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Marine Corps Field Feeding Program

U.S. Marine Corps

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Marine Corps Field Feeding Program

1. This publication has been edited to ensure gender neutrality of all applicable and appropriate terms, except those terms governed by higher authority. No other content has been affected.

2. File this transmittal sheet in the front of this publication.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

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1. Change all instances of MCRP 4-11.8A, *Marine Corps Field Feeding Program*, to MCRP 3-40G.1, *Marine Corps Field Feeding Program.*

2. Delete current supersession statement on Foreword: This publication supersedes Marine Corps Reference Publication 4-11.8A, *Food Services References*, dated 02 December 2013.

Replace supersession statement on Foreword with: This publication supersedes Marine Corps Reference Publication 4-11.8A, *Marine Corps Field Feeding Program*, dated 2 December 2013.

3. File this transmittal sheet in the front of this publication.

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For the Readers

Marines,

This version of MCWP 4-11.8A, *Marine Corps Field Feeding Program* is one of seven Marine Corps Service doctrine publications that participated in a 2015 doctrine pilot program. The purpose of the program was to select certain publications to test and determine what doctrine revision efficiencies could be gained in respect to both speed and production to better support our warfighters.

As part of that doctrine pilot program, the organization responsible for this publication's content—the doctrine proponent—was given greater responsibilities for the revision process and content. The proponent for this publication was also granted signatory authority for this version of the publication.

At the time of this publication's endorsement, the final results of the doctrine pilot program are still pending; however, this particular publication (along with the other selected pilot program publications) will directly shape future Marine Corps Service doctrine policy and procedures. I would like to thank the doctrine proponent command who participated in the revision of this publication for their contributions to this important program.

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FOREWORD

Marine Corps Reference Publication 4-11.8A, *Marine Corps Field Feeding Program*, provides guidance for commanders, staffs, logisticians, food service officers, supply officers, food technicians, mess chiefs, and food service specialist. It describes the Marine Corps' food services support and Class I operations in an expeditionary environment in order to provide comprehensive informative coverage of food services operations in the Marine Corps.

The Marine Corps field feeding program (MCFFP) supports the Marine air-ground task force in an expeditionary environment through its flexible feeding methods. The MCFFP furnishes the capability to provide Marines the right meal, at the right place, at the right time. The feeding methods, rations, and equipment described in this publication provide commanders a variety of options to support sustained feeding operations in an expeditionary environment.

This publication supersedes Marine Corps Reference Publication 4-11.8A, *Food Services References*, dated 02 December 2013.

Reviewed and approved this date.

BY DIRECTION OF THE COMMANDANT OF THE MARINE CORPS

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CHAPTER 1
FUNDAMENTALS

The Marine Corps field feeding program (MCFFP) consists of the right mix of personnel, rations, equipment, and training in order to support the Marine air-ground task force (MAGTF) commander's expeditionary maneuver warfare and peacetime feeding requirements.

Concept of Organization

The MCFFP has three main components: personnel, equipment, and rations. Personnel and equipment are integrated at the lowest organizational level possible and support each unit's mission statement. The management of rations and ration components is inherent to each element of the MAGTF. Therefore, the operation plan (OPLAN) should be designed to maximize the use of organic assets in support of mission requirements.

Command Element

The Marine expeditionary force (MEF) headquarters group supports the MEF command element's initial flow of forces with organic resources using a mix of packaged operational rations (PORs) and unitized group rations (UGR). This organic capability sustains the command element until the operational situation allows for either a general support or direct support structure to flow in and provide additional support. The logistics combat element (LCE) can be task organized to provide personnel and equipment that will augment organic food service capabilities and ensure the highest quality support available within the unit's mission, enemy, terrain and weather, troops and support available, and time available (METT-T).

Ground Combat Element

The ground combat element (GCE) has limited personnel and equipment to support highly mobile combat operations; however, there is sufficient capability to provide a combination of PORs and UGR meals in forward static locations or by employing a mobile feeding concept of support. This organic capability sustains the GCE until the operational situation allows for either general support or direct support capability to flow in and provide additional support resources. Similar to the command element, the GCE is dependent on the LCE to augment organic food service capabilities with personnel and equipment support.

Aviation Combat Element

Organic personnel and equipment of the Marine wing support squadron (MWSS) provide field feeding support to the aviation combat element (ACE). The ACE's field feeding capability provides organic personnel and equipment to support the range of military operations and mission essential tasks.

Logistics Combat Element

The food service company of the LCE provides an organic food service personnel and field food service equipment capability to the LCE, which supports the range of military operations.

As the tactical and operational situation allows, personnel assigned to the food service company of the LCE provide general support and direct support food service capability to the GCE and command element. The LCE augments organic assets of the supported unit and should be task organized to support mission requirements.

Concept of Employment

The MCFFP supports the MAGTF commander in all theaters of operation. Deployed forces will subsist on a mix of rations that will consist of PORs, UGRs, and enhancements. The family of field feeding equipment is used to prepare UGRs.

Food service is a command support service in that it is an inherent capability normally available at the organizational level. As a command support service, it is a sub-function of services, categorized under the logistics warfighting function. As logistics is a national and Service responsibility, so is food service and Class I. Class I in the joint arena is considered an area of common item support. Accordingly, responsibility for supply of Class I after D+60 is normally assigned by the force commander to a Service component command, normally the dominant or most capable service provider. While allied nations are also responsible to provide their own Class I support, coalition efforts in the past have received at least temporary support from the most capable US Service until allied logistic capabilities mature. During the first 60 days or before the establishment of a common item support manager, the Marine Corps has often supported these operations.

Organizational Responsibilities

The goal of food service support is to provide the right mix of personnel, rations, equipment, and training in order to support the MAGTF commander’s field feeding requirements.

Deputy Commandant for Installations and Logistics

The Deputy Commandant for Installations and Logistics; Assistant Deputy Commandant for Facilities and Services (Code LF) is the principal staff advisor to the Commandant of the Marine Corps on food service matters. The Assistant Deputy Commandant for Facilities and Services also serves at the Commander, Marine Corps Installations Command (MCICOM). The MCICOM G-4 provides policy guidance, supervision, and technical assistance on the acquisition, storage, issue, and accountability of subsistence items and equipment, facility design, sanitation issues, and contracted food services.

The Headquarters, United States Marine Corps (HQMC) Installation and Logistics (I&L) Department; Logistics Plans, Policies, and Strategic Mobility Division (Code LP); Logistics

Plans and Operations Branch (Code LPO) is the designated Marine Corps point of contact for War Reserve Materiel (WRM) program matters in both deliberate and crisis planning. The Logistics Plans, Policies, and Strategic Mobility Division is the approving authority for the release of ground WRM stocks during crisis execution. For budgetary planning, Class I training requirements and funding support are coordinated by the MCICOM G-4 with appropriate field commands. The MCICOM G-4 coordinates with the Marine Corps component commands, Marine Forces Reserve (MARFORRES), and commands within the supporting establishment for the positioning of training stocks. Marine Corps Order (MCO) 4400.39, *War Reserve Materiel Policy*, provides detailed information on responsibilities, planning, and withdrawal of Class I requirements during crisis execution.

Defense Logistics Agency

Defense Logistics Agency (DLA) is a Department of Defense (DOD) agency. Defense Logistics Agency Troop Support is a field level activity of DLA and it is designated as the DOD executive agent for subsistence. It procures, inspects, stores, and distributes subsistence supplies and is responsible for supplying PORs, UGRs, and ultra-high temperature (UHT) milk. In addition, DLA Troop Support is responsible for sourcing fresh fruits and vegetables.

Theater Class I (Subsistence)

Commanders are responsible for determining an operational feeding policy. A feeding concept is established early in planning to reduce potential problems during operations. The normal lead time for delivery of Class I in the continental United States (CONUS) is 30 days, and outside the continental United States (OCONUS) the lead time is 60 to 90 days. The food service officer (FSO) at the component commander level makes recommendations regarding the implementation of the operational feeding policy and development of the feeding concept. Theater support in a joint operational environment is determined by the theater commander.

Class I support after D+60 is normally an Army mission. The US Army's theater Class I supply procedures are addressed in Army Techniques Publication, *Army Field Feeding and Class I Operations.*

Deployment Planning

Food service support is a critical part of any unit deployment, requires the same level of deliberate planning as other commodities, and is a part of the operational planning team's logistical support plan. The senior FSO's input is vital to planning, providing advice and planning considerations that support the unit's time-phased deployment. Commanders should ensure that the final OPLAN or operation order (OPORD) specifies the required movement of personnel and equipment and defines the basic load for rations to be carried by individuals who are deploying (Annex D [Logistics]).

At the MEF level, commanders are responsible for determining the operational feeding policy. This should be established early in the planning process to deconflict potential problems and

incorporate considerations for a time-phased approach to deployments and unit force flow into theater (or area of operations). The FSOs at the MEF G4 and major subordinate command level make specific recommendations to the commander regarding the implementation of the operational feeding policy and development of the feeding concept. The MEF executes Class I support to the MAGTF using the LCE rations platoon.

Initially, deployment plans identify the use of PORs and as the theater matures progress to a meal selection of UGRs with enhancements when logistically supportable. While the selection of the rations is contingent upon the unit's mission, the end state is to provide the best meal possible. Medical units' deployment plans must include unitized group rations-M (UGR-Ms) augmented with the medical diet field feeding supplement. Types of rations will be discussed in chapter 3.

Prepositioned Stocks

Understanding prepositioned stocks for WRM and prepositioning objectives will be vital for operational planning teams and predeployment considerations. Marine Corps Order 4400.39 explains the purpose and intent for WRM and is supported through a performance-based agreement (PBA) between HQMC and DLA; HQMC I&L, Logistics Facilities and Services Division (Code LF) is the Marine Corps lead for this PBA. The PBA provides amplifying guidance to ownership and management responsibilities concerning operational rations, to include funding authorities and storage locations. Navy/Marine Corps Departmental Publication (NAVMC) 2907, *Prepositioning Objective for Maritime Prepositioning Force and Marine Corps Prepositioning Program-Norway,* provides the latest prepositioning objective for maritime prepositioning ships squadrons (MPSRONs) and Marine Corps Prepositioning Program Norway. The use of these references will be required for proper detailed planning and u s e of prepositioned assets.

Force Held Stocks

The landing force operational reserve material (commonly referred to as LFORM) is prepositioned stocks for the specific purpose of providing unit managed resources to ensure the Marine expeditionary unit (MEU) commander has 15 days of supply (DOS) of PORs on-hand to provide operational flexibility and Class I force sustainment.

Class I Availability

The area of operations Class I manager (with guidance from the commander) must determine the rations to be moved forward using a supply-push method. Not all types of Class I may be available in each element of operations at the on-set of hostilities. When the logistic support structure is in place, a pull method may be implemented. Using the pull method, the unit places a demand (ration request), and the LCE reacts to meet that demand (see page 2-9 for more information on the "supply-push" and "demand-pull" methods of the logistic system).

Tactical Feeding

Tactical feeding is expeditionary feeding of forward units or elements and fixed base camps, whether in combat or in training. When supporting units are on the move, field feeding must be highly mobile and flexible enough to meet the commander's intent.

***Base Camp Feeding*.** Base camp feeding is the traditional field mess. Base camp feeding (feeding in a static environment) can be employed in combat or training, depending on the mission. Typically, the LCE and ACE operate in static environments conducive to this type of feeding. Logistical requirements for displacing base camp feeding sites are sizable and must be exercised in training environments in order to support the operational need.

Forward Feeding Unit. Under the current MCFFP, infantry units have food service specialists and equipment assigned to their table of organization and table of equipment, which provides commanders with a capability to employ resources as the tactical situation permits. One option is to send food service Marines forward with a tray ration heating system (TRHS) mounted in a tactical vehicle to support dispersed units. This option requires preparing beverages at the field mess site, heating some of the rations on the move, and heating the remainder of the rations at the linkup site. A second option is for food to be prepared in the base camp field mess, sent forward in insulated containers, and served hot at the linkup site.

