée, vegetable, starch, or dessert). Both the receiver and the issuer sign the DA Form 3294 or the automated issue document. The SFOS should ensure the amount of rations transferred or turned-in is also posted to the respective DA Form 5914. Figure 6-9 shows a sample of a completed DA Form 3294 when used to turn rations into a garrison dining facility. Figure 6-10 shows a sample of a completed DA Form 3294 when used to turn rations into the Class I point.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD)

TO: QM BDE DINING FACILITY
FROM: HHC, 236th BN
CONSUMPTION DATE(s)
NUMBER OF MEAL(s) REQUESTED

REQUEST
ISSUE X 20060801
TURN-IN
ISSUE date

ITEMS	UI	B	L	D	B	L	D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
UGR HOS ENTREES	PAN										8			
UGR HOS DESSERT	PAN										9			
UGR HOS VEGETABLES	PAN										12			
UHT MILK WHITE	EA										61			
UHT MILK CHOC	EA										42			
CEREAL, BOWL	CS										4			
HOMINY GRITS	CO										6			

REQUESTED BY:
ISSUED BY: Bill Morris SGT
ISSUED BY:
TOTAL DOLLAR

RECEIVED BY:
RECEIVED BY:
RECEIVED BY:
CONTROL NO.

PAGE NO. | NO. OF PAGES | REMARKS:

DA FORM 3294, JUL 2002
DA FORM 3294-R, JUN 1990, IS OBSOLETE.
USAPA V1.00

Figure 6-9. Sample DA Form 3294 used as a turn-in to a garrison dining facility

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD): 20060724

TO: 43D SUSTAINMENT BRIGADE
FROM: HHC, 236th BN
CONSUMPTION DATE(s)
NUMBER OF MEAL(s) REQUESTED

REQUEST
ISSUE
TURN-IN X
ISSUE date

ITEMS	UI	B	L	D	B	L	D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO										3	3		
8970-01-432-9963 UGR H&S DIN #4	MO										3	3		
8970-01-433-0562 UGR H&S BRK #2	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS										7	7		
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS										15	15		
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS										3	3		
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS										12	12		
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX													
8915-01-088-8749 APPLES, 40 LB CS	CS													
8915-00-616-0211 ORANGES, 35 LB CS	CS													
8915-00-126-8748 BANANAS, 45 LB CS	CS													

REQUESTED BY:
ISSUED BY: Bill Morris SGT
ISSUED BY:
TOTAL DOLLAR

RECEIVED BY:
RECEIVED BY: John Sary 556
RECEIVED BY:
CONTROL NO.

PAGE NO. 1
NO. OF PAGES 1
REMARKS:

DA FORM 3294, JUL 2002
DA FORM 3294-R, JUN 1990, IS OBSOLETE.
USAPA V1.00

Figure 6-10. Sample DA Form 3294 used as a turn-in to a Class I point

PERSONAL HYGIENE

6-53. The SFOS will ensure established sanitation standards and personal hygiene practices are understood and followed by food service specialists. Food handlers can transmit germs by contaminated hands, soiled clothing, unrestrained hair, and respiratory (particulates from coughing and sneezing). Scratching your head or face, using the latrine, eating, and smoking are just some examples of how hands can be contaminated with harmful germs that are then transmitted to food or food contact surfaces. Commanders and senior unit NCO leaders should ensure the SFOS has access to shower and laundry facilities for all unit food service specialists. The field standard is one shower per week, and in hot arid climates, two showers per week. Individuals responsible for handling or preparing food must practice the procedures shown in figure 6-11 to assure proper sanitation and personal hygiene.

INSPECTION

6-54. The SFOS or shift leader must inspect all food handlers each day as they report for work. Send personnel who exhibit signs of illness to the medical unit for an examination. Personnel are responsible for reporting any symptoms of infection or disease before they begin work or at the time a problem develops. The SFOS's inspection should be both visual and verbal to identify—

- Infected cuts, sores, burns, boils, rashes, or other skin or wound infections.
- Unclean hands and fingernails. Fingernails must not have nail polish or embedded jewelry, must be trimmed, and must not extend beyond the fleshy tip of the finger. False nails or nail extensions are prohibited.

- Cuticles should also be clean and trimmed.
- Diarrhea (known or suspected). Ask the Soldier!
- Signs of respiratory illness (coughing or sneezing).
- Sore throat with fever.
- Unauthorized jewelry. Plain wedding band and medical alert devices are the only jewelry allowed.
- Unclean or improper headgear.
- Unclean or improperly maintained clothing.

CAMOUFLAGE PAINT

6-55. Camouflage paint or other skin coatings are poisonous and toxic materials when consumed. Food service specialists preparing food or KPs performing sanitation duties should not wear camouflage paint on their hands, arms, or face. At remote feeding sites, individuals serving food or performing basic site cleanup may wear camouflage paint but they must wear disposable single-use gloves.

FIELD HAND-WASHING FACILITIES

6-56. Locate hand-washing devices at appropriate places such as the bivouac area, outside the latrines, near the kitchen and dining area, and at other locations as needed. The unit field sanitation team should be part of the planning process for hand-washing locations. An effective hand-washing facility is made up of the following four components: water, soap, paper towels, and a trash can. Proper hand washing involves scrubbing the hands and forearms with soap for 20 seconds, giving special attention to the areas around fingernails, the fingertips, and between fingers.

1. Hands and arms should be washed thoroughly and often with soap and water. At a minimum, hands should be washed—
   - Before beginning duty.
   - After using toilet facilities.
   - After servicing burner units or handling fuel cans.
   - After handling soiled or contaminated equipment or utensils.
   - After using tobacco products.
   - Before preparing food.
   - After preparing one food item, but before preparing another.
   - After performing custodial duties, including handling garbage or other refuse.
   - After moving or unloading rations.
2. Wear clean garments and maintain personal cleanliness.
3. Wear required headgear properly to keep hair away from foods and food contact surfaces.
4. Strictly prohibit the use of tobacco by personnel preparing or serving food, or while engaged in any activity in food preparation areas.
5. Do not clean latrines, work with garbage cans, drains, grease traps, or perform other KP duties during periods of food preparation.
6. Do not permit unauthorized personnel in food preparation, storage, or sanitation support areas.
7. Avoid unnecessary hand contact with food. Handle food with clean utensils, such as tongs, scoops, or forks.

Figure 6-11. Proper hygiene practices

FIELD KITCHEN SAFETY

6-57. Supervisors should monitor work schedules to ensure food service specialists receive proper rest and sleep periods. Research indicates accident rates and severity of accidents both increase when personnel are tired. Food service specialists must always be alert when they cook or serve food. Burns, collisions, and

falls are common accidents in field kitchens. Carbon monoxide fumes can injure and kill Soldiers in unventilated tents/work areas. If food service specialists are rushed or engaged in horseplay while cooking and serving food, accidents are more likely to occur. Training can curtail unsafe acts, unsafe working conditions, and careless use of equipment. Below are some precautions against burns, injuries from handling knives, collisions, and falls.

BURNS AND CARBON MONOXIDE POISONING

6-58. Flammable liquids are used in the operation of field kitchen equipment. Figure 6-12 lists some precautions that must be constantly monitored and enforced to prevent burns and carbon monoxide poisoning.

1. Train all personnel in fire prevention, suppression, and emergency evacuation procedures.
2. Never let untrained personnel use fuel-fired equipment. Ensure all personnel are trained or certified to operate MBUs, M59 field ranges, immersion heaters, generators, and other equipment.
3. Do not attempt service procedures on a burner that has recently been in operation. Let the burner cool down before performing these procedures.
4. Keep an operable fire extinguisher in all required areas (fuel storage, generator, kitchen, sanitation center).
5. Do not smoke within 50 feet of the fuel storage area or kitchen.
6. Clean up spilled fuel promptly. Vapors from spilled fuel can catch fire or explode if they come in contact with a flame or heat from a hot burner. Fuel is also a contaminant to the wholesomeness of food products.
7. Operate burners and ranges according to the operator's manual instructions.
8. Ventilate cooking and sanitation center areas.
9. Use dry hot pads when handling hot items.
10. Do not crowd the cooking area.
11. Turn the handles of pots and pans pointing to the back or side of the range.
12. Know where you will put a hot pot before you pick it up.
13. Be careful not to spill grease on or around open flames.
14. Leaders periodically check all work areas and personnel.

Figure 6-12. Safety precautions to prevent burns and asphyxiation

HANDLING KNIVES

6-59. Many food service accidents are caused by mishandling of knives by food service specialists. Figure 6-13 lists some safety precautions for the safe handling of knives in the kitchen.

1. Keep knives sharp.
2. Use the right knife for the job.
3. Cut away from your body.
4. Keep knives in racks when they are not being used or cleaned.
5. Do not palm vegetables and fruits when you cut through them.
6. Do not leave a knife or other sharp-edged tool lying on a worktable. It might get covered with vegetables or other foods and be a hazard to the person cleaning the table.
7. Do not try to catch a falling knife. Always step back and let it fall.
8. Do not allow KPs to clean knives.
9. Do not soak knives. Remove them from the water immediately.
10. Do not carry knives when your hands are full.
11. Do not use knives to open cans.
12. Never run while holding a knife.
13. Wash knives separately from other utensils.

Figure 6-13. Safety precautions for using knives

COLLISIONS AND FALLS

6-60. Food service specialists who hurry when they serve food may bump into someone and spill hot food on themselves and others. Sometimes little spills are not seen until someone slips and falls. The following hints will help food service specialists to avoid collisions and falls:

- Do not run or hurry when carrying hot food.
- Clean up spills immediately.
- Keep footgear in good condition.
- Warn others when you are passing through with hot food.
- Keep field range doors closed.
- Always watch where you step.
- Keep aisles and walkways clear.

SERVING LINE SETUP

6-61. Serving lines should be set up based upon the equipment being used and the threat situation. When you are using an MKT or CK, set up the serving line inside. On the MKT, you may serve cold foods on one side of the trailer and hot foods on the other side. Soldiers may enter the trailer from either end, but all Soldiers should move through the serving line in the same direction. Use a U-shaped serving line on a MKT or set up two serving lines, one on each side of the trailer. On the CK, Soldiers enter on one side of the trailer and move through the serving line in the same direction. Troops should pass through at 5-meter (17-foot) intervals. Once the troops are served, they spread out to reduce the chance of casualties in case of enemy attack. Regardless of how the serving line is set up, use the following sequence to ensure that hot foods are served last and that condiments and beverages do not slow down the serving lines:

- Salad
- Bread
- Dessert
- Starches (potatoes, rice, noodles)
- Vegetables

- Meat
- Beverages and condiments

FIELD KITCHEN WASHING AND SANITIZING

6-62. The FSC provides the primary means to wash and sanitize field kitchen components. Units without the FSC will use 32-gallon trash cans and immersion heaters. Dishwashing procedures used in the field follows the same 3-compartment sink concept employed in garrison: scrape, wash, rinse, sanitize, and air dry. The SFOS must ensure that a thermometer is available to continually spot check water temperatures in each sink or can.

SAFETY PRECAUTIONS

6-63. Observe all safety precautions including those discussed below. Ensure that—

- Neoprene or other suitable heavy duty rubber dishwashing gloves are available for personnel working at the wash, rinse, and sanitizing sinks. For optimum protection against scalding, gloves should be at least 16 inches in length and folded with a one-inch cuff.
- Special baskets are used for immersing utensils and other equipment in the final rinse. Hands, even those protected by the neoprene gloves, are never immersed in the final rinse sink or compartment. Tongs are used when handling or removing pots and pans that will not fit in the basket from the final sanitizing sink.
- A fire extinguisher is in the fueling area and in the MBU or immersion heater areas of operation.
- The fuel storage area is 50 feet from the FSC or immersion heaters.
- Personnel do not use machine-dishwashing soap or compounds when using immersion heaters or the FSC.
- Food operations leaders conduct a safety briefing with the personnel assigned to operate the wash lines.
- The work area is properly ventilated to prevent carbon monoxide poisoning. The FSC-2 has a monitor that provides visible and audible alarms if carbon monoxide exceeds acceptable levels.
- When the MBU is in the rack, it is pushed as far to the rear of the rack as possible. The edge of the sink will become very hot if the burner is not placed all the way to the rear. Some models of the FSC are equipped with a heat-retaining flap that is lowered over the rack opening after the burner unit is in place.

WARNING

The heat-retaining flap becomes extremely hot. Do not touch it with your bare hands. Use a dry hot pad!

WASHING PROCEDURES

6-64. Follow the procedures below when washing pots, pans, and utensils in the field. Figure 6-14 provides the correct water temperatures for proper cleaning and sanitizing using immersion heaters and the FSC.

Scraping

6-65. Scrape all food particles from pots and pans as soon as possible after use. Use a long handled scraper or a rubber scraper.

Prewashing

6-66. If available, use a fourth sink/can as a prewash. Water temperatures must be about 80 degrees Fahrenheit. After food scraps and particles are removed, items to be cleaned and sanitized are placed in the prewash for removal of heavy food particles, grease, and burned-on food. Use a long-handled brush for this also.

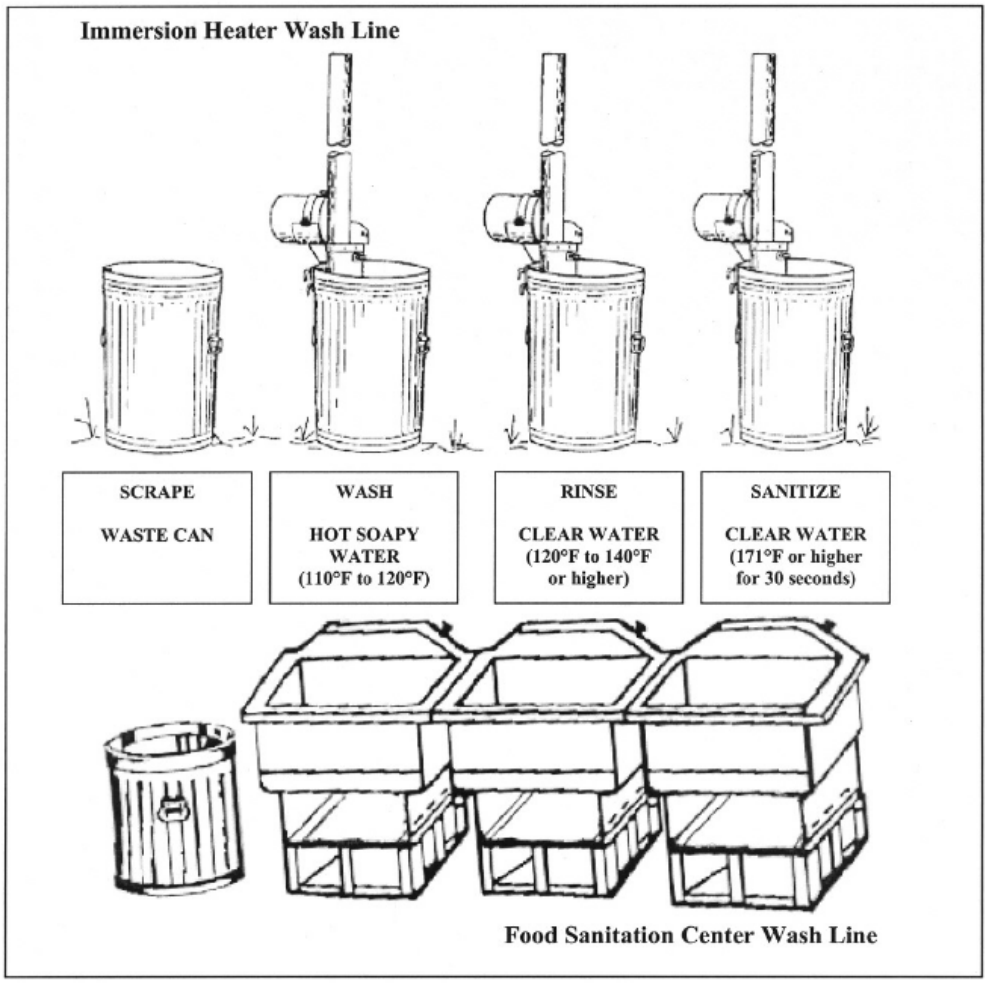


Figure 6-14. Immersion heater and FSC wash lines using hot water

Washing

6-67. Fill the wash sink/can with 20 gallons of water and heat it to 110 to 120 degrees Fahrenheit (hot to touch). It is important that the wash solution temperature be kept between 110 and 120 degrees Fahrenheit to soften greasy film. Add 12 ounces of hand-dishwashing compound (local purchase). Stir vigorously to produce suds. Then thoroughly wash the item in the wash solution using a long-handled brush. Remove it from the wash solution and shake it vigorously to remove the excess solution. Change the wash solution when it is contaminated with food particles and grease. Contamination is evident when there are no suds or a thin grease film develops on the water's surface. To conserve water when changing the immersion heater wash water, clean the can, refill it with fresh water, and rotate it in the line for use as the final rinse. Use the first rinse as the wash water and the final rinse as the first rinse.

Rinsing

6-68. Use the second sink/can for rinsing detergent and abrasives off the equipment. Keep the water between 120 to 140 degrees Fahrenheit at all times. Change the rinse water whenever there is grease, suds, or food particles on the surface.

Sanitizing

6-69. Use the third sink/can for sanitizing. Submerge the item for 30 seconds in water that is at least 171 degrees Fahrenheit or higher. For large cooking items that will not fit in the sink/can, use a quart ladle to pour sanitizing water over all parts of the item. Then vigorously shake the item to remove as much water as possible. It is important to keep the sanitizing water at the proper temperature. Change the water when a grease film appears on the surface.

Air Drying

6-70. Air-dry the equipment on the FSC storage rack or a clean and sanitized table when using immersion heaters. Do not use towels or napkins.

Cleaning Up

6-71. Drain the water in one sink/can at a time. Wash the sink/can using hand-dishwashing compound, hot water, and a brush. Follow with a hot water rinse.

Note. Dispose of all field kitchen liquid and solid waste according to local environmental regulations and Appendix G.

CHEMICAL DISINFECTING METHOD

6-72. The chemical disinfection method is always used when the FSC or immersion heaters are unable to maintain the required hot water sanitizing temperature of 171 degrees Fahrenheit or above.

Disinfectants, Food Service (Commercial Type)

6-73. Any commercial type of food service disinfectant that meets industry standards may be used in the field when the final (sanitizing) rinse water cannot be kept at the proper temperature. When food service disinfectant is dissolved in water (between 75 and 110 degrees Fahrenheit or manufacturer specification), it releases active chemicals, which disinfects the utensils. If the compound is dissolved in water that is too warm (above 130 degrees Fahrenheit), some chemicals can evaporate and the disinfecting action is lost. A commercially accepted food service disinfectant solution is used for rinsing and sanitizing clean, washed equipment. Dissolve the contents per manufacturer's directions in the warm rinse water. Stir thoroughly to dissolve. Disinfect the items by swishing them in the disinfectant water for at least one minute. Figure 6-15 provides the correct water temperatures for proper cleaning and sanitizing using food service disinfectant unless otherwise specified by the manufacturer of the disinfectant. Step-by-step procedures for proper cleaning and sanitizing using food service disinfectant are as follows:

- Scrape food scraps into a waste can, pit, or trench. Prewash items if you can.
- Wash the items in hand-dishwashing compound solution.
- Rinse the items in clean water.
- Disinfect the items by swishing them in a disinfectant solution for at least one minute. The water temperature of the solution must be between 75 and 110 degrees Fahrenheit. Make a fresh solution for every 100 people. Do not use the solution again.
- Let the items air dry in a place where they will not get dirty.

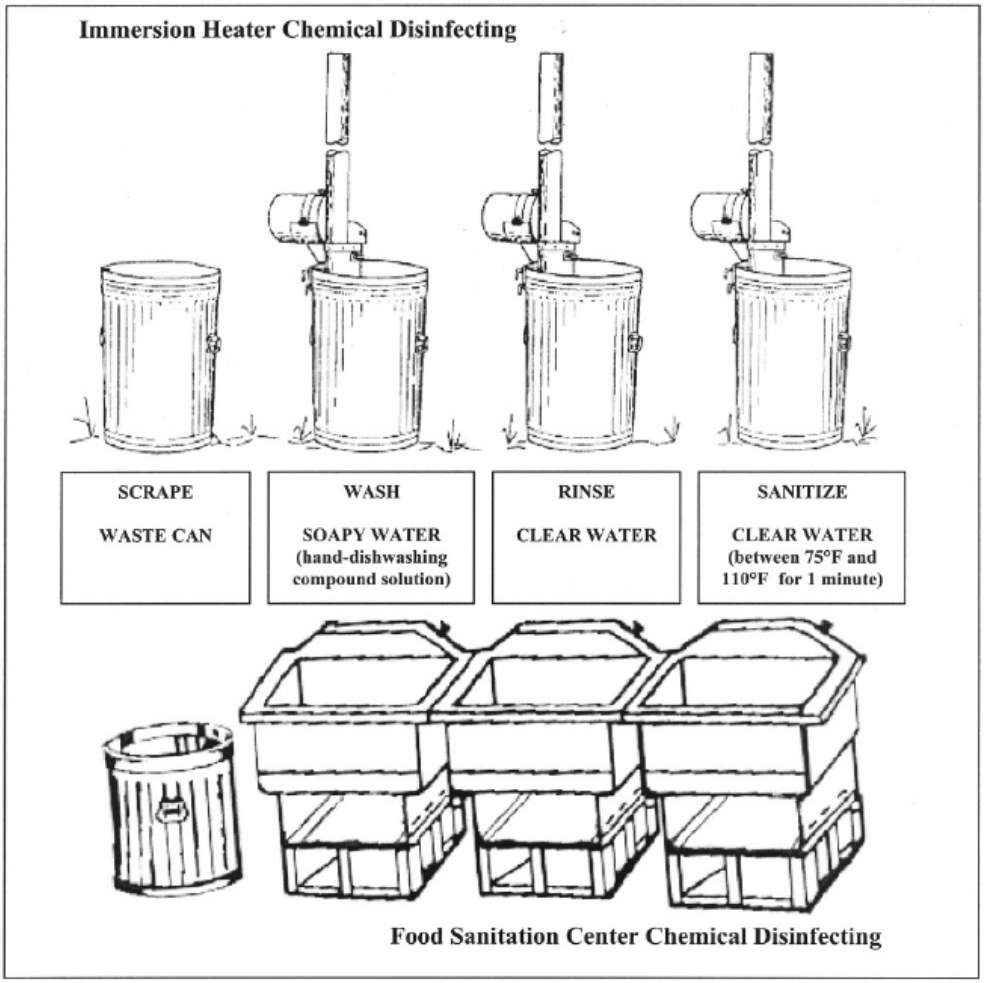


Figure 6-15. Immersion heater and FSC chemical disinfecting method

Disinfection using Standard Chlorine Bleach

6-74. Properly washed and rinsed food equipment and utensils may be sanitized using a 100-ppm chlorine solution. The sanitizing rinse water must be maintained between 75 and 110 degrees Fahrenheit to achieve the prescribed sanitizing concentration. Water that is too hot will cause the chlorine to dissipate (escape) rapidly from the water. When using a chlorine bleach solution for sanitizing, completely immerse items for a minimum of 15 seconds, then shake off excess water and allow items to air dry on a clean rack. To prepare a 100-ppm chlorine solution, mix 2 tablespoons of (unscented) chlorine bleach with 4 gallons of water. A sink containing 20 gallons of water will require 10 tablespoons (or 2/3 cup) of bleach.

Notes.

1. 10 tablespoons = 5 ounces = 2/3 cup
2. The SFOS must ensure that a suitable test kit (chlorine test strips) is available for spot checking the concentration of the sanitizing solution.
3. Items sanitized in a chlorine solution that has a concentration of 200-ppm or higher must be followed by a clear water rinse to remove the excess chlorine residual.

COLD-WEATHER FIELD FEEDING

6-75. Commanders at all levels must plan for extreme cold-weather operations. The three basic components of CWFF are equipment, rations, and procedures.

EQUIPMENT

6-76. Equipment considerations include:

- Restrict the use of the MKT (those without the MKT-I kit) in cold weather to temperatures above 32 degrees Fahrenheit. Commanders must do a risk assessment when deploying all MKTs in temperatures below 32 degrees Fahrenheit. Areas to be assessed include poor heat distribution, inside condensation, and mobility problems when transporting. Use tents to support the KCLFF and equipment components from the CK/MKT. Some examples of suitable tents are the TEMPER and the MGPTS. The unit provides assigned tents to the food service section. Other types of equipment and things to remember are discussed below.
- Specially designed water trailers (trailer, NSN 2510-01-091-5167, and frame, NSN 2330-01-108-7767) are required. Each water trailer is equipped with swing-fire heaters.
- Preventive maintenance and adequate pre-deployment testing is critical and must not be neglected.
- The failure rate of equipment increases in extreme cold environments. This causes a need for more repair parts.
- The current dining or sleeping tent authorized for zones 6 and 7 is the 10-man tent.
- The Space Heater Arctic (NSN 4520-01-444-2375) is used to heat sleeping and work areas. Special safety considerations are necessary (for example, fire guards and positioning within the tent).

RATIONS

6-77. Soldiers' nutritional needs are greater in CWFF—

- Soldiers are authorized 4,500 calories per day in extreme cold weather.
- Units operating in extreme cold-weather may use the Arctic Supplement to the UGR.
- Soldiers may be authorized a 900-calorie supplement on days when no UGRs or other hot supplemented meals are used. Command authorized warming beverages (soup and coffee) may be authorized separately when arctic supplements are not available.
- Commanders are reminded that water is a nutrient and that Soldiers need sufficient quantities. Soldiers' water requirements increase in extreme cold climates. For a more detailed discussion on individual and unit water requirements refer to FM 10-52.
- MREs, UGR-H&S, and UGR-Es freeze at temperatures below 32 degrees Fahrenheit. Store rations to prevent freezing when possible. Use procedures in Chapter 7 of this manual for handling of MREs in freezing temperatures.

PERSONNEL

6-78. Food service specialists require additional time and assistance in preparing rations in extreme cold-weather environments. KPs are needed to assist in sanitation at field sites.

MAINTENANCE

6-79. Maintaining mechanical equipment is exceptionally difficult in the field during cold weather. Additional time is required to perform tasks. This time lag cannot be over emphasized and must be included in all planning. Bulky and clumsy clothing that Soldiers must wear in extremely cold areas reduces their personal efficiency. At temperatures below 20 degrees Fahrenheit, maintenance requires up to five times the normal amount of time. Several requirements that affect maintenance directly and require planning and preparation before a cold weather operation are—

- Site clearance is difficult. More man-hours and engineer support may be required.
- Work productivity is reduced about 50 percent when temperatures go below 20 degrees Fahrenheit.
- Daylight is limited in extreme cold-weather climates. Lighting and maintenance tents are recommended.
- Shelter is needed for equipment requiring maintenance.
- Proper clothing and tools are required for mechanics.
- Adequate portable heaters must be available.
- Suitable methods must be in place to store and issue antifreeze, fuels, hydraulic fluids, and lubricants.
- Adequate supplies of repair parts must be maintained.
- Sufficient equipment for snow and ice removal must be available.

CWFF SAFETY

6-80. Safety is as important in CWFF as it is in any other area. The following are additional considerations for CWFF safety:

- Because MRE towelettes have an alcohol base; they may stick to skin or may cause frostbite when used in extremely cold climates.
- Metal objects should not come in direct contact with skin.
- Soldiers must know the warning signs of frostbite and cold weather injuries and be trained to recognize and react to the onset of cold weather related injuries.
- Bulky clothing, fatigue, and cold hands and fingers add to the risk of accidents. Safety must be stressed and personnel must be aware of the limitations and hazards of working in extremely cold conditions.
- Tents should still be adequately ventilated to prevent carbon monoxide poisoning.
- Leaders – Check your Soldiers!

REDEPLOYMENT

PREPARING FOR REDEPLOYMENT

6-81. The SFOS must ensure that enough Class I supplies are available to sustain the unit en route to its home station. Coordinate with your commander and staff to ensure that the unit's movement back to home station is smooth. Figure 6-16 is a checklist to aid in redeployment planning.

1. Have you advised your commander regarding a realistic ration mix during the last days of the deployment? For example, you should try not to serve a hot UGR-A meal just hours before your unit is scheduled to redeploy.
2. Review and evaluate your current inventory of Class I supplies, including supplements and enhancement items. Can items in the inventory be incorporated into remaining meals to be served?
3. Will your inventory sustain your unit through the operation? If not, request additional Class I supplies.
4. Are you required to subsist your unit personnel during the movement back to home station? Do not forget rest halts (stops in route), overnights, and railheads. Request rations, if required.
5. Have you accumulated Class I items which should be turned in?
6. Will you be required to transfer loose rations to another unit/home station?
7. Have you submitted all strength and feeder reports before departing the deployment site?
8. Are you prepared to perform required maintenance on your equipment before closing the field site?
9. Are all records and files on hand and complete?

Figure 6-16. Redeployment checklist

CLOSING THE DEPLOYMENT SITE

6-82. Following the correct procedures for closing the field kitchen site is extremely important. You must consider the environmental impacts caused by soakage pits, grease traps, trash pits, and incinerators. The SFOS must ensure that all environmental concerns have been met in closing a field site. Also, you must understand the battlefield signature that a haphazardly closed field site can leave for enemy forces. Appendix G provides information to help you close your field site. Also, refer to the field kitchen equipment TMs and Chapter 5 of this manual for the correct methods of cleaning and maintaining your equipment before movement back to your home station.

MOVING THE UNIT TO THE HOME STATION

6-83. It is vital that the SFOS be prepared to provide food service support during redeployment. The commander and unit movement officer should be the first stop in gathering information. They will provide the specifics of when, how, and where the unit will move. Also, they can provide specific food service requirements for convoy rest halts, railheads, overnight commitments, and airflow.

FIELD KITCHEN RECORDS MAINTENANCE AND REVIEW

6-84. All records of field operations must be maintained per requirements of the Army Record Information Management System (ARIMS). Refer to AR 30-22 and AR 25-400-2 for guidance on the establishment, maintenance, and destruction of files. SFOSs must ensure that account close-out procedures are followed and that accountability and audit trails are complete. Records of field operations provide a basis for forecasting requirements on future operations.

6-85. All records of Army field feeding must be reviewed for completeness and accuracy. The unit food advisor and supervisor must play the key role in ensuring that SFOSs are trained and are maintaining records properly. The unit FSO should review records periodically during the field operation to ensure that required accountability procedures are being followed. Food advisors should review all field records as soon as possible after redeployment but not later than the next scheduled formal written action plan is submitted as required by AR 30-22. Appendix F of this publication provides a guide for the review of field feeding records and required unit actions.

This page intentionally left blank.

Chapter 7
Class I Operations

This chapter provides guidance on the operation of theater and SSA Class I operations for both field training exercises and operational deployments. This chapter does not provide Class I procedures for SSMOs. SSMO Class I operation procedures are discussed in AR 30-22 and DA Pamphlet 30-22. Units requiring Class I support from an installation SSMO should contact the SSMO SSM for specific operational procedures during the predeployment planning stage.

DEPLOYMENT

7-1. The number and levels of Class I sustainment activities increases significantly from training exercises to operational deployments. During training exercises, a SSMO will typically provide rations directly to the supported units or to a SSA Class I point which will then reissue the rations to supported units. SSA Class I sustainment activities are seldom employed during short duration or individual unit training exercises. During exercises, ration requirements are forecasted and ordered well in advance for the entire exercise period. Storage capabilities and the resupply distribution system will be well established. Class I operations during operational deployments are much more complex. Theater level Class I sustainment organizations take the place of the SSMO and receive subsistence directly from DSCP. One or more sustainment brigades may be deployed to establish Class I operations within the AO. The sustainment brigade will establish Class I distribution points as required to support their customer units. Storage capabilities are often inadequate during the early stages and the resupply distribution system must often be established in austere hostile territory.

7-2. The deployment of Class I sustainment units must begin immediately at the onset of training exercises and operational deployments. These personnel, their equipment, and transportation assets must be in place to receive and forward the subsistence required for sustaining the forces. Their locations should be planned and coordinated for compatibility with the overall layout of the resupply distribution system. Responsibilities of Class I operational personnel and Class I planning are discussed in Part One. Ration planning factors are discussed in Chapter 4. A checklist for evaluating the operational effectiveness of Class I operations is located at Appendix E.

CLASS I SITE SELECTION AND LAYOUT

CHARACTERISTICS

7-3. Each Class I point must be accessible to its supply sources and customer units. Depending on METT-TC factors, Class I points may be co-located with water points. Select an area with good drainage and cover near the MSR. Make use of any permanent buildings. Roads should be able to handle heavy traffic and be wide enough for the supply vehicles. They must also be able to support the weight of support and customer vehicles in all weather conditions. Ground where rations are to be positioned must be able to support the weight of the rations. Post directional signs inside Class I points to avoid traffic congestion and accidents.

DETERMINING SIZE OF THE CLASS I POINT

7-4. You can compute the space required to support any ration cycle using the cubic feet of the rations being used. Perishable enhancements, ice, and UGR-A components require refrigerated space and more

cubic feet than other rations. MREs, UGR-H&S, bottled water, and HCPs do not normally require refrigerated space. Operational rations require less space than any others.

Site Layout

7-5. The site should be large enough to handle the estimated volume of Class I supplies and equipment. A theater level Class I point requires more storage space than a Class I point supporting a single Army Division. It also needs a larger area for greater vehicle traffic engaged in picking up and delivering Class I supplies. A parking/staging area is needed for vehicles stopping at the checkpoint, loading and unloading supplies, bringing in and taking out containers and refrigerated trailers, and for MHE working the stacks. Class I sites in the AO must be large enough to afford some dispersion of supplies to lessen the chance of enemy destruction. Use dunnage to keep the supplies off the ground and shipping containers, tents, and tarpaulins to provide protection when sufficient permanent buildings are not available. Make sure lighting is adequate for safety and security. Fence the perimeter and establish checkpoints at each exit and entrance. Figure 7-1 shows the suggested layout for an SSA Class I sustainment point. Figure 7-2 shows the suggested layout for a forward SSA Class I point.

Types of Storage

7-6. Available storage can range from covered buildings (walls and roof) or tents; to open storage, which may offer no protection; to just overhead cover (tarpaulins and camouflage nets). Class I supplies, including semiperishables, keep best in covered storage. However, in the field you should have a rapid turnover of Class I supplies thereby eliminating many of your long term storage problems.

Theater Storage

7-7. When operating in an AO where a SPV or SSMO exists, maximum use will be made of available SPV/SSMO facilities, equipment, and personnel when the tactical situation permits. At Class I points located at field locations, rations may be stored in Army-owned or Army-leased ISO 20-foot and 40-foot containers**.** One key consideration for Class I managers in the AO is commercial container management. The majority of Class I subsistence is shipped from CONUS or other locations around the world in commercial carrier's 20-foot or 40-foot ISO containers to the AO and may be throughput directly to your location. These commercial shipping containers are owned by a commercial vendor/carrier, and upon receipt at your class I operation, should be off-loaded and returned to the sending activity as fast as possible. There is a 10-day grace period from the time the container is delivered point to point and received by the activity (sustainment brigade or SPV) responsible for management and distribution of subsistence within an AO until the commercial carrier begins to assess the Army a demurrage/detention charge until the containers are returned to their custody. Charges can accumulate in the hundreds of thousands of dollars with no benefit accrued by the Army.

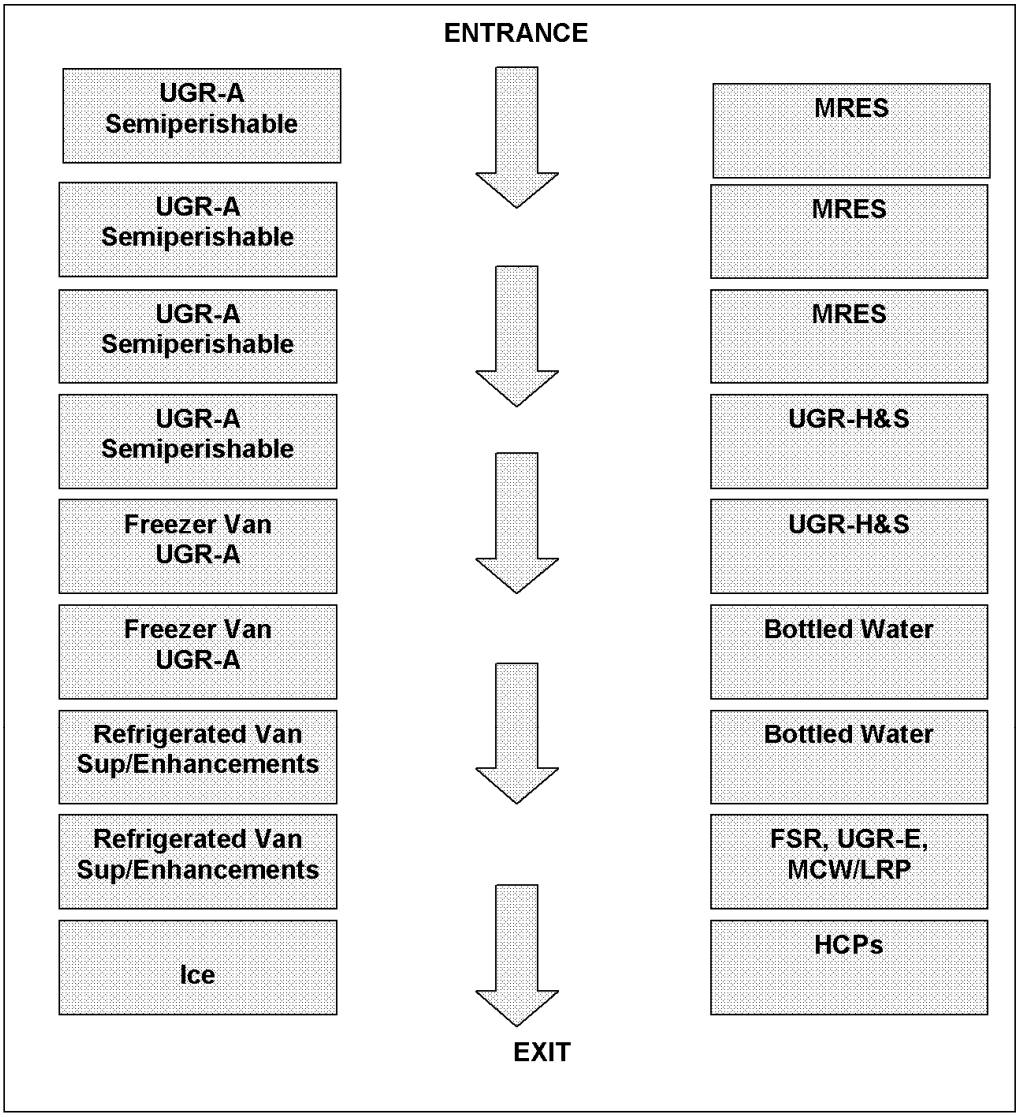


Figure 7-1. Suggested layout for a SSA Class I sustainment point

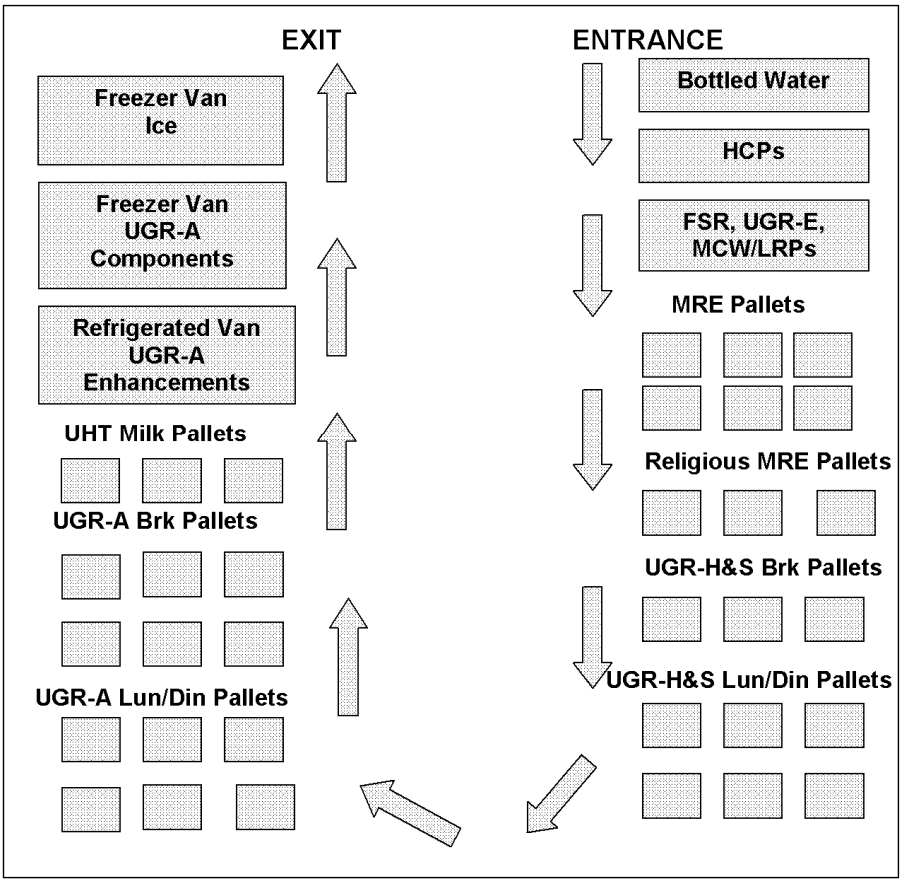


Figure 7-2. Suggested layout for a forward SSA Class I point

Concealment and Cover

7-8. Because of the large amounts of supplies stored at Class I points, it is extremely difficult to camouflage or conceal all the subsistence. At SSA Class I sustainment points, rations may be stored in Army owned or leased ISO 20-foot and 40-foot commercial shipping containers. At forward SSA Class I points, if trees are available, place the palletized rations under them. All trucks and MHE should be camouflaged with authorized netting. When possible, terrain features should be considered and used to protect the Class I point from direct enemy fire.

Defense

7-9. When feasible, use three-strand concertina wire to define the site's perimeter. Interlace the concertina wire with sensors, trip flares, and antipersonnel mines to provide early warning of the enemy's approach. Have security patrols check the condition of the perimeter daily to ensure that no one tampered with or penetrated the concertina wire. Include fighting positions as part of the unit's overall defensive plan. Enforce light and noise discipline as required by the METT-TC. Coordinate your security plan with the MP battalion responsible for security in your sector.

Security

7-10. The enemy may try to contaminate or destroy supplies. Subsistence supplies should be protected to prevent loss from enemy action, pilferage, or theft during receipt, storage, and issue. The MPs can help in setting up an effective program. Some effective measures are shown in figure 7-3.

1. Disperse supplies and equipment in the field so that one incoming round does not destroy the entire Class I yard and supporting equipment.
2. Provide an aggressive security education program that convinces personnel that they have a legal and ethical responsibility to report losses.
3. Ensure that assigned supervisory personnel set a good example.
4. Inspect delivery and pickup vehicles before departure to ensure they contain only authorized supplies properly recorded on shipping and receiving and/or issue documents.
5. Use seals on vehicles if available.
6. Allow only authorized personnel to enter the supply areas. Each individual authorized to request or receive Class I subsistence will be included on the by name unit-furnished memorandum of authorization to receive Class I supplies. The Class I point will maintain on file the memorandum for each supported unit, signed by the appropriate individual, listing those individuals authorized to request and receive Class I subsistence for that unit. The Class I personnel will verify the individual's ID card with the memorandum prior to admittance to the Class I point.
7. Limit access to actual storage areas to authorized personnel on duty and inspectors.
8. Provide accurate methods for taking physical inventories.
9. Quickly investigate and determine how any losses in inventory occurred.
10. Use locks, screens, and bars on doors and windows. Use appropriate signage to ensure that customers understand which areas are off limits to access.
11. Remove trash periodically during the day rather than just at the end of the day.
12. Inspect empty containers and flatten cartons before removal.
13. Use barbed or concertina wire as barriers, and inspect daily for breaks and tunnels.
14. Keep the number of open cases of subsistence to a minimum.

Figure 7-3. Effective security measures

SCHEDULE OF ISSUES AND CLASS I POINT OPERATIONAL PROCEDURES

7-11. Prior to beginning operations, Class I managers at each supply level will establish SOPs for the operation of their Class I points. SOPs should be developed on the schedule of issues, issue cycle, ration issue factors, issue hours of operation, Class I inventories, and night operations (if used).

SCHEDULE OF ISSUES

7-12. The key document the Class I manager uses to manage the Class I point operation is the schedule of issues. This schedule should be developed and distributed to supported units under both the pull and push systems. Under the pull system, supported units must submit ration requests in accordance with this schedule. While commanders may select the ration type desired for each meal period based on their METT-TC, the Class I manager will determine the menu number which will be supplied for that ration type. Based on the current operational ration menus on hand, the Class I manager should ensure UGR menus are issued in sequence number to prevent units receiving the same meals repetitively. The Class I

point will make every effort to maintain uniformity with the established issue schedules and the approved ration cycle for each day. The schedule of issues (figure 7-4) will provide Class I point customers information on:

- Ration request, issue, and consumption dates.
- Strength reporting dates and procedures.
- Menu numbers for UGRs.
- Substitutions, deletions, and mandatory issues.
- Residual ration turn-in dates and procedures.

43d Sustainment Brigade Class I Schedule of Issues

Request Date	Issue Date	For Consumption Dates	UGR Menu Numbers	
			Brk	Lunch/Dinner
9 March	11 March	13, 14 March	# 4, 5	# 7, 8
11 March	*13 March	15, 16 March	# 6, 7	# 9, 10
13 March	15 March	17, 18 March	# 1, 2	# 11, 12
15 March	17 March	19, 20 March	# 3, 4	# 13, 14
17 March	*19 March	21, 22 March	# 5, 6	# 1, 2

*Unit Turn-In Dates are 13 & 19 March

Notes:

1. Units will submit an official DA Form 5913 (*Strength and Feeder Report*) to the Class I point NLT 3 days after arriving to the field site.
2. Units that want to draw less than two days of supply will coordinate with the Class I Officer/NCO.
3. Any changes to requests (additions and deletions) must be made NLT 48 hours before issue.
4. Turn-ins will only be accepted on unopened UGR-H&S modules, unopened MREs, and UHT milk. Turn-ins will be inspected by veterinary personnel before being accepted.

Figure 7-4. Example of a Class I point schedule of issues while operating under the pull system

ISSUE CYCLE

7-13. As discussed in paragraph 3-55, the issue cycle is the number of days of rations the Class I point will issue to their supported units on each issue day. Each Class I point's issue cycle will be based on the next higher level Class I sustainment activity issues, the volume of rations, and its supported unit's missions. Forward Class I points may have supported units on different issue cycles depending upon their size and mission. Careful timely planning and coordination between supported units and Class I managers must take place to ensure safe and secure storage capabilities are being maintained at every level (Class I point and unit field kitchens) and all subsistence can be adequately stored and safeguarded.

RATION ISSUE FACTORS

7-14. The Class I manager will provide their supported units with the issue factors for each ration being used based on the exercise or theater ration cycle. The Class I manager must also establish minimum ration issue factors based on the size of the units being supported and the volume of the rations being issued. All rations should be requested, ordered, and issued in case lots only. The only exception to this rule would be for very small units being supported by a forward Class I point.

ISSUE HOURS OF OPERATION

7-15. The Class I manager must establish time periods the Class I point will issue rations to supported units. These times must be flexible to meet the different unit missions but they cannot be so flexible that

the Class I point cannot accomplish its own mission. Class I personnel are often in a constant cycle of receiving and issuing rations as well as maintaining Class I site security and accomplishing other unit supply tasks as assigned by their commander. Constant coordination between the Class I manager, food advisor, and SFOS is essential to maintaining a smooth operating Class I point.

SUBSTITUTIONS AND DELETIONS

7-16. Changes may be made to the prescribed ration cycle. Through effective predeployment Class I planning, substitutions and deletions can be kept to a minimum. The Class I manager must keep the supported food advisors and SFOS advised of substitutions or deletions in a timely manner. The food advisor can develop a suitable substitution list once the ration cycle is established and provided to Class I managers.

CLASS I INVENTORIES

7-17. Class I managers should conduct regular inventories (preferably prior to ordering) to ensure excess subsistence items are not allowed to build up. Excess rations invite spoilage, pilferage, waste, and are a poor management indicator. Rations received from the theater and SSA subsistence sustainment activities are issued to using units quickly and stocks should not be allowed to accumulate or be maintained at forward SSA Class I points. Inventories at the theater and SSA subsistence sustainment activities will be conducted at the direction of the theater subsistence officer. Cyclic inventories are recommended to assist in maintaining asset visibility and to reduce excess stocks at these levels. Class I managers use the DA Form 3294 (figure 7-5) or an automated worksheet to document the inventory.

NIGHT OPERATIONS

7-18. Sometimes it is necessary to receive and issue supplies at night. Night operations involve decreased visibility and the use of artificial light, and may be conducted under blackout conditions where no artificial light is permitted. Any vehicle operating in the blackout area must follow blackout procedures. Advance preparation and training are required for successful night or blackout operations. Two SOPs should be established for night operations; one for Class I personnel and one for units picking up or delivering supplies. Cover the items discussed below in SOPs for operation during blackout conditions.

Facilities

7-19. Black out tents or buildings used for offices and storage areas so that no light shows outside. Use extra canvas to make blackout flaps on tents to block light.

MHE

7-20. MHE cannot be used under total blackout conditions except in a building or when the environment is METT-TC driven. Night operations involve a commander's risk assessment and risk reduction management when the mission is METT-TC driven and the use of MHE is required under blackout conditions.

Traffic

7-21. All traffic must be one way to avoid collisions. The unit picking up supplies must provide walking traffic guides to direct vehicles. Place personnel with flashlights with red filters at strategic points to answer questions and direct traffic.

CLASS I TRACKING

7-22. As discussed in paragraph 3-60, DOD uses RFID for tracking supplies including all Class I. RFID technology consists of RFID tags (passive and active) that are mounted on shipping containers, pallets, and/or cases and interrogators that "read" the RFID tag identification number once the tag passes within a specified distance of the interrogator. RFID information is tracked through the Joint Automatic Information

Technology (J-AIT) server or through BCS3. The use of RFID facilitates inventory control and redistribution of sustainment cargo assets at all Class I sustainment activities.

CLASS I OPERATIONS UNDER A PUSH SYSTEM

7-23. Under a push system, theater Class I planners, in coordination with SSA Class I planners, determine the type and quantity of rations to be shipped from the theater subsistence sustainment activity to SSA Class I points for issue to supported units. The Class I points may coordinate transportation to deliver rations to supported units or they will direct units where to pick rations up.

COMPUTING RATION REQUIREMENTS

7-24. Class I points compute ration requirements based on the number of personnel to be supported, remote sites (if known), unit missions, feeding capabilities of field kitchens, and the established issue factors for each ration. Operational rations already have established issue factors. The food advisor, in conjunction with the Class I manager, will establish issue factors for supplement, enhancements, warming and cooling beverages, ice, and bottled water during the planning stages of the operational deployment. Ration computing formulas guidelines are described in paragraphs 7-28 through 7-34. During operational deployments, once Class I managers compute the ration requirements, they round up case/module requirements to the next pallet and/or container quantities when appropriate for theater/SSA shipments. Transportation assets are scarce during operational deployments and their use must be maximized by only hauling full loads.

Operational Rations

Individual Rations

7-25. Individual rations (MRE, MCW/LRP, FSR, and religious meals) are computed by using the number of personnel being supported and the quantity of meals in each case. MREs, MCW/LRP, and religious meals have 12 meals in each case. FSRs have 9 meals in each case. Required fractions of cases are rounded up to the next full case.

Examples

MRE: Number of personnel being supported (435) divided by the number of meals in each case (12) = 36.25 cases. Round up to 37 cases.

FSR: Number of personnel being supported (435) divided by the number of meals in each case (9) = 48.33 cases. Round up to 49 cases.

Unitized Group Rations

7-26. UGRs (H&S and A) are computed by using the number of personnel being supported at each feeding site and the number of meals in each module. Each UGR module (3 boxes) contains 50 meals. Any fraction of UGR modules needed at each feeding site must be rounded up to the next module.

Example

Feeding site one has 40 personnel, feeding site two has 25 personnel, and feeding site three has 140 personnel. The Class I point would issue 5 modules (1 module for site one, 1 module for site two, and 3 modules for site three). Class I managers must also take into consideration that when shipping and issuing the UGR-A, one box of the three box module is frozen and requires refrigerated storage/transportation.

7-27. UGR-Es are computed by using the number of personnel being supported at each feeding site and the number of meals in each module. Each UGR-E module (1 box) contains 18 meals. Any fraction of the UGR-E module needed at each feeding site must be rounded up to the next module.

Example

Feeding site one has 16 personnel, feeding site two has 6 personnel, and feeding site three has 22 personnel. The Class I point would issue 4 modules (1 module for site one, 1 module for site two, and 2 modules for site three).

Supplement/Enhancements

7-28. Ration supplement (milk) and enhancements (fresh fruits, vegetables, bread, cereal, and salad dressings) are computed by using the established issue factor, the case/box quantity, and the number of personnel being supported. Required fractions of cases/boxes are rounded up to the next case/box.

Examples

Cereal: Established issue factor is 1 individual bowl per Soldier for each breakfast UGR meal, individual bowl cereal comes 36 individual bowls per case, and number of personnel supported is 435. 435 (personnel supported) divided by 36 (number of bowls in each case) equals 12.08 (required cases). Round up to 13 cases of cereal.

Apples: Issue factor is 18 lb. per 50 Soldiers for each UGR meal, apples come in a 40 lb. box and the number of personnel supported is 435. 435 (personnel supported) divided by 50 (issue factor) equals 8.7 (working factor) times 18 (issue factor) equals 156.60 (required lb. of apples) divided by 40 (lb. of apples in each box) equals 3.915 (required boxes). Round up to 4 boxes of apples.

Warming and Cooling Beverages

7-29. Warming and cooling beverages (soup, coffee, creamer, sugar, beverage base powder) are computed by using the established issue factor and the number of personnel being supported.

Example

Established issue factor for canned soup is 1 can per 50 Soldiers per day and the number of personnel supported is 435. 435 (personnel supported) divided by 50 (issue factor) equals 8.7 (working factor) times 1 (issue factor) equals 8.7 (required cans). Round up to 9 cans of soup. Based on the case quantity of each warming and cooling beverage item, the Class I manager must determine if computed required fractions of cases should be rounded up to the next full case.

Ice

7-30. Ice is computed by using the established issue factor, the quantity of ice in each bag, and the number of personnel being supported. Required fractions of bags are rounded up to the next full bag.

Example

Established issue factor is 2 lb. of ice per Soldier per day, ice comes in 50 lb. bags, and the number of personnel being supported is 435. 435 (personnel supported) times 2 (issue factor) equals 870 (lb. of ice required per day) divided by 50 (lb. of ice in each bag) equals 17.4 (required bags of ice). Round up to 18 bags of ice.

Bottled Water

7-31. Bottled water is computed by using the established issue factor, the quantity in each bottle/case, and the number of personnel being supported. Required fractions of cases are rounded up to the next full case.

Example

Established issue factor is 6 liters of water per Soldier per day, water comes in 1.5 liter bottles/12 bottles to a case, and the number of personnel supported is 435. 435 (personnel supported) times 6 (issue factor) equals 2,610 (total number of liters required per day) divided by 1.5 (liters of water in each bottle) equals 1,710 (bottles of water required) divided by 12 (number of bottles in each case) equals 145 (cases of water required).

ISSUES AND ACCOUNTABILITY

7-32. Theater and SSA Class I sustainment activities generate MROs (automated or written lists/forms for each unit), which are attached to the subsistence when it is shipped forward. Class I personnel must inventory the subsistence received and acknowledge receipt by signing and dating the list/form provided with the delivery. The Class I point uses the same list/form or a DA Form 3294 (figure 7-5) to issue the rations to the supported unit. Once the Class I point has issued the subsistence to the supported unit, the item is considered consumed. The Class I point balances its receipts against its issues to ensure accountability.

ADJUSTMENTS AND CROSS LEVELING

7-33. Because the push system is very inflexible, rations can end up in the wrong areas when units move and ration stockpiles can quickly build up or become depleted if the forecasted personnel strength changes or is incorrect. Class I managers and food advisory personnel have to be constantly aware of the operational status of their supported units, the feeding cycle, and the status of rations that are within the Class I points and field kitchens. They must monitor incoming rations and react quickly to coordinate with SSA Class I sustainment activities to adjust the amount of rations being received. They must also assist in cross leveling to accommodate meal schedule changes that result from METT-TC and other operational changes.

TRANSITION TO THE PULL SYSTEM

7-34. Once the theater stabilizes and Class I distribution system personnel and equipment are in place, the theater may transition to a full or partial pull system. When the theater moves from a push to a pull system, the theater subsistence officer will provide guidance to all SSA Class I sustainment activities on unit ordering lead times and procedures needed for the transition.

CLASS I OPERATIONS UNDER A PULL SYSTEM

7-35. Under the pull system, field kitchens submit orders through their respective SSA Class I point. The order is then processed through the next level of Class I supply (SSMO or SSA Class I sustainment point). The Class I manager is responsible for receiving the requirements, determining the availability of components, making substitutions where required, providing instructions to the subsistence supply activities at the SSA Class I points, and requesting the transportation to ensure that the rations are delivered

in a timely manner. Then subsistence is sent forward to satisfy the request from the field kitchen. Class I point ration receipt, receiving, issue, and accountability procedures under the pull system are the same for field training exercises and operational deployments.

Note. Complete AFFS accountability requirements, procedures and instructions for Class I points are discussed below and are contained in AR 30-22, chapter 4, and DA PAM 30-22, chapter 4.

UNIT STRENGTH REPORTING

7-36. Units are required to provide the supporting Class I point with their present-for-duty strength on a DA Form 5913 (figure 6-3, page 6-9) no later than 3 days after arrival to the field site. DA Form 5913 identifies by service component the number of personnel scheduled to be present-for-duty each day for feeding purposes. The DA Form 5913 is only submitted once to the Class I point although the unit's actual present-for-duty strength may change during the deployment. The Class I point will keep one copy of the unit's DA Form 5913 and send a copy to the next higher Class I point.