Logistics Civil Augmentation Program. Theater support in a joint operational environment, as determined by the theater commander, may be provided by contractors as part of the logistics civil augmentation program (LOGCAP) and in accordance with joint policy for base camp operations.

Logistics civil augmentation program is a US Army initiative for peacetime planning for the use of civilian contractors in wartime and other contingencies to provide preplanned logistics and engineering/construction support. These contractors perform selected services to support US forces in support of DOD missions. Use of contractors in a theater of operations allows military units to support other missions or shortfalls and provides an additional means to adequately support the force. This program is primarily designed for use in areas where no bilateral or multilateral agreements exist with the host nation. However, LOGCAP may provide additional support in areas with formal host-nation support (HNS) agreements, where other contractors are involved, or where peacetime support contracts exist. Additionally, LOGCAP is available during CONUS mobilizations to assist the CONUS support base and help units get ready for war.

Tactical Food Services Support Responsibilities

Unit Commander

The unit commander is responsible for field food service operations and will ensure that—

- The unit has all authorized field food service equipment listed in the table of equipment (serviceable and stock list-3[SL-3] complete).
- Personnel are trained and personnel support requirements are available.

- Adequate transportation support capabilities are available to move food service personnel, equipment, rations, ice, water, fuel, trash, and residual rations.
- Sufficient mess attendant support is available for field messes preparing UGRs.
- Personnel strength data (present for duty by Service component) is provided to the mess chief in a timely manner.

Food Service Officer and Food Service Technician

The FSO and the food technician are responsible for advising commanders on the employment of available resources, and administers guidance to unit mess chiefs, while providing assistance in resolving food service related matters. The FSO must be thoroughly familiar with the MCFFP and provide assistance in field operations from as early as possible in the planning phase until the mission is complete.

Mess Chief

The senior enlisted food service Marine is designated as the unit mess chief and is essential to the successful planning, execution, and operation of field feeding at all levels of the MAGTF. The mess chief must know all aspects of field food service operations and make the most efficient use of assigned personnel, equipment, facilities, and supplies.

Food Service Specialists

Food service specialists are trained to prepare all meals in the family of combat rations. Staffing is based on the feeding standard as established by the commander's capability to serve two hot meals daily, which is dependent on METT-T.

Mess Attendant Support

The commander is responsible for tasking supported units with mess attendant support to the field mess. The use of the UGR increases the sanitation requirement as well as the overall workload. Staffing of food service personnel is not designed to handle this increase without unit augmentation. The number of personnel required depends on the unit feeding strength, mission, and remote site feeding versus the consolidated feeding requirement.

> *Note: All mess attendants will be required to complete the Department of Defense Form (DD Form) 2971 prior to assignment to mess duty*

Combat Service Support Food Personnel

The Marine logistics group coordinates the personnel and equipment required to support the MAGTF's Class I requirements.

Food service personnel sustain operations ranging from military support, to domestic relief operations, to foreign humanitarian assistance, to peace-keeping operations and armed conflicts. Field feeding operations will reflect the mission of the MAGTF element supported. The MCFFP

adjusts for those differences and provides a variety of equipment and rations to support any situation. The primary mission of food service personnel is to provide food service support to deployed forces.

Supply is responsible for Class I support; supply must maintain subsistence storage units and prepositioned requirements; however food service personnel may provide expertise and assistance in the management of these activities.

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CHAPTER 2
DEPLOYMENT PLANNING

Deployment of theater subsistence procurement, storage and distribution activities should begin at the onset of theater operations. Personnel, equipment, and transportation assets should be in place to receive and distribute the subsistence required to sustain the force at the onset of operations. Their locations should be planned and coordinated for compatibility with the overall layout of the theater distribution system. The FSO and unit mess chiefs must advise commanders (at each level) of any special requirements during initial planning phases. The MCFFP permits food service operations in a variety of tactical situations, but they must be curtailed in chemical, biological, radiological, and nuclear (CBRN) environments.

Deployment planning begins with forecasting requirements to support the OPLAN and the commander's intent. Food service planning in hostile environments must be flexible and tailored to support the tactical situation along the entire operational continuum.

When the theater of operations is initially activated or if hostilities arise, all Class I distribution system components may not be in place; therefore, units may not have the luxury of choosing the rations they will consume. The OPLAN and the approved feeding concept will identify when distribution units and equipment will be phased into the operation and when each type of ration should arrive in theater.

Additional food service factors that may be included in the OPLAN are environmental protection, fuel, water, ice, waste disposal, subsistence inspections and veterinary support, residuals, sanitation inspections, refrigeration assets, transportation of Class I, and convoy support requirements. The use of contracted services for waste (garbage and gray water disposal) may be required and will need to be identified in the unit's overall logistical requirements. The deployment planning considerations provided in appendix A should be used as a guide for unit deployment planning. Additionally, appendix B provides checklists, flowcharts, and food service capability sets that can be used to assist in the deployment planning process.

Unit Preparation

Actual staffing of food service specialists and mess attendants is directly related to the type of operation and feed plan. Most OPLANs or OPORDs define a time-phased force flow, which is dependent on the operational environment. The OPLAN should also identify the planned use of prepositioned assets or WRM supporting the operation or exercise. Appendix C should be used in developing a concept of support, based on the unit's requirements.

Concept of Support

The MCFFP supports the MAGTF commander in all theaters of operation, using the commander's intent and mission requirements as outlined in the corresponding OPLAN or

OPORD. With this information, it is incumbent on the senior FSO within the unit to develop a concept of support to sustain the operation. The concept of support should be developed using all the information provided in this publication as well as the listed references.

Support Structure

The required number of food service specialists to support mission-specific taskings should be determined by a food service subject matter expert. The actual number of personnel will depend on the feed plan, equipment, location, and number of static or remote feeding sites:

- Expeditionary field kitchen (EFK) operations. Six food service specialists per EFK. See unit table of organization for available structure.
- Enhanced-tray ration heating system (E-TRHS) operations. Three food service specialists per E-TRHS. See unit table of organization for available structure.
- TRHS operations. Three food service specialists and one driver (when mobile mounted) per TRHS. See unit table of organization for available structure.

Other manpower considerations when supporting the field feeding mission include the following military occupational specialties (MOSs):

- 1141–electrician.
- 1142–electric equipment repair specialist.
- 1161–refrigeration mechanic.
- 1171–hygiene equipment operator.
- 1345–engineer equipment operator.
- 3531–motor vehicle operator (requires a specific license for the E00707B, EFK trailer).

Field mess attendant support is developed in coordination with the type of equipment and rations being used to sustain the operation. Specific requirements will be commensurate with the level of food service expected from the command. A traditional ratio of 1 mess attendant per 25 Marines being supported has been used for large scale field feeding operations.

> *Note: In accordance with MCO 1000.6,* Assignment, Classification, and Travel Systems Manual, Food Service Specialist, MOS 3381, *will not be assigned meal verification, cash collection, or mess attendant duties.*

Shipboard Staffing

Navy personnel for shipboard messing are staffed to meet the requirements of the ship's crew. Additional personnel are required to augment the Navy food service specialist and mess attendant when Marines are embarked. Different Marine Corps food service specialist and mess attendant augmentation ratios have been established by HQMC for the categories of total embarked Marines, enlisted Marines, staff noncommissioned officers, and officers (see table 2-1 on page 2-3).

Table 2-1. Augmentation Ratios.

Embarked Troops	Food Service Specialists	Mess Attendant	Total Augmentation Required
100	2	6	8
300	4	17	21
500	7	28	35
700	10	39	49
900	13	50	63
1100	15	61	76
1300	18	72	90

The embarked Marine shipboard staffing ratio is 1:72 food service specialists to Marines embarked. A mess attendant (food service attendant) ratio of 1:18 (1 mess attendant for every 18 troops embarked) will be used to compensate for the reduction of total food service specialists.

The number of mess personnel furnished for the chief petty officer/ staff noncommissioned officers mess will remain at a ratio of 1:15, and the number of wardroom mess attendant assigned will remain equal to 12 percent of the embarked officer population. Additionally, updating the memorandum of understanding or memorandum of agreement between the embarking unit and the ship to detail modifications to specific augmentation may be required.

Training Exercises

Food service specialists must be trained to operate effectively within the MCFFP. The MOS-specific training should include—

- The operation and maintenance of all authorized equipment allowance.
- Subsistence requisitioning, receipt, storage, accountability, issuance, and distribution procedures.
- Safe food handling regulations.
- Food defense.
- Preparation and serving procedures.
- Environmental stewardship responsibilities.
- Sanitation procedures.
- Operational planning (use appendix C to develop a concept of support).
- Retrograde procedures.
- Responsibilities for maintaining the family of combat feeding equipment within the Global Combat Support Systems-Marine Corps.

In accordance with NAVMC 3500.35, food service specialists need to stay current with all unit training activities concerning military battle skills. Training plans should include unit specific tactics, techniques, and procedures such as, map reading, convoy operations and security, rear area security, setup and employment of crew served weapons, and patrolling.

A “train as you expect to fight” mentality must be established to ensure a high state of readiness. With this understanding, many of the steps involved in unit deployments will be the same whether deploying in support of exercises or real-world events.

Basic training considerations are as follows:

- Understand the commander’s intent: the mess chiefs’ concept of support should support the commanders’ scheme of maneuver and mission objectives.
- Determine organic table of equipment and table of organization to support mission requirements.
- Submit Class I requisition or request in accordance with published timelines
- Identify and coordinate supporting activities required (i.e., power, bulk and bottled water, fuel, materials handling equipment [MHE], or other support requirements).
- Develop an embarkation plan per unit standard operating procedure (SOP).

Contingency Operations

During contingency operations, additional considerations to the concept of support include the following:

- Determine required planning lead time.
- Understand if the unit is deploying its own table of equipment, falling in on established allowances, or using prepositioned assets.
- Coordinate with DLA Troop Support by using designated area coordinators or regional representatives for the following:
  - Area food and water risk assessment.
  - Available sources of supply in the region.
- Establish who the executive agent will be for Class I in the region.
- Coordinate with US Army Public Health Command (USAPHC) for approved sources of supply if DLA Troop Support is not the initial Class I provider.
- Develop Class I reporting procedures for subordinate units.

War Reserves

The majority of Marine Corps Class I WRMs are owned and held by DLA, including those aboard MPSRONs, and they are maintained as protected Marine Corps WRM levels. Rations are procured and held as landing force operation reserve material with Military Personnel, Marine Corps (MPMC) funding. The Logistics Plans, Policies, and Strategic Mobility Division and Logistics Facilities and Services Division/MCICOM review, on an as-required basis, the methodology that calculates all Class I items to support each MEF and Marine Forces Reserve (MARFORRES) WRM. For budgetary planning purposes, a deterioration loss factor for UGRs will be included in t h e computation. These requirements will be calculated for the full planned period of support required for the scenarios authorized for sustainability planning in MCO 4400.39.

Computation of WRM for all Class I items is based on the approved force list, planned mobilization support requirements, and the food service portion of Annex D (Logistics) to the OPORD. Meals, ready to eat (MREs) are held as WRMs and are Marine Corps managed. The ability of the Marine Corps to maintain adequate levels of MREs to meet peacetime training and MAGTF sustainment requirements is directly related to shelf life and stock rotation policies. The MCICOM G-4 is responsible for budgeting and satisfying these requirements. Assets will be positioned with Marine Corps forces only to the degree that timely stock rotation can be accomplished. These stock levels should be equal to one-half the operating level plus the safety level for a Marine expeditionary brigade (MEB)-sized MAGTF. A shortfall in training requirements will affect the capability to sufficiently rotate WRMs.