UNIT RATION REQUESTS

7-37. Under the pull system, units submit two copies of the DA Form 3294 or use voice communications to request rations from the supporting Class I point. The DA Form 3294 has been designated as a multiuse form used to request, receive, transfer, and turn-in rations. A DA Form 3294 facsimile may also be used when an automated ordering system is available. Prior to the deployment, the Class I point may issue preprinted DA Form 3294s listing the rations available and units of issue to all of their supported units for ease of ration ordering. The field kitchen may order up to three days rations using one DA Form 3294. Figure 7-5 shows an example of a two-day ration request from a field kitchen to the Class I point.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD)

TO: 43D SUSTAINMENT BRIGADE — REQUEST X — 20060718
FROM: HHC, 236TH BN — ISSUE
CONSUMPTION DATE(s): 21-22 JULY 2006 — TURN-IN
NUMBER OF MEAL(s) REQUESTED — ISSUE date

		435	435	435	435	435	435							
ITEMS	UI	B	L	D	B	L	D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO	9									9			
8970-01-432- UGR H&S DIN #	MO			9							9			
8970-01-433-0562 UGR H&S BRK #2	MO				9						9			
8970-01-432- UGR H&S DIN #	MO						9				9			
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS		37			37					74			
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS	33		16	33		16				98			
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS	16		16	16		16				64			
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS	13			13						26			
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX	10		9	10		9				38			
8915-01-088-8749 APPLES, 40 LB CS	CS	4		4			4				12			
8915-00-616-0211 ORANGES, 35 LB CS	CS			5	5		5				15			
8915-00-126-8748 BANANAS, 45 LB CS	CS	4			4						8			

REQUESTED BY: Earl Jones SFC — ISSUED BY: — ISSUED BY: — TOTAL DOLLAR
RECEIVED BY: — RECEIVED BY: — RECEIVED BY: — CONTROL NO.
PAGE NO. 1 — NO. OF PAGES 3 — REMARKS:

DA FORM 3294, JUL 2002 — DA FORM 3294-R, JUN 1990, IS OBSOLETE. — USAPA V1.00

Figure 7-5. Sample DA Form 3294 field kitchen request to Class I point

CLASS I POINT RATION REQUESTS AND RECEIPTS

7-38. The Class I point consolidates all unit rations requests on a DA Form 3294 and submits two copies to the next level Class I sustainment activity for resupply. Figure 7-6 is an example of a Class I point consolidated ration request. The next level of Class I supply issues the requested rations using the same DA Form 3294 by checking the "Issue" block and posting the amount of rations issued in the "Supply Action" block. The issuing Class I point will retain one copy of the completed form and the Class I point receiving the rations will retain the other copy.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD): 20060718

TO: 1ST TSC
FROM: 430 SUSTAINMENT BDE
CONSUMPTION DATE(s): 21-22 JULY 2006
NUMBER OF MEAL(s) REQUESTED

REQUEST: X
ISSUE:
TURN-IN:
ISSUE date:

ITEMS	UI	B	L	D	B	L	D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO										64			
8970-01-432-9963 UGR H&S DIN # 4	MO										64			
8970-01-433-0562 UGR H&S BRK #2	MO										64			
8970-01-432- 9976 UGR H&S DIN # 5	MO										64			
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS										534			
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS										711			
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS										474			
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS										178			
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX										267			
8915-01-088-8749 APPLES, 40 LB CS	CS										87			
8915-00-616-0211 ORANGES, 35 LB CS	CS										99			
8915-00-126-8748 BANANAS, 45 LB CS	CS										52			

REQUESTED BY: Bill Michell MSG
ISSUED BY:
ISSUED BY:
TOTAL DOLLAR

RECEIVED BY:
RECEIVED BY:
RECEIVED BY:
CONTROL NO.

PAGE NO. 1
NO. OF PAGES 3
REMARKS:

DA FORM 3294, JUL 2002
DA FORM 3294-R, JUN 1998, IS OBSOLETE.
USAPA V1.00

Figure 7-6. Sample DA Form 3294 Class I point consolidated ration request for resupply

RATION ISSUE TO THE SUPPORTED UNIT

7-39. The supported unit receiving representative must verify and sign for all quantities of subsistence listed on the unit's original DA Form 3294 in the next available "Received By" block. Figure 7-7 shows a sample DA Form 3294 when the Class I point issues rations on the same document the unit requested the rations on.

RATION REQUEST/ISSUE/TURN-IN SLIP
For the use of this form, see DA PAM 30-22; the proponent agency is DCS, G4

DATE (YYYYMMDD)

TO: 430 SUSTAINMENT BRIGADE — REQUEST X 20060718
FROM: HHC, 236th BN — ISSUE X 20060720
CONSUMPTION DATE(s): 21-22 JULY 2006 — TURN-IN
NUMBER OF MEAL(s) REQUESTED — ISSUE date

ITEMS	UI	435 B	435 L	435 D	435 B	436 L	475 D	B	L	D	TOTAL	SUPPLY ACTION	UNIT PRICE	DOLLAR VALUE
8970-01-433-0561 UGR H&S BRK #1	MO	9									9	9		
8970-01-432- UGR H&S DIN #	MO			9							9	9		
8970-01-433-0562 UGR H&S BRK #2	MO				9						9	9		
8970-01-432- UGR H&S DIN #	MO						9				9	9		
8970-01-433-0563 UGR H&S BRK #3	MO													
8970-01-432- UGR H&S DIN #	MO													
8970-00-149-1094 MRE	CS		37			37					74	74		
8910-01-506-5239 MILK, UHT, WHITE 27CS	CS	33		16	33		16				98	98		
8910-01-506-5245 MILK, UHT, CHOC 27/CS	CS	16		16	16		16				64	64		
8920-01-E60-0167 CEREAL, BOWL, 36/CS	CS	13			13						26	26		
8920-01-506-6298 BREAD, SPLIT TOP 48BX	BX	10		9	10		9				38	38		
8915-01-088-8749 APPLES, 40 LB CS	CS	4		4			4				12	12		
8915-00-616-0211 ORANGES, 35 LB CS	CS			5	5		5				15	15		
8915-00-126-8748 BANANAS, 45 LB CS	CS	4			4						8	8		

REQUESTED BY: Earl Jones SFC — ISSUED BY: John Sary 556 — ISSUED BY: — TOTAL DOLLAR
RECEIVED BY: — RECEIVED BY: Bill Morris 567 — RECEIVED BY: — CONTROL NO.
PAGE NO. 1 — NO. OF PAGES 3 — REMARKS:

DA FORM 3294, JUL 2002 — DA FORM 3294-R, JUN 1960, IS OBSOLETE. — USAPA V1.00

Figure 7-7. Sample DA Form 3294 unit request and Class I point issue on the same form

RATION BREAK METHODS

7-40. The method of ration break procedures used depends on the quantity and type of ration, personnel, time, and transportation available. Vehicles used to transport subsistence should be clean, free of moisture, and have pallets to keep subsistence off the bed of the truck. The front and rear flaps must be lowered and secured during transport. Subsistence vehicles are not to be used to transport garbage or petroleum products while transporting subsistence. The bed of the truck should be free of harmful protrusions such as nails that could puncture food containers. Ice chests or other insulated containers should be used to transport perishables when time, distance, and outside temperature could cause the temperature to rise above required safe levels for refrigerated items and frozen items.

UNIT PILE

7-41. All the supplies for a unit are put in one marked pile (figure 7-8) and the using unit personnel load the supplies on their trucks under the supervision of Class I personnel. This method is used mainly when there is no further break.

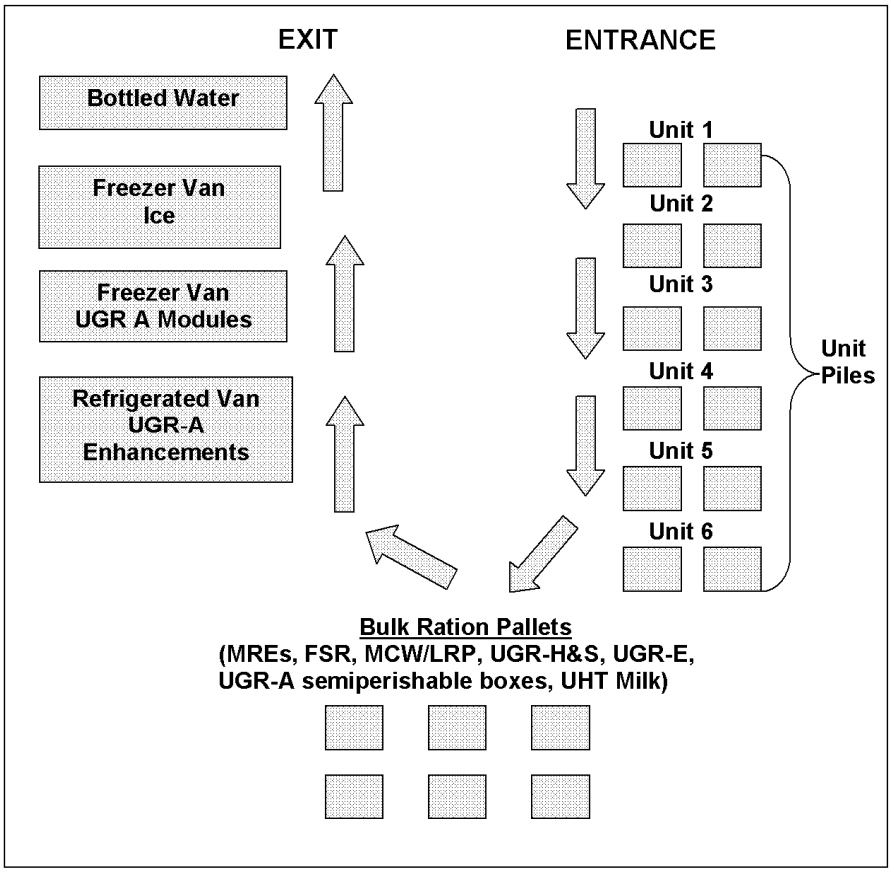


Figure 7-8. Unit pile method of ration distribution

ITEM PILE

7-42. Items are separated into piles by type (figure 7-9). The requesting unit's trucks stop at each pile and pick up the authorized amount of that item under the supervision of supply point personnel. This method is used mainly when large quantities of each item are to be issued. Supply point personnel handle supplies less, but longer loading times are usually required for each truck, especially when using unit personnel act as part of the load process, this may cause an increase in traffic congestion and delays.

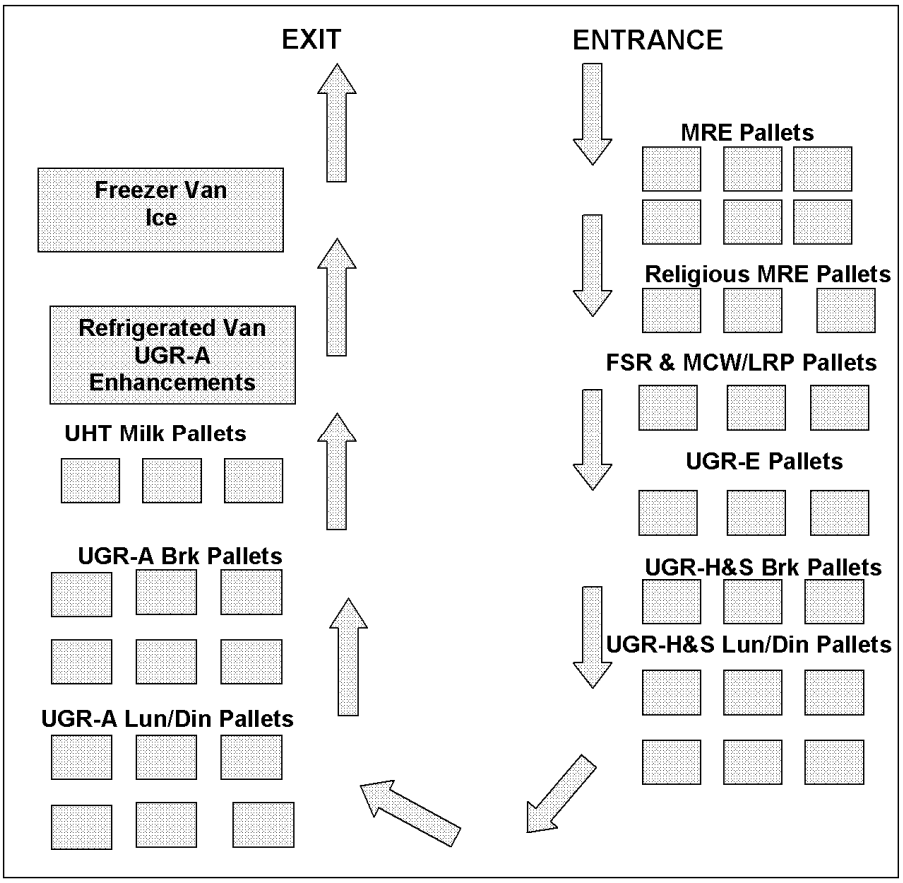


Figure 7-9. Item pile method of ration distribution

TRUCK TO TRUCK

7-43. Items are transferred directly from the Class I point's vehicles to the unit's vehicles under the supervision of Class I personnel. This method ties up vehicles, but it cuts handling, keeps supplies under cover, and increases mobility. This method is used mainly for perishable supplies.

AERIAL DELIVERY

7-44. Aerial delivery of subsistence is essential to the supply or resupply distribution system. Airdrop, air land, and sling loading are used to overcome problems of distance and time constraints. For more information on aerial delivery distribution operations, refer to FM 4-20.41.

RAIL DELIVERY

7-45. Semiperishable rations (MREs, FSR, MCW/LRP, UGR-H&S, UGR-E, and bottled water) and HCPs may be delivered by rail (METT-TC dependant). Commercial shipping containers (ISO 20-foot or 40-foot) may be loaded on the flatbed railcars or the individual pallets may be loaded directly on the rail cars.

INSPECTIONS

7-46. Subsistence supplies are inspected and reinspected from the time they are received until they are consumed. Inspections ensure that only food that is fit for consumption is received and issued.

RESPONSIBILITIES

7-47. The Class I manager is responsible for the inspection of all subsistence items before they are accepted. This inspection ensures that requested items are received in good condition and in the requested quantities. A representative of the Army veterinary service will perform random inspections of subsistence as it is received at a supply point. Semiperishables are not inspected by the veterinary food inspector on receipt unless it is requested by the Class I manager. If the subsistence is wholesome and complies with contract requirements and the contractor can be identified from container markings or shipping documents, the veterinary food inspector stamps the delivery documents. Veterinary food inspectors are also responsible for conducting Class IX type (during storage) inspections on subsistence in storage to detect early signs of deteriorating food. Cases of semiperishables that pass inspection are stamped with an intermediate test date (ITD). The ITD indicates the approximate remaining shelf life. Rejected items are reported to the accountable officer so appropriate disposal action can be initiated. The Class I manager is responsible for ensuring subsistence being turned in to a SSMO has received a Class V (any receipt except purchase) veterinary inspection. Detailed information on Army veterinary service inspections are in AR 40-657.

INSPECTION TYPES

7-48. There are three types of inspections. They are visual, sampling, and full inspections.

Visual

7-49. Subsistence supply specialists usually perform the visual inspection. The inspector checks the outside of the Class I item or its container for damage or deterioration. Damaged containers, such as broken boxes and dented cans, are a good reason to request an Army veterinary service inspection.

Sampling

7-50. In sampling, the veterinary food inspector chooses a number of units at random and inspects them thoroughly. If any of the samples are damaged or deteriorated, the veterinary food inspector performs a full inspection. Items used during sampling inspections are accounted for on DA Form 3161, *Request for Issue or Turn-in,* as an identifiable loss.

Full

7-51. The veterinary food inspector thoroughly examines all units of a particular item or shipment. Damaged or deteriorated items are set aside, and the veterinary food inspector advises the Class I manager what to do with them. Full inspections should not be conducted unless absolutely necessary.

CRITERIA USED DURING INSPECTIONS

7-52. Certain criteria are used to inspect subsistence. These criteria are discussed below.

Canned Goods

7-53. Individual cans should be inspected when there is reason to believe they may be damaged. If boxes are broken or bent, they should be opened and each can should be inspected. Cans that have been stored for a long time or exposed to high temperatures should be inspected. Cans that are rusted, swollen, leaking, or dented should be inspected by the veterinary food inspector.

Polymeric Tray Packs and Institutional Pouches

7-54. Tray packs and institutional pouches are inspected for damage. Tray packs and institutional pouches with any of the following defects should be set aside for further inspection and destruction: leaks from a pinhole, cuts, fractures, incomplete or blown seals where the contents of the tray pack are on the outside of the container, swollen or outwardly distended tray lids, pouch sides bulging from internal pressure, and swells caused by overheating.

Other Semiperishables

7-55. Semiperishables in jars, cardboard containers, and paper bags will spoil if they are mishandled, improperly stored, or stored for a long time. The containers should be inspected for signs of insects or rodents and damage from moisture or mishandling. Products in clear containers should be inspected for color changes. If any of these signs are evident, a veterinary food inspector should be called.

Fresh Fruits and Vegetables (FF&V)

7-56. Fresh fruits and vegetables should be inspected on receipt and every day while they are in storage. Prior to service, all raw FF&V must be immersed for a minimum contact time of one minute in potable water and chlorine solution with 100-ppm chlorine residual prior to service. Ensure that the procedures outlined in TB MED 530, Chapter 9, are understood and complied with by your food operations staff. FF&V must also be inspected for insect infestations including fruit flies, roaches, and worms. PREVMED and veterinary personnel must be notified if insects are seen. Appearances are deceiving. The best way to tell if they are fit for consumption is to cut them open and taste them. Items that have been freezer damaged will appear glassy and those that have chill injury may be discolored and have an off flavor.

Frozen Items

7-57. Frozen items, including meat, should be frozen solid when they are received. If they are thawed, they must be used right away, if approved by the veterinary food inspector. They should never be refrozen. Packages are checked on all sides for ice, which is a sign that they have thawed and been refrozen. Icy packages should be checked by the veterinary food inspector. Several thermometers will be positioned within all frozen and chill storage areas to monitor ambient temperatures. Freezer temperatures will be checked twice a day by Class I personnel. Temperatures noted will be recorded on a temperature chart for each storage area. To maintain frozen or chill temperatures within cold/frozen storage areas including ISO containers, the doors will only be opened for immediate issue or receipt of rations and then immediately closed.

Other Perishables

7-58. Other perishables are inspected for cleanliness and to see that they are chilled properly.

SUBSISTENCE HANDLING PRINCIPLES

7-59. Subsistence must be stored so that it is both accessible and secure. Store supplies so that those with the oldest date of pack are easily issued first. To prevent their total destruction, store and disperse perishable and semiperishable subsistence from separate locations. Class I personnel at all levels are required to use MHE. Leaders must ensure that safety is stressed and incorporated into MHE operation. Whether you are receiving, storing, or shipping perishable or semiperishable items, follow these important principles—

- The least handling is the best handling. This saves time, cost, and potential material damage and reduces accidents.
- Standardize your equipment and operating procedures as much as possible. Maintenance and repair requirements are reduced and storage and issue procedures simplified when your personnel are working from the same plan.

- Choose the right machine for the right job. Equipment capabilities are detailed in the operator's manuals. Consider the number of items to be moved, weight, and the distance of the move.
- An essential phase of any field operating Class I program is planning for weather and transportation restrictions and reducing safety hazards.
- Never exceed your equipment capabilities. Over loading equipment increases equipment failures, maintenance requirements, and the risk of accidents.
- Loading and unloading materials with mechanical devices, when properly done, reduces safety hazards and decreases subsistence damage. Subsistence products damaged by MHE are meals lost to Soldiers, stress that fact to operators.

PERISHABLE STORAGE

7-60. Maintain proper temperatures, humidity, and air circulation and store only compatible products together. Also, follow the storage precautions discussed below.

TEMPERATURE

7-61. Perishables stored below prescribed temperatures can suffer chill injury. The temperature for storing frozen subsistence should not exceed 0 degrees Fahrenheit. During transportation, the temperature should not exceed 10 degrees Fahrenheit. For ice cream, the recommended temperature is -10 degrees Fahrenheit and should not exceed 0 degrees Fahrenheit at any time. Chill items should be stored at 34 to 40 degrees Fahrenheit. Each storage (mobile or fixed) container is equipped with a thermometer, which must be checked frequently. It should be checked and documented each morning and at the end of operating and non-operating days. Figure 7-10 is an example of a locally developed temperature chart.

Refrigerator and Freezer Temperature Log

Month/Year

Location

Day	AM Refrigerator	AM Freezer	AM Initials	PM Refrigerator	PM Freezer	PM Initials	Action Taken (Notify supervisor if temperature is not acceptable: Refrigerator 34-41° F Freezer 0° F or below)
1							
2							
3							
4							
5							
6							

Figure 7-10. Temperature log

HUMIDITY

7-62. Prescribed humidity levels stop an item from gaining or losing moisture. A high humidity level allows moisture to condense on an item and be absorbed. A too low humidity level allows the item to dry out.

AIR CIRCULATION

7-63. Proper circulation of refrigerated air is the prime factor in keeping the temperature in all parts of storage spaces at recommended levels. It is also important in preventing carbon dioxide from building up in

FF&V compartments. Use pallets to raise containers off of the floor and permit the free circulation of air. Stack containers so that there is 4 inch wall clearance and ensure that containers are stored 6 inches off the floor with a 2-foot ceiling clearance. There should be adequate working space between stacks. Use fan or duct systems (where available) to maintain proper circulation. Do not stack items in front or under refrigeration units or fans in prefabricated units.

PRODUCT COMPATIBILITY

7-64. Storing incompatible products together may result in color loss, taste changes, and odor absorption. Products should be grouped according to compatibility. Meat, eggs, and dairy products (odor-absorbing items) should not be stored with odor-producing items such as apples or citrus fruits.

STORAGE PRECAUTIONS

7-65. As soon as frozen items are delivered, they should be transferred to freezer storage. If the product temperature is higher than the freezer area, place the shipping containers on pallets or hand trucks. This allows the air to circulate and reduce the product temperature as quickly as possible. The containers should be stacked more compactly once a uniform temperature is achieved. Never refreeze items which have been thawed. Do not stack items so high that containers on the bottom are damaged and the contents are crushed and bruised. Store items so that the oldest lots, by date of pack, are issued first. The only exception to this FIFO rule is when older lots are in better condition than newer ones. If perishables are stored properly, they should show no major loss of quality within plus or minus 20 percent of the approximate storage life.

SEMIPERISHABLE STORAGE

7-66. Semiperishables are not as susceptible to spoilage as perishables. They may spoil if they are handled or stored incorrectly or if they are kept for too long. Properly storing and protecting semiperishables ensures that products are tasty and safe for consumption during their shelf life and possibly beyond. After a product is inspected by veterinary personnel, its shelf life may be extended.

CORRECT STORAGE

7-67. Do not stack items so high that boxes and their contents are damaged. Do not place items directly on the floor. Bagged items should not be stored in corners and no subsistence should be stored directly against walls. MRE cases may be stacked up to four pallets high. In open storage, items should be placed on pallets and organized for ease of access.

FREEZING TEMPERATURES

7-68. For dry or low moisture semiperishable items, freezing temperatures do little or no damage. Freezing may cause damage to the packaging of water content items. Can seams may rupture and MRE pouches, polymeric tray pack lids, or institutional pouches may be cut or punctured. This damage can lead to serious health risk if not properly handled and inspected by veterinary personnel. Metal cans are not generally engineered for freezing. Frozen cans, MRE pouches, polymeric tray packs, and institutional pouches should not be rough handled as this may compound the problem. Storage life of semiperishable rations is extended by lower temperature storage (from 50 degrees Fahrenheit to as low as 32 degrees Fahrenheit). Frozen storage of semiperishables is not recommended.

HIGH TEMPERATURES

7-69. High storage temperatures encourage the growth of bacteria and molds, promote insect infestation, and shorten the approximate storage life of semiperishable items. The serviceable storage life of individual and group rations decreases as storage temperatures increase. MREs have been designed to have a minimum shelf life of 4 years when stored at 80 degrees Fahrenheit. UGR-H&S and UGR-Es have been designed to have a minimum shelf life of 18 months when stored at 80 degrees Fahrenheit. In fixed warehouse facilities, semiperishable items should not be stacked so high that they are damaged by higher

temperatures near ceilings. Items should not be stacked near or under hot water heaters, steam, water, heating pipes, or stored in metal buildings, ISO shipping containers, and trailers without adequate ventilation to prevent heat buildup. Fans should be used to provide ventilation and to prevent excessively high temperatures. Do not store food items in direct sunlight. In open storage, natural cover can help hold down damage from direct sunlight and high temperatures. Additional operational ration temperature storage data is located in Chapter 4.

Note. Do not cover UHT milk and/or other subsistence with black plastic in a field environment. Black plastic intensifies temperatures and causes rapid deterioration of subsistence.

HIGH HUMIDITY

7-70. Avoid high humidity, when possible, because it also encourages the growth of bacteria and molds and promotes insect infestation. High humidity also causes dry items to absorb moisture, making them cake and harden. Loss of flavor and discoloration may also occur in some items. Humidity also causes metal containers to rust and boxes to become weaker.

EXPOSURE TO LIGHT

7-71. Items packed in clear containers may lose their flavor because of overheating and become discolored when exposed to light for prolonged periods. To prevent this, keep clear containers boxed or in areas with reduced light exposure.

MRE STORAGE CONSIDERATIONS

7-72. MREs require special handling in freezing temperatures and contain chemical heating devices.

Handling Procedures of MREs in Freezing Temperatures

7-73. The flexible film pouch used for MRE items such as the entree or wet pack fruit becomes less flexible or more brittle at temperatures below 0 degrees Fahrenheit. The contents of the pouch freeze in random shapes, creating sharp edges or points. These edges and points may cut, puncture, or otherwise damage the pouch material if they are handled roughly. When the contents are thawed, bacteria can begin to grow and the food becomes unfit for consumption. Following the procedures below will reduce the possibility of damaged pouches and foodborne illnesses.

- MREs that become frozen during exercises will not be returned to the SSMO and should be kept frozen until issued for immediate consumption.
- If frozen MREs are returned to storage and thawed, they must be segregated and marked with a placard stating "HOLD-PREVIOUSLY FROZEN, RETURNED TO HEATED STORAGE ON *(DATE)*, CLEARED FOR ISSUE *(DATE–minimum of 30 days after returned to heated storage)"*. Frozen MREs will be tempered to ensure that the center of pallets or boxes reaches room temperature (77 degrees Fahrenheit). The MREs are then held at this temperature for thirty days and then inspected by VSP prior to issue. The time and temperature period stated will allow the contents of the pouches to react, if spoilage bacteria are present.
- Frozen MREs must be handled with care. Rough handling (for example, dropping boxes off trucks or throwing them into the truck) increases the risk of pouch failure and loss of the MRE.
- Rations not intended for freezing should not be frozen. Stationary MRE pouches may be frozen a number of times without damage to the pouch. The product quality will deteriorate with each freeze/thaw cycle, but the food will remain wholesome as long as the pouch is not damaged. The MRE should not be cycled through more than five freeze/thaw cycles.

Flameless Ration Heater

7-74. The FRH is a chemical heating device packed in each MRE. It is activated by adding water as prescribed on the package. FRHs packaged within the MRE box are not regulated by the Department of Transportation. No special handling or storage is required. Although bulk packaged FRHs are no longer issued, they may still exist in unit storage areas. Case lot FRHs when stored in large quantities do present a significant flammable hazard and should be turned in immediately for appropriate disposal and segregated from other trash. Coordinate this action with Army garrison environmental science staff and environmental safety office when operating at local training areas.

PEST CONTROL

7-75. Unit field sanitation teams have the primary mission of insect and rodent control in the field. Class I personnel must assist by maintaining properly established and sanitary operations. Pests can be controlled by pest proofing the storage area, depriving them of food, and using appropriate extermination measures. When pests are discovered in the storage area, the preventive medicine activity must be notified immediately.

INSECTS

7-76. Insects, especially cockroaches, are hitchhikers. Incoming supplies should be inspected carefully for infestation and empty cartons should be removed from the premises promptly. In fixed facilities, screens should be used on outside doors. When supplies are received, doors and screens should be open for the shortest time possible. Cracks in the walls and floors should be filled. Restrooms should be kept clean. Garbage cans should be kept covered with tight fitting lids and the contents disposed of promptly to prevent breeding. Subsistence should be stored on pallets away from walls to eliminate hiding places and to facilitate inspection and cleaning. If possible, subsistence should be on shelves or dunnage a minimum of 6 inches off the floor or ground and a minimum of 4 inches away from the walls to permit cleanup of spills. In open storage, supplies should be covered with tarpaulins or clear plastic when practical. Broken containers of food should be cleaned up quickly and completely. If areas do become infested, insecticides are used for control. Class I personnel must implement measures to ensure subsistence items do not become contaminated.

RODENTS

7-77. The first step in rat and mouse control is to prevent their entry into the storage facility. Holes should be covered or filled in and doors should close tightly. The next step is to eliminate rodent hiding places by placing subsistence on pallets away from walls. Finally, their food sources should be eliminated by proper garbage disposal and good housekeeping. If areas become infested, traps and poison baits can be used for elimination. The use of poison baits must be approved by the medical authority. Their approval is based on compliance with environmental stewardship principles. All environmental laws and regulations must be adhered to in the use of poisonous baits.

SANITATION AT CLASS I POINTS

7-78. Sanitation in a Class I point must be maintained per TB MED 530. Food can cause illness and death if it becomes contaminated. Food that must be disposed of may be a loss to the government and can have an adverse impact on mission accomplishment. Environmental protection laws and regulations must be followed when disposing of subsistence.

PERSONNEL

7-79. Class I personnel should be neat, clean, and free of disease and infection before they are allowed to handle subsistence. They should not use tobacco products when handling subsistence. Disposable gloves used in handling fresh foods should be impermeable to contamination and must be maintained in a clean

and sanitary condition. Personnel must wash their hands thoroughly before starting work, before eating, after breaks, and after using latrines.

AREA AND EQUIPMENT

7-80. Storage areas should be kept clean, orderly, and free of garbage at all times. Garbage should be disposed of in approved containers with tight-fitting lids. Spilled food should be cleaned up completely and as soon as possible to prevent insect and rodent infestation. Scales and MHE should be kept clean. Handwashing facilities should be readily available for personnel to use before starting to work, after each break, after using latrines, and whenever hands become soiled. The use of tobacco or tobacco products is always prohibited in ration storage areas.

TRANSPORTATION

7-81. Vehicles used to transport subsistence should be clean, free of moisture, and have pallets to keep subsistence off the bed of the truck. The front and rear flap must be lowered and secured during transport. Vehicles used to transport food are not to be used to transport garbage or petroleum products while transporting subsistence. The bed of the truck should be free of harmful protrusions (such as nails) that could puncture food containers. Refrigerated or insulated vehicles should be used to transport perishables when time, distance, and outside temperature could cause the temperature to rise above required safe levels for refrigerated items and frozen items.

CLASS I POINT SAFETY

7-82. Accidents cost money through the loss of man-hours and damage or destruction of food and equipment. The resulting loss of personnel, subsistence, and equipment could prevent Class I supplies from being issued to supported units in a timely manner. Figure 7-11 gives some general rules that should be included in the Class I safety program.

LOADING AND UNLOADING

- Position bridge plates and mobile ramps correctly and do not exceed load capacities.
- Chock rear wheels of trucks and trailers and use safety jacks when trailers are disconnected from their tractors.
- Check the truck flooring for breaks and weakness before loading and unloading.
- Remove loose straps and protruding nails from containers before unloading.
- Never block aisles, doorways, and windows.

HANDLING AND LIFTING

- Get a firm grip on the container, not on the metal bands or strapping.
- Get a firm footing, keeping your body weight even.
- Bend your knees, keeping your back straight and the load close to your body.
- Use your thighs and shoulder muscles to lift the load.
- Walk normally; making sure that you can see where you are going. Make sure that things that can trip over are out of the way. Keep the load close to your body and ease it to its resting place.
- Stack rations correctly. Put heavy boxes on the bottom.
- Wear gloves when handling crates or sharp or rough materials.
- Wear combat boots or safety shoes at all times.
- Wear helmets or hard hats in areas where Class I supplies are being lifted or hoisted.
- When possible, use MHE to move heavy supplies.

Figure 7-11. General rules for Class I safety program

USING TOOLS AND MHE

- Use the right tool for each job. Use nail pullers for opening boxes, use strap or wire cutters for cutting straps or wire, and use hammers for driving nails. Eye protection should always be available when manual and power tools are being used.
- Ensure that only properly trained personnel use tools and equipment.
- Follow safety precautions especially when using power tools.
- License personnel on a variety of MHE at the home station prior to deploying. Include MOS 92G personnel in the MHE licensing training to facilitate Class I operations during deployments.
- Follow MHE safety precautions at all times.
- Use only MHE with the rated load capacity for the supplies being moved.
- Maintain and service MHE per the organizational and operator's maintenance manuals.
- Refuel MHE only in designated areas and only with the engine off.
- Park MHE only in an approved area.
- Use only electric-powered MHE inside a warehouse.
- Personnel operating MHE should have a ground guide at all times.
- During loading, personnel picking up supplies should remain in a designated area away from MHE operations.

PALLETIZING SUBSISTENCE

- Use only containers, pallets, and dunnage that are in good condition.
- Stack pallet loads with a 4-inch clearance on all sides. (The clearance between stacks will permit air circulation.)
- Limit the height of the stacks based on floor load limits and the sturdiness of the containers. A minimum of a 2-foot clearance will be maintained between the top of the stack and an unobstructed ceiling. When pallets do not exceed 15 feet high and a sprinkler system or light/heating fixtures are present, maintain an 18-inch safety clearance below the sprinkler/fixtures. If pallet heights exceed 15 feet, maintain a 36-inch safety clearance below sprinklers/fixtures.
- When a space must be left on the pallet due to the configuration of the load, load the pallets with a four-point level top. Leave spaces only in the center. Place partially loaded pallets on the top of a stack or place the supplies on a rack.

PREVENTING FIRES

- For interior storage, post **NO SMOKING** signs in areas where smoking is not permitted.
- Keep combustibles away from heat sources.
- Collect trash daily and place it in proper refuse containers.
- Clearly mark fire aisles and exits and ensure that they are not blocked.
- Ensure that portable fire extinguishers are readily available and in good working order. Assign an operator to each extinguisher for use in case of fire and to inspect it at least once monthly.

Figure 7-11. General rules for Class I safety program (continued)

REDEPLOYMENT

DISPOSITION OF FIELD RATIONS AND RESIDUALS

7-83. At the end of the training exercise or operational deployment, field kitchens will turn in all unopened modules of UGRs, unopened MRE boxes, and other types of operational rations in unopened condition to their supporting Class I point or SSMO. When units are away from their home station and there is no transportation to return residuals to the home station, the unit food advisor should coordinate with other food advisors that may be at the training site to transfer the residuals to this unit for consumption or provide the Army Command or ASCC food advisor with a complete inventory of residual rations for disposition instructions.

RESIDUAL TURN-IN PROCEDURES

7-84. Field kitchens use DA Form 3294 to turn-in or transfer all residuals. Items are listed on the form by type of menu item (entrée, vegetable, starch, or dessert). The Class I point will reissue reusable items to other supported field kitchens or will consolidate all items and ship them to the next level of supply. All transfers from the Class I point will be completed on a DA Form 3294. During training exercises, the accountable Class I officer returns semiperishable residuals to a SSMO designated by the Army Command or ASCC. Their disposition is based on remaining shelf life, quantity, and the number of upcoming operations. All rations must be inspected by VSP upon turn-in for proper disposition.

END OF OPERATIONS ACCOUNTABILITY

7-85. The designated and/or accountable Class I manager for the field operation ensures that all reports and redeployment accountability procedures are completed. The Class I point objective is a zero balance between rations received and documentation of issue, turn-in, transfer, destruction, salvage, or condemnation. Financial Liability of Property Loss Investigation or AR 15-6, Investigation will be prepared per AR 735-5 when there is a difference between total receipts and total distribution. The SSA supply activity schedules an audit of their Class I points. All records of the Class I points must be reviewed for completeness and accuracy. Appendix F provides a guide for the review of Class I operation records.

This page intentionally left blank.

Chapter 8
Contingency Operations

This chapter discusses the logistic support requirements for CONOPS food service operations in an AO. Planning factors and operational considerations for CONOPS feeding require extensive coordination to ensure seamless feeding operations. The decision to request authorization for the implementation of CONOPS feeding is made by the theater commander based on mission requirements and whether forces are required to remain in the theater for an extended time (enduring presence). CONOPS food service and Class I operations are considered the movement to garrison-type dining facility operations supported by SPV or contractor direct-delivered subsistence. These garrison-type dining facility operations may be established initially upon entry into the theater or they may progress from unit TOE food service specialists using mobile kitchen equipment. Also included within this definition are mobile field kitchen operations transitioning to UGR-A Short Order Supplemental Menus during extended deployments in an AO.

TYPES OF OPERATIONS

8-1. CONOPS feeding may take many different forms depending upon mission requirements, the tactical situation, and logistical capabilities available within the AO. Operations may include—

- LOGCAP-contractor built and operated modular dining facilities.
- Contingency contractor-built and operated modular dining facilities.
- LOGCAP/Contingency contractor-remodeled (preexisting buildings) and operated dining facilities.
- LOGCAP-operated force provider module.
- LOGCAP-operated mobile field kitchens at forward operating bases (FOBs).
- Military-operated mobile field kitchens at FOBs.
- Military-operated force provider module.
- HN-built and operated dining facilities.

FEEDING STANDARD

8-2. The feeding standard for CONOPS, when garrison-type dining facilities are established is three quality meals each day with the capability to distribute, prepare, and serve the DA CONOPS Menu. Field kitchens will utilize UGR-A Short Order Supplemental Menus to provide additional menu choices when using UGRs. Additional information on each menu is discussed below and in chapter 4.

Note. Transition to LOGCAP feeding must be approved by HQDA G4 according to AR 30-22 and all supporting requirements (for example; personnel; equipment, refrigeration, storage, transportation, and SPV platform) must be in place prior to the transition.

UGR-A SHORT ORDER SUPPLEMENTAL MENUS

8-3. These menus are used to provide additional menu choices to reduce the redundancy of the UGR menus when personnel are being supported from mobile field kitchens during extended deployments.

These menus consist of easy-to-prepare, highly accepted breakfast and lunch/dinner short order menu choices such as hamburgers, hot dogs, ribs, chicken, pizza, burritos, breakfast sandwiches, and desserts. Unlike operational rations, these menus are not unitized. The menu components must be ordered by NSN from DSCP or the SPV. The use of these rations can greatly increase morale for personnel at FOBs that must continue to subsist from mobile field kitchens when other forces are being supported by garrison-type dining facility operations.

DA CONOPS MENU

8-4. This menu is mandatory for use with all garrison-type dining facility operations whether operated by military or contracted personnel. This cyclic menu provides quality menu choices for three meals daily and is nutritionally adequate to sustain forces in all types of environments. Class I planners must coordinate with DSCP and theater Class I and transportation managers to ensure that subsistence OST from the supplier's location (CONUS) to the theater is included in the planning guidance and subsistence estimates—this is a critical planning factor. If the OST from CONUS to the AO is 60 days, not including clearing port and transport to your location, subsistence orders must be submitted at a minimum 60+ days in advance of the actual requirement for the subsistence. Sounds fundamental, but there are hundreds of incidents where the OST is not included, resulting in shortfalls in subsistence. Avoid this all too often planning mistake. When you fail to plan, you plan to fail. The requirements for this menu have been coordinated with DSCP, which reduces the time needed to implement the menu in a new AO. Benefits of this menu include—

- Facilitates strategic planning for CONOPS feeding.
- Standardizes CONOPS subsistence support.
- Provides the theater food advisor, command food advisors, and subsistence suppliers with standardized menu recapitulation data used to facilitate the ordering and shipping process.
- Streamlines the operational supply line.
- Improves SPV fill rates by limiting the number of line items required to be stocked, ordered, and shipped.
- Incorporates maximum use of easy-to-prepare and pre-prepared food items which reduces labor, cooking equipment requirements, and food safety considerations in austere environments.
- Meets commander and customer expectations for continued food service support.

COORDINATION AND RESPONSIBILITIES

8-5. The movement to CONOPS feeding, which requires thorough coordination between theater Class I planners and several organizations that have the specific CONOPS feeding responsibilities, are discussed below. CONOPS feeding requires additional logistical support to establish and maintain the elevated feeding standards required for extended deployments. The command must use a contingency contract for this support directly with capable regional contractors or through the LOGCAP.

THEATER FSMB

8-6. As discussed in Chapter 3, once it is logistically possible, the theater food advisor will establish a theater FSMB to manage the theater food program. In addition to providing a forum for the exchange of subsistence operational procedures and distribution issue resolution, a key function of the FSMB is to provide an avenue to review the theater menus, refine food product issue factors, and recommend replacement of menu-based food products if required. Since ACES is the Executive Agent for the DA CONOPS Menu, all theater FSMB recommendations to replace items on the menu will be provided back to ACES for action.

ACES

8-7. ACES provides doctrinal guidance, technical assistance, and supervision of all CONOPS feeding including planning, operational procedures, training, accounting, and contracting. As the executive agent for the DA CONOPS Menu, ACES ensures the menu is nutritionally adequate and catalogs menu items

with the theater, DSCP, and the SPV. ACES oversees the revision of the menu periodically as needed and also works with DSCP to develop plans for the use of excess subsistence stocks within the theater as needed.

DLA/DSCP

8-8. DLA/DSCP coordinates CONOPS menu requirements with capable regional SPVs. DLA/DSCP will determine, in coordination with the theater operational planners and the SPV, when the tactical situation permits the direct delivery of rations to dining facility operations and/or the establishment of forward subsistence distribution centers (SDCs) within the AO.

USAMC LOGCAP

8-9. USAMC manages the LOGCAP for the Army. The LOGCAP rapidly provides material and manpower support to the Army under pre-established umbrella contracts. Class I support can include transportation and handling of Class I as well as establishing, supplying, and operating CONOPS garrison-type dining facilities and mobile field kitchens at FOBs where required. The ASCC may also fund LOGCAP contracts in the AO. Army LOGCAP contracts may last 18 months and can only be extended by the Army G4. Additional information on the LOGCAP can be found in AR 700-137, AR 715-9, and the USAMC website: www.amc.army.mil/logcap/.

DEFENSE CONTRACT MANAGEMENT AGENCY

8-10. DCMA representatives called Administrative Contracting Officers (ACO) work closely with USAMC LOGCAP to oversee each specific LOGCAP Task Order for services requested by the Army. A LOGCAP Task Order will normally cover all requested logistics services for a particular base camp or region. Class I planners/advisors, supported commands, and food service specialists will work closely with the ACO to monitor the performance of the contractor.

CONTINGENCY CONTRACTING ACTIVITY

8-11. If capable contractors are available within the theater, commands can contract directly with them through the theater PARC. Units submit supply and service requests through their logistical channels to the PARC. The PARC uses the Acquisition Review Board process to determine contracting priorities and allocation of resources as part of the theater contracting support plan (CSP). Normally, during deployments to a theater with limited local economy resources, all required service contracting will go through LOGCAP.

SUBSISTENCE SUPPLY

8-12. The transition to CONOPS feeding is a transition from tactical Class I sustainment activities/points to SPV and/or contractor direct-delivered subsistence to dining facility operations. CONOPS dining facility operations may improve their feeding standards over time, just like initial-entry TOE field kitchen operations, due to the ramp up of the line item A-ration pipeline, prime vendor storage and distribution capabilities, and the continued stabilization of the theater logistical infrastructure.

8-13. Initially, LOGCAP/contingency contractors may procure subsistence from VETCOM approved sources for their own dining facility operations due to the unavailability of an adequate SPV platform within the AO. Contractors providing their own subsistence will meet all applicable U.S. subsistence source requirements (for example, Berry Amendment and Buy American Act) and only procure subsistence from VETCOM approved sources. VETCOM will check all subsistence for source compliance and wholesomeness. Once the tactical situation permits and a DSCP SPV platform is capable, all subsistence will be provided by the designated SPV.

TRANSITION SEQUENCE

8-14. The process for transitioning to CONOPS feeding requires detailed planning and coordination. Planning for movement to CONOPS feeding may begin at any time prior to or during the deployment. The Theater Feeding Plan Time Line (figure 3-1) previously discussed in Chapter 3 for operational deployment Class I supply planning should be used by theater Class I planners for planning CONOPS feeding. The CONOPS feeding shown on this condition based planning time line during the latter stages of the expeditionary period and in the temporary period has progressed from TOE field kitchen operations.

8-15. Typically, mobile field kitchens are used during the initial phases of operational deployments. As the theater stabilizes and logistically matures, food service operations are transitioned to garrison-type dining facility structures if an enduring presence is required. Based on the mission and the location of the forces within the AO, not all of the forces may be supported by base camp garrison-type dining facilities. Forces may be located for long periods of time at FOBs that do not allow semi permanent structures. Class I planners, in coordination with commanders and operation planners, will determine whether to operate these kitchens with military food service specialists or contract these operations out through LOGCAP. FOB feeding operations will continue to use the UGR-A as the primary ration for each meal and will be supplemented with the UGR-A Short Order Supplemental Menus. Class I distribution may continue to be operated by tactical Class I points or may transition to SPV/Contractor direct delivery.

8-16. Force provider food service operations may be operated by military food service specialists MOS 92G or contractor personnel through the LOGCAP. An overview of force provider food service operations begins in paragraph 8-56.

8-17. LOGCAP/contingency contractor-built and operated garrison-type dining facilities (modular or renovated preexisting buildings) do not have to progress from mobile field kitchen operations. If theater planners determine a requirement, the theater may establish these operations initially in the AO. Example: during the initial stages of OIF, theater Class I planners awarded contingency contracts to build and operate food service operations (Force Provider and modular buildings) in the Kuwait intermediate staging base (ISB) State Camps. These contracts allowed combatant commanders to concentrate on building their combat power for the upcoming battle in Iraq rather than focusing on self-sustainment logistics in Kuwait. Regardless of when LOGCAP/Contingency Contract garrison-type dining facilities are established, Class I planners must ensure all of the necessary logistical support is in place to support them. Contracting considerations for contracting dining facility operations within an AO when transitioning to CONOPS feeding begins in paragraph 8-18. Establishing LOGCAP/contingency contract garrison-type dining facility operations should be sequenced as follows:

- Theater planners coordinate with ACES for CONOPS planning, contracting, and menu guidance.
- Theater planners coordinate with DSCP for SPV and menu support. SPV storage and distribution support includes:
  - Adequate refrigerated and dry warehousing space.
  - Container retrograde plan.
- Adequate distribution capability (refrigerated and dry transportation) within the AO.
- Theater planners coordinate with USAMC LOGCAP and PARC Representatives for contracting support. Contracting support includes:
  - Adequate size of dining facility operation(s) to support required forces.
  - Adequate storage capabilities (refrigerated and dry) at dining facility site.
- Theater planners coordinate SPV distribution requirements (convoy movement and container retrograde) and procedures.
- Theater planners coordinate with base-camp commands for external support to the contracted dining facility operation including:
  - Potable water and fuel support.
  - Waste disposal.
  - SPV/Contractor driver life support.

- Adequate MHE for the off loading of rations.
- Contracting Officer Representative (COR) or Contracting Officer Technical Representative (COTR) support.

CONTRACTING CONSIDERATIONS

8-18. Class I planners and contracting officers must ensure all Class I source, distribution, storage, and food preparation areas are covered within the contract to meet required performance levels and standard levels of service. The use of civilian contractors involves a higher degree of risk and a risk assessment to both the overall mission and safety and security to contractor personnel must be considered in the planning stages. A LOGCAP/contingency contract operation is considered the same type of support provided to a Soldier in a CONUS or OCONUS garrison dining facility operation and therefore all faucets of management and food service operational procedures must be established (forecasting, ordering, receiving, storage, food preparation, sanitation, serving, headcounting, and accounting). The paragraphs below discuss factors the Class I planner and contracting officer should consider when establishing a LOGCAP or contingency contract for CONOPS feeding within an AO.

PERFORMANCE WORK STATEMENT (PWS)

8-19. The PWS is the document that contains the performance standards required of the contractor. The PWS must include adequate details to ensure the contractor knows what services must be performed but not overly detailed as to hamper the contractor in the performance of their duties. Contracts must also retain some flexibility to meet unforeseen obstacles due to the nature of CONOPS. Historically, LOGCAP/contingency contract food service PWSs are very general in nature. As a result of OIF, ACES has provided on-going coordination with USAMC LOGCAP to incorporate specific food service performance requirements into all food service PWS for CONOPS. Theater Class I planners should contact ACES for the latest copy of these requirements. Due diligence must be exercised to ensure the government receives the contracted services required at the best cost.

CONTRACTOR PERFORMANCE AND OVERSIGHT

8-20. A surveillance program is necessary to ensure that the contractor is providing the services required of the contract. The PARC, ACO for LOGCAP, or Contracting Officer (KO) for contingency contracting is the only official authorized to modify the contract of the dining facility operation. Supported commands should coordinate all contractor support through either of these individuals or the government could incur additional cost to the contract. Often the ACO or KO has many other contracts to oversee and cannot personally conduct surveillance of the contractor. In these situations, the command with operational control of the contracted dining facility will provide food service advisory personnel (Food Service Technicians [MOS 922A] and Senior Food Operations Management NCOs) and Soldiers, who are no longer performing MOS 92G cook tasks as a result of the institution of the contract, to perform duties as CORs (contingency contract) or COTRs (LOGCAP). Prior to performing these duties, these food service specialists must be designated on orders by the ACO or KO. ACES has a COR/COTR Mobile Training Team (MTT) that can provide training in the AO or to units at home station prior to deployment.

SIZE AND LOCATION OF THE DINING FACILITY OPERATION

8-21. Planning for the size and location of the dining facility can be difficult because the forces are often repositioning within the AO based on current and future mission requirements. Building a dining facility to support 10,000 personnel at location A may seem like a good idea at the time but future operational plans may indicate that 90 days from now only 5,000 personnel will be at this location. Planning for the dining facility location and size must also take into consideration the number of personnel that will be supported in the facility (eat in) and the number the facility will support by remote site feeding. It does not make good sense to build a dining facility to support 10,000 to eat-in only to feed 2,000 and remote site feed 8,000. Class I planners should consider the best available future force plans and include all U.S. Military and Coalition Forces, contractors, Third Country Nationals (TCNs), DOD, and DA personnel to be supported. Additionally, all estimated remote site feeding requirements should be included in the contract to include

who is responsible to provide insulated food and beverage containers. The contractor should be responsible for cleaning and maintaining the containers and the supported unit should be responsible for the transportation of the containers from the dining facility to the feeding site and back to the dining facility. The ACES Facility and Engineering Division can assist in design and equipment requirements to support mission requirements.

SUBSISTENCE STORAGE CAPABILITIES AT THE DINING FACILITY OPERATION

8-22. Just as important as contracting for the right feeding capacity is ensuring the contract contains the requirements for the contractor to have adequate storage capabilities (refrigerated and dry) to support the theater menu and issue cycle. Refrigerated (frozen and chill) storage is critical and planners must provide the contracting officer with estimated storage requirements for the contract. The theater, in coordination with the SPV, will establish the issue cycle based upon the delivery distance, transportation capabilities, theater convoy capabilities, and current threat conditions. Distribution and storage capacity is referred to in DOS. Based on theater conditions, it would not be uncommon for a dining facility operation to maintain a 4 to 12 DOS at each dining facility operation. An important consideration for all refrigeration requirements is to include all required maintenance responsibilities within the contact.

ENVIRONMENTAL CONTROL UNITS (ECUS)

8-23. The contract should stipulate that the contractor is responsible for providing each dining facility operation with ECUs that provide appropriate air-conditioning or heat depending upon the climate.

POTABLE WATER AND FUEL SUPPORT

8-24. The contract should clearly stipulate whether government-furnished water and fuel will be provided to the contracted dining facility operation. If the government will provide the water and fuel; the Class I, water, and fuel planners, in coordination with the potential dining facility contractors, should determine daily dining facility requirements. Also, the contract should stipulate who will provide the storage for the water and fuel and what the storage capacity requirements will be.

POTABLE ICE AND BOTTLED WATER

8-25. As discussed in Chapter 3, theater Class I planners will determine whether to contract for delivery of ice and bottled water or establish production plants at selected base camps within the theater based on source availability and distribution capabilities.

- Contracted dining facility operations use potable ice to chill beverages during meal periods. The contract should stipulate whether the contactor will produce potable ice in the dining facility or whether the government or the contractor will ship ice to the dining facility. If the ice is to be shipped in, the contract should stipulate the estimated storage requirements and who is responsible for receiving, storing, and issuing it.
- Supported unit personnel will require additional ice in arid climates to cool bottled water and other authorized beverages. In arid climates, Class I planners should consider whether the contractor or the government will maintain ice issue points on the base camp. It is best to not duplicate efforts for this service. Whoever provides ice to the dining facilities should also maintain the required number of ice issue points for support of unit personnel.
- If the theater is issuing bottled water, the contract should stipulate who (government or contractor) will receive, store, and issue bottled water to the units/Soldiers.

WASTE AND TRASH

8-26. Significant amounts of waste (food, water, and trash) are generated daily because of food preparation and meal service. Procedures and responsibilities for the disposal of this refuse should be included in the contract.

HEALTH AND SAFETY

8-27. The health and safety of all personnel who eat in the dining facility operation is paramount to the success of the mission. Contracted dining facility operations must maintain high levels of sanitation and hazard analysis critical control point (HACCP) checks to prevent food-borne illness. Due to the nature and location of CONOPS (often in third-world countries) there must be an increased awareness by the contractor and DOD civilian or military contract management and quality assurance oversight personnel to ensure proper food safety and employee controls and training are continually in effect. Environmental sciences, preventive medicine, and veterinary personnel will maintain required surveillance programs of contracted dining facility operations. Class I planners should consider the following contractor employee requirements for inclusion in the contract:

- Work VISA/credentials for each food service employee.
- Food handlers' health examination and certification to include the taking and testing of stool samples.
- Clearance and security considerations for local national or contracted employees.
- Contractor retains a sample of each food product produced for a designated time period. These samples will be tested if any food-borne outbreak occurs.
- Incorporation of DA Pamphlet 30-22 food risk management procedures.

OPERATIONAL RATION STOCKS

8-28. Even though the theater may transition to contract dining facility operations, units will still require operational rations due to mission requirements. The theater, in coordination with the commands within the AO, will also establish required operational ration contingency (emergency) stockage levels. Class I planners should determine the following:

- Since CONOPS feeding primarily uses line item A-rations, the requirements for operational rations will be significantly reduced. Maintaining large operational ration stockage levels at each level of supply will increase the waste and destruction of these rations due to shelf life requirements. Class I planners should conduct a thorough review of operational ration stockage level requirements at each level of supply and reduce these levels upon implementation of CONOPS feeding. The MRE is the primary ration for contingency stocks. UGRs should not be used for contingency ration stocks due their limited shelf life.
- With the transition to contracted dining facility operations, the SPV often takes the place of the Class I sustainment activity/point. If this is the case, Class I planners should determine if the contractor will begin to stock and issue operational rations to units required for daily operations from the proximity of the dining facility operation or on the base camp. If the contractor is to maintain operational rations, Class I planners should ensure that the estimated storage requirements for these rations are included in the PWS and specified as such. The contract should also require that these rations are held in temperature controlled storage to maintain maximum shelf life.
- The contract should also include stipulations that operational rations may be rotated within the menu cycle of the contracted dining facility as determined by the theater or local command. This stipulation provides the theater or local command with a way to utilize excess operational stocks and to rotate stocks due to shelf life requirements. The contract should also stipulate a reduced cost rate to the government for services rendered by the contractor when operational ration stocks are rotated into the menu cycle on a consistent basis or when the theater/local command changes the ration cycle through the ACO or KO for an extended time such as when the command wants to begin serving an MRE for the lunch meal.

HOLIDAY MEALS

8-29. Contracts should include requirements to provide special meals to Soldiers for observed holidays such as the Army Birthday, Thanksgiving, Christmas, Independence Day, New Years, and so forth. The contract should also indicate who is responsible for providing any decorations for these meals.

SPECIAL FUNCTIONS, RECOGNITION EVENTS, AND MORALE SUSTAINING ACTIVITIES

8-30. Social functions and morale sustaining activities are an accepted and expected part of Army culture, and serve as a way to increase esprit de corps and maintain morale. Food service support for these functions and activities are not readily available outside of the garrison-type dining facility in an undeveloped AO. Authorized subsistence items and specific operating procedures for these events are included in AR 30-22 and DA Pamphlet 30-22. Specific guidance on supporting these events should be obtained from the Concepts, Systems, and Policy Division of ACES. Contracts should include requirements for supporting these authorized events—

- Very Important Person (VIP)/Distinguished Visitor Lunches and Conferences.
- Morale Sustaining Activities (Organization Days).
- Monthly Promotion and Birthday Recognition.
- Transfer of Authority Events.

8-31. The theater food advisor, in conjunction with the theater commander, will establish the authorized level, support request, and approval routing requirements for each type of event. Class I planners must also consider food handling protection requirements for organizations drawing subsistence from the garrison-type dining facility operation for these events. The risk of foodborne illness is greater with untrained personnel handling raw subsistence. In these cases, Class I planners should coordinate with PREVMED personnel to conduct food handling classes as a requirement prior to personnel drawing subsistence from the garrison-type dining facility operation.

ACCOUNT MANAGEMENT

8-32. Theater Class I planners will ensure account management procedures are included within CONOPS food service contracts. CONOPS contractors will use these procedures to account for the subsistence ordered/used and number of personnel fed. Garrison-type dining facility operations utilizing the DA CONOPS Menu will use Army Ration Credit System (ARCS) accounting principles for headcounting and subsistence management instead of the AFFS. The ARCS is the Army's garrison subsistence requisitioning and accounting system.

8-33. Manual and automated Management Information Systems (MIS). Contractors will be required to use either manual accounting procedures or electronic automated MIS as determined by DSCP and the Army. Automated MIS could include the STORES, AFMIS, and the future Common Food Management System (CFMS). Automated MIS will be accessed for use on the Internet. DSCP/Army will establish all access user accounts and provide user logins/passwords as well as initial training on the use of the MIS. Once trained, contractors will provide all sustainment training on the use of the MIS to their own personnel.

ACCOUNT MANAGEMENT PROCEDURES

8-34. As a result of OIF, ACES and DSCP has developed several ARCS food service operation SOPs specifically for CONOPS dining facility operations. Theater Class I planners should contact the Concepts, Systems and Policy Division of ACES for the most current CONOPS account management SOPs. Specific account management procedures will be established in ordering, receiving, storing, inventories, preparation, and service of subsistence, headcounting, and headcount and account reporting. Overviews of each of these areas are discussed beginning with paragraph 8-35. Command food service staffs and appointed COR/COTRs discussed in paragraph 8-20, should assist the contractor in meeting the goals and objectives of these account management procedures.

ORDERING

8-35. All CONOPS feeding sites must transition to a full pull system prior to implementation. An excessive amount of subsistence will build up at the CONOPS feeding sites when operating under the push system. Upon implementation of a SPV platform to support garrison-type dining facility operations and FOB feeding sites, DSCP, in coordination with the SPV, will establish the order flow processes and ordering procedures utilizing automated MIS. DSCP will establish accounts with user names and

passwords for each dining facility operation to access and order rations through the MIS website on the Internet. DSCP, in conjunction with the SPV, will also establish and provide not-in-stock (NIS) and shortage-item operational procedures and an order frequency schedule to each dining facility operation. The SPV will coordinate all subsistence NIS with the ordering customer for approval of substitutions prior to shipment.

RECEIPTING

8-36. The SPV will provide an electronic order invoice to the dining facility contractor and the delivery driver will have an additional copy for ration personnel to account for and sign the receipt for items received. Any discrepancies between the amount ordered and received or items that are spoiled or not fit for consumption will be annotated on the receiving document. After receipt, the contractor will input the received quantities into the MIS adjusted inventory. The received quantities are used for correct payment of the SPV and for accountability of subsistence at the dining facility.

Fast Pay

8-37. Fast pay is a system used to expedite payment to the SPV in an AO. The SPV fills orders and loads trucks according to dining facility order. Once the SPV trucks have departed the warehouse in route to the final destination, the SPV will submit the invoice to DSCP for payment. Once the MIS adjusted detail and signed dining facility ration invoice are received by DSCP, they will be reconciled against the fast pay invoice and any discrepancies will be adjusted and credit provided by SPV to the government.

Subsistence Condemnation

8-38. Spoiled/unfit subsistence arriving to or at the dining facility will be inspected and condemned by VETCOM personnel. Based on the circumstances of the condemnation, the government, contractor, or SPV may be held liable for the loss of the subsistence. If the contractor or SPV is found liable, the government will be credited for the cost of the condemned subsistence. Procedures for condemnation and processing liability can be accomplished using manual methods or Army automated AFMIS web based system. Specific procedures are as follows:

- VETCOM personnel are contacted when spoiled/unfit subsistence is delivered to the dining facility or spoiled/unfit subsistence is discovered in storage at the dining facility.
- VETCOM personnel manually complete the DA Form 7538 (*Subsistence Serviceability Certificate*) condemning subsistence.
- VETCOM personnel forward completed DA Form 7538 to the theater surgeon.
- Theater surgeon forwards copy of completed DA Form 7538 to the theater food advisor.
- If the SPV is determined liable for the loss of government subsistence, the contractor will not receipt for subsistence and the theater food advisor will provide a copy of the DA Form 7538 to the SPV COR for reimbursement to the government.
- VETCOM personnel in the AO can use the VSP condemnation process function of the Army AFMIS web based system to accomplish the same condemnation procedures.
- If the contractor is determined liable for the loss of government subsistence, the theater food advisor will provide a copy of the DA Form 7538 to the responsible ACO for reimbursement to the government.