Maritime Prepositioning Force

The purpose of prepositioned assets is to place military units, equipment, or supplies at or near the point of planned use or at a designated location to reduce reaction time and to ensure timely support of a specific force during the initial phases of an operation. Field feeding equipment and Class I supplies are part of the maritime prepositioning force (MPF) capability and are designed to support a notional, MEB-sized element in accordance with Marine Corps Bulletin 3501, Maritime Prepositioning Force (MPF) Force Lists (F/L). Prepositioning objectives are established by commodity for equipment and supplies, and they are published annually by the table of authorized materiel control number (TAMCN) in NAVMC 2907. The following must be considered during MPF operations:

- Equipment items needed to support the MPSRON are spread loaded across vessels that make up the squadron.
- A “capability set” is designed to be offloaded quickly in order to support quick reaction missions (as directed) or the arrival and assembly stage of an MPF off-load operation. The food service portion of the capability set consists of six E-TRHSs and supporting gear and it is maintained on the weather deck of a designated ship within the squadron.

Each MPSRON contains a basic load that is meant to sustain the force until follow-on support can be established. Ration shelf life limits Class I stockage levels to a point that can be rotated and managed according to annual training events. A total requirement to support the force list, as published in Marine Corps Bulletin 3501, is not attainable. The senior enlisted food service Marine responsible for operational support must be familiar with the specific Class I prepositioning objective associated with the designated MPSRON. Using unit force flow numbers, most MPSRONs contain enough MREs to support the initial 15 DOS (for a notional MEB-sized force); if the force size is smaller, then the DOS will be greater. Therefore, force size information is critical to the planning process in order to make the best use of deployment lead time. Follow on Class I support should be requested in accordance with the PBA and can be shipped via air or sea.

Requests for General or Direct Support

The MAGTF's LCE provides general or direct support to the GCE and command element, and will serve as the primary means of generating and filling mission support requirements. The originating request should flow through established routes from the supported unit to the designated supporting unit. When mass unit deployments prevent the LCE from fulfilling all support tasking's, shortfalls will be forwarded to the MEF for MEF-wide sourcing. When tasked, the LCE provides personnel and a field feeding capability commensurate with the supported unit's requirement. The LCE augments the supported unit's organic capability in order to execute the field feeding mission. The LCE possesses all TAMCNs associated with the family of field feeding equipment and can employ any or all of its capability, as required. Although, both general and direct support scenarios are METT-T driven, a standard support plan is not possible due to differing planning factors. To ensure a consistent level of support, the following planning factors may apply:

- General support scenarios may call for the LCE to establish a static feed site that supports base camp operations, as well as transient unit populations.
- Direct support scenarios may require the LCE to establish a base camp feed site for GCE units in forward operating bases. In this case, organic personnel and equipment would either be pooled for large group feeding or pushed to unit supported battle positions throughout their area of operations. The LCE will serve as the overall direct support coordinator of food service operations.

Marine Corps Air-Ground Combat Center Training Support

Numerous exercises are conducted aboard Marine Air-Ground Task Force Training Command (MAGTFTC), Marine Corps Air-Ground Combat Center (MCAGCC) in Twentynine Palms, California, each year. When directed, MAGTFTC supervises the planning for and execution of unit training exercises. Units requesting Class I subsistence support, field feeding equipment, and or support facilities will submit a feasibility of support request via naval message to the MAGTFTC G-3 no later than 60 days prior to the start of the training exercise. The exercise support division will review all feasibility of support submissions and provide a response to the requesting unit and their chain of command.

Simultaneously, the requesting unit will provide all feed plans directly to the MAGTFTC, MCAGCC G-4, and FSO via the exercise logistics coordination center no later than 60 days prior to commencement of the exercise. Changes to the approved feed plan may be required due to rations availability. If the feed plan is in support of an integrated training exercise, one consolidated feed plan must be submitted.

Additional considerations for training units while aboard MAGTFTC are as follows:

- The requesting unit is responsible for water distribution, ice requirements and the transportation of rations.
- Water and ice distribution points are accessible on Camp Wilson and support must be coordinated through the exercise logistics coordination center.

- Supported units will conduct a joint inventory of all facilities and equipment with the base food service representative.

  Note: Messing equipment and contracted mess attendants are available at Camp Wilson so that unit personnel can maximize training opportunities. Combat Center Order 3500.14A, Marine Air-Ground Task Force Training Command Integrated Training Exercise Order, *outlines specific requirements for supported units.*

Non-Class I Requirements

Ice Requirements

The planning factor for potable ice is based on 6 pounds per Marine per day in a temperate climate and 11 pounds per Marine per day in an arid climate. Although ice is a Class I item, the use of subsistence funds is unauthorized; Operations and Maintenance, Marine Corps (O&MMC) funds be used to purchase ice. Additional ice calculation planning factors can be found in appendix E.

Fuel Requirements

The planning factor for fuel requirements in support of food service equipment depends on the specific platform the unit is using (fuel calculations can be found in app. F). It is the responsibility of the unit mess chief to ensure the proper levels of fuel are maintained throughout the operation.

Note: If the field feeding site has standalone generators, it will be important to ensure that they are included on the refueling schedule.

Water Requirements

Potable water is an essential element in the MCFFP. The overall water requirement will be based on equipment (by type), ration mix, sanitation, and food production:

- Specific planning factors for each equipment platform can be found in the corresponding technical manual (TM).
- Detailed information for rehydrating ration components, and mixing beverage packs can be found in DLA Operational Rations, Customer Ordering Handbook.

It is important to not underestimate the requirement for ration preparation. Individual water calculation planning factors can be found in appendix G. Additionally, Marine Corps Warfighting Publication 3-17, *Engineering Operations,* provides unit sized water planning factors based climatic conditions.

Security

Procedures for securing subsistence, supplies, funds, and equipment must be established in advance and outlined in the duties of guard personnel task with patrolling subsistence and supply stocks. Requirements for special items, such as concertina wire and security locks must also be considered. Using approved sources of supply will help to eliminate the risk of food tampering and will ensure that food vendors have security measures in place to protect the integrity of the supply chain down to the using unit.

Records, Logs, and Publications

Food service personnel will maintain records of training, equipment (maintenance and repair), ration accounting, personnel supported, publications, and after action reports.

Equipment Status

The authorized equipment allowance must be maintained in a “mission capable” status, and be included in the unit’s cyclic preventive maintenance program. Specific information concerning the operation and maintenance of each platform in the family of combat feeding equipment can be found in the corresponding TM.

Upon notification of a deployment or exercise, preventive maintenance checks should be completed in order to validate equipment readiness status. Repair parts and replacement (SL-3) components are ordered as needed; ensuring to document all transactions in the applicable equipment record jacket within Global Combat Support Systems-Marine Corps.

Deployment Databases

The unit automated information system (AIS) contains deployment databases that identify lift requirements. Unit AIS garrison databases reflect all table of equipment assets to include embark boxes and containers on-hand at the unit level. Depending on the level of information maintained by the unit, the database may include the national stock number (NSN), item identification, and the package identification.

There is a distinct difference between the unit AIS garrison database plan and the unit deployment list (UDL). The unit AIS garrison database lists all table of equipment assets and their containers. The UDL shows only those assets the unit will deploy to meet the logistic needs of the unit commander, which shows the unit lift footprint and provides visibility of the entire unit’s food service equipment.

Deploying units (MEU, MEB, and MEF) establish an equipment density list (EDL) allowance and determine sourcing agencies for equipment in support of operational requirements. The EDL is a TAMCN list of items required to support a deployment. The EDL reflects all equipment beyond each element's table of equipment as well as other equipment determined necessary by higher headquarters. Equipment received in support must be loaded onto a unit’s consolidated memorandum receipt and into the mechanized allowance list upon receipt; reconciliation with unit

supply must ensure all EDL items match the consolidated memorandum receipt and mechanized allowance list.

Class I (Logistics) Distribution System

Supply-Push Method

The supply-push method is used to initially fill the supply pipeline during conflict. During limited duration or high-intensity conflict, this method may be used exclusively without conversion to the demand-pull method. Under a supply-push method, the materiel management center of the LCE and or the MAGTF planning cell determines the type and quantities of rations to be shipped to each Class I supply point. Types and quantities of rations ordered and shipped under this method are based on anticipated troop strength, unit location, type of operation, and supported unit feeding capabilities. The supply-push method ensures that rations are available in the operational area; ration types and variety will mature as the operational situation stabilizes. An intermediate rations break point will need to be established in the rear operating area. The purpose of the break point will be to ensure that large bulk containers, which are direct shipped (or direct vendor delivered) from the ration assembler with a single menu, are reassembled into mixed container loads for forward movement; thereby ensuring that multiple menus are available to the using units.

Demand-Pull Method

The MCFFPs policies and procedures are based on a demand-pull method. This method has the supported unit placing a demand on the Class I distribution system. Class I is sent forward to satisfy the request from the supported unit. This method provides asset visibility and a single point of control over all subsistence supplies, while being responsive to supported units.

Distribution Variances

The actual process for Class I distribution may differ based on METT-T factors. Considerations include Class I supply point locations, mode of transportation, convoy schedules, and types of rations. Specifics of the Class I distribution system for deployment planning are also available from various unit documents, such as Annex D (Logistics) of the OPORD, letters of instruction, or directives.

Weather Conditions

Hot Weather

When conducting field operations where the ambient temperature is routinely above 90 °F, careful planning must be conducted to ensure a safe operating environment is established and maintained. In these conditions, temperatures exceed 140 °F under tents during midday hours. Preparing rations and serving food during these extreme conditions increase the risk of heat casualties.

Cold Weather

When conducting field operations where the ambient temperatures are routinely below 32 °F, maintenance checks are critical and must not be neglected. The failure rate of equipment increases under cold weather conditions, and places a greater demand on the maintenance response capability. Food service Marines require additional time and assistance in preparing rations and performing other tasks under these conditions. At temperatures below -20 °F, operations and maintenance require up to five times the normal amount of time.

The minimum caloric requirement for Marines operating in an extreme cold weather environment is 4,500 calories per day. Menu planning and Class I supply/resupply requirements must be designed to allow for the increased calories required in these environments.

> *Note: During extreme cold weather, mess chiefs must consider the type of fuel available and fuel freezing points. If warranted, mess chiefs may request for a non-gelling additive when artic diesel fuel is not available. Refer to appendix F for specific information on fuel freezing points*

Extreme Weather

Extreme weather conditions have adverse effects on equipment operations as well. A continuous preventive maintenance program is required to reduce malfunctions of equipment due to sand, dirt, and corrosion. Technical manuals provide additional considerations for equipment operators during extreme weather conditions and should be followed in accordance with manufacturer or service recommendations.

Class I Site Selection

Each Class I point must be accessible to the source of supply and the supported unit. Class I distribution points may be collocated near other classes of supply and supply distribution points. Other considerations are as follows:

- The site is located near the main supply route.
- Roads should be capable of handling heavy traffic in all weather conditions and be wide enough for vehicle mobility.
- Permanent structures are used when possible.
- The area should provide good coverage, drainage and be capable of supporting the weight of the rations.
- Directional signs should be erected inside Class I points to avoid traffic congestion and accidents and allow for proper site management.

Size

The site should be large enough to handle the estimated volume of Class I supplies and MHE. A parking area is needed for vehicles stopping at the control point, loading and unloading supplies, and rotating refrigerated trailers. There should be a dispersion of supplies throughout the Class I

site to lessen the chance of collateral damage that may be caused by enemy indirect fire. Dunnage racks will be used to keep the supplies off the ground. Tents, sunshades, and tarpaulins will be used to provide protection when structures are not available. Lighting must be adequate for safety and security. The perimeter will be fenced and control points established at each exit and entrance. Figure 2-1, on page 2-12, and figure 2-2, on page 2-13, show the suggested layout for a rear area and forward area Class I supply point.

Concealment and Cover

Because of the large amounts of supplies stored at a Class I point, it is extremely difficult to camouflage or conceal all of the subsistence. Palletized rations should be placed under trees when available. All trucks and MHE will be camouflaged with netting. When possible, terrain features should be used to protect the Class I point from enemy fire.

Defense

Three-strand concertina wire is used to defend the site's perimeter. The concertina wire is interlaced with sensors to provide early warning of the enemy's approach. At a minimum, the condition of the perimeter is checked by security patrols daily. Fighting positions are included as part of the unit's overall defensive plan. Light and noise discipline are enforced based on METT-T considerations.

Camouflage

The subsistence supply point and field mess site must be concealed to prevent detection by enemy aircraft, ground forces, or infrared sensors. Precautions are as follows:

- Do not let Marines 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 setup near combat or hostile areas.
- Bury or retrograde disposable dishes and utensils, tin cans, and litter from packaged rations.
- Camouflage the area where refuse is buried.
- Camouflage equipment and other items that might reflect light and keep them out of sunlight.
- Use light discipline when required. When operating equipment that is not designed to support blackout conditions, cease all field feeding operations and eat PORs.

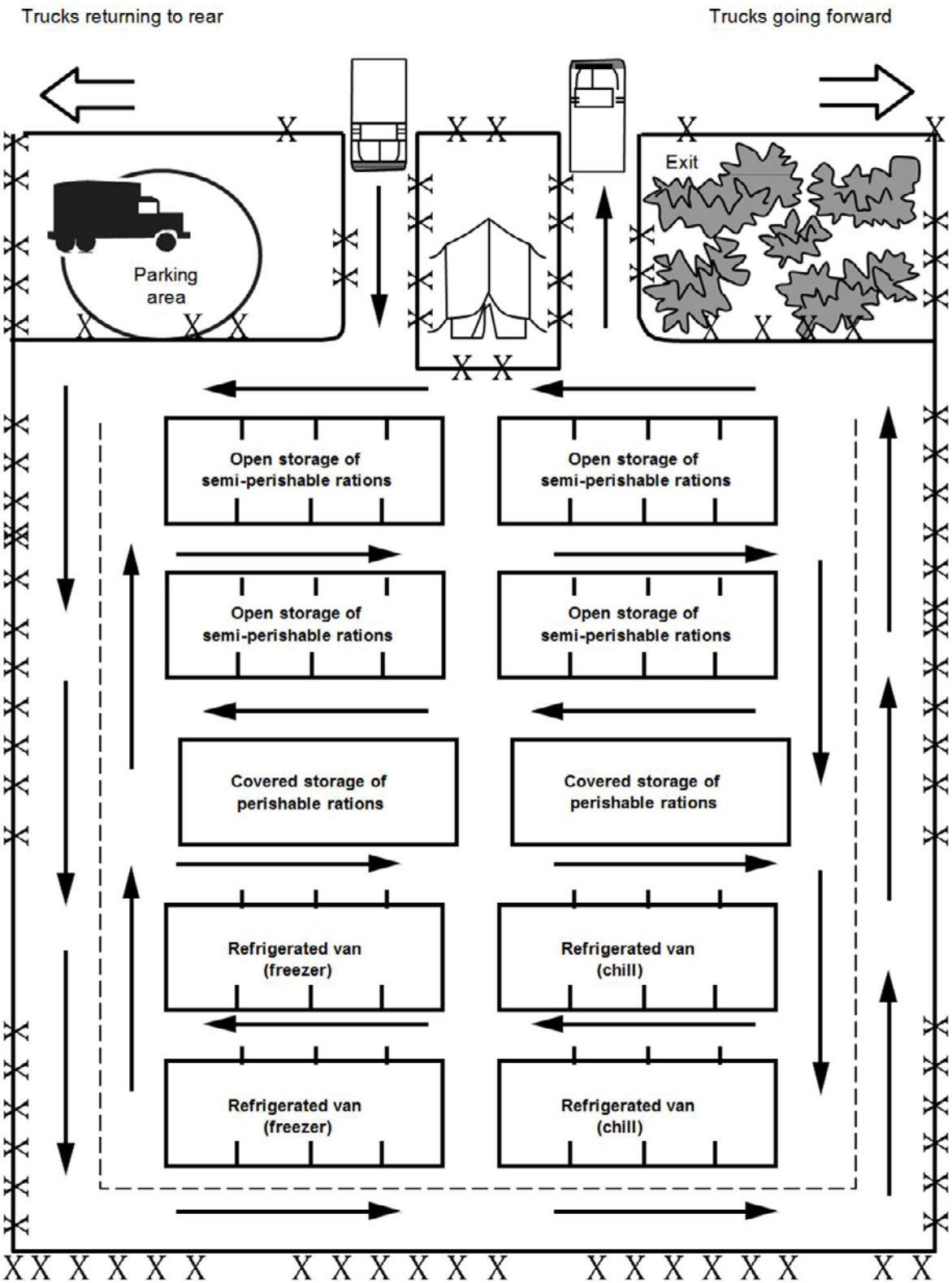


Figure 2-1. Rear Area Class I Supply Point.

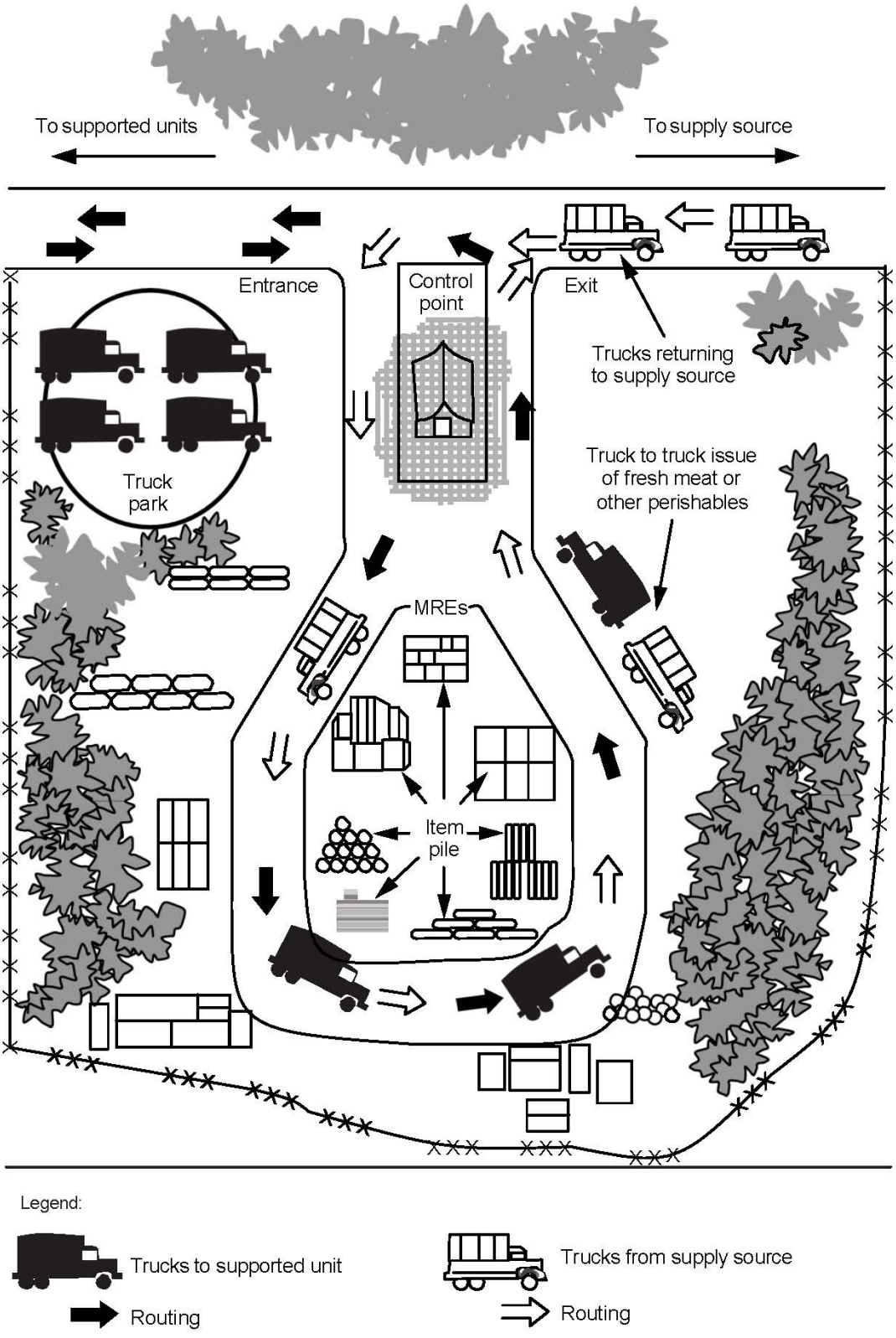


Figure 2-2. Forward Area Class I Supply Point.

The unit commander specifies the general location of the field mess site. However, the mess must consider the following characteristics when selecting a good field site:

- Good natural cover shields Marines from the enemy and protects personnel from sun, heat, and cold winds.
- Good access roads let supply trucks move freely.
- High and dry ground near a protected slope ensures good drainage and protection from
- the wind.
- Adequate space eliminates crowding of Marines and facilitates spreading of equipment so that personnel can work efficiently.
- A nearby source of potable water is needed for use in preparation of foods and beverages.
- Sandy loam or graveled soil allows excess water to seep away and helps soakage pits and trenches work well.
- Level ground facilitates the setup of the equipment.

The following should also be considered in selecting and setting up the field feeding site:

- Tactical or nontactical operation.
- Extent of time the area will be occupied.
- Method of solid waste disposal (burn, bury, back haul).
- Resupply operations.
- Tents and building usage.
- Billeting area location.
- Convenient water source for purification when needed.
- Location away from heads or any source of contaminants.

Figure 2-3, on page 2-15, is an example of a rear area field mess when using the EFK; similar considerations may be applied using other field feeding platforms. Passive measures should include dispersion, camouflage, cover and concealment, light and noise discipline, survivability moves, covering vehicle tracks into the field kitchen site, and staggering ration distribution to eliminate congestion of the site.

Field Feeding Options

Field feeding options include either a semi-permanent site or the use of TRHS. The semi-permanent site is located in the rear area for an indefinite time. Since some units may not require rapid mobility, a semi-permanent site may be established near troop concentrations. Insulated food containers will be used to transport hot food to nearby units that require a larger degree of mobility. The TRHS can be located close to the forward unit and is operated for short durations. Its use should be limited to short periods of time for smaller units with a highly mobile mission. Long term sole subsistence on unitized group ration-heat and serve (UGR-H& S) will have the same effect on physiology and morale as MREs.