Note. The SPV will not be held liable for VETCOM condemned subsistence if it is the result of the military escort.

INVENTORIES

8-39. Dining facility contractors will conduct a 100 percent physical inventory upon receipt of issues and on weekly basis at a minimum. Inventory procedures will be according to AR 30-22 and DA Pamphlet 30-22, Chapter 3. The inventory will be managed to maintain accountability and prevent loss of subsistence and funds.

STORAGE

8-40. Garrison-type dining facilities and FOBs will maintain adequate storage according to mission requirements and stockage objectives. Food service specialists will maintain proper rotation and documentation, consistent with good inventory and storage practices for rations received to prevent loss of subsistence. Paragraph 8-22, discusses contracting requirements for subsistence storage.

FOOD PREPARATION

8-41. Contractors and military personnel will prepare subsistence according to Armed Forces Recipe Cards, SOPs, or manufacturer's instructions. Production schedule and other subsistence accountability documents will be maintained. Progressive cooking techniques will be used in preparation of subsistence items.

PORTION CONTROL

8-42. Food servers will follow the appropriate Armed Forces Recipe Card (TM 10-412) and SOPs for all serving sizes. Additional servings can be provided if requested by the diner.

HEADCOUNTING AND HEADCOUNT REPORTING

8-43. Garrison-type dining facilities will support many different categories of diners (U.S. military, Coalition Forces, DOD/DA civilians, DOD/DA contractors, AAFES personnel, Red Cross, MWR, dining facility TCN and staff personnel, and so forth). In an AO, these personnel are supporting the forces and often do not have any other place to subsist other than contracted or military operated dining facilities. Headcounting considerations and procedures are as follows.

Actual Strength Versus Supported Strength

8-44. Actual strength is the total number of Soldiers in the theater; this may also include all other categories of diners. Supported strength is the number of Soldiers and other diners that are actually fed at the CONOPS dining facilities. When projecting headcount, military leadership must not base projected feeding figures on actual strength but rather on supported strength estimates to prevent over preparation and waste of government subsistence. Contingency contracts typically have "headcount bands" used to substantiate the amount of payment claimed by the contractor due to the movement of forces within the AO based on current mission requirements. Accurate headcount data by the government is the key to ensuring that the contractor is paid only for their performance, based on the number of meals actually provided to Soldiers and other diners. The maintenance of accurate headcount data by meal is the only method that verifies accurate headcount data for the government and is a key management tool used to avoid inflated contractor claims for payment and inaccurate subsistence estimates.

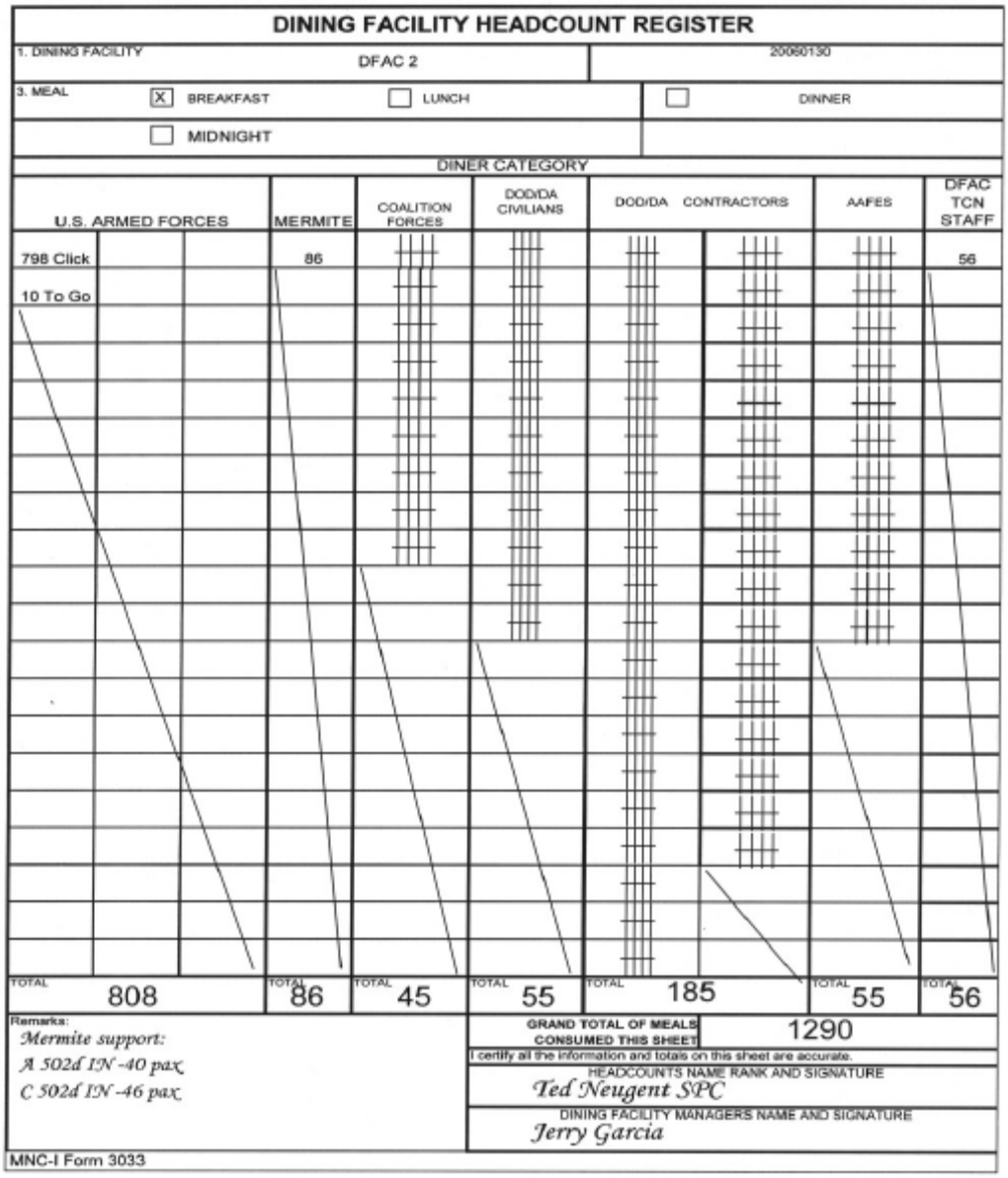
Documentation

8-45. Headcounters will be MOS 92G food service specialists (if available) or detailed personnel from a military unit. Personnel performing headcounter duties will do so according to AR 30-22 and DA Pamphlet 30-22. Capturing and reporting headcount data of each different category of diners consuming any portion of a meal in CONOPS dining facilities is mandatory.

Headcount Register

8-46. The Headcount Register (figure 8-1) will be used to capture the headcount for each meal served. Individual signatures are not required, but the headcount will be recorded into different categories as shown on the figure. The headcounter will make a tick mark under the appropriate category of each diner as they enter the dining facility. The headcounter will check the ID of all personnel except those military personnel in uniform. At the conclusion of the meal, the headcount will add up the tick marks from each category and record the number on the form for that category. If a clicker is used to count personnel, then the number from the clicker can be recorded under that category and the remaining space crossed off. The headcounter will add all categories together for a grand total number and then sign verifying the headcount numbers for the form only. The remaining space in each category will be crossed off to ensure no

additional tick marks can be recorded. The headcounter will also add in any remote site feeding the contractor provided in the appropriate column once documentation is verified and on file. After all forms for that meal have been completed and signed, the headcounter will turn them into the dining facility manager.



DINING FACILITY HEADCOUNT REGISTER

1. DINING FACILITY: DFAC 2 | 20060130

3. MEAL: [X] BREAKFAST [ ] LUNCH [ ] DINNER [ ] MIDNIGHT

DINER CATEGORY

	U.S. ARMED FORCES	MERMITE	COALITION FORCES	DOD/DA CIVILIANS	DOD/DA CONTRACTORS	AAFES	DFAC TCN STAFF
798 Click		86					56
10 To Go							
TOTAL	808	86	45	55	185	55	56

Remarks:
Mermite support:
A 502d IN -40 pax
C 502d IN -46 pax

GRAND TOTAL OF MEALS CONSUMED THIS SHEET: 1290

I certify all the information and totals on this sheet are accurate.

HEADCOUNTS NAME RANK AND SIGNATURE: Ted Neugent SPC

DINING FACILITY MANAGERS NAME AND SIGNATURE: Jerry Garcia

MNC-I Form 3033

Figure 8-1. Headcount Register

Headcount Record

8-47. The Headcount Record (figure 8-2) compiles headcount data for each meal served by day. This form is used to consolidate the number of meals by category fed from the Headcount Register. The headcounter will total each meal by category and enter it onto the Headcount Record after each meal. All categories of diners will be totaled for each meal. At the end of the final meal served for that day the headcounter and dining facility manager will sign and date the form. The Headcount Record will be used to transfer the entries by category of diner to the Headcount Report with the exception of dining facility TCN and contractor staff. Deducting the TCN and staff from the total number fed for each meal is accomplished

because the U.S. Government does not reimburse the contract provider for services provided for their personnel. However, the government must account for the rations consumed by the contract provider for their staff on the DA Form 7454 (*Monthly Earnings and Expenditures Record*) to get an accurate account for subsistence issued and consumed by everyone subsisting in the dining facility for each meal served.

SAMPLE DAILY HEADCOUNT RECORD

UNIT/ORGANIZATION Oasis				DATE 31 Jul 05
	BREAKFAST	LUNCH	DINNER	MID-NIGHT MEAL
SECTION A				
U. S. FORCES	1253	1571	1666	
MERMITE				
COALITION FORCES	189	200	202	
DOD/DA CIVILIANS	14	14	17	
DOD/DA CONTRACTORS	353	342	351	
AAFES				
DFAC TCN STAFF	49	162	56	
OTHER				
OTHER				
OTHER				
OTHER				
SECTION B				
TOTAL (TRANSFER TO MONTHLY EARNINGS AND EXPENDITURE REPORT)		2289	2292	
SECTION C				
TOTAL MINUS TCN STAFF (TRANSFER TO HEADCOUNT REPORT)		2127	2236	

MANAGER'S SIGNATURE	COTR'S SIGNATURE	DATE

Figure 8-2. Headcount Record

Headcount Report

8-48. The Headcount Report (figure 8-3) compiles headcount data for each day and maintains four days of data at a time. The dining facility manager will enter the data from the Headcount Record daily onto the Headcount Report. The COR/COTR will verify and sign the Headcount Report every four days. The

Headcount Report will maintain a running total of headcount for all meals by category, so that the last report for that reporting period will have the grand total of headcount by meal category. The COR/COTR will verify and sign the Headcount Report and then forward a copy to the next higher headquarters.

HEADCOUNT REPORT

1. MONTH AND YEAR			2. DINING FACILITY						
LINE	CATEGORY a	MEAL	DATE (YYYYMMDD) 20050729 HEADCOUNT b	DATE (YYYYMMDD) 20050730 HEADCOUNT c	DATE (YYYYMMDD) 20050731 HEADCOUNT d	DATE (YYYYMMDD) HEADCOUNT e	TOTAL OF COLUMNS b THRU e f	TOTALS FROM LAST REPORT g	CUMULATIVE TOTAL TO DATE h
SECTION A									
1	U.S ARMED FORCES	BRK	1250	1245	1253		3748	10640	14388
		LUN	1562	1569	1571		4702	14027	18729
		DIN	1647	1680	1666		4993	15213	20206
		MNM	0	0	0		0	0	0
2	MERMITE	BRK	0	0	0		0	150	150
		LUN	0	0	0		0	0	0
		DIN	0	0	0		0	0	0
		MNM	0	0	0		0	0	0
3	COALITION FORCES	BRK	190	190	189		569	1703	2272
		LUN	188	188	200		576	1509	2085
		DIN	210	210	202		622	1474	2096
		MNM	0	0	0		0	0	0
4	DOD/DA CIVILIANS	BRK	15	15	14		44	138	182
		LUN	17	17	14		48	132	180
		DIN	14	14	17		45	134	179
		MNM	0	0	0		0	0	0
5	DOD/DA CONTRACTORS	BRK	342	342	353		1037	3119	4156
		LUN	332	332	342		1006	2949	3955
		DIN	350	350	351		1051	2304	3355
		MNM	0	0	0		0	0	0
6	AAFES	BRK					0	0	0
		LUN					0	0	0
		DIN					0	0	0
		MNM					0	0	0
7	MEALS SOLD FOR CASH	BRK					0	0	0
		LUN					0	0	0
		DIN					0	0	0
		MNM					0	0	0
8	OTHER	BRK					0	0	0
		LUN					0	0	0
		DIN					0	0	0
		MNM					0	0	0
SECTION B									
9	TOTAL	BRK	1797	1792	1809	0	5398	15750	21148
10	TOTAL	LUN	2099	2106	2127	0	6332	18617	24949
11	TOTAL	DIN	2221	2254	2236	0	6711	19125	25836
12	TOTAL	MNM	0	0	0	0	0	0	0
3. REMARKS						TOTALS	18441	53492	71933

4. DATE (YYYYMMDD)	Name and signature of COTR	Name and signature of Dining Facility Manager

Figure 8-3. Headcount Report

ACCOUNTING

8-49. All government-furnished subsistence is accountable by the Army or the contractor from receipt until consumption. Contract dining facility managers or the SFOS will complete the Monthly Earnings and Expenditure Record (figure 8-4) to provide accountability of rations issued for the dining facility operation. The Monthly Earnings and Expenditures Record is a major indicator of efficiency and compliance and the dining facility manager uses it to report costs. The dining facility manager maintains this record daily by entering in the headcount data from the Headcount Record and calculating the daily and cumulative allowances. Issue receipts are entered in as issues on the day they are received by utilizing the STORES adjusted detail report at the dining facility. The COR/COTR will reconcile the report against the Headcount Report and receipts every 10 days and at the end of the accounting period. After the record is reconciled at the end of the month, the COR/COTR forwards a copy to next higher headquarters.

MONTHLY EARNINGS AND EXPENDITURES RECORD

For use of this form, see DA PAM 30-22; the proponent agency is DCS, G4.

1. UNIT		2. ACCOUNTING PERIOD				3. BDFA				$17.70
4. BDFA BREAKOUT										
a. BREAKFAST $3.54		b. LUNCH $7.08		c. DINNER $7.08		d. MIDNIGHT $7.08		BEGINNING INVENTORY		
5. DINING FACILITY TRANSACTIONS										
a. DATE	b. BRK HEADCOUNT	c. LUN HEADCOUNT	d. DIN HEADCOUNT	d. MNM HEADCOUNT	f. ALLOWANCE TODAY	g. CUMULATIVE ALLOWANCE	h. TOTAL ISSUES	i. CUMULATIVE ISSUES	j. EARNINGS & EXPENDITURES STATUS TO DATE (IF COL g IS GREATER THAN COL i, ACCT IS UNDER SPENT; IF COL i IS GREATER THAN COL g, ACCT IS OVEREXPENT (+))	
1-Jul	1472	1505	1997	0	30,005.04	30,005.04	0.00	0.00	(30,005.04)	
2-Jul	1395	1670	2047	0	31,254.66	61,259.70	163,749.35	163,749.35	102,489.65	
3-Jul	1434	1779	2170	0	33,035.28	94,294.98	0.00	163,749.35	69,454.37	
4-Jul	1501	1695	2105	0	32,217.54	126,512.52	0.00	163,749.35	37,236.83	
5-Jul	1393	1489	2074	0	30,157.26	156,669.78	0.00	163,749.35	7,079.57	
6-Jul	1454	1775	2333	0	34,231.80	190,901.58	134,019.44	297,768.79	106,867.21	
7-Jul	1351	1385	2111	0	29,534.22	220,435.80	0.00	297,768.79	77,332.99	
8-Jul	1135	1660	1941	0	29,512.98	249,948.78	0.00	297,768.79	47,820.01	
9-Jul	1431	1785	2427	0	34,886.70	284,835.48	0.00	297,768.79	12,933.31	
9-Jul	Vet Condemnation					284,835.48	(3,457.20)	294,311.59	9,476.11	
10-Jul	1232	1525	2172	0	30,536.04	315,371.52	146,864.53	441,176.12	125,804.60	
11-Jul	1154	1610	2010	0	29,714.76	345,086.28		441,176.12	96,089.84	
12-Jul	1075	1705	2155	0	31,134.30	376,220.58		441,176.12	64,955.54	
13-Jul	1450	1751	2210	0	33,176.88	409,397.46		441,176.12	31,778.66	
14-Jul	1379	1698	2130	0	31,983.90	441,381.36		441,176.12	(205.24)	
15-Jul	1299	1575	2045	0	30,228.06	471,609.42		441,176.12	(30,433.30)	
16-Jul	1450	1810	2250	0	33,877.80	505,487.22		441,176.12	(64,311.10)	
17-Jul	1379	1750	2155	0	32,529.06	538,016.28		441,176.12	(96,840.16)	
18-Jul	1250	1725	2096	0	31,477.68	569,493.96		441,176.12	(128,317.84)	
19-Jul	1175	1675	1991	0	30,114.78	599,608.74	162,013.61	603,189.73	3,580.99	
20-Jul	Transfer					599,608.74	82,954.20	686,143.93	86,535.19	

Figure 8-4. Monthly Earnings and Expenditures Record

SPV/CONTRACTOR DISTRIBUTION CONSIDERATIONS

8-50. With the transition from tactical Class I points to SPV/Contractor direct-delivered subsistence, Class I planners should consider the following factors.

FORWARD SUBSISTENCE DISTRIBUTION CENTER

8-51. During transition planning for CONOPS feeding, Class I planners, in coordination with DSCP, USAMC LOGCAP, or the PARC, should determine the feasibility of establishing a forward SDC based on required distribution distances and methods, SPV/Contractor distribution capabilities, and the threat levels

within the AO. The physical make-up of the SDC could include semi-permanent modular structures or preexisting buildings for warehouses or some warehousing capability with electrical plug-ins for refrigerated containers. The size of the SDC should be determined based on the ration cycle, the volume of rations being distributed, and the required stockage levels. A drawback to establishing a forward SDC is that the subsistence must be handled an additional time. The main benefit of the forward SDC is that it provides a stockage level close to the supported units which adds predictability to the subsistence resupply process during normal operations and during emergencies such as when the MSRs are disrupted.

MSR SECURITY AND LIFE SUPPORT

8-52. Force protection and convoy movement requirements for SPV/Contractors must be considered. All SPV/Contractor transportation must move within the established theater distribution system with military convoy security assets unless the theater approves the SPV/Contractors to provide their own convoy security (METT-TC dependant). Contractors must be provided with the operational procedural requirements for inclusion in the theater distribution system and provided life support (meals, showers, latrines, bedding) at rest stops and at delivery destinations for their drivers unless the contractor will be self-sufficient. Class I planners should coordinate these requirements during the contract development stages with the contractors and theater distribution personnel.

DISTRIBUTION ASSET VISIBILITY

8-53. All SPV/Contractors will use DOD ITV technology discussed in paragraph 3-59, to track their subsistence shipments unless the theater approves the SPV/Contractors to use their own internal tracking systems. All internal SPV/Contractor tracking systems must be able to interface with DOD ITV logistic databases, provide level 6 shipping data, and provide 100 percent vehicle and cargo ITV within the AO.

COMMERCIAL SHIPPING CONTAINER DEMURRAGE

8-54. As discussed in Chapter 3, units, organizations, or activities that delay, hold, or use commercial shipping containers at their location for storage of subsistence or unit property are incurring container demurrage charges for the government on a daily basis. If the storage planning factors in the contract are not accurate or the contractor does not have enough required storage, the dining facility contractor may be holding and utilizing these shipping containers to maintain the required DOS of subsistence required in the contract. Contract oversight personnel (COR/COTR) should periodically evaluate the contractor's storage operations to ensure shipping containers are not being held unnecessarily.

HNS DINING FACILITY OPERATIONS

8-55. The U.S. Government may negotiate with the HN to provide feeding support to the deployed forces. These HNS agreements may also be referred to as Status of Forces or AIK agreements. Class I planners should coordinate closely with theater civil affairs and HN representatives on these types of dining facility operations. Class I planners must understand though the HN ultimately may make the final decision on how these facilities are constructed and operated. Important considerations on these types of dining facility operations include:

- The HN may decide upon the design and build the structure. Class I planners should ensure the dining facility structure and functional layout meets all applicable U.S. construction and safety standards.
- The HN may provide the food service contractor to operate the dining facility.
- The HN may establish the menu cycle for the dining facility operation. Class I planners should ensure that Army menu standards are included within the established menu cycle.
- The HN may establish the headcounting and headcount reporting procedures to include the collection of cash.
- Class I planners should coordinate with the HN to have COTRs placed in these dining facility operations to oversee food safety procedures and assist the contractor in meeting the requirements of the food service contract.

FORCE PROVIDER FOOD SERVICE OPERATIONS

8-56. Force Provider provides a stand-alone, increased quality of life capability for Soldiers or civilian personnel (when employed in response to requests from U.S. civil authorities). The feeding standard for Force Provider units is three cook-prepared meals per day, relying primarily on the UGR-A with supplement and enhancements or the DA CONOPS Menu. Force Provider will be operated by civilian contract operated food service specialists or an autonomous Force Provider company with a mission of furnishing climate controlled billeting, food service, laundry, shower, and morale support activities for up to 3,300 Soldiers. The Force Provider Company is modular in design, consisting of six operating platoons, each capable of independent operations in support of 550 personnel. FM 42-424 provides detailed information for the operations of the Force Provider.

FOOD SERVICE SUBSYSTEM

8-57. The Force Provider food service subsystem is all electric and consists of climate-controlled TEMPER facilities for dining, food preparation, kitchen, and sanitation areas and the necessary equipment to provide three hot meals daily. The TEMPERs are joined together with vestibules and bump-through doors. A leader and 26 personnel are required to set up the 96-foot dining TEMPER. The remaining TEMPERs will require two men per arch for erection. A utilities equipment repairer, MOS 52C, is required to supervise and assist in erecting the 600 cubic-foot walk-in refrigerators, positioned outside the food preparation area.

8-58. A typical Force Provider module contains one all-electric food service subsystem. Key components of the food service subsystem include:

- 96-foot TEMPER for the dining area with furniture.
- 64-foot TEMPER for the kitchen area.
- 32-foot TEMPER for the sanitation area.
- 32-foot TEMPER for the food preparation area.
- Two 600-cubic foot walk-in refrigerators.
- Gray water hoses and equipment.
- Potable water hoses and equipment.
- PDISE and cables.
- ECUs.
- M-80 water heater.
- Grease trap.
- Food preparation equipment (major items are listed below):
  - 2 forced convection double ovens.
  - 2 stand-mounted griddles.
  - 2 floor-mounted, 30-gallon tilt braising pans.
  - 2 floor-mounted, 20-gallon steam kettles.
  - 2floor-mounted, 5-pan opening steam tables, serving and sanitation equipment and accessories.

8-59. Army Training and Evaluation Program (ARTEP) 42-424-30-MTP contains Crew Drills D-42-2-D0013 and 42-2-D0014 for the set-up, maintenance, and dismantling of the food service subsystem.

Appendix A

Training

Operational and situational challenges will continue to demand a lot from Army food operations leaders. To meet the challenge, we need competency-based leadership from adaptable, confident, ethical, and forward thinking military and civilian food operations leaders. The key methods used to develop this type of Army leader are accomplished through education and tough, realistic, and battle-focused skill based professional training. There is no known training strategy that can achieve unit or organizational readiness without intensive leadership to build Soldier/civilian confidence and competence. Senior leaders at all operational and generating (legacy term was institutional) Army levels must ensure that core and professional skill development training is continuous, evaluated for effectiveness, and meets current Army doctrinal standards. By enforcing training standards, leaders provide the training environment and opportunity for Soldiers and civilians to develop and demonstrate the core and professional food operations knowledge and skills necessary to be an effective food operations leader and cohesive team builder. Remember, "Things that are checked by leaders are things that are done well".

FOOD ADVISOR RESPONSIBILITIES

A-1. Food Advisors, Technicians, Food Program Managers, and Senior or Chief Food Operations Management NCOs, (military or civilian at all levels regardless of component) collectively and individually assist commanders, Class I personnel, the FSO, SFOS, and individual food service specialists in the accomplishment of the mission.

A-2. The food advisor is one of the few food service personnel who have access to the commander and the staff. One of the most important contributions the food advisor can make to the food service program is to see that the training needs of food service and Class I personnel are met. This includes assistance from establishing FSO training and MOS training programs to gaining quotas for training schools or advising on local civilian training opportunities. The Army garrison/installation food program manager also provides this support to garrison tenant units without assigned food advisory personnel. Food advisors must inform FSOs and SFOSs of their observations related to skills of food service and Class I personnel and possible training needs. The food advisor should ensure that MOS sustainment and common skills training are being scheduled and make unannounced visits to the facility or training site to ensure that training to standard is actually being conducted.

A-3. When training exercises are planned, the food advisor must ensure that Class I and food service planning are included. As a subsistence staff officer, the food advisor ensures that the commander and staff are aware of the problems associated with food supply, distribution, preparation, serving, and accountability. The food advisor must also advise on tactical, environmental stewardship, and resource management considerations. Examining each of these areas in the planning stages of the operation will help the staff solve them before the unit deploys to the field. Due to large amounts of fuel, water, and subsistence used and the wastes (liquid and solid) generated by field kitchens, environmental protection training is a must for all food service specialists. The food advisor must ensure that food service supervisors at each unit are aware of their responsibilities in the implementation of the Army's environmental stewardship program.

A-4. AR 30-22 and DA PAM 30-22 provide policy guidance on accounting and operational procedures used during training exercises and operational deployments. The food advisor, Class I manager, and the

SFOS must train food service and Class I personnel to maintain proper records and how to submit the reports. Training must be ongoing and must be accomplished prior to field operations. It is not sufficient to wait until the unit is deployed before becoming concerned with the requirements for subsistence accountability.

A-5. The FSO participates in the development of unit training schedules. The food advisor and SFOS must keep the FSO informed of food service training needs to receive the required training emphasis. The SFOS must assess the adequacy of the training program as it relates to the needs of the unit food service team and recommend additions to and deletions from training plans. Food service training requirements should be addressed in the training schedule. The G3, the S3, or the Director of Plans, Training, Mobilization, and Security publishes the schedule. Sometimes it is hard to find the funds or time for training, but training pays in the long run. Remember that trained people—

- Need less supervision.
- Develop better work habits.
- Take more pride in their work.
- Prepare better meals.
- Give better service.
- Waste less food.
- Are safer workers.

RESOURCES

SCHOOL QUOTAS

A-6. Quotas for attendance at service schools may be requested through channels according to the provisions of AR 350-1, DA PAM 351-4, and AR 614-200. The inability to obtain a quota to attend a resident school does not relieve individuals from the responsibility to continue their food service training.

SELF-DEVELOPMENT

A-7. Self development is one of the key components of the leader development program. It is a planned, progressive, and sequential program followed by leaders to enhance and sustain their military competencies. It consists of individual study, research, professional reading, practice, and self-assessment. Under the self-development concept, the Soldier, as an Army professional, has the responsibility to remain current in all phases of their MOS.

A-8. Another important resource for self-development is the Army Correspondence Course Program (ACCP). Enrollment is also available online through the U.S. Army Training Support Center website (http://www.atsc.army.mil/itsd/index.asp). Another excellent online self- development, no cost training resource is the U.S. Army's e-Learning Program accessible at https://usarmy.skillport.com/rkusarmy/login/usarmylogin.cfm.

SOLDIER TRAINING PUBLICATION (STP)

A-9. The STP is the primary source for the Soldier to use in maintaining MOS proficiency. STP 10-92G1-SM-TG and STP 10-92G25-SM-TG identify the individual MOS training requirements for Soldiers in MOS 92G. These STPs contain standardized training objectives (in the form of task summaries) to train and evaluate Soldiers on critical tasks which support unit missions during wartime. Food advisors, FSOs, SFOSs, and Soldiers should use the STP to plan, conduct, and evaluate individual training in units. Additional training resources (in addition to this manual) are listed in FM 10-23-2. The FSO and SFOS must also ensure that Soldiers have access to required regulatory and doctrinal guidance such as: ARs, TBs, DA Pamphlets, and FMs. They must also know what formal training is available and how to get it. Each unit's senior leaders and NCOs must be involved in the training of their subordinates.

COMMON TASKS AND UNIT TRAINING

A-10. The SFOS should use Soldier's Manuals of Common Tasks (SMCT) (STP 21-1-SMCT and STP 21-24-SMCT) ARTEPs, and FM 7-0 to establish effective training plans and programs that integrate Soldier, leader, and collective training tasks.

SPECIFIC TRAINING RESPONSIBILITIES

FOOD ADVISORS

A-11. The food advisor has differing levels of responsibility for training individuals within the food program. These responsibilities (relating to FSOs, Class I personnel, SFOS, and senior food service specialists) are outlined in the following paragraphs. The importance of continuous training cannot be over-emphasized. Each successful operation or deployment can be traced to the successful training that preceded it.

Food Service Officers

A-12. The food advisor must take a direct role in the training of the FSO. This is normally an additional duty assigned by the unit commander to officers who have little or no training or experience in food service. These officers are trained by food advisors with support from the SFOS with whom they work. The FSO receives assistance through classes, demonstrations, solicited comments, or ideas and advice. The food advisor must ensure that the FSO fully understands the basics of food service operations. The FSO must be advised of environmental stewardship requirements for garrison and field food service operations. The food advisor must ensure that the FSO is aware of Army, state, and local environmental and resource management regulations. Initial and annual sanitation training requirements for food service specialists are outlined in TB MED 530. FSOs must also be able to audit food service records and identify the causes of and remedies for deficiencies.

Class I Personnel

A-13. Food advisors assist Class I officers and NCOs in the planning and operation of Class I points at every level of tactical Class I supply. One of the ways food advisors do this is by providing Class I point operations sustainment training to MOS 92A personnel prior to and during the unit's deployment. The success or failure of the Class I supply operation in the field will depend on the prior training of the following key Class I point tasks: requisition, distribution, receipt, storage, issue, turn-in, and accountability.

Senior Food Operation Advisors

A-14. Training in food service is a continuous process. The food advisor should be aware of the formal training requirements which are a part of the career progression pattern for MOS 92G. The food advisor can then make the FSO and commander aware of the training needs of their NCOs. The food advisor can advise the commander on schools and training requirements for food service specialists. Since the SFOS is busy with daily food service operations requirements at the unit level, the SFOS may not always be aware of recent developments. The food advisor must inform these NCOs of changes in policy and doctrine, new publications, and equipment. The FSMB provides an excellent opportunity to update the SFOS on new developments. The food advisor must ensure that the SFOS is able to train first-line supervisors to fulfill their training responsibilities to junior personnel. The food advisor must also assist the SFOS in establishing and implementing an ongoing MOS training program for assigned food service specialists.

Senior Food Service Specialists

A-15. First-line supervisors are responsible for training those they supervise. Although they may be quite proficient in their jobs, they may not yet know how to train others. The food advisor and SFOS assist by providing train-the-trainer training, as required. This should be an integral part of the unit MOS training program. They can also assist them to learn by insisting that they use the 92G STP training manuals, read

and understand FM 7-0, and by recording each trainee's progress. The SFOS must monitor subordinate's training to ensure that the trainee's needs are met. Since dining facilities have a vital peacetime mission, food service specialists sometimes miss out on common skills training routinely provided to other unit personnel. The food advisor must review training records and ensure that each unit's food service specialists participate as required. The skills acquired during common task training can make the difference between life and death on the battlefield.

SENIOR FOOD OPERATION SERGEANTS

A-16. The SFOS, with the food advisor's help, develops a comprehensive food service training program for the unit food service specialists. The SFOS keeps a card file or notebook to show who has been trained and the subjects covered. There are several types of food service training. The SFOS works with the FSO and the food advisor to get service school training for assigned personnel.

SOLDIERS' RESPONSIBILITIES

A-17. Each Soldier is responsible for performing individual tasks that the first-line supervisor identifies based on the unit's training plan. The Soldier must perform the task to the performance standards identified by the trainer. If the Soldier has a question about how to do a task, it is the Soldier's responsibility to ask the trainer or first-line supervisor, who knows how to perform each task and can train the Soldier to perform the task to standard.

MOS SKILL BASED TRAINING PLAN

A-18. The SFOS, with assistance from the food advisor, FSO, and commander, should develop a MOS Training Plan using the STP that identifies the essential individual tasks to be trained. Units have different training needs and requirements based on differences in environment, location, equipment, dispersion, and similar factors. Therefore, the MOS Training Plan should be used as a guide for conducting unit training and not a rigid standard. Each part of the MOS Training Plan is designed to assist the commander in preparing a unit training plan that satisfies integration, cross training, training up, and sustainment training requirements. Along with the MOS Training Plan, give Soldiers rotational assignments. In this way, workers will receive training in more than one area. Table A-1 provides a sample MOS Training Plan that includes some the tasks that can be taught on field feeding. Remember that there are many more subjects that must be taught or reinforced. For example, Class I personnel could be assigned to work or train in the operational garrison dining facilities, receiving, storing, and distributing subsistence.

Table A-1. Sample MOS Training Plan

Subject Area	*Task Number*	*Title*	*Training Location*	*Sustainment Training Frequency*	*Sustainment Training Skill Level*
		Skill Level 2			
7. Supervisory Functions	101-92G-2151	Direct Personnel Setting Up and Dismantling the Mobile Kitchen Trailer (MKT)	Unit	Semiannual	2-4
8. Field Kitchen	101-92G-2163	Direct Personnel Operating and Maintaining Field Kitchen Equipment	Unit	Semiannual	2-4
	101-92G-2164	Direct Personnel Preparing and Serving Meals at a Field Kitchen Site	Unit	Semiannual	2-4
10. Sanitation Services	101-92G-2203	Direct Personnel in Implementing Sanitation Practices at a Field Kitchen Site	Unit	Semiannual	2-4
	101-92G-2205	Direct Personnel Applying Food Protection Measures in a Dining Facility and at a Field Kitchen Site	Unit	Semiannual	2-4
		Skill Level 3			
15. Field Kitchen Operations Supervision	101-92G-3255	Establish Layout of Field Feeding Area Site	BNCOC	Semiannual	3-4
	101-92G-3275	Supervise the Operation and Maintenance of the Mobile Kitchen Trailer	BNCOC	Semiannual	3-4

PERFORMANCE STANDARDS

A-19. Performance standards tell Soldiers how well they must be able to do a job. The 92G STPs have tasks and job standards for Soldiers at each skill level. The standards give the sequence in which the steps in the task must be done. Use these standards as a training tool. They are clear-cut so that both workers and supervisors can understand them. They specify what Soldiers must be able to do at each grade level before they can be promoted to the next grade. Each supervisor should maintain a leader book to record training accomplishments of their Soldiers. See FM 10-23-2 for additional guidance. Figure A-1 shows a training task from the STP.

Direct Personnel Applying Food Protection Measures in a Dining Facility and at a Field Kitchen Site

101-92G-2205

Conditions: You are the first cooking in a dining facility or a field kitchen. You have been directed by the food service sergeant to ensure that your soldiers follow the required procedures when receiving, storing, preparing, cooking, and serving food. In MOPP 4 conditions, all food service operations cease. Equipment and materials required are an operational dining facility or field kitchen and food service personnel.

Standards: Ensure that your soldiers follow approved personal hygiene practices and that they are familiar with the food protection rules in TB MED 530. You must complete all performance measures accurately to prevent loss, spoilage, and contamination.

Performance Steps

1. Ensure that food service personnel maintain hygiene standards.
   a. Wear a clean uniform daily.
   b. Do not wear any jewelry with the exception of a plain wedding band.
   c. Wear headgear or a hair net to restrain hair.
   d. Keep fingernails cleaned and trimmed.
   e. Wash hands before, during, and after preparing food items, after using toilet facilities, and after handling soiled equipment and utensils.
   f. Wash hands after using any type of tobacco.
   g. Wash hands after performing any type of custodial duty.
2. Ensure that soldiers are familiar with the food protection measures in TB MED 530.
   a. Correct internal product temperatures of PHFs are maintained.
   b. PHF items are cooked sufficiently to kill harmful microorganisms.
   c. Product thermometers are available and accurate.
   d. Make sure that food items are covered and stored properly.
   e. Food service soldiers prepare the food according to the recipe card or SOP.
   f. Food is prepared with the least possible manual contact.
   g. PHF items are heated to the required internal temperature before they are placed into the hot food holding units.
   h. Surfaces of equipment and utensils used for preparation are cleaned and sanitized after each use.
   i. Food display and service are according to the SOP.
   j. Poisonous and toxic materials are labeled, stored, and used properly.

Performance Measures	GO	NO GO
1. Ensured that food service personnel maintain hygiene standards:	____	____
2. Ensured that soldiers are familiar with the food protection measures in TB MED 530.	____	____

Evaluation Guidance: Score the soldier GO if all steps are passed. Score the soldier NO-GO if any steps are failed. If the soldier scores NO-GO, show what was done wrong and how to do it correctly.

References

Required	**Related**
TB MED 530	800-101-0018-B
	800-101-0134-B
	800-101-0135-B

Figure A-1. STP training task

TRAINING PROCEDURES

A-20. Before training can begin, each task must be broken down so that it can be presented logically. The trainer follows a general training outline that covers the necessary training. The SFOS (with assistance from the food advisor) should develop an outline using the STP that includes subject, scope, and references for the training program. Remember that some workers will need more training than others. However, they should not be singled out as it may lower their self-confidence. The worker who learns quickly may have a

smug attitude. These attitudes can affect the morale of the entire staff. The best way to avoid either of these problems is to use the training program as a refresher course. Then the trainer can spend more time helping those who need it. A training outline should be used and approved by the food advisor prior to implementation. Figure A-2 is a recommended outline for training. Below are some general guidelines for the conduct of the training.

PREPARE THE TRAINEE

- Put the trainee at ease.
- Demonstrate the task. Show the trainee where to put ingredients, utensils, and equipment so that they can be easily reached.

PRESENT THE OPERATION

- Demonstrate the job step-by-step.
- Be patient and be thorough so that details are not missed.
- Go slowly enough for the trainee to follow the demonstration.
- Ask questions to make sure that the trainee understands the operation.
- Review frequently to make sure that the pace is not too fast.

HAVE THE TRAINEE TRY THE OPERATION

- Ask the trainee to demonstrate the operation and to explain each step. Ask questions about what, how, and why a step is done. These questions reinforce the learning process.
- Correct errors with tact.

FOLLOW UP THE TRAINING

- Let the trainee function independently.
- Tell the trainee to come to the trainer for help or materials.
- Give further instruction if necessary.

Figure A-2. Sample outline for training personnel

SET AN ATTAINABLE STANDARD

A-21. The standard should be what a first-class worker can do in a specified time by using the one best way. If the SOP does not give the standards for organizing the training program, get them from the food advisor.

MAKE ALLOWANCES

A-22. Newly assigned workers may not be able to meet all of the requirements of the standard. However, explain to them that as soon as they learn the job, they will be expected to meet the time limits of the standard.

INSPECT COMPLETED WORK

A-23. Inspect the trainees' work. Tell the trainees if they do a good job. If not, make sure they get more instruction to help them do a better job the next time.

KEEP THE STANDARD UNCHANGED

A-24. Once a standard is set and is in use, do not change it. At times, there may be an exceptional worker who will produce more than is required by the standard. However, the average worker will not, so do not change the standard.

TRAINING SCHEDULE DEVELOPMENT

A-25. Many factors influence the development of a training schedule. Some of them are discussed below.

TRAINING TIME

A-26. This is one of the most critical factors in developing a training schedule. The extent of training needs must be considered. Allow time for the trainee to gain a workable knowledge of procedures, methods, and techniques of the subject to be trained. The trainee must learn to identify common errors and shortcomings and how to avoid or correct them. Schedule the training so that it will not interfere with the mission work load. If it takes 48 hours to train a subject, schedule training during a two-week period. Do not schedule training during non-duty hours if possible.

UNIT REQUIREMENTS

A-27. Consider the trainees' unit requirements for training, their other duties, and their days off. Coordinate with unit commanders and personnel offices before scheduling training.

FACILITIES AND MATERIALS

A-28. If a classroom is needed, make sure one is available. Make sure that there is a lesson plan for each block of instruction. The lesson plan can be informal notes or a more detailed plan. Use training aids and handouts and make sure that any equipment needed will be available.

TRAINERS

A-29. Personally conduct training or have a member of the staff do it. If the staff does the training, make sure that the trainer is skilled in teaching and work methods. Just because someone can do a job well does not mean they can teach someone else to do the job well.

SUPERVISORY RESPONSIBILITIES

A-30. If the SFOS delegates training responsibility to another trainer, the training methods, program, and schedule must be coordinated with that person. Review the training outline with the trainer. Determine the time, methods of instruction, review, and corrective actions. Be available to help the trainer. Make sure that training plans, policies, and procedures for the course are followed. Check the menus to be used, the work schedule, and assignments. The SFOS must also check on the trainee's progress and make sure that everyone follows safety and sanitation procedures.

APPROACH TO TRAINING

A-31. The objective of all trainers should be to have a staff that works as a team to prepare and serve quality food. The trainer must recognize the importance of training and must be able to convey this to the trainee. If the training program is to be successful, the trainee must want to learn. Good leadership, sound instructional methods, and effective communication help to motivate the trainee. The SFOS must constantly supervise training to make sure that it does not become so routine that trainees lose interest.

TRAINEES

A-32. During the first interview with a trainee, find out what the trainee knows. Watch the trainee's work and determine what the trainee knows. Compare what the trainee knows to what the trainee is expected to know. Then determine what the trainee needs to be taught. Consider the duration and main duties of the trainee's present position, how much training the trainee needs, and how much education and experience are required for the level of instruction.

SUGGESTIONS TO TRAINERS

A-33. The role of the trainer is critical. The trainer influences the student's attitudes and acceptance of the subject being taught. The following points are some suggestions for trainers to follow:

- **Win the Respect of the Trainee**. Be tactful, loyal, and enthusiastic. This will win the respect of the staff and of the trainee.

- **Know the Subject**. Be knowledgeable in the subject so that it can be taught to others. Teach only relevant material. If you have training aids and films, use them to stress teaching points.
- **Be Considerate**. Be sure that personal interest and enthusiasm do not cause training to be too intense. If training is too intense, the trainees may become tired, bored, and discouraged.
- **Use a Positive Approach**. At the start of the training program, stress to the trainee the need for a positive approach and an optimistic attitude. Place the trainee in situations where problems are not likely to occur. Assign the trainee tasks that can be done with little chance of error.
- **Be Professional**. Talk directly to the trainee, not over the trainee's head. Do not use condescending speech or actions. Check each trainee for cleanliness, appearance, and state of health.
- **Develop the Confidence of the Trainee**. Split tasks among the trainees. When trainees can perform small portions of a task successfully, assign them complete tasks.
- **Evaluate Yourself**. Strive to become a more efficient teacher. Frequent and objective self-evaluations are good ways to measure how good a teacher you are. Put yourself in the trainee's place; it will help in evaluating effectiveness.

FOLLOW-UP

A-34. When planning training, plan to follow up on its effectiveness. The trainer should do the follow up. Even if the SFOS is not the trainer, the SFOS should also do a follow up. Stress the important points that were discussed in the training sessions. Remember, not all problems are the fault of the program. Ways to follow up on training are discussed below.

METHODS

A-35. Two methods of following up on training are to interview the trainee and to observe the trainee at the work site. Check to see if the trainee is using the skills taught during the training.

REFRESHER TRAINING

A-36. If the trainees needs more training, schedule refresher training sessions. Do not use the same methods and materials used in the previous training. Instead, plan new methods and use new materials, such as handouts and task summaries, to train the basic job skills.

REVIEW

A-37. Review the overall MOS training program. Establish good communications with the trainees and discuss any problems they may have. Make sure that trainers are effective.

This page intentionally left blank.

Appendix B

Deployment Planning Checklist

The checklist (figure B-1) is a sample to be used to plan for Class I support during training exercises and operational deployments. Electronic copies of this checklist can be obtained by contacting the Concepts, Systems, and Policy Division of ACES.

DEPLOYMENT PLANNING CHECKLIST	
MISSION	***Check***
Obtain or determine your unit's mission.	
Obtain or determine geographical location of unit and climate/environmental factors impacting on mission accomplishment.	
Determine projected length of mission.	
Determine the projected feeding strength by phase of the operation.	
Obtain the Operational Commander's intent in regards to food service expectations by each phase of the operation.	
Evaluate logistic support plan and sustainment annex to the OPLAN or OPORD.	
What headquarters is directing the deployment?	
What is the task organization for the deployment (attached/detached units)?	
Are supporting units specified?	
When does the external support begin?	
What support will the unit receive?	
Is there a deployment contingency plan?	
Are food service specialists and equipment included in the deployment plan? Do they travel with the unit? Who supports if food service specialists and equipment are not included in the initial deployment?	
Is there an internal unit logistical support plan or Class I portion of the combat support annex?	
Should the Unit Basic Load (UBL) of Class I be issued to the individual Soldier prior to deployment? How many DOS of the UBL does the OPORD specify for each Soldier? Will the UBL be consumed during the operation?	
Will travel rations be needed? How many DOS? What types?	
Will contracted or catered meals be needed?	
Have the supply source and operational dates for the Class I been identified?	
Are lead times for ration/supply requests established?	
Has the flow of requisitions and Class I been described to using units?	
Have Class I requirements been supplied to the supporting organization?	
Have supply and service locations (Class I, water, fuel, and landfill) been identified and provided to the user?	
Is a trash removal plan established?	
Are units trained in trash removal/disposition procedures?	
Is a subsistence retrograde plan established?	
Are veterinary personnel available for subsistence support requirements?	
What are the logistical capabilities of the HN? Request access to the DSCP logistics tool SPIDERS and review at: https://spiders.dla.mil	
If there are HN support facilities, do they meet United States sanitation guidelines? Contact VETCOM.	
If a project code or fund cite is required for the HN support, has it been established?	

Figure B-1. Deployment planning checklist

DEPLOYMENT PLANNING CHECKLIST	
PERSONNEL	***Check***
Evaluate mission requirements to determine personnel needs.	
Determine status of personnel, experience, training, capabilities.	
Evaluate projected workload to determine KP and detail support requirements.	
Determine tours of duty for food operations and Class I personnel.	
Determine training requirements, to include familiarization with unit/local SOPs, environmental standards in the area of operations.	
Are personnel trained in accountability procedures?	
Have cash meal payment and/or field meal reimbursement procedures been implemented?	
Review medical threat briefing with particular attention to potable water supply; chlorine residual, food-borne illness of local populations, and sanitary quality of local food supply.	
EQUIPMENT	
Review TOE/MTOE and hand receipts for equipment to determine shortages.	
Evaluate status of equipment on hand to determine maintenance requirements.	
Evaluate workload and mission to determine supplemental equipment and storage needs.	
Evaluate on-hand spare parts and order shortages.	
Evaluate projected ration mix to determine refrigeration and ice requirements.	
Evaluate projected ration cycle to determine transportation requirements.	
Evaluate type and number of vehicles to determine packing and loading plans.	
Evaluate maintenance support to determine resupply of equipment and spare parts in the field.	
Review load plans for accuracy.	
SUPPLIES	
Evaluate projected workload and mission to determine requirements for all disposable and expendable supplies. Determine required stock levels. Prepare load list for required items.	
Evaluate serving procedures to determine supply needs.	
Project fuel consumption to determine needs.	
Forecast daily potable water consumption to determine water needs.	
Evaluate mission support to determine resupply procedures for fuel, water, and disposable.	
SUBSISTENCE	
Determine ration mix and ration cycle.	
Coordinate ration requirements with DLA/DSCP (Theater).	
Determine whether the war reserve stocks are needed (Theater).	
Establish an account with the supporting SSMO/Class I point.	
Determine the order and shipping time between each level of Class I supply.	
Determine required stockage strength at each level of Class I supply (if used).	
Determine religious ration requirements.	
Determine any special holiday meal requirements.	

Figure B-1. Deployment planning checklist (continued)

DEPLOYMENT PLANNING CHECKLIST	
SUBSISTENCE	***Check***
Determine Medical Diet Field Feeding Supplement requirements (if any).	
Determine Health and Comfort Pack requirements (if any).	
Will bottled water be used? Who, what, where, how?	
What HN support is available? Needed?	
Determine ration accounting methods. Procure appropriate forms and establish procedures.	
Evaluate categories of diners to determine correct accounting procedures, particularly foreign nations, contractors, and U.S. support personnel (for example AAFES, Red Cross) (if applicable).	
Have enhancements (bread, fresh fruit, salad, and cereal) and mandatory issues of milk been requested and programmed?	
Have warming and cooling beverages been considered, ordered, and funded?	
Evaluate issue and request cycle from supply activity to determine timely submission of ration requests, reports and forms.	
Determine daily need for ice to be requested. Is there a need for potable ice? Who, when, where, and how?	
Evaluate food storage procedures to determine security needs.	
Review inventory management procedures to reduce/control waste, loss, and excessive residuals.	
Are all participants aware of the importance of reporting accurate present-for-duty strength data so that reimbursement can be affected in a timely manner?	
MISCELLANEOUS	
Check publications (book set and references) and forms needed for deployment.	
Determine local waste disposal procedures and locations.	
Coordinate plans for site selection and layout of field kitchen.	
Coordinate with supported units. Determine feeding level requirements, and the need for remote site feeding.	
Determine field kitchen meal serving periods.	
Establish deployment teams for sending the KCLFF-E or AK (if authorized by TOE or MTOE) forward to deployed units.	
Review equipment operations, safety and sanitation requirements with your team.	
Identify any site-specific environmental issues.	
CONOPS FEEDING OPERATIONS	
Coordinate COR/COTR training for MOS 92G personnel with ACES.	
Determine Field Kitchen Equipment requirements.	

Figure B-1. Deployment planning checklist (continued)

Appendix C

Development of an Airdrop Operational Ration SOP

Airdrop of rations may be required when other resupply modes will not permit timely resupply. Use of airdrop during training exercises should be minimized to preclude loss of subsistence; however, when airdrops must be used, preplanning is essential.

PLANNING

C-1. Airdrop of operational rations (MREs, UGR-H&S, and UGR-E) should be considered early by the G3/S3 planning cell in support of training exercises to prevent the loss of rations and training dollars. Planning considerations should include the length of the exercise, when the airdrop is planned, and the number of personnel to be supported. This will ensure that the airdropped rations can be consumed prior to the end of the exercise. Key personnel in the planning cell should include the responsible Food Advisor and Senior or Chief Food Operations Management NCO to assist in preparing and ordering the ration cycle and mix needed for successful completion of the units' mission in accordance with the commander's intent.

PROCEDURES

C-2. Operational rations that are airdropped into the operational area will be accounted for and handled as other operational rations. There is no adjustment needed to the shelf life of the operational rations due to airdrop procedures. Current standards (MRE only) are 100 percent survivability for low-level airdrops and 75 percent survivability for free-fall airdrops. Operational rations airdropped into the operational area will be handled by development of a local SOP to cover the following areas:

- Procedures identifying the operational rations by marking them with a distinctive color or symbol (for example use red spray paint to mark the ends of the cases).
- Procedures for checking of operational rations considered having possible defects as a result of the airdrop. These procedures will cover VETCOM requirements for holding, inspecting, and disposition of rations.
- Procedures for identifying and accounting for airdropped rations that cannot be recovered (for example aircraft went down or the rations were dropped in a lake). These rations will be accounted for according to procedures in AR 30-22 and DA Pamphlet 30-22.
- Planning requirements for the mission should be closely considered in the operational planning for Class I to prevent undue waste and training dollars lost due to improper planning. Airdropped rations not consumed during the exercise will not be allowed to be turned back into the SSMO.

C-3. Airdropped operational rations that cannot be consumed in the field will be transferred to another unit in the field or returned to the garrison dining facility for consumption. The transfer of these rations will cover the following procedures:

- Transfer to another unit or returned to garrison operations will be accomplished on a DA Form 3294 and marked "Air Dropped" operational rations. Disposition and accountability of rations will be accomplished on DA Form 5914 according to AR 30-22 and DA Pamphlet 30-22.
- FIFO by date of pack will not apply to airdropped operational rations. These will be consumed as soon as possible.

Note. If at any time there is a question as to the shelf life, quality, or safety of airdropped operational rations, VETCOM personnel will be contacted. They will evaluate and make a final determination as to the disposition of the rations.

This page intentionally left blank.

Appendix D

Sample SOP for Field Kitchen Maintenance

This SOP is a sample to be used as a tool in constructing a field kitchen maintenance SOP (figure D-1) and evaluation checklist. It is an excellent guide in coordinating maintenance functions ensuring uniformity and proper procedures for performing PMCS on food service equipment. Electronic copies of this SOP and evaluation checklist can be obtained by contacting the Concepts, Systems and Policy Division of ACES.

OFFICE SYMBOL (30)

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

1. Purpose: This SOP establishes the objectives, responsibilities and maintenance procedures applicable to the care and maintenance of field kitchen equipment.

2. Mission: The mission of the G4 Food Service Office is to:

a. Provide assistance and training in the care and maintenance of field equipment.

b. Ensure 100 percent mobilization of serviceable field equipment in support of all deployments and training exercises.

3. Responsibilities:

a. G4 Food Service will:

(1) Ensure 100 percent of the field kitchen equipment in the division is serviceable and combat ready.

(2) Offer the commanders assistance in training personnel in the proper care and maintenance of equipment.

(3) Conduct evaluations on field kitchen equipment when requested by the commander.

(4) Conduct quarterly assistance visits of field kitchen equipment to aid the commander in weak area(s) of maintenance.

(5) Conduct evaluations for cleanliness and serviceability of field kitchen equipment in accordance with the unit recovery schedule after the completion of all exercises or training.

(6) Evaluate field kitchen equipment during field training operations.

b. Commanders will:

(1) Ensure field kitchen equipment is 100 percent mission capable by periodically inspecting maintenance, serviceability and parts on order.

(2) Request assistance in continuous training and evaluations.

(3) Request and schedule evaluations of the field kitchen equipment after the unit recovers after the termination of all exercises or training.

Figure D-1. Sample Field Kitchen Maintenance SOP

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

(4) Ensure personnel are properly trained in the proper use, care and maintenance of field kitchen equipment.

c. Food Operations Sergeant will:

(1) Ensure 100 percent serviceability of field kitchen equipment.

(2) Ensure personnel are trained adequately to care for and maintain field kitchen equipment IAW the required manuals.

(3) Ensure DA Form 5988-E [*Equipment Inspection Maintenance Worksheet (EGA)* (ULLS)] and DA Forms 2404 (*Equipment Inspection and Maintenance Worksheet*), 2408-14 (*Uncorrected Fault Record*) and DD Form 314 [*Preventive Maintenance Schedule and Record*) (manual)] are completed and maintained IAW most recent Maintenance Management Update.

(4) Request assistance from the G4 Food Service Office.

(5) Ensure all items of equipment on the supply hand receipt are signed for properly by the FOS.

d. Food Service Personnel will:

(1) Care for and maintain equipment before, during, and after field training exercises.

(2) Inspect equipment continuously IAW TMs and note all deficiencies on DA Form 5988-E or DA Form 2404.

(3) Ensure DD Form 314 or ULLS is maintained IAW current Maintenance Management Update.

(4) Ensure equipment is 100 percent serviceable, cleaned and free of rust IAW the unit recovery schedule after the termination of all exercises or training.

(5) Be licensed on the safe operation of all applicable fuel-fired cooking equipment (MBU, generator, Immersion Heater, Lantern). A copy of all Soldier's licenses will be kept on file and available for evaluation.

(6) Seek assistance from the G4 Food Service Office through the appropriate chain of concern.

e. Units will:

(1) Use all MTOE Field Kitchen Equipment during field training exercises. Deploy as you would go to war, train in peacetime as you would go to war.

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

(2) Do not use field expedients, such as fabricated griddles, butane fired or charcoal grills, or any other unauthorized equipment during field training exercise. The Commander, FSO and FOS are responsible for Soldiers injured or equipment damaged as a result of unauthorized or altered equipment.

4. Maintenance:

a. Maintenance Paperwork:

(1) Each equipment end item (field ranges M-59, immersion heaters M-67, accessory outfit (field range), field ice chest (200 & 400 lb), water trailer, food sanitation center (FSC), kitchen company level field feeding-enhanced (KCLFF-E), mobile kitchen trailer (MKT) and containerized kitchen (CK)) will have DA Forms 5988-E/2404 indicating the deficiencies found on the equipment. Deficiencies, missing and unserviceable parts must be annotated with an NSN and a document number.

(2) Deficiencies of components of each equipment end item (for example: food containers, beverage dispensers, modern burner units (MBU), lanterns, etc) will be annotated on the end item's respective DA Forms 5988-E/2404. The MBU may be input into the ULLS and have its own DA Form 5988-E if desired.

(3) Each MKT and CK will have a separate DA Forms 5988-E/2404.

(4) Each equipment end item (field ranges M-59, immersion heaters M-67, accessory outfit (field range), field ice chest (200 & 400 lb), FSC, and KCLFF) will be numbered for identification purposes on the DA Forms 5988-E/2404.

(5) Each multiple component of each equipment end item (MBUs, fuel cans for the immersion heaters, beverage dispensers, insulated food containers, water jugs, lanterns, and fuel cans) will be numbered for identification purposes on the DA Forms 5988-E/2404.

(6) For each equipment end item, a respective updated technical manual will be on hand.

b. Modern Burner Unit:

(1) The MBU can be left in the appliance during movement from one field location to another.

(2) All fuel should be drained from the MBU prior to storage. Additionally, the MBU should be removed from all appliances and the system components placed in appropriated containers in a dry place.

(3) Clean the burner with a soapy damp rag or brush. The burner is designed to withstand being wet but DO NOT use a hose or pressure washer on the MBU, power converter or battery box.

(4) The burner top pan and tube must be kept clean at all times. Use a soapy rag, stainless steel, steel, or plastic scrubbing pad for this task. DO NOT use steel or stainless steel scrubbing pads on any surface other than the burner tube and top pan.

(5) Clean the air vents on the regulator and float valve assemblies with a brush. Clean all connectors, including those on the power cables with a dry brush.

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

(6) Wipe battery pack and power converter housing with a soapy damp rag to remove dust and stains. Remove soapy residue from all components before returning to service by wiping with a clean damp cloth.

c. Field Range M-59:

(1) Each M-59 Range must be cleaned with hot soapy water. Do not use abrasive cleaners or wire brushes. A commercial type nylon pad may be used to remove corrosion or caked-on grease.

(2) Each M-59 Range must be free of rust, grease and food particles. Note: When all rust is removed, the cradle rails and hinges must be lubricated IAW TM 10-7360-204-13&P, paragraph 3-2, page 3-1.

(3) All component parts must be cleaned and free of dirt.

(4) Lightly coat exposed surfaces of cabinet and pot handles with P14 Preventive Compound, NSN: 8030-00-251-5048, to prevent rust.

d. Accessory Outfit:

(1) One accessory outfit must be available for every one to four M-59 Ranges. The accessory kit tool box is to be numbered if the unit has more than one.

(2) The kit toolbox and all items in the accessory kit must be serviceable and clean.

(3) Each accessory outfit will have one set of heat protective gloves, NSN 8415-01-092-3910.

(4) Baking racks must be cleaned with hot soapy water. Gentle rubbing with a scouring pad can remove stubborn foreign material.

e. Immersion Heaters:

(1) Each fuel can must be painted (camouflaged, OD Green or sand) and numbered. The immersion heater should be painted 6 inches (camouflaged, OD Green or sand) down, measuring from the top of the flue compartment. Use only authorized paint for this purpose (TM 5-4540-202-12&P, Para 3-4(b), Page 3-7).

(2) All immersion heaters must be cleaned and free of rust. Clean inside the flue chamber with brush (TM 5-4540-202-12&P Appendix E, Item 9). Pick up heater body and dump residue. The next usage of the heater will burn out the balance of residue.