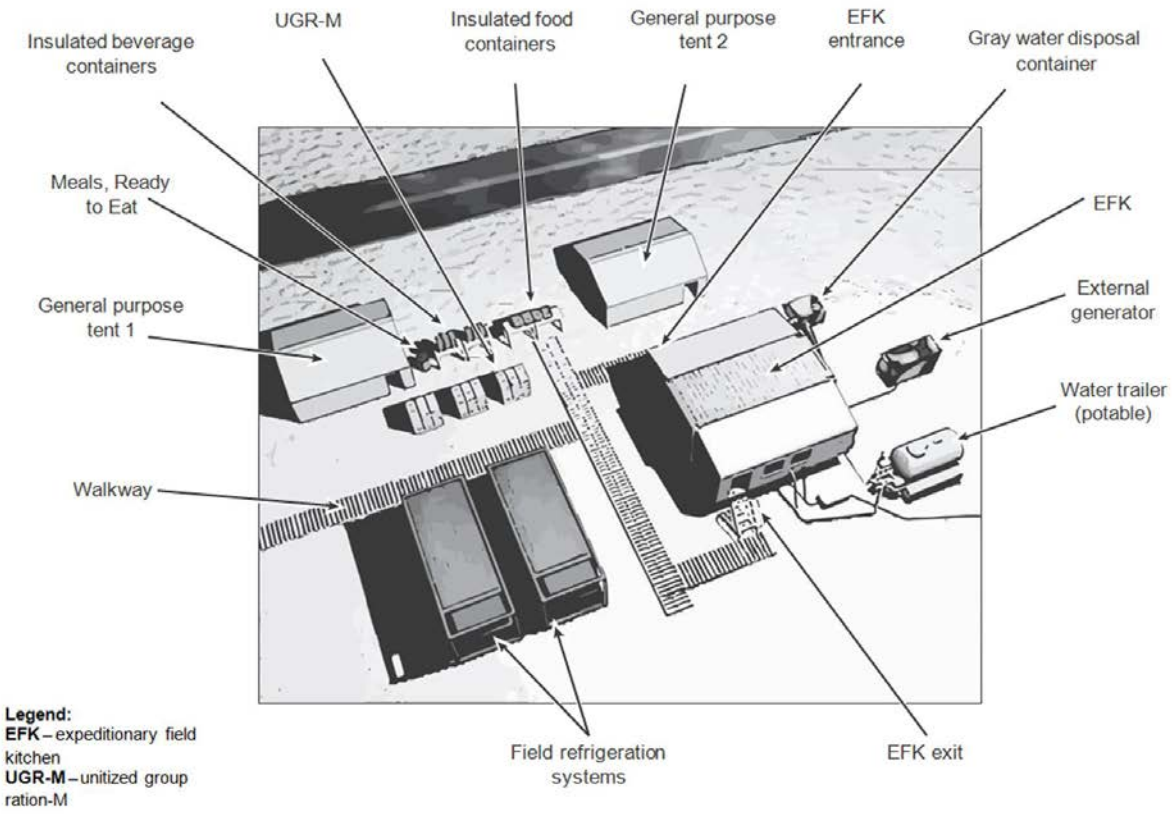


Figure 2-3. Recommended Expeditionary Field Mess Layout.

Use the following to determine which option to employ:

- Availability of equipment and personnel.
- Capability of the logistic system.
- Level of commitment.
- Availability of rations.
- Total sanitation requirements.
- The number of personnel to be fed.
- Feeding times.
- Location.
- Mission.

Each field feeding option can be tailored to meet the requirements unique to each using unit.

> *Note: When practical, the TRHS may be deployed to remote sites for hot meal preparation. Three food service Marines should accompany this equipment.*

Established field mess sites may be required to provide messing support to units operating in or passing through their area. Food service personnel should be responsible for the transportation, setup, and feeding of units away from the field mess. Food service personnel should accompany

meals sent to remote sites to ensure proper sanitation and portion control. Remote feeding requires intensive management by commanders and food service personnel.

When staging prepared subsistence, dunnage racks should be used, and the area should be covered when possible. Staging may be by unit, meal, or item. The staging area must be supervised by a food service Marine to ensure that units receive the proper amount of rations and instructions in sanitation and serving.

Redeployment

Planning Class I and food service requirements for redeployment is equally as important as planning for deployments. The mess chief must ensure that enough Class I supplies are available to sustain the unit en route to its home station. If unused rations are present at the end of the exercise or deployment, these supplies are turned in to the supporting supply activity. Attention to detail and coordination with the commander and staff will ensure smooth unit movement.

Following the correct procedures for closing the field mess and Class I areas of operation is extremely important. Consideration must be given to the environmental impacts caused by soakage pits, grease traps, trash pits, and incinerators. Local SOP may outline additional measures concerning pack-out and redeployment.

The unit must be prepared to provide food service support during redeployment. The commander and unit embarkation officer will provide specific information such as, when, how, and where the unit will move. The mess chief is responsible for ensuring that logistical requirements are identified to the S-4 officer. The commander and unit embarkation officer will also provide specific food service needs such as, convoy rest halts, railhead support,
and overnight commitments.

CHAPTER 3
RATIONS AND SUSTAINMENT

The MCFFP supports the MAGTF commander in all theaters of operation. Deployed forces will subsist on a mix of rations that will consist of PORs, UGRs, and enhancements as described in MCO 10110.14_, *Marine Corps Food Service and Subsistence Program*.

A ration is the amount of food that is nutritionally adequate to feed one person for one day. Major subordinate command FSO/food technician/ mess chief will provide commanders with options for choosing the appropriate ration that best supports the commander's tactical situation.

Unitized rations include UGR-H&S, UGR-M, unitized group ration-A (UGR-A), and unitized group ration-express (UGR-E). Packaged operational rations include MREs, first strike ration (FSR), meal, cold weather (MCW), and religious meals (i.e., kosher and Halal). Ultra-high temperature milk is used as a supplement to operational rations and does not require refrigeration. Enhancements may be used to supplement PORs and unitized ration meals in order to increase dietary fiber and product acceptability. Under certain conditions, contracted meals or host nation messing (HNM) may be an authorized alternative when organic or direct support resources are not available.

Planning Considerations

The approved Marine Corps field feeding policy is one MRE and two hot meals per day. Ideally, an individual ration is served for lunch and hot meals are served for breakfast and dinner. The Marine Corps' primary field feeding rations is the UGR-M or the UGR-H&S. The UGR-A is by exception only, primarily due to the logistical requirements for distribution of the ration components. The UGR-A is primarily used by the US Army, which is better equipped to support the use of this ration. The inclusion of two UGRs in the standard of three quality meals per day is based on units having the required personnel and equipment necessary for implementation.

> *Note: All requests for UGR-As or UGR-Es must go through MCICOM G-4 for approval.*

The POR is designed for individual or small group feeding when the tactical situation is unstable or the unit is widely dispersed, and a field feeding site cannot be established. The MRE is best used when the levels of combat are intense or unit activity precludes the use of a prepared unitized ration. The FSR is designed for long-range patrols and makes a viable option for the first 72 hours of conflict due to its cube size and weight reductions over other POR types. Packaged operational rations should not be used as the sole daily diet beyond 21 days and FSRs should not be the sole diet beyond 3 consecutive days.

The UGR-H&S is used as a bridge between the POR and the UGR-M. The UGR-M should be used when units are located in a more static position on the battlefield, or area of operations. These meals require more time and resources to prepare and are dependent on a mature distribution system.

Unit deployment planning will consider all organic, general and direct support resources available for the mission. All field feeding requirements will be based on operational necessity. Appendix C provides a food service support matrix to be used in the development of a concept of support plan. It provides a notional number of personnel and equipment resources, which may be required to support the commanders' concept of operations.

Unitized rations are introduced into the feed plan as soon as the tactical, operational, and logistical situation permits. The feed plan is a standard form supplied by the FSO to plan for the introduction of standard ration mixes in accordance with the unit mission and is METT-T dependent (see app. D for a standard feed plan format).

Patients in field hospitals will receive three hot UGR-M meals daily. These meals are also augmented with a medical diet field feeding supplement. Meals, ready to eat are authorized for patients in hospitals only in emergencies or when other rations are not available. Enhancements will be added to the menu as they become available.

Types of Rations

Packaged Operational Rations

Meal, Ready to Eat. The MRE is the Marine Corps' primary POR. Each MRE is designed to sustain an individual engaged in heavy activity such as military training or during actual military operations. Meals, ready to eat are packaged meals designed for consumption as individual meals or in multiples of three as a complete day's ration. Except for beverages, the entire meal is ready to eat. The MRE also contains a ration supplement, flameless heater (RSFH) in each flexible pouch to heat the entree. Each meal provides an average of 1,250 kilocalories (13 percent protein, 36 percent fat, and 51 percent carbohydrates). Each box contains 12 meals. The net weight per case is approximately 22 pounds and the size is 1.02 cubic feet. The ration has a shelf life of 3 years when stored at 80 °F and 6 months when stored at 100 °F.

First Strike Ration. The FSR is a compact, eat-on-the-move assault ration designed for short durations of highly mobile and or high intensity combat operations. The FSR provides a full day's ration equivalent in a single package. Overall packaging substantially reduces the weight and cube size. Ration components enhance warfighter consumption, nutritional intake, and individual mobility. Each box contains three different menus, with three (daily ration) packages of each menu type, for a total of nine daily rations in each box. One FSR package provides an average of 2,850 kilocalories. The net weight per case is approximately 29 pounds and the size is .99 cubic feet. The net weight per pallet is approximately 1,442 pounds and the size is 52.3 cubic feet. The FSR has a shelf life of 2 years at 80 °F.

Note: One package equals three meals and is used in lieu of three MREs.

Meal, Cold Weather. The MCW is an individual ration intended for cold weather feeding to replenish the loss of energy from exertion in extreme cold. The MCW will not freeze in extreme cold weather conditions and provides extra drink mixes for countering dehydration during cold weather activities. The MCW requires 34 ounces of water to hydrate all components in its menu bag and may be consumed as individual meals, or in multiples of three as a complete day's ration. Each meal provides an average of 4,500 kilocalories (15 percent protein, 35 percent fat, and 50 percent carbohydrates). Each box contains 12 meals. The net weight per case is approximately 15 pounds and 1.02 cubic feet, while each pallet weighs 758 pounds and is approximately 56.1 cubic feet. The ration has a shelf life of 3 years when stored at 80 °F.

Meal, Religious. Meal, religious is a specialized set of menus designed for military members with strict religious, kosher or Halal diets. Each meal is designed for individual consumption or in multiples of three as a complete day's ration. Each meal consists of one kosher or Halal certified entree and religiously certified/acceptable complementary items sufficient to provide the recommended daily nutritional requirements. It is a self-contained meal; however, it is not combined in a flexible meal pouch. Each case of religious meals contains 2 intermediate boxes: 1 box with 12 entrees and 1 box with 12 component/accessory items. Except for the beverages, the entire meal is ready to eat. Each meal also contains a RSFH for heating the entree. Each meal provides an average of 1,200 kilocalories (11 to 13 percent protein, 37 to 40 percent fat, and 48 percent carbohydrates). Each box contains 12 meals. The ration has a shelf life of 9 to 10 months at 80 °F from the time components are assembled into the meal packet.

Note: Requirements for these rations must be forecasted annually.

Humanitarian Daily Rations

The Department of State is responsible for humanitarian daily rations (HDRs). Combatant commanders are responsible for transporting HDRs. When these rations arrive on site, nongovernmental organizations or embassies assume responsibility. These rations are designed for feeding large populations of displaced persons or refugees under emergency conditions. In accordance with MCO P4400.39, HDRs are not funded for or consumed by military members. The shelf life of the HDR is 36 months at 80 °F.

Note: MCFFP family of combat rations are not intended for or authorized for humanitarian feeding.

Unitized Group Rations

Unitized Group Ration–Heat and Serve. The UGR-H&S is designed to maximize the use of commercial items and to simplify the process of providing high quality food service in a field environment. All components for a complete 50-person meal are included in the UGR-H&S, with the exception of mandatory supplements, such as milk and cold cereal, and optional enhancements like bread and fresh fruit and vegetables. The UGR-H&S module is characterized by tray-pack entrees, starches and desserts. There are 7 breakfast menus and 14 lunch or dinner menus available. Each 50-person module of the UGR H&S is composed of 3 boxes. The average weight and cube per module is 124.5 lbs and 5.25 cubic feet.

Unitized Group Ration–M. The UGR-M is quick and easy to prepare and includes shelf-stable and dehydrated ingredients, and feature more commercial items in order to balance module components. The UGR-M has 5 breakfast and 14 lunch/dinner menus with each meal providing an average of 1,300 kilocalories (15 percent protein, 30 percent fat and 55 percent carbohydrate). Each module provides 50 meals and each pallet contains 8 modules or 400 meals. The UGR-M will have an expected shelf life of 18 months at 80 °F.

> *Note: Food service specialist and appropriate equipment are required to prepare the UGR-M.*

Unitized Group Ration–A Option. The UGR-A is designed to maximize the use of commercial items and to simplify the process of providing high quality food service in a field environment. All components for a complete 50-person meal are included in a single module. The UGR-A module is comprised of 3 boxes. One pallet is comprised of 12 modules, which provides 600 meals. The UGR-A includes perishable/frozen-type entrees (A-Rations) along with commercial-type components. Currently there are 7 breakfast and 14 lunch or dinner menus available. Each menu provides an average of 1450 kilocalories (14 percent protein, 32 percent fat, and 54 percent carbohydrates) per serving. The average weight and cube size of one UGR-A module is 86.70 lbs. and 4.03 cubic feet. The UGR-A shelf life varies between perishable and semi perishable components. See DLA rations handbook for more detailed information.