(3) Clean outside of immersion heater by hand with a scouring pad, or extra fine sandpaper to remove corrosive products, oil, grease, or dirt. If heaters are to be stored, lightly coat heater body with Corrosive Preventive Petroleum, NSN 8030-00-251-5048 to prevent rust.

(4) Remove the burner assembly from the burner compartment and remove all rust and carbon build-up. Wipe dry. Wrap burner assembly with barrier paper and store. Wipe clean prior to next use.

(5) Ensure the igniter assembly has a wick and retainer spring.

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

(6) Check the fuel tank to ensure it is serviceable, clean and free of rust. With fuel valve removed, flush tank with a small amount of fuel then oat interior of empty tank with P-10 Oil, SN 9150-00-111-3199 to prevent rust. Flush tank with a small amount of clean fuel prior to next use. This will eliminate smoking. Use approved disposal container to discard mixture.

(7) The instruction and information plate (Caution, identification) on the fuel tank and heater must be readable.

(8) Immersion heaters must be numbered.

(9) Smokestack sections are to have all soot removed. Wash exterior with brush and hot water, then dry thoroughly. When dry, put a coat of preservative lube oil, NSN 9150-00-231-2341 on them.

(10) Each section of pipe must have two (2) rivets in the top and bottom pipe. Wash the exterior of the pipe with a brush and soapy water. Rinse and thoroughly dry. Remove soot from interior of pipes by running sand or fine gravel through the sections.

f. Corrugated Cans (32 Gallon):

(1) Corrugated cans must be painted (camouflage, OD Green or sand). The paint should cover only the outside of the can up to ½ inch from the top of the can (Do not let paint touch the rim of the can).

(2) All corrugated cans used in conjunction with the immersion heater must be clean and free of rust. Trash cans will also be painted and have the word “Trash” labeled on the center of the can.

g. Insulated Food Containers (IFC):

(1) All food containers must be free of food particles and cleaned with hot soapy water. Never immerse the food containers in water. Allow the containers to air dry.

(2) The containers should be stored on a shelf or on a pallet in a dry area. The IFC should be stored with lids closed but unlatched. The latches and handles on the food container should be serviceable.

h. Dispenser, Liquid, Insulated:

(1) The dispenser must be cleaned inside and out with hot water and mild detergent. Rinse thoroughly, let air dry with the lid open. The rubber gasket inside the lid must be placed back on the lid to air dry.

(2) Remove and clean the facet assembly with hot water and mild detergent. Let air dry and reassemble.

(3) If dispensers are to be stored for a period of time, store with lids slightly open to prevent odors. Clean per (1) and (2) prior to using again.

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

i. Field Ice Chests:

(1) The 200 lb and 400 lb ice chest are required to be painted (camouflage, sand or OD Green).

(2) The ice chest authorized with the MKT will not be painted.

(3) Ice chests must be cleaned inside and out with warm water and mild detergent. Rinse thoroughly. Let air-dry with the lid open. The rubber gasket inside the chest must be clean and serviceable. Keep ice chest open to air dry.

j. Food Sanitation Center (FSC) and Kitchen Company Level Field Feeding (KCLFF):

(1) Lubricate the drain and work table legs as needed with general purpose lubricating oil (NSN 9150-00-664-6173).

(2) Clean storage rack assemblies sink assemblies, drain table, work table and accessories such as sink immersion racks with hot soapy water. Use a commercial type nylon cleaning pad for removing corrosion.

k. Mobile Kitchen Trailer (MKT) and Containerized Kitchen (CK):

(1) When preparing the MKT for the travel mode, it is important the equipment is cleaned and placed on the trailer IAW TM 10-7360-206-13, pages 2-35 thru 2-38.

(2) When preparing the CK for the travel mode, ensure the equipment is cleaned and placed on the trailer IAW TM 10-7360-226-13&P, chapter 2, paragraph 0006 00.

(3) Cleaning supplies and food will not remain on the MKT or CK during storage.

(4) All components on the mobile kitchen trailer and containerized kitchen should be free from dirt, grease, and rust.

(5) When in the field, it should be cleaned daily (recommend after the breakfast meal). Upon returning to garrison, the MKT and CK will be thoroughly cleaned and all supplies removed and stored elsewhere.

(6) The travel covers, roof canopies, curtains, and screens should be serviceable and free of dirt.

l. Lanterns, Fire Extinguishers and Fuel Cans:

(1) Propane or battery operated lanterns may be used in lieu of the issued gasoline lantern. The issued gasoline lanterns will be retained as a component of each equipment end item (MKT, KCLFF, and FSC) and will be available for inspection.

(2) All required fire extinguishers on hand must be serviceable (charged).

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

(3) Fuel cans must be serviceable. Gaskets should fit properly and fuel caps should be free of rust.

(4) Plastic fuel cans will not be painted. They will be stenciled with the word "MOGAS" or “JP8” with black lusterless letters.

m. Water Trailer, Water Jugs, Water Sterilization Bag:

(1) The water trailer must be cleaned on the inside and out. The water trailer will be inspected quarterly in garrison, and also prior to filling. When in the field the water trailer must be checked by qualified personnel. PMCS will be performed IAW appropriate TM's and unit SOP's. The water trailer is to be certified annually by Preventive Medicine.

(2) When the water trailer is being stored, all water will be drained from trailer.

(3) The water trailer should be checked for serviceability IAW TM 9-2330-267-14&P. All shortcomings should be annotated on DA Forms 5988-E/2404**.** Check trailer's surface for excessive cracks, signs of use other than water, such as gasoline, non-potable water, etc.

(4) Water jugs should be serviceable and clean. Water must be drained from jugs when storing.

(5) All water jugs must be stenciled with black letters with the words "Potable Water" or have the word water already imprinted on the jug.

(6) Unit field sanitation teams are required to have a minimum of three (3) days sanitary supplies and food service disinfectant on hand (NSN 6840-00-810-6396).

(7) The water sterilization bag must be cleaned and checked for holes. Wash in warm soapy water, rinse in clear hot water.

(8) When storing, scrub inside of water sterilization bag with a chlorine solution. Use a one-half mess kit spoonful or 1 MRE spoonful of calcium hypochlorite, NSN 6810-00-255-0471. Hang until completely dry, fold and wrap in kraft paper, NSN 8135-00-160-7752. Store in new fiberboard box, NSN 8115-00-428-4124, in clean, dry place. Do not store the water sterilization bag while it is wet.

5. Assistance Visits: Prior to a unit assistance visit by G4 Food Service, the following are required:

a. All CKs and MKTs must be set up with all components displayed.

b. The (KCLFF/KCLFF-E) and FSC should be placed in an area so that it is easily accessible. Do not leave MBUs in the cradle assemblies.

c. The M-59 Ranges must be set up with all component parts. The MBU will not be left in the cabinet. The cradle w/pot will rest on the door of the range when opened.

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

OFFICE SYMBOL
SUBJECT: Sample Field Kitchen Equipment Maintenance SOP

d. All immersion heaters will be lined up with the burner assembly centered on top of the fuel tank and the tank positioned on top of the combustion chamber. Stove pipes will be placed on the floor upright next to the immersion heaters. Do not connect any pipes. Pipes will not be wrapped. Fuel caps on the fuel tanks must be left opened.

e. Empty water and fuel cans must be organized. Insulated food container lids will be closed, but unlatched. Faucets to beverage dispensers will be left attached.

f. All publications and SOPs will be organized and placed on a table in the order listed in the inspection checklist. If publications are not available, there must be a document indicating the publications have been ordered.

g. The accessory kit and its components should be laid out neatly. The accessory tool box must be clean and emptied.

h. Fuel will not be stored in any equipment. Gasoline found in equipment will result in an overall unsatisfactory rating.

6. G4 point of contact for this SOP is Division Food Service, extension

FOR THE COMMANDER:

Encl

ACofS, G4

DISTRIBUTION:

Figure D-1. Sample Field Kitchen Maintenance SOP (continued)

This page intentionally left blank.

Appendix E

Checklists for Evaluating Class I and Field Kitchen Operations

Figure E-1 and figure E-2 shows checklist samples used to evaluate Class I and field kitchen operations during training exercises and operational deployments. Electronic copies of these checklists can be obtained by contacting the Concepts, Systems, and Policy Division of ACES.

Class I Operations		
UNIT:		
Reviewed By: Date:	**Yes**	**No**
ADMINISTRATION		
Current regulations and manuals on hand.		
AFFS accountability forms completed and maintained correctly.		
Subsistence residuals properly disposed.		
Excess subsistence levels managed properly.		
SITE AND PROCEDURES		
Class I point accessible to customers. Traffic flow established to enhance ration transfer and reduce time on site for customers.		
Roads sufficient to handle traffic volume.		
Directional signs posted.		
Adequate MHE on hand.		
Security measures in place and enforced.		
Quantity and identity verified when subsistence received at Class I point.		
Condition and quality checked.		
Stock Locator System in effect (if applicable).		
First in/first out inventory control used.		
Rations stored on pallets, by type and expiration date.		
Semiperishables kept dry, stored out of direct sunlight, and in a manner to protect against pests and rain.		
Adequate refrigeration available, set up, and operable for perishable subsistence storage.		
Only potable ice used.		
Temperature logs maintained for refrigeration.		
Pesticides and cleaning products maintained separately from food.		
Pest control measures adequate.		
Proper administrative procedures in place to provide accountability for subsistence.		
Requisitions, receipts, issues properly documented.		
Co-located with water point operations if possible.		
PERSONNEL		
Effective use of personnel.		
Adequate supervision.		
Personnel appear to maintain adequate personal hygiene.		
Veterinary Services Activity support is being provided.		

Figure E-1. Class I operations

Field Kitchen Operations		
UNIT:		
Reviewed By: Date:	**Yes**	**No**
ADMINISTRATION		
Current regulations and manuals on hand.		
Current and appropriate maintenance records and repair parts on hand.		
Subsistence estimate and strength reporting procedures current.		
AFFS accountability forms completed and maintained correctly.		
Cash and cash meal payment sheets secured (if applicable).		
Vehicle loading plans available and used.		
Subsistence residuals properly disposed of.		
Excess subsistence levels managed properly.		
FIELD KITCHEN SITE (GENERAL)		
Appropriate fire extinguishers on hand and serviceable.		
No smoking areas designated and enforced.		
Fuel storage area at least 50 feet from the kitchen and from where burners are lit.		
Garbage pit clearly marked and at least 90 feet from the kitchen and 100 feet from the water source. Latrines 100 yards downhill from field kitchen.		
Incinerators at least 150 feet downwind from the kitchen (if applicable).		
Good cover and drainage available for the water trailer.		
Water trailer treated and checked for chlorine levels in accordance with FM 4-25.12 (unit field sanitation team).		
Water trailers cleaned and inspected in accordance with TB MED 577.		
Kitchen site camouflaged (if applicable). Camouflage netting secured to within 6 inches. Cook fighting positions are adequate and are maintained.		
Handwashing site available for diners and kitchen personnel.		
Soap and brushes available at handwashing site.		
Burning or burying used for trash disposal in accordance with FM 21-10 or hauling trash and garbage out of field site in accordance with local guidelines.		
PERSONNEL		
Effective use of personnel (Food Service, KPs).		
Food service specialists inspected at the start of work by supervisor for clean uniforms, haircuts, clean hands, proper jewelry, infected cuts, sores, burns and signs of respiratory illness.		
Personnel appear to maintain adequate personal hygiene.		
No evidence of using tobacco in the food preparation areas.		
Unit Field Sanitation Team is appointed on unit orders and fully functional.		
Proper food handling techniques evident. Servers are courteous. Proper Equipment on hand.		
All personnel demonstrate operator's knowledge of each piece of food service equipment, field expedients, field sanitation, and trash and garbage procedures.		

Figure E-2. Field kitchen operations

Field Kitchen Operations		
UNIT:		
Reviewed By: Date:	**Yes**	**No**
FOOD PREPARATION AND SERVICE		
All personnel demonstrate operator's knowledge of each piece of food service equipment, field expedients, field sanitation, and trash and garbage procedures.		
Adequate supervision (Supervisors visible during meal preparation and service).		
Meal hours adequate.		
Safety and tactical standards followed.		
Production schedule prepared correctly (if applicable).		
Appropriate recipes/preparation instructions available and followed (if applicable).		
Appropriate and sufficient serving utensils available and used.		
Leftovers disposed of correctly.		
Food held and served at appropriate temperatures (Correct temperatures maintained throughout the meal service).		
Food prepared in the correct quantities, palatable, and served on time.		
Progressive cooking is being used to the maximum extent possible.		
Correct portion control evident.		
Hot foods served last in cold weather.		
Serving line under protective cover (when available).		
Serving line allows smooth flow of traffic.		
Staggered serving lines used for tactical situations.		
One-way, straight-serving line used for non tactical situations.		
Prompt replenishment of serving line items.		
Sanitation practices maintained in accordance with this manual, TB MED 530 and FM 21-10.		
FIELD KITCHEN (TENT/MKT/CK)		
Located near good natural cover.		
Located on firm level ground which is free of projected roots and rocks		
Located on high dry ground for good drainage.		
Protected from wind.		
MKT has minimum operating area of 30 feet by 30 feet with 11 feet overhead clearance.		
CK has minimum operating area of 50 feet by 30 feet.		
Orderly and efficient equipment arrangement.		
Available shelving clean.		
Appropriate liners (screening) for tent shelters available.		
Appropriate fire extinguishers available, visible, and serviceable.		
Replacement parts available for kitchen equipment, as appropriate.		
FIELD RANGE M59		
Accessory outfit complete.		
Positioned on firm, level ground or on noncombustible material.		
Adequate ventilation available.		
All hinges and shutter doors serviceable.		
Ranges cleaned and maintained properly.		

Figure E-2. Field kitchen operations (continued)

Field Kitchen Operations		
UNIT:		
Reviewed By: **Date:**	**Yes**	**No**
INSULATED FOOD CONTAINERS		
Adequate number of insulated food containers on hand to support feeding mission.		
All components serviceable.		
Time and temperature rules for potentially hazardous foods (PHFs) followed in use of insulated food containers (four hours maximum time for holding PHFs).		
Menu items labeled on containers.		
Containers used only with insert pans.		
Containers not sealed when not serving.		
Containers cleaned, air dried, and stored properly between uses.		
MODERN BURNER UNIT		
Approved fuel being used (JP-8 or alternate diesel fuel).		
Two person carrying rule being applied when moved.		
Free of food waste and debris.		
Power cables not frayed, damaged, or dirty.		
Fuel can adapter housing and fuel hose free of cracks, cut, and leaks.		
Power converters free of visible damage to control panel.		
Battery pack free of external damage.		
FOOD SANITATION CENTER		
Site is sheltered and on level sandy or gravel ground.		
Good ventilation available.		
Scrap can is used before washing.		
Wash, hot soapy water 10 to 120°F and brushes available for cleaning.		
Rinse water 120 to 140°F.		
First and second rinse 171°F or higher.		
Water drained and sinks cleaned as necessary. Racks serviceable and clean.		
Washed pots and pans allowed to air dry properly before storage.		
IMMERSION HEATERS (IF APPLICABLE)		
Flue is free of rust or damage. Flue preheated for 1 minute prior to lighting.		
Wash, hot soapy water 110 to 120°F.		
Rinse water 120 to 140°F.		
Sanitizing water 171°F or higher.		
Heating pipes (four per heater) serviceable and free of soot.		
Leak proof fuel tank.		
Mounting clamps serviceable.		
Heat protective gloves used when igniting fuel.		
Fuel valve adjusted until fuel flows in rapid drops but not in a fine stream.		
Soldier's face shielded from burner compartment during lighting or adjustments.		

Figure E-2. Field kitchen operations (continued)

Field Kitchen Operations		
UNIT:		
Reviewed By: **Date:**	**Yes**	**No**
DINING AREA		
Hand washing device for diners available and maintained properly.		
Clean, free of trash and covered trash cans are available.		

Figure E-2. Field kitchen operations (continued)

Appendix F

Checklists for Reviewing AFFS Records for Class I and Field Kitchen Operations

Figure F-1 shows a checklist sample to be used to review the AFFS records for Class I and Figure F-2 shows a checklist sample for field kitchen operations during training exercises and operational deployments. Electronic copies of the checklists can be obtained by contacting the Concepts, Systems and Policy Division of ACES.

Checklist For Reviewing Class I Operations Records		
UNIT:		
Area	**Yes**	**No**
1. Is a copy of the Class I accountable officer designation on file?		
2. Is a copy of the Class I point schedule of issues, turn-ins, and the ration cycle on file?		
3. Is a copy of all supported units strength and feeder report (DA Form 5913) on file?		
4. Has a copy of all supported units DA Form 5913 been submitted to the SSMO or next higher Class I support activity?		
5. Review the Class I point request and issue documents (DA Form 3294) to determine if:		
a. Preprinted DA Form 3294s were prepared and issued to supported units once the ration mix/ration cycle was established.		
b. Consolidated subsistence requests were submitted to the SSMO/next higher Class I supply activity.		
c. Quantities of supplements and enhancements correctly converted based on established issue factors.		
6. Are receiving documents (DA Form 3294/Automated Printout/Direct Shipping Document) on file for all subsistence received at the Class I point?		
7. Review the following when the Class I point receives subsistence directly from the depot to determine if:		
a. The accountable officer provided the SSMO with signed, dated copies of all receiving documents.		
b. The accountable officer prepared SF 364 for any discrepancy (short or over shipment) and submitted it to the supporting SSMO.		
8. If the Class I accountable officer changed during the training, is a copy of the required inventory (DA Form 3294) signed by both officers on file?		
9. Are all issuing and turn-in documents (DA Form 3294) on file?		
10. Is documentation from VSP on file for all turn-ins, condemned, deteriorated, and destroyed subsistence?		
11. Does a review of the receipt, issue, turn-in, transfer, destruction, salvage, or condemnation documents indicate a zero balance of all rations at the end of training?		
Reviewed By: **Date:**		

Figure F-1. Checklist for reviewing Class I operations records

Checklist For Reviewing Field Kitchen Operations Records		
UNIT:		
Area	**Yes**	**No**
1. Are letters of instruction or operations orders on file? Do they support completion of the requirements of DA PAM 30-22, appendix H, (prior to departure for the field operation)?		
2. Are files established and maintained per requirements of AR 25-400-2?		
3. Are the following forms available (if appropriate) for each day of the operation? Are appropriate blank forms on hand and available?		
c. DA Form 3034.		
d. DA Form 3294.		
e. DA Form 5913.		
f. DA Form 5914.		
4. Is the strength and feeder report on file (DA Form 5913)? Was it submitted to the appropriate Class I support activity?		
5. Did Commanders stay within a 10 percent variance between present-for-duty on DA Form 5913 and actual number of Soldiers supported in the field? Wider variances will be justified.		
6. Review request, receipt and issue documents (DA Form 3294) to determine if—		
g. DA Form 3034 prepared for each UGR-A meal served.		
h. The number of main entrees received was properly posted to the DA Form 5914.		
i. The number of UGR-A main entrees was posted to the DA Form 3034 correctly.		
j. The number of MREs received was posted to the appropriate DA Form 5914 correctly.		
k. Authorized UHT milk supplement was requested for use with UGR meals.		
l. Requests for authorized enhancements were properly submitted.		
m. Records indicate deletion of enhancement and supplements to reduce on hand inventory prior to the end of the exercise.		
n. Confirm mathematical accuracy of documents reporting meals drawn, issued for consumption, turned-in, transferred, or destroyed.		
7. Were separate DA Form 5914 maintained for each type of ration used and as required for breakfast/lunch/dinner?		
8. Were residuals properly disposed? Were all DA Forms 5914 (for each type of ration served) closed out at a zero balance?		
9. Were meals sold for cash during the exercise? If so, are DD Forms 1544 and 1131 on file to verify turn in of cash? Are effective cash control procedures in place to safeguard cash and cash related documents?		
10. Was recoupment of BAS for all personnel accomplished per requirements of AR 600-38?		
Reviewed By: **Date:**		

Figure F-2. Checklist for reviewing field kitchen operations records

This page intentionally left blank.

Appendix G

Water Treatment and Waste Management

WATER TREATMENT

G-1. Food service operations require fuel, rations, and water; all from approved sources. Water for drinking and cooking must be potable. Water is considered potable when it has been properly treated (purified) and disinfected and does not contain concentrations of chemical, microbiological, radiological, or other contaminants that can make a person sick. When water is stored in a manmade container, such as a water trailer, 5-gallon can, or distribution pipe, it must contain a measurable concentration of residual disinfectant. TB MED 577, chapter 9 states: "Field food service personnel will measure chlorine residuals in their water supply prior to starting food preparation for each meal". The SFOS should be capable of disinfecting previously treated water when required. Using non-potable or inadequately disinfected water in field feeding operations may adversely affect Soldiers' health and unit readiness. When potable water is not available, use the MRE or UGR-H&S to help minimize the potential for water and foodborne illnesses.

WATER DISINFECTANTS

G-2. Chemicals issued to Army units and individuals for disinfection include calcium hypochlorite (NSN 6810-00-255-0471 *[6-ounce bottle]*), Chlor-Floc (NSN 6850-01-374-9921 *[treatment system]*; NSN 6850-01-352-6129 *[tablets]*; NSN 6850-01-374-9923 *[treatment bag]*; NSN 6850-01-374-9922 *[cloth filter]*, and Iodine (NSN 6850-00-985-7166). Additional means of disinfecting water include boiling or using standard (unscented) chlorine bleach. Approved individual hand-held treatment devices may also be used as long as the treatment is followed by a disinfectant such as iodine. Disinfection procedures can be found in TB MED 577 (chapter 9, paragraph 9-9) and FM 21-10 (chapter 2, pages 2-22 thru 2-27).

EMERGENCY SITUATIONS

G-3. In an emergency, water used for drinking, washing food, heating IFCs, and dishwashing can be obtained from unapproved sources if suitable disinfectants are used. TB MED 577, chapter 9, states: "Even in emergency situations, personnel should only consume water that has been disinfected. If a treated and disinfected water supply is not available, personnel must individually treat and/or disinfect water before they drink it. Individuals should start with the clearest, cleanest, least odorous water they can readily find and treat and/or disinfect the water using personal water purification procedures."

TESTING FOR CHLORINE

G-4. The minimum required chlorine residual at the unit level (point of consumption) is 1-ppm unless otherwise stated by the medical authority. To test for chlorine, use the chlorination kit (NSN 6850-00-270-6225) authorized by CTA 50-970. Figure G-1 shows the steps to take for testing chlorine in water. FM 4-25.12, appendix C, provides supply item NSNs for restocking the chlorination kit.

1. Determine the desired chlorine residual in parts per million as determined by the medical authority.
2. Test the point of consumption for required chlorine residual.
3. Flush the spigots and rinse the color comparator with the sample water.
4. Fill the comparator and add one crushed DPD comparator tablet.
5. Cover the comparator top and rotate back and forth (do not shake) allowing the tablet to dissolve. If chlorine is present, the sample water will change to a shade of pink.
6. Hold the comparator to the light, compare color chart on the right to the water color on the left, and read chlorine residual in parts per million where the colors match.
7. If residual meets medical authority standard, the water is fit for consumption or other use.
8. If residual is lower than the medical authority standard, re-chlorinate using calcium hypochlorite ampules, bulk calcium hypochlorite, or liquid bleach as appropriate for the amount of water being treated and availability of products.
9. After treatment, wait 10 minutes and recheck for chlorine residual. If it meets requirements, wait an additional 20 minutes before using water.

Figure G-1. Steps to test for chlorine

DISINFECTING WATER IN 5-GALLON CANS

G-5. A 5-gallon can of water is generally disinfected using calcium hypochlorite ampules. Following the procedures in figure G-2 will make enough solution to disinfect four 5-gallon containers and produce a 1-ppm residual.

Note: The dosage prescribed in FM 21-10, table A-1, is generally applied to untreated (raw) water. Using one-half ampule of calcium hypochlorite to disinfect 5 gallons of water *[or 1 ampule for two 5-gallon cans]* as prescribed by FM 21-10, will yield a 5-ppm residual in water that has been previously treated and disinfected.

1. Test water for the desired chlorine residual in parts per million.
2. If you need to raise the chlorine residual in accordance with medical authority standards, break the chlorine ampule into the canteen cup. Hold the ampule in both hands with the etch mark pointing toward the canteen cup and your thumbs behind the etch mark. Then push the ampule with your thumbs.
3. Add water to the cup until it is about half full and stir until the ampule dissolves.
4. Pour half of the solution into each of four 5-gallon cans. Add water to the cans, close the top, and shake the cans several times.
5. After 10 minutes test for chlorine residual parts per million. If it meets medical authority standards, then wait an additional 20 minutes before drinking the water.
6. If chlorine residuals are not met, prepare a second chlorine solution. Add one-quarter canteen cupful of solution to each can. Wait 10 minutes. Read the chlorine residual. If the required residual is not met, add the remaining chlorine solution. If the chlorine residual is still inadequate after this second disinfectant cycle, contact preventive medicine before continuing or using the water.

Figure G-2. Steps for disinfecting water in 5-gallon cans

DISINFECTING WATER IN 400-GALLON WATER TRAILERS

G-6. Water in 400-gallon water trailers is disinfected using calcium hypochlorite. Follow the procedures shown in figure G-3.

Note. The dosage prescribed in FM 21-10, table A-1, will raise the chlorine residual of previously treated water from zero to 5-ppm. Unless otherwise prescribed by the medical authority, water at the unit level (point of consumption) should only be re-chlorinated to 1 ppm. Reducing the table values from FM 21-10 to one-third the prescribed dosage will yield a residual between 1 and 2-ppm for previously treated water.

1. Test for the desired chorine residual in parts per million.
2. If you need to raise the chlorine residual of previously treated water to 1 ppm, add one MRE spoonful (or 6 ampules) of calcium hypochlorite to a ½ canteen cup of water. Stir for about one minute or until water and calcium hypochlorite mix to a milky solution.

   Note: Use 3 MRE spoonfuls (or 22 ampules) if a minimum residual of 5 ppm is directed by the medical authority.

3. Put the solution in the water trailer. If the trailer is full before you add the chlorine solution, mix the solution by either stirring it with a clean pole or by towing the trailer for 10 minutes.
4. Test the water again to make sure it has enough chlorine
5. Wait an additional 20 minutes before drinking the water.

Figure G-3. Steps for disinfecting water in 400-gallon water trailers

DISINFECTING WATER BY BOILING

G-7. Disinfect water temporarily by boiling in any suitable container. Bring the water to a rolling boil for 15 minutes to ensure disinfection. Remember, boiling does not leave any residual disinfecting power. Store the water in a clean, covered container and use it as soon as possible.

WASTE MANAGEMENT

G-8. FM 21-10 outlines procedures for proper waste disposal, which apply to operations under the AFFS. Commanders will determine, based on the scenario and federal, state, local, or HN laws, whether to burn, bury, backhaul, or use dumpsters to dispose of waste from field kitchens. Inform all personnel of the policy on garbage disposal in an area of operations. Waste must be removed from the kitchen area at least daily. Accumulated waste will attract rodents and insects. Proper disposal of kitchen waste is also essential in limiting the battlefield signature your unit leaves for the enemy. Dispose of liquid and solid waste as discussed below; use FM 4-25.12 for specific guidance when constructing waste disposal facilities.

LIQUID WASTE

G-9. Dispose of liquid waste in soakage pit or trench that is equipped with a grease trap for straining out solid matter and grease. The soil absorbs the liquid waste. Figure G-4 illustrates a grease trap with soakage pit. Units that are using the FSC-2, which is equipped with a grease separator, can drain the gray water directly into the soakage pit or trench. Two pits are needed so that each pit can rest every other day. In porous soil, a soakage pit 4 feet (1.2 meters) square and 4 feet (1.2 meters) deep will take care of 200 gallons (760 liters) of liquid per day. Use a soakage trench if the ground water level is close to the surface or if there is rock or clay near the surface. Figure G-5 illustrates the configuration of a soakage trench with a grease trap. Due to environmental concerns, liquid or solid grease may require separate disposal.