> *Note: Visit the DLA Troop Support webpage for more information on the types of rations available, menus, and ration specifications: www.troopsupport.dla.mil/subs/rations/in- dex.asp*

Unitized Group Ration–Express. The UGR-E is a compact, self-contained module that provides a complete, hot meal for 18 personnel. It has pull-tab technology that initiates the heating process which takes approximately 30 to 45 minutes to heat completely before it is ready to serve. The module contains all food items and disposable items (cups, compartment trays, napkins, utensils, and trash bags) necessary to feed 18 individuals. Each menu provides an average of 1300 kilocalories (12 percent protein, 38 percent fat, and 50 percent carbohydrates) per serving. Standard items that are included in all modules are coffee, creamer, hot sauce, gloves, box cutter, hand cleaner (towelette), dinner trays, dining packets, trash bags, and heater module. The UGR-E option has a minimum shelf life of 18 months at 80 °F.

The UGR-E is a specialized meal for specific applications on the battlefield. It affords the commander the ability to provide hot food to remote units when other forms of field feeding are not practical without the necessity of equipment, fuel, or power. For budgeting purposes the UGR-E is more than twice as expensive and is more weight and cube size than other ration types. Long term sole subsistence on UGR-E will have the same effect on physiology and morale as MREs.

Enhancements

An enhancement is the subsistence item added to the meal for nutritional purposes (e.g., fresh fruits, fresh vegetables, milk, and bread). A supplement is the authorized monetary allowance to be added to the cost of the meal for procurement of the enhancement items.

For security and safety purposes, enhancements that are not provided by a DLA Troop Support-approved prime vendor must be certified as an approved source of supply before procurement. Local procurement of food will not be made without coordination and approval of an Army veterinary service team or Navy preventive medical unit. Enhancements are perishable items that require refrigeration and increase transportation, fuel, equipment, and water requirements. The workload, liquid and solid waste disposal, and sanitation requirements for food service personnel are also increased. Concurrent with the introduction of perishable r a t i on s into the theater of operations, refrigerated transportation and storage assets are required from the receiving theater subsistence distribution activity to the using field mess. Refrigeration sources include existing table of equipment assets (i.e., organic tactical refrigeration, refrigerated International Organization for Standardization [ISO] containers from MPSRONs, and contracted refrigeration).

Enhancements to Packaged Operational Ration. The amount of monetary supplement authorized for POR enhancements is limited to 8 percent per POR box cost that was actually consumed. The cost of the UHT milk is not included in the authorized 8 percent supplemental allowance.

Enhancements to Unitized Group Rations. When tactical, operational, and logistical situations permit, enhancements may be added to unitized group ration meals. Authorized enhancements consist of bread, milk, cereal, fresh fruits, fresh vegetables, etc. The supplemental allowance of the enhancements will not exceed 15 percent of the module cost of the primary ration consumed. Overseas exercises that must pay a higher cost for enhancement items are authorized a supplemental allowance not to exceed 20 percent of the module cost of the primary ration consumed. The UHT milk costs are not included in the 15 percent (CONUS) and 20 percent (OCONUS) supplemental allowance for exercises.

Ultra-High Temperature Milk. Ultra-high temperature milk is fresh milk that has been processed using ultra high temperature pasteurization to ensure microbic inactivation, while preserving the flavor, taste and nutritional value. Milk should be available with each unitized ration meal and may be UHT or whole milk. Suggested serving is two half pint containers of milk for breakfast with cereal, and one half pint container for lunch or dinner. Ultra-high temperature milk should be used before procuring fresh commercial items.

Individual Ration Heating Devices

The RSFH is the only flameless heater available to heat POR entree packets, dehydrated entrees in MCW, and water for instant soups and beverages. The RSFH is a water-activated, exothermic, chemical heating pad packaged with each MRE or MCW.

Health and Comfort Pack

The HQMC I&L Department; Logistics Plans, Policies, and Strategic Mobility Division; Logistics Capabilities Center; Supply Chain Capabilities Team (Code LPC-3) is responsible for policy guidance on the acquisition of health and comfort packs (HCP). The HCP is classified as a gratuitous item under Class I vice Class VI (personal demand/nonmilitary sales). An HCP is a Service contingency item designed to provide health and comfort items for male and female personnel. Health and comfort packs are delivered into theater once forward area exchange facilities are established. Health and comfort packs are not held in peacetime as part of WRM.

To meet MAGTF deployment timelines, Marine Corps Logistics Command provides an initial 30-day requirement for HCPs to DLA Troop Support. Health and comfort pack requirements are calculated and registered during deliberate planning and are based on the initial 30 DOS to support the MAGTF. The DLA Troop Support website provides additional details on the types of health and comfort packs available.

Host Nation Feeding

One of the first OCONUS planning factors to consider is host nation feeding. Host nation Feeding consists of four categories: food service HNS, HNM, contract feeding, and field support. When feasible, MAGTF plans should make maximum use of HNS available within the theater of operations. Host-nation support can augment MAGTF elements' organic food service capabilities; however, HNM and contract feeding is not a substitute for essential MAGTF organic capabilities but should be considered when organic capabilities are not feasible. Written agreements of support, payment for all HNM/contract feeding, and approval of a funding source will be accomplished prior to support being provided.

Host-Nation Support

An HNS agreement may be entered into by the US Government and friendly host nations. There are two types of HNS agreements: wartime and peacetime. Food service HNS consists of selected subsistence items procured from the local economy and prepared by Marine Corps food service personnel. Generally, items consist of enhancements (produce, milk, bread) and are used to enhance unitized rations and PORs. If a unit anticipates the need for HNS, it must notify the appropriate headquarters to ensure that a current agreement is in effect. The applicable HNS agreement letter that specifies support and reimbursement must be submitted with the unit's quarterly subsistence financial report. Subsistence provided by a host nation must be inspected by US Army veterinary personnel.

Host Nation Messing

Host nation messing consists of bulk food purchased for US military organizations (as opposed to individual Service members), with the host nation or contractor providing the food and its preparation. Host nation messing involves Marine Corps personnel subsisting in a host nation facility in which the Marine Corps will reimburse the host nation for the meals provided. Host

nation messing differs from HNS in that the Marines actually receive full messing support in a foreign military or civilian dining establishment and, in most cases, no food service Marines or attendants are needed. Units requiring HNM must identify the requirement 90 days before support is provided. Procedures to obtain billing documents must be coordinated with the host nation early in the planning process to ensure that all paperwork is compiled in a timely manner at the end of the operation or exercise.

Contract Feeding

At times, units will operate in areas where a civilian contractor or host nation government provides meals through contracted logistics support agreements. Contract feeding is any feeding where individual meals provided are prepared by a contractor (CONUS/OCONUS) or host nation government outside the Service's mess hall. This method of feeding Marines should be used in accordance with the guidelines specified in MCO 10110.14 and only after all efforts to obtain subsistence support from other military or host nation sources have been exhausted. A contracting agent or contingency contracting officer, usually at a military installation or embassy nearest the feeding site, must negotiate contract feeding requirements. All nonfood costs incurred by the contractor (e.g., labor, equipment, materials) must be paid for with unit O&MMC baseline operating funds. The subsisting unit collects all accounting data pertaining to the subsistence operation before departing the area of operations. Prior to entering into a contractual agreement coordinate with Army veterinary service team or Navy preventive medical unit to inspect the proposed vendor and clear them as an authorized provider.

The use of contract feeding as a unit support plan does not eliminate the need for food service personnel. Food service specialists are required to provide contract oversight, force protection, and ensure food safety for the deployed force.

Military Personnel, Marine Corps Subsistence-In-Kind Funds (1105 Appropriation). Military Personnel, Marine Corps, subsistence in kind (SIK) funding is used to procure bulk subsistence items from direct support stock control (prime vendor) or other contracted commercial sources. Bottled water and ice are not considered food items for purchase and must be procured using O&MMC funds.

When contract feeding/HNS is provided, MPMC SIK funds may be used to pay for raw subsistence items. Under these conditions, the SIK account will only reimburse contract or host nation costs at the discounted meal rates for two meals, which are typically the breakfast and dinner. Units are required to use MREs for the third meal under all field conditions. Contract feeding or host nation contract costs above the discounted meal rates must be paid with unit or exercise O&MMC funds (e.g. contract labor, overhead, profit).

Reserve Personnel, Marine Corps (1108 Appropriation). Reserve Personnel, Marine Corps (RPMC) is annual appropriation that provides for the pay, allowance, clothing, subsistence, per diem, travel and other related costs for Marine Corps Reserve personnel. When contracted field meals and host nations support or messing are provided during Reserve training or exercises, the entire contract cost will be coordinated and funded from the RPMC account.

Operations and Maintenance, Marine Corps (1106 Appropriation). Operations and Maintenance Marine Corps appropriation is used to support baseline operational expenses and training costs (this includes consumable supplies, cleaning gear, fuel, repair parts, etc.). Additionally, O&MMC funds are used for contract or host nation costs above that allocated from the MPMC account.

Operations and Maintenance, Marine Corps Re-serve (1107 Appropriation). Operations and Maintenance, Marine Corps Reserve (O&MMCR) is appropriation used to support the operational and training costs of Marine Corps Reserve units. The O&MMCR funding is used for the same activities that O&MMC appropriation provides for Regular Marine Corps.

Field Support

This method of feeding occurs when the contractor or host nation procures only bulk food from an approved source of supply. The Military Services set up a field mess and prepare their own meals.

Acquisition and Cross-Servicing Agreements

Occasionally, United States forces will conduct multinational training exercises with foreign military forces. United States Code, Title 10, Armed Forces, subtitle A, part IV, chap. 138, subchapter 1, sec. 2341-2350, Acquisition and Cross-Servicing Agreements, authorizes DOD to enter into mutual logistic support agreements with the defense departments of foreign nations. When conducting a multinational exercise, the officer scheduling and conducting the exercise should determine the appropriate reimbursements for messing support for each participant based on existing acquisition and cross-servicing agreements. If in doubt, the unit comptroller will have information on all existing agreements and should be the point of contact to determine if an acquisition and cross-servicing agreement is in place.

CHAPTER 4
EQUIPMENT

Expeditionary Field Kitchen

TAMCN C0034
NSN 7360-01-579-1956

The EFK is a self-contained mobile feeding platform. See figure 4-1.

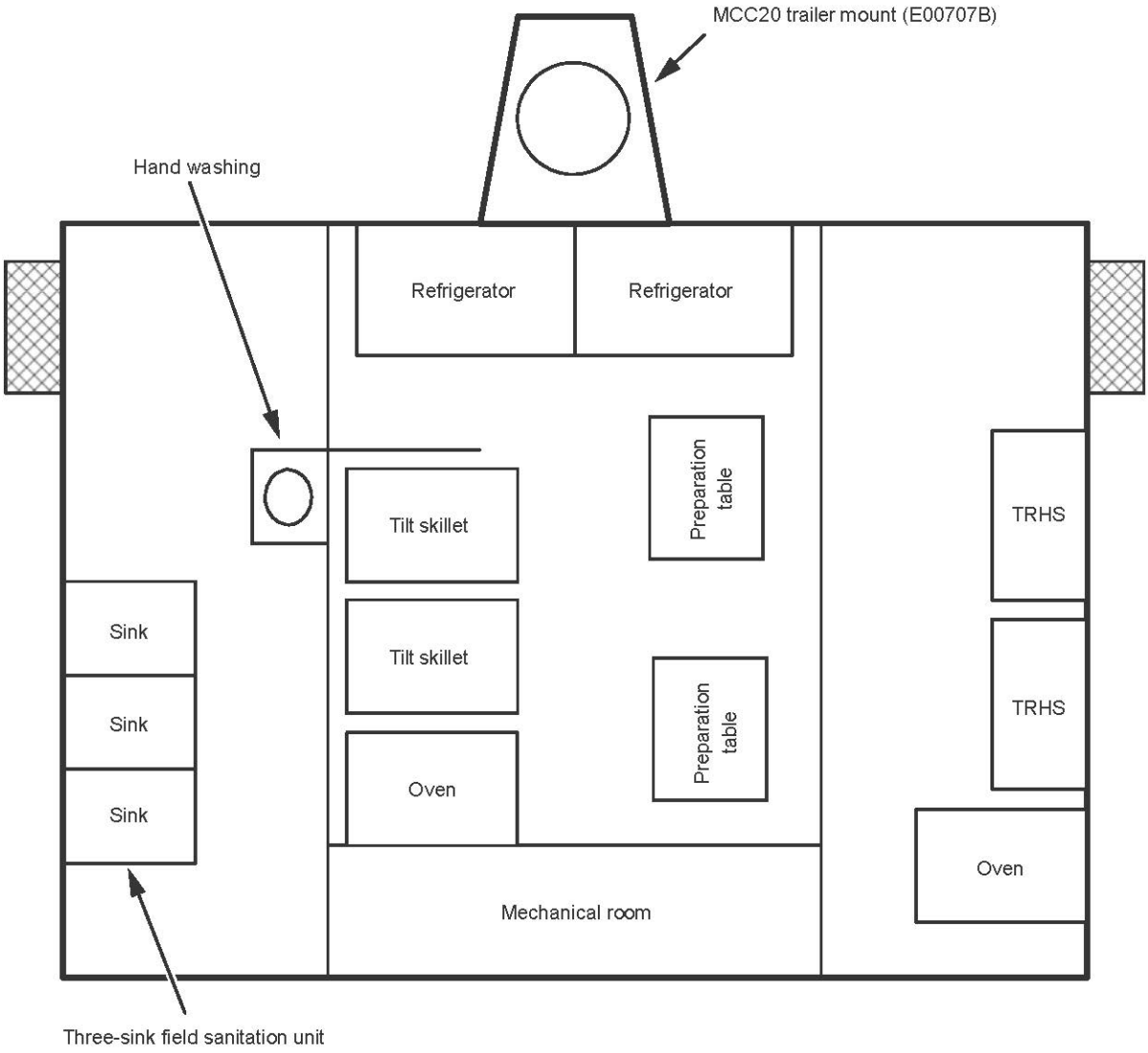
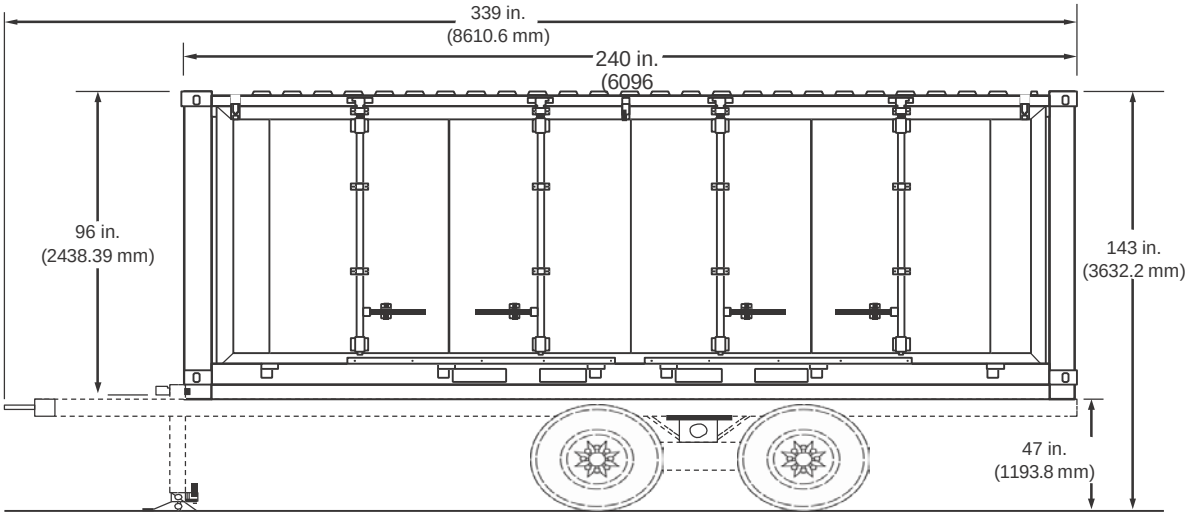


Figure 4-1. Expeditionary Field Kitchen.

The EFK is an ISO container in a two-way expandable configuration mounted on the E00707B trailer (see figs. 4-2 and 4-3 on page 4-3). The system is composed of two tilt skillets, two ovens, two TRHSs, a three-compartment sanitation sink, and two reach-in style refrigerators. All cooking components use the AirtronicTM burner as the heat source.



MCC20 trailer width: 97 in. (2438.39 mm)

Figure 4-2. Trailer-Mounted Expeditionary Field Kitchen.

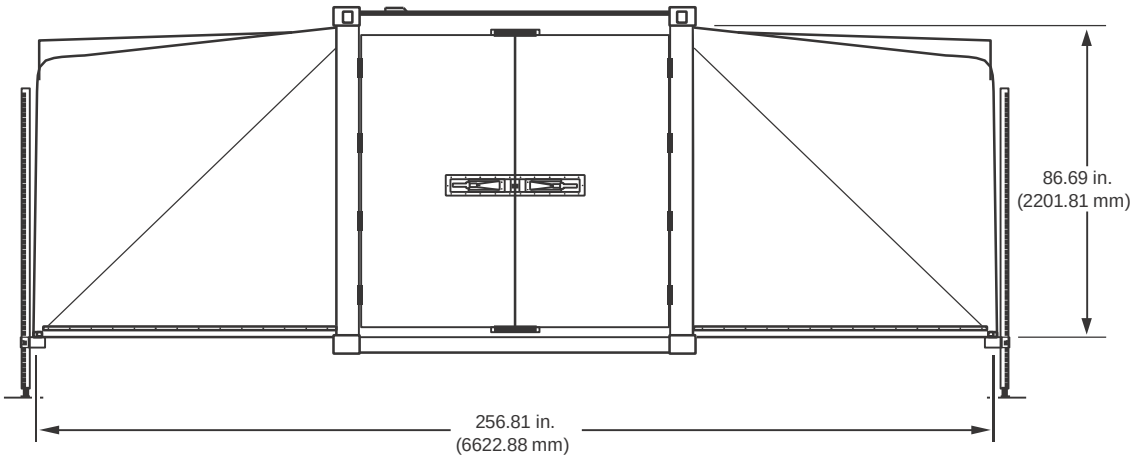


Figure 4-3. Expeditionary Field Kitchen with Sides Expanded.

The two TRHSs, one mobile oven, hand washing sink, and the field sanitation unit are mounted on casters to allow the components to be moved into place on the wing walls of the EFK. All other components are mounted to the floor.

Operational Characteristics

The EFK is used to support designated elements of the MAGTF with up to 750 hot meals twice daily. The commander can use the EFK in expeditionary operations to provide meals that enhance unit morale, performance, and health while meeting nutritional standards identified by the US Navy Bureau of Medicine and Surgery. Meals may be served from the EFK at the preparation site or placed in insulated food containers for remote feeding. The setup and operating range for the EFK is from -24 °F to 125 °F and the storage range is from -25 °F to 160 °F.

Physical Characteristics

The EFK is comprised of one ISO container mounted on the E00707B trailer. The weight of each system is 23,960 pounds. This weight includes the trailer, container, and container contents. The EFK's physical specifications are as follows:

Container overall dimensions
- Length: 25ft.
- Width: 8 ft.
- Container height: 12 ft.

Trailer overall dimensions
- Length: 28 ft 3 in.
- Width: 97 in.
- Container lock height: 47 in.
- Total height with containerized shelter: 143 in.

Ground clearance
- Frame rail: 28 ¾ in.
- Axle: 11 ¾ in.

Weights
- Curb (no load): 8,380 lbs.
- Maximum cargo: 23,960 lbs.
- Gross (loaded): 32,340 lbs.

Note: Listed maximum loads obtainable only with center of gravity approved shelter or flat rack systems.

Power Requirements

The EFK requires an external generator or electrical power source for all operations. The current power requirements are 6 kW for the EFK. The EFK utilizes three-phase, 208 volt, 50/60 Hz, alternating current, capable of North Atlantic Treaty Organization (NATO) conversion. The EFK is powered by a 10 kW, 60 Hz power supply or generator typically employed for operational scenarios, as well as conventional commercial sources, or shore power.

Maintenance

The Marine Corps recognizes two levels of maintenance: field and depot. Field maintenance is any maintenance that does not require depot maintenance capability and is performed by equipment operator(s) and mechanics or technicians within Marine Corps organizations and activities, and or by approved commercial or contract sources. Maintenance tasks performed within the field LOM are categorized as organizational or intermediate. A unit may perform any field maintenance tasks for which it is staffed, trained and equipped. Units are not authorized to conduct maintenance outside of their assigned capabilities except when coordinated through the supporting and supported unit relationship or as outlined in MCO 4790.25. Detailed information in regards to maintenance for the EFK may be found in TM 11805A-OI/1 (EFK) and TM 11464A (E00707B trailer).

The corrosion prevention and control (CPAC) program is designed to reduce maintenance requirements and costs associated with the EFK. When corrosion degrades the operational and structure capabilities of the system, the CPAC program will repair existing damage and apply preventive measures to avert future damage.

Any repair of the system that exceeds the field level of maintenance based on the source, maintenance, and recoverability (SMR) code will be done at the depot level maintenance facility in accordance with TM 11805A-OI/1.

Other Support Equipment

Employment of the EFK requires additional support equipment such as refrigeration systems, general purpose tents, potable water sources and gray water disposal containers. Utilizing grey water pumps will also assist in grey or black water removal. Weather conditions along with operating hours of the field feeding site may require the need for environmental control units (A/C and heaters).

> *Note: The EFK is also equipped with an auxiliary adapter for use with six containers together (commonly referred to as a SIXCON).*

Storage

The container of the EFK is ISO certified and can be stacked nine high when removed from the trailer.

Transportation

The EFK is transportable by air, land, and sea.

Transportability and Naval Integration. When configured for transportation, the EFK complies with Department of Transportation guidelines and regulations related to container safety and handling, as well as commercial handling regulations pertaining to ISO containers.

Rail Transportability. The EFK is rail transportable without damage or degradation to the system. The system is rail transportable in CONUS and NATO countries without restrictions. When loaded on a 50-in. (127-cm) high rail car, the EFK has a dimensional profile within the Association of American Railroads outline diagram and the Gabarit International de Chargement as specified in Military Standard (MIL-STD) -1366E.

Aircraft Transportability. The EFK meets the minimum requirements of Military Handbook (commonly referred to as MIL-HDBK) -1791 for C-17, C-141, and C-5 air transport. Although, the manufacturer certifies that the EFK meets air transportability requirements for NAVAIR C-130 and external helicopter lift, the user should contact the project manager, Combat Support Equipment, Combat Support Systems, Marine Corps System Command for updated information.

Marine Transportability. The EFK is Marine transportable per MIL-STD-1366E and withstands (without damage) the shock, rolling (not to exceed 15 degrees), and pitching (not to exceed 10 degrees) normally experienced on the deck or in the hold of a cargo vessel.

Ground Transportability. The Marine Corps' medium tactical vehicle replacement (MTVR) is the prime mover of this system. The EFK mounted on its E00707B trailer and towed by the MTVR is transportable over primary and secondary roads, as well as cross-country terrain. It is important to consult with the motor transport section as there are restrictions for towing with the extra-long wheelbase MTVR.