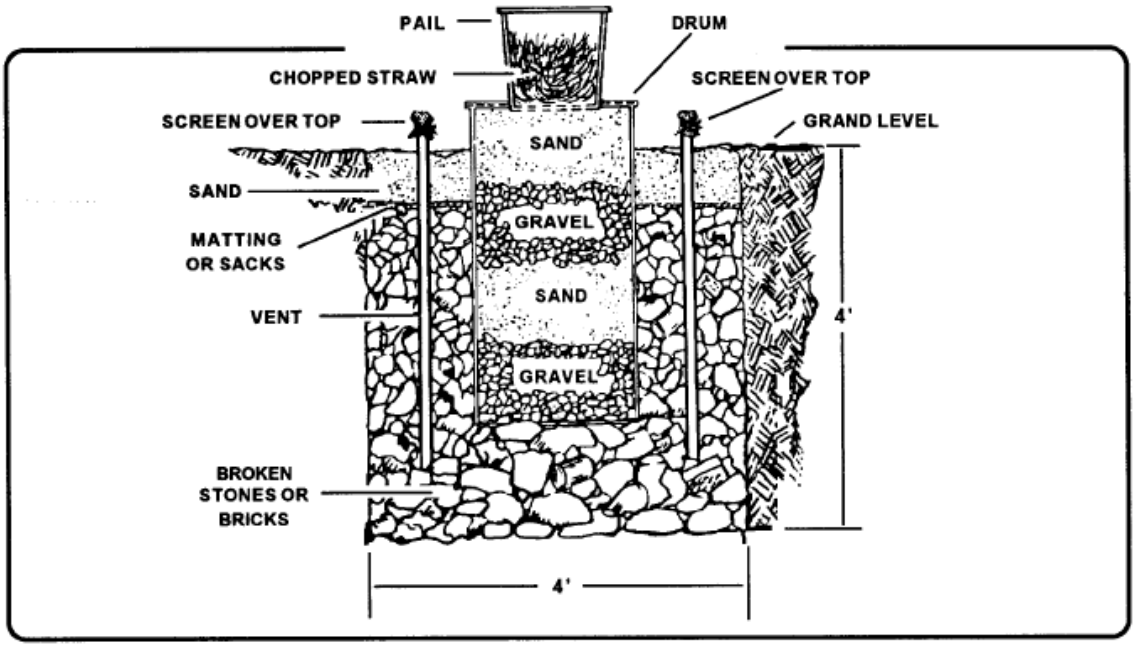


Figure G-4. A grease trap and soakage pit

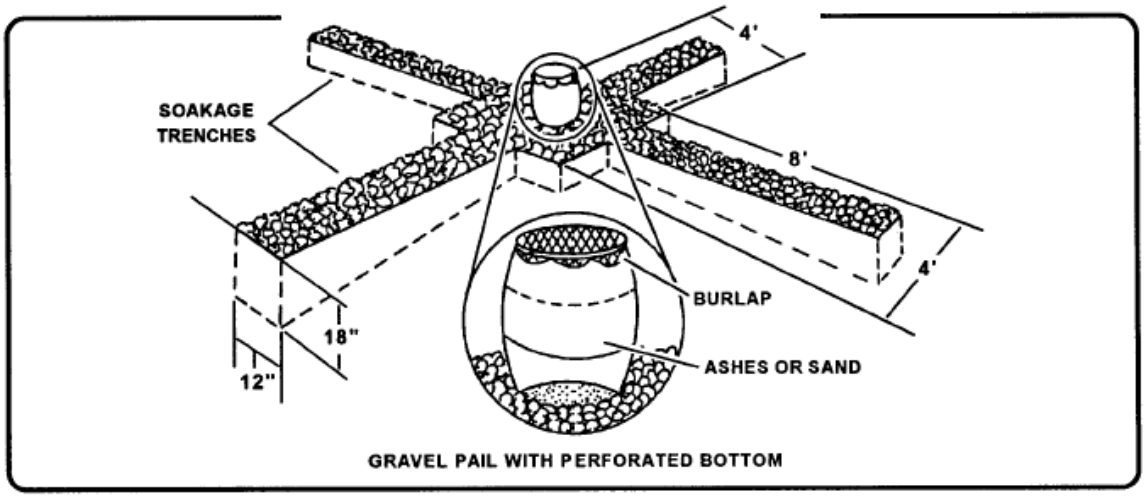


Figure G-5. A soakage trench and grease trap

SOLID WASTE (TRASH AND GARBAGE)

G-10. Bury, burn, or backhaul solid waste. These procedures are described below.

Burying

G-11. During training exercises most state laws prohibit burying trash and garbage. However, during operational deployments, if the unit will be at a site for less than one week, bury solid waste in pits or trenches. These pits or trenches must be at least 27 meters (90 feet) from the dining area and at least 27

meters away from any water source used for cooking or drinking. Use the garbage pit if the unit will be at the site for only one day. If the unit will be at the site for two days to a week, use a garbage trench. Be sure cans are flattened and boxes are broken up before they are dumped. UGR-H&S trays should be nested one inside the other.

Burning

G-12. During training exercises most state laws prohibit burning of trash. During operational deployments, if the unit is going to be at the site for more than one week, burn solid waste in an open incinerator. Use an inclined incinerator or a cross-trench incinerator. Incinerators will not burn wet garbage, so the liquid waste must be separated from the solid waste. This must be done by straining the garbage with a coarse strainer, such as an oil bucket, a can, or a 55-gallon drum with holes in the bottom. Pour the liquid through a grease trap into a soakage pit or trench. Burn the solids that are left. Garbage that will not burn must be buried or hauled to a disposal site. Field incinerators must be at least 45 meters (150 feet) from the kitchen and dining areas so that the odor will not bother the food service specialists and the diners. Figure G-6 illustrates the inclined and cross-trench incinerators.

Notes.

1. Incinerators make smoke. Do not use an incinerator if it will possibly disclose your location to the enemy.

2. Trash cans with lids must be provided near dining areas and must be lined with a plastic bag. Plastic bags should be tied off when 2/3 full to prevent spillover that may attract insects and rodents.

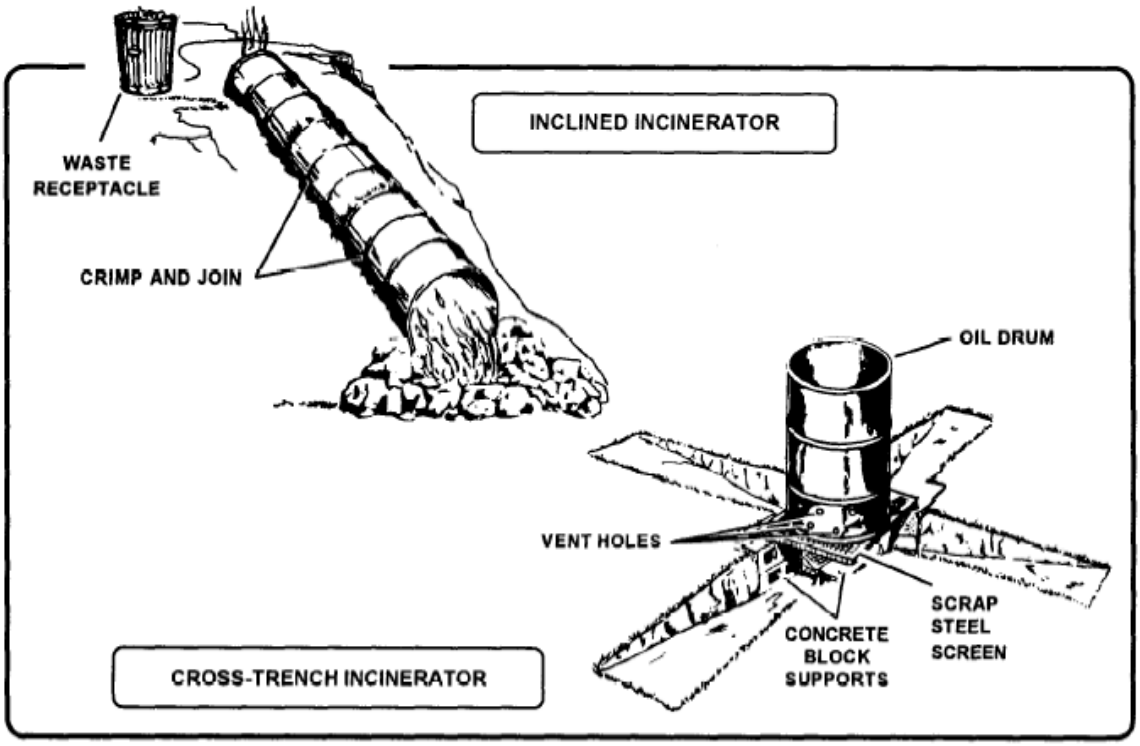


Figure G-6. Inclined and cross-trench incinerators

Backhauling Waste

When the operation plan calls for returning waste to a designated disposal point, the SFOS must arrange for transportation support. Waste should be bagged or boxed when possible. Excess boxes and UGR-H&S pans must be nested to conserve space.

Glossary

Acronym	Definition
AAFES	Army and Air Force Exchange Service
ACCP	Army Correspondence Course Program
ACES	Army Center of Excellence, Subsistence
ACO	administrative contracting officer
AFFS	Army Field Feeding System
AFMIS	army food management information system
AIK	assistance in kind
AK	assault kitchen
AKO	Army Knowledge Online
AO	area of operations
AOR	area of responsibility
APOD	aerial port of debarkation
AR	Army regulation
ARCS	army ration credit system
ARIMS	Army Record Information Management System
ARNG	Army National Guard
ARNGUS	Army National Guard of the United States
ARTEP	Army Training and Evaluation Program
ASCC	Army service component command
BCS3	Battle Command Sustainment Support System
BCT	brigade combat team
BFSB	battlefield surviellance brigade
BSB	brigade support battalion
BTU	British thermal unit
C2	command and control
CBRN	chemical, biological, radiological and nuclear
CAB	combat aviation brigade
CFMS	common food management system
CK	containerized kitchen
CMK	commercial meal kit
CN	can
CONOPS	contingency operations
CONUS	continental United States
COR	contracting officer representative
COTR	contracting officer technical representative
CRM	composite risk management
CROP	container roll-in/roll-off platform

CS	case
CSSB	combat sustainment support battalion
CSP	contracting support plan
CTA	common table of allowances
CWFF	cold weather field feeding
DA	Department of the Army
DA PAM	Department of the Army pamphlet
DCMA	Defense Contract Management Agency
DLA	Defense Logistics Agency
DMC	distribution management center
DOD	Department of Defense
DOS	days of supply
DSCP	Defense Supply Center, Philadelphia
DVD	direct vendor delivery
DTRACS	Defense Tracking, Reporting and Control System
E2E	end-to-end
EA	each
EAB	echelons above brigade
ECU	environmental control unit
EPW	enemy prisoner of war
FCIHW	food container, insulated, hospital ward
FF&V	fresh fruits and vegetables
FIFO	first in, first out
FM	field manual
FOB	forward operating base
FRH	flameless ration heater
FSC	food sanitation center
FSO	food service officer
FSMB	food service management board
FSR	first strike ration
GDMS	Global Distribution Management System
GFM	government furnished material
GPS	global positioning system
GTN	Global Transportation Network
HACCP	hazard analysis critical control point
HBCT	heavy brigade combat team
HCA	head of contracting activity
HCP	health and comfort pack
HDR	humanitarian daily ration
HEMTT-LHS	heavy expanded mobility tactical truck-load handling system
HMMWV	high mobility multipurpose military vehicle

HN	host nation
HNS	host nation support
HQ	headquarters
HQDA	Headquarters, Department of the Army
H&S	heat and serve
IBCT	infantry brigade combat team
ID	identification
IDT	inactive duty training
IFC	insulated food container
ILSC	Integrated Logistics Support Center
ISB	intermediate staging base
ISO	international standards organization
ITD	intermediate test date
ITV	in transit visibility
KCLFF	kitchen, company level field feeding
KO	contracting officer
KP	kitchen police
KW	kilo watt
LB	pound
LCOP	logistics common operating picture
LF	loaf
LMTV	light medium tactical vehicle
LOGCAP	Logistics Civilian Augmentation Program
LOGPAC	logistics package
LOGSA	logistics support activity
LRP	logistics release point
LRP	long range patrol
MBU	modern burner unit
MCW	meal, cold weather
ME	maneuver enhancement
METT-TC	mission, enemy, terrain, troops – time and civilian
MFK	modular field kitchen
MGPTS	modular general purpose tent system
MHE	material handling equipment
MIS	management information system
MKT	mobile kitchen trailer
MOD	module
MOS	military occupational specialty
MPA	military procurement, Army
MRE	meal, ready to eat
MRO	material release order

MSC	Military Sealift Command
MSDS	material safety data sheet
MSR	main supply route
MTOE	modified table of organization and equipment
MTP	military training plan
MTRCS	multi temperature refrigerated containerized system
MTS	movement tracking system
MTT	mobile training team
MTV	medium tactical vehicle
MWR	morale, welfare and recreation
MWRH	mounted water ration heater
NATO	North Atlantic Treaty Organization
NCO	noncommissioned officer
NIS	not in stock
NSN	national stock number
OCONUS	outside the continental United States
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OMA	operations and maintenance, Army
OPLAN	operations plan
OPORD	operations order
OST	order ship time
OZ	ounce
PARC	principle assistant responsible for contracting
PHF	potentially hazardous food
PLL	prescribed load list
PLS	palletized load system
PMCS	preventive maintenance checks and services
POD	point of debarkation
PPM	parts per million
PREVMED	preventive medicine
PWS	performance work statement
QSC	quartermaster support company
RFID	radio frequency identification device
RC	reserve component
RCS	refrigerated container system
SFOS	senior food operations sergeant
SBCT	Stryker brigade combat team
SDC	subsistence distribution center
SDDC	Surface Deployment and Distribution Command
SHA	space heater arctic

SMCT	Soldiers Manual of Common Tasks
SOP	standing operating procedure
SPIDERS	support planning integrated data enterprise readiness system
SPOD	sea port of debarkation
SPV	subsistence prime vendor
SSA	supply support activity
SSM	subsistence supply manager
SSMO	subsistence supply management office
STORES	subsistence total ordering receipt electronic system
STB	special troops battalion
STP	soldier training publication
SUST	sustainment
TACOM LCMC	Tank-Automotive and Armaments Life Cycle Management Command
TB	technical bulletin
TCN	third country national
TDA	table of distribution and allowances
TEMPER	tent, expendable, modular
TM	technical manual
TOE	table of organization and equipment
TOTM	tailored operational training meal
TSC	theater sustainment command
UBL	unit basic load
UGR	unitized group ration
UHT	ultra high temperature
ULLS	Unit Level Logistics System
U.S.	United States
USAR	United States Army Reserve
USASCoE	United States Army Sustainment Center of Excellence
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAMC	United States Army Material Command
USAQMC&S	United States Army Quartermaster Center and School
USPFO	United States Property and Fiscal Officer
USTRANSCOM	United States Transportation Command
VETCOM	Veterinary Command
VIP	very important person
VSP	veterinary services personnel
WRS	

This page intentionally left blank.

References

SOURCES USED

These are the sources quoted or paraphrased in this publication.

ARMY REGULATIONS

AR 15-6, *Procedures for Investigating Officers and Boards of Officers*, 2 October 2006.

AR 25-400-2, *The Army Records Information Management System (ARIMS*), 12 August 2010.

AR 30-22, *The Army Food Program*, 10 May 2005.

AR 40-25, *Nutrition Standards and Education*, 15 June 2001.

AR 40-656, *Veterinary Surveillance Inspection of Subsistence*, 28 August 2006.

AR 40-657, *Veterinary/Medical Food Safety, Quality Assurance, and Laboratory Service*, 21 January 2005.

AR 350-1, *Army Training and Leader Development*, 18 December 2009.

AR 525-13, *Antiterrorism*, 11 September 2008.

AR 614-200, *Enlisted Assignment and Utilization Management*, 26 February 2009.

AR 600-38, *Meal Card Management System*, 11 March 1988.

AR 700-137, *Logistics Civil Augmentation Program (LOGCAP)*, 16 December 1985.

AR 715-9, *Contractors Accompanying the Force*, 9 June 2010.

AR 735-5, *Policies and Procedures for Property Accountability*, 28 February 2005.

COMMON TABLE OF ALLOWANCES

CTA 50-970, *Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items)*, 28 January 2005.

CTA 50-909, *Field and Garrison Furnishings and Equipment*, 1 August 1993.

DEPARTMENT OF THE ARMY FORMS

DA Form 2028, *Recommended Changes to Publications and Blank Forms.*

DA Form 2404, *Equipment Inspection and Maintenance Worksheet*

DA Form 2408-14, *Uncorrected Fault Record*

DA Form 3034, *Production Schedule.*

DA Form 3161, *Request for Issue or Turn-in.*

DA Form 3294, *Ration Request/Issue/Turn-in Slip.*

DA Form 5913, *Strength and Feeder Report.*

DA Form 5914, *Ration Control Sheet.*

DA Form 7454, *Monthly Earnings and Expenditures Record.*

DA Form 7590, *Operational Ration Quality Feedback.*

DEPARTMENT OF DEFENSE FORMS

DD Form 314, *Preventive Maintenance Schedule and Record*

DEPARTMENT OF THE ARMY PAMPHLETS

DA Pamphlet 30-22, *Operating Procedures for the Army Food Program*, 6 February 2007.

DA Pamphlet 750-8, *The Army Maintenance Management System (TAMMS) Users Manual*, 22 August 2005.

FIELD MANUALS

FM 1, *The Army*, 14 June 2005.

FM 4-02.7, *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment*, 15 July 2009.

FM 4-02.56, *Army Medical Field Feeding Operations*, 29 April 2003.

FM 4-20.41, *Aerial Delivery Distribution in the Theater of Operations*, 29 August 2003.

FM 4-25.12, *Unit Field Sanitation Team*, 25 January 2002.

FM 5-19, *Composite Risk Management*, 21 August 2006.

FM 7-0, *Training for Full Spectrum Operations*, 12 December 2008.

FM 10-23-2, *Tactics, Techniques, and Procedures for Garrison Food Preparation and Class I Operations Management*, 30 September 1993.

FM 10-52, *Water Supply in Theater of Operations*, 11 July 1990.

FM 20-3, *Camouflage, Concealment, and Decoys*, 30 August 1999.

FM 21-10, *Field Hygiene and Sanitation*, 21 June 2002.

FM 42-424, *Quartermaster Force Provider Company*, 6 August 1999.

FMI 4-93.2, *The Sustainment Brigade*, 4 February 2010.

TECHNICAL BULLETINS

TB MED 530, *Food Occupational and Environmental Health Sanitation*, 30 October 2002.

TB MED 577, *Sanitary Control and Surveillance of Field Water Supplies*, 15 June 2010.

STANDARD FORMS

SF 364, *Report of Discrepancy (ROD)*

SOLDIER TRAINING PUBLICATIONS

STP 10-92G1-SM-TG, *Soldier's Manual and Trainer's Guide for Food Service Specialist, MOS 92G, Skill Level 1*, 9 April 2003.

STP 10-92G25-SM-TG, *Soldier's Manual and Trainer's Guide for Food Service Specialist, MOS 92G, Skill Levels 2, 3, 4, and 5*, 1 April 2004.

STP 21-1-SMCT, *Soldier's Manual of Common Tasks, Level 1*, 18 June 2009.

STP 21-24-SMCT, *Soldier's Manual of Common Tasks (SMCT), Warrior Leader, Skill Levels 2, 3, and 4*, 9 September 2008.

TECHNICAL MANUALS

TM 9-4540-202-12&P, *Operator's and Organizational Maintenance Manual, (Including Repair Parts and Special Tools List) for Heater, Immersion, Liquid Fuel Fired 35,000 BTU Output for Corrugated Cans (Military Model M67) (NSN 4540-00-469-6593)*, 12 November 1996.

TM 9-6115-642-10, *Operator's Manual for Generator Set Skid Mounted, Tactical Quiet 10 KW, 60 and 400HZ MEP-803A (60 HZ) (NSN 6115-01-275-5061), MEP-813A (400 HZ) (6115-01-274-7392)*, 15 September 2010.

TM 9-6115-673-13&P, *Operator's, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for 2 KW Military Tactical Generator Sets 120 VAC, 60 HZ: MEP-531A (DEWEY) (NSN 6116-01-435-1565) (EIC: LKA) MECHRON (6115-21-912-0393) (EIC: N/A), 28 VDC: MEP-501A (DEWEY) (6115-01-435-1567) (EIC: LKD) MECHRON (6115-21-912-0392) (EIC: N/A)*, 30 June 2010.

TM 10-4500-200-13, *Operator, Organizational and Direct Support Maintenance Manual, Including Repair Parts and Special Tools List for Heaters, Space Radient-Type, Portable (Type I, Model 1941, Solid Fuel) (NSN 4520-00-257-4877); (Type II, Model 1941, Liquid Fuel) (4520-00-927-4214); (Yukon Model M1950, Solid or Liquid Fuel) (4520-00-287-3353); Heaters, Immersion: Liquid Fuel Fired for Corrugated Cans, (All Makes and Models) (4540-00-266-6835) (Preway Model 447-*2EX) *(4540-00-453-9146) for Tank Trailer (All Makes and Models) (4540-00-266-6834),* 10 December 1969.

TM 10-7310-281-13&P, *Operator's, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List (RPSTL) for Modern Burner Un*it (MBU) (NSN 7310-01-452-8137), Modern Burner Unit (MBU-V3) (NSN 7310-01-507-9310), 17 May 2010.

TM 10-7360-204-13&P, *Operator, Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Range, Outfit, Field, Gasoline, Model M59 (NSN 7360-00-082-2153); Model M2A (7310-01-017-1285); Model M2A w/Safety Device (7310-01-113-9172), Accessory Outfit, Gasoline, Range w/Baking Rack (7360-00-187-4757),* 8 July 1983.

TM 10-7360-206-13, *Operator's, Organizational and Direct Support Maintenance Manual for Kitchen, Field Trailer Mounted MKT-75 (NSN 7360-00-138-7782) (EIC: YBC); MKT-75A (7360-01-092-0470) (EIC: YBL), MKT-82 (7360-01-155-6020) (EIC: YBM); MKT-85 (7360-01-214-1176) (EIC: YBT); MKT-85S (7360-01-246-4646) (Air Force Only); MKT-90 (7360-01-313-2238) (EIC: YCF, MKT-95 (7360-01-417-4635) (EIC: YCG), MKT-99 (7360-01-483-8617),* 31 March 2002.

TM 10-7360-206-23P, *Unit and Direct Support Maintenance Repair Parts and Special Tools List for Kitchen, Field Trailer Mounted MKT-75 (NSN 7360-00-138-7782) (EIC: YBC), MKT-75A (7360-01-092-0470) (EIC: YBL), MKT-82 (7360-01-155-6020) (EIC: YBM), MKT-85 (7360-01-214-1176) (EIC: YBT), MKT-85S (7360-01-246-4646) (Air Force Only), MKT-90 (7360-01-313-2238) (EIC: YCF), MKT-95 (7360-01-417-4635) (EIC: YCG), MKT-99 (7360-01-313-2238) (EIC: N/A),* 29 April 2005.

TM 10-7360-208-13&P, *Operator's, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List For Modular Field Kitchen (MFK) (NSN 7360-01-276-9817) (EIC: YCD),* 9 September 1991.

TM 10-7360-209-13&P, *Operator, Organizational, and Direct Support Maintenance Manual Including Repair Parts and Special Tools List For Kitchen, Company, Level Field Feeding (KCLFF)(NSN 7360-01-200-9828) (EIC: YBN), Kitchen, Company Level Field Feeding-Enhanced (KCLFF-E) (7360-01-347-1980) (EIC: YCH),* 10 April 1987.

TM 10-7360-211-13&P, *Operator's, Unit and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Food Sanitation Center (FSC), Model FSC-90 (NSN 7360-01-277-2558), Model FSC-2 (7360-01-496-2112),* 3 August 2006.

TM 10-7360-226-13&P, *Operator's Unit, and Direct Support Maintenance Manual (Including Repair Parts & Special Tools List) for Containerized Kitchen (with Trailer) (NSN 7360-01-473-3408),* 1 August 2001.

TM 10-8340-224-13, *Operator's Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Tent, Expendable, Modular, Personnel (Temper) Type I, 64X20 Surgical Work, Green, (NSN 8340-01-185-2616) Type II, 64X20 Medical, Green, (8340-01-185-2617) Type III, 48X20 Utility, Green, (8340-01-185-2615) Type V, 32X20 Personnel, Green (8340-01-196-6272) Type V, 16X20 Medical, Green, (8340-01-185-2614) Type VI, 16X20 Central Med Supply, Green, (8340-01-185-2618) Type VII, 16X20 Utility, Green, (8340-01-185-2613) Type VIII, 96X20 Medical Ward, Green, (8340-01-257-8468) Type IX, 80X20 Medical Surgical, Green, (8340-01-257-8469) Type X, 64X20 Medical Support, Green, (8340-01-257-8470) Type XI, 32X20 Medical Support, Green, (8340-01-257-8471) Type XII, 16X20 CS Support, Green, (8340-01-257-8472) Type XIII, 96X20 medical Ward Trop, Green, (8340-01-257-8473) Type XIV, 32X20 Medical Support Trop, Green, (8340-01-257-8474) Type XV, 48X20 Kitchen, Green (8340-01-325-0131) Type XVI, 32X20 Sanitation Center, Green, (8340-01-324-7971) Type I, 64X20 Surgical Work, Tan, (8340-01-212-9468) Type II, 64X20 Medical, Tan, (8340-01-212-9469) Type III, 48X20 Utility, Tan, (8340-01-212-9470) Type IV, 32X20 Personnel, Tan, (8340-01-185-2628) Type V, 16X20*

Medical, Tan, (8340-01-212-9471) Type VI, 16X20 Central Med Supply, Tan, (8340-01-212-9472) Type VII, 16X20 Utility, Tan, (8340-01-212-9473) Type VIII, 96X20 Medical Ward, Tan, (8340-01-257-8475) Type IX, 80X20 Medical Surgical, Tan, (8340-01-257-8476), Type X, 64X20 Medical Support, Tan, (8340-01-257-8477) Type XI, 32X20 Medical Support, Tan, (8340-01-257-8478) Type XII, 16X20 CS Support, Tan, (8340-01-257-8479) Type XIII, 96X20 Medical Ward Trop, Tan, (8340-01-258-6482) Type XIV, 32X20 Medical Support Trop, Tan (8340-01-257-8480) Type XV, 48X20 Kitchen, Tan, (NSN Unassigned) Type XVI, 32X20 Sanitation Center, Tan (NSN Unassigned), 1 March 1993.

DOCUMENTS NEEDED

None.

READINGS RECOMMENDED

None.

Index

A

asset visibility, 3-15, 7-8, 8-16

B

Battle Command Sustainment Support System, 3-15, 7-8

C

Class I manager, 2-6, 2-7, 3-6, 3-9, 3-10, 3-14, 4-1, 4-14, *6-18*, 7-2, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10

E

enemy prisoners of war, 3-3, *3-5*, 3-9

environmental stewardship, 1-4, 4-3, 5-13, 6-1, 6-3, 6-26, 6-30, 7-22, A-1, A-3

Equipment
- canteen cup stand, 5-15
- mounted water ration heater, 5-15, 5-16

expeditionary sustainment command role, 2-2

F

feeding standards
- for contingency operations, 8-1
- for field hospitals, 1-2
- for field kitchens, 1-2

food service management board, 3-16, 4-12, 8-2, 8-3, A-3

food service officer, 2-7, 6-4, 6-8, 6-30, A-1, A-2, A-3, A-4

Forms
- *DA Form 3034*, *6-17*, F-3
- DA Form 3294, 6-12, 6-13, 6-14, *6-18*, *6-19*, *6-20*, 7-7, 7-10, 7-11, 7-12, 7-13, 7-14, 7-25, C-1, F-2, F-3
- *DA Form 5913*, *3-4*, 6-8, 6-10, 7-6, 7-11, F-2, F-3
- DA Form 5914, 6-16, 6-17, *6-18*, C-1, F-3
- Headcount Record, 8-12, 8-13, 8-15
- Headcount Register, 8-11, 8-12
- Headcount Report, 8-12, 8-13, 8-14, 8-15
- Monthly Earnings and Expenditure Record, 8-15

H

host nation support, 3-10, 8-16

I

ice, 3-8, 4-15, 6-12, 7-10, 8-6, B-4

in transit visibility, 3-15, 8-16

K

kitchen police, 2-7, 2-8, *6-21*, B-3

M

Menus
- DA 21-Day CONOPS Menu, 2-4, 4-11, 4-12, 8-1, 8-2, 8-3, 8-8, 8-17
- UGR-A Short Order Supplemental Menus, 4-11, 4-12, 8-1, 8-2, 8-4

O

order ship time, 3-6, 3-7, 8-2

P

performance work statement, 8-5, 8-7

Planning sequence
- for contingency operations, 8-4
- for operational deployments, 3-2
- for training exercises, 3-2

pull system, 1-1, 3-11, 3-12, 6-7, 6-8, 6-12, 7-5, 7-6, 7-10, 7-11, 8-9

push system, 1-1, 3-11, 6-7, 7-8, 7-10, 8-9

R

radio frequency identification device, 3-15, 7-8

Ration
- computing requirements, 6-8, 7-8
- contingency stockage levels, 1-4, 2-3, 3-9, 8-7
- cross-level, 3-10
- cross-leveling, 6-7, 7-10
- flow, 3-12
- issue cycle, 3-14, 7-5, 7-6, 8-6
- issue factors, 3-9, 4-12, 6-9, 6-11, 7-5, 7-6, 7-8
- retrograde, 3-10, B-2

Rations
- flameless ration heater, 4-2, 4-3, 4-6, 4-7, 5-15, 7-21

S

schedule of issues, 3-9, 7-5, 7-6

senior food operations
- sergeant, 2-7, 3-16, 4-5, 5-1, 5-2, 5-3, 5-12, 5-13, 6-1, 6-2, 6-4, 6-6, 6-7, 6-8, 6-10, 6-11, 6-12, 6-16, 6-17, *6-18*, *6-20*, *6-24*, 6-27, 6-29, 6-30, 7-7, 8-15, A-1, A-2, A-3, A-4, A-6, A-8, A-9, G-1, G-6

Shipping container
- demurrage, 3-15, 7-2, 8-16
- marking and security, 3-16

stock locator system, E-2

Subsistence
- captured, 2-5, *3-5*, 3-11
- condemnation, 7-25, 8-9
- documentation of supply support, 3-11
- donations, 3-11
- special and holiday meals, 3-7, 8-8, B-3

subsistence distribution center, 8-16

subsistence prime vendor, 2-4, 2-5, 3-6, 3-7, 3-8, 3-15, 3-16, 3-17, 4-11, 7-2, 8-1, 8-2, 8-3, 8-4, 8-5, 8-6, 8-7, 8-9, 8-10, 8-15, 8-16

subsistence supply manager, 2-6, 4-7, 7-1

Support Planning Integrated Data Enterprise Readiness System, 3-6, 4-14, B-2

T

Tents
- modular general purpose tent system, 5-5, 5-10, 5-11, 5-15, 6-28
- tent, expendable modular, 5-5, 5-6, 5-7, 5-11, 5-15, 6-28, 8-17

theater feeding plan time line, 3-3, 3-4, 8-4

theater food advisor, 1-1, 2-5, *3-5*, 3-16, 8-2, 8-8, 8-10

theater subsistence officer, 2-4, 2-5, 3-4, 7-7, 7-10

travel rations, 3-2, 3-9, B-2

U

unit basic load, 2-7, 3-9

W

war reserve stocks, 2-3, 2-4, 3-4, 3-6
Water
  bottled, 3-2, 3-3, 3-4, 3-7, 3-8, 3-9, 3-12, 4-15, 6-9, 7-2, 7-8, 7-10, 7-16, 8-6, 8-7, B-4
  bulk, 3-9, 8-6
  disinfecting with, 7-18, G-1
  sanitizing with, 6-26, 6-27, E-5
  treatment, 5-19, G-1, G-2, G-3

ATTP 4-41
14 October 2010

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
1026502

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: Not to be distributed; electronic media only.