Enhanced-Tray Ration Heating System

TAMCN C00357B NSN 4520-01-564-3917

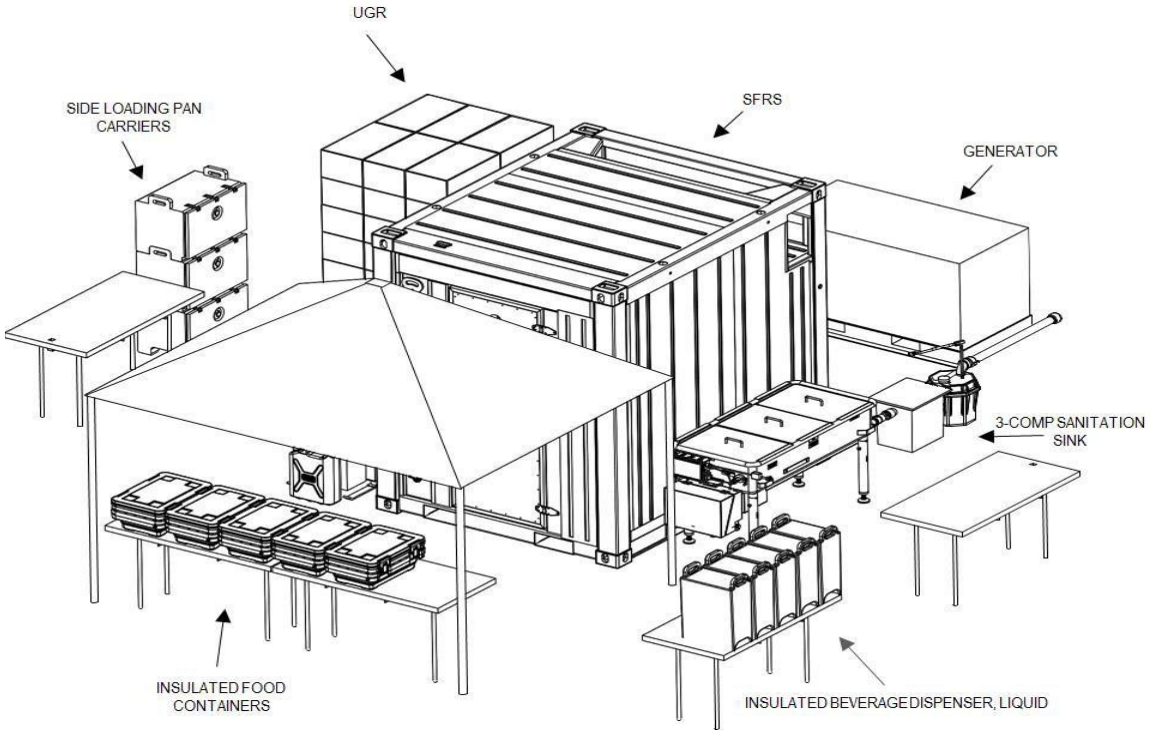
The E-TRHS (see fig. 4-4 on page 4-6 and 4-5 on page 4-7) is comprised of the TRHS, the small field refrigeration system (SFRS) with shelving and tie down equipment, two M-59 field ranges, two powered multifuel burner (PMB) sleds, a three compartment sanitation sink, and assorted ancillary items. All items fit within the SFRS for transport. A detailed pack-out of the equipment is included in TM 09211A-14&P, *Operation Manual and Component List for the Enhanced Tray Ration Heating System (ETRHS); Supplement to Tray Ration Heating System (TRHS), for the E-TRHS, Supplement 1*.

Operational Characteristics

The E-TRHS will be used to support designated elements of the MAGTF with up to 350 hot meals twice daily. The commander can use the E-TRHS in expeditionary operations to provide meals that enhance unit morale, performance, and health while meeting nutritional standards identified by the US Navy Bureau of Medicine and Surgery. Meals may be served from the E-TRHS at the preparation site or placed in insulated food containers for remote feeding. The addition of the refrigeration system allows for the use of the full family of combat rations.

Physical Characteristics

The E-TRHS is comprised of one ISO certified refrigerated container, 8 ft x 8ft x 6.5 ft.



Legend:
3-COMP–3-component
SFRS–small field refrigeration system
UGR–unitized group ration

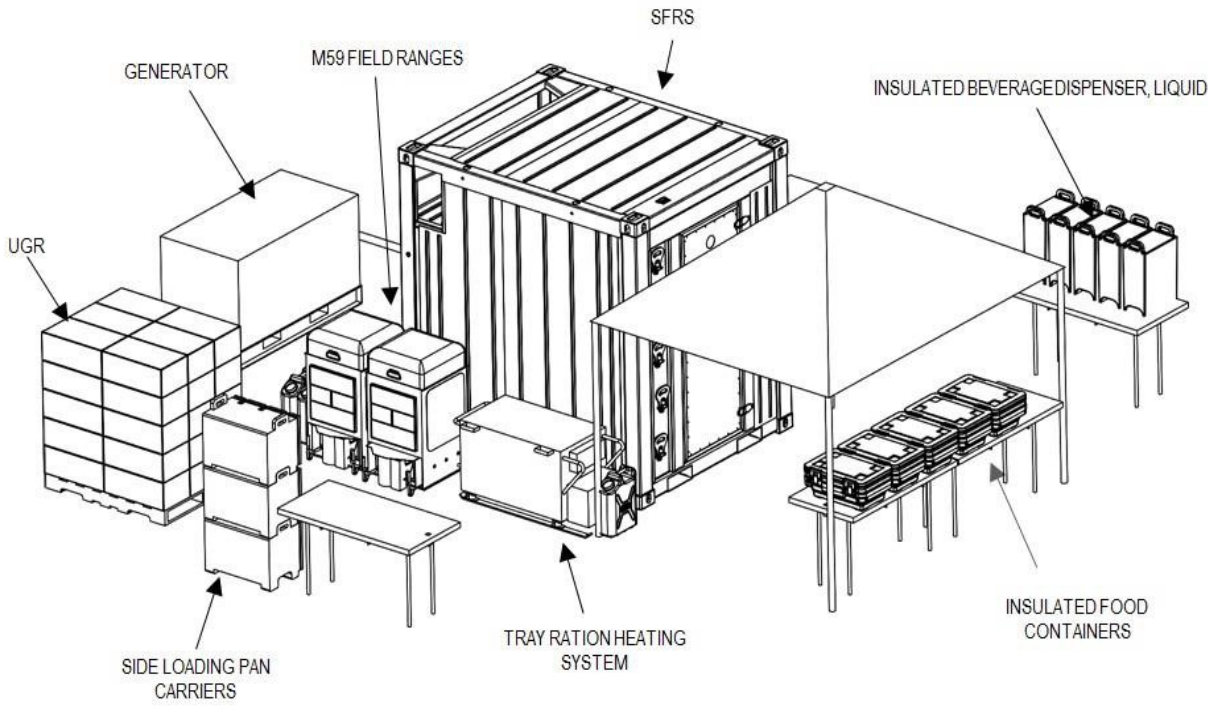
Figure 4-4. Enhanced-Tray Ration Heating System With Sink.

Power Requirements

The E-TRHS requires an external generator or electrical power source for all operations. The current power requirements are 5 kW for the E-TRHS. The E-TRHS utilizes 3-phase, 208 volt, 50/60 Hz, alternating current, which is capable of NATO conversion. The E-TRHS is powered by a 10 kW, 60 Hz power supply or generator typically employed for operational scenarios, as well as conventional commercial sources, or shore power.

Maintenance

For the E-TRHS, field maintenance is any maintenance that does not require depot maintenance capability and is performed by equipment operator(s) and mechanics or technicians within Marine Corps organizations and activities, and or by approved commercial or contract sources. Units are not authorized to conduct maintenance outside of their assigned capabilities except when coordinated through the supporting and supported unit relationship or as outlined in MCO 4790.25. Detailed information in regards to maintenance for the E-TRHS can be found in TM 09211A-OR (TRHS), TM 10-7360-204 (M59), and TM 11609A-OI (SFRS). The E-TRHS may require induction into the CPAC program for preservation of the SFRS. The CPAC activity will perform surface preparation, spot paint, or repair damage that has arrested the corrosion.



Legend:
SFRS–small field refrigeration system
UGR–unitized group ration

Figure 4-5. Enhanced-Tray Ration Heating System.

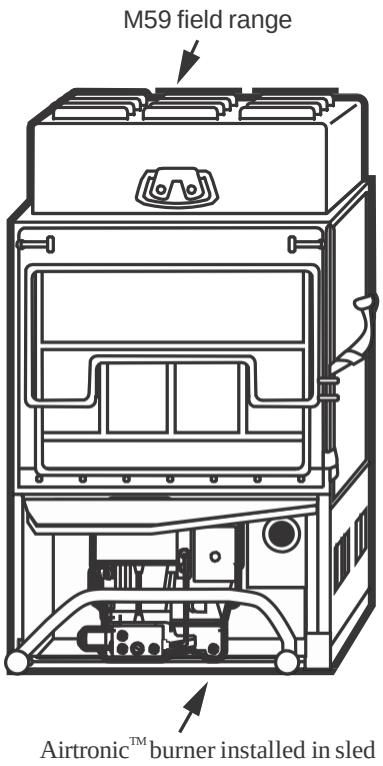
Other Support Equipment

Employment of the E-TRHS requires additional support equipment such as general purpose tents, potable water sources and gray water disposal containers.

Field Range Outfit

NSN 7360-00-082-2153

The M59 field range outfit (see fig. 4-6 on page 4-8) is portable and can be adapted to many different cooking configurations. Each field range comes with pots, pans, and cooking and serving utensils. The M59 field range can be used to bake, roast, boil, grill, and deep fat fry foods. The range may also be used as a hot line or steam table.



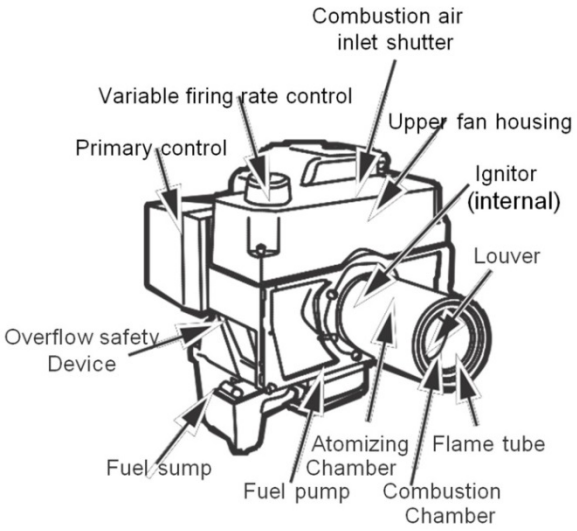


Figure 4-6. Airtronic™ Burner, Sled Installed.

Figure 4-7. AirtronicTM Burner.

Airtronic™ Burner Unit With Powered Multifuel Burner Sled

NSN 7310-01-442-8340
NSN 7310-01-535-6986

The Airtronic™ burner (NSN 731001-442-8340) (see fig. 4-7) is the heat source for all the cooking components within the E-TRHS. The burner is inserted into the PMB sled (NSN 7310-01-535-6986) (see fig. 4-6). The sled is then placed only in the bottom of the M59 field range. The mess chief must ensure that the cooks operate the PMB sled (with burner installed) safely and in a manner that protects the environment.

The Airtronic™ burner (see fig. 4-7) is a secondary repairable component and as such, when found defective, organizations will replace secondary reparable components by conducting an exchange with the supporting repairable issue point. Secondary repairable items with an SMR code of an “O” in the third character position are authorized to conduct an exchange. Basic preventive maintenance checks and services must still be conducted by the operator or crew at the organization.

WARNING

Do not operate the burner in an unventilated space. Buildup of carbon monoxide gas could lead to injury or death.

Insulated Food Carrier, Stackable

TAMCN C4880
NSN 7360-01-576-1586

Insulated food containers (see fig. 4-8) are used to keep foods hot or cold. These containers will maintain the temperature of food for a 4-hour period. Food containers will hold 5 gallons of liquid.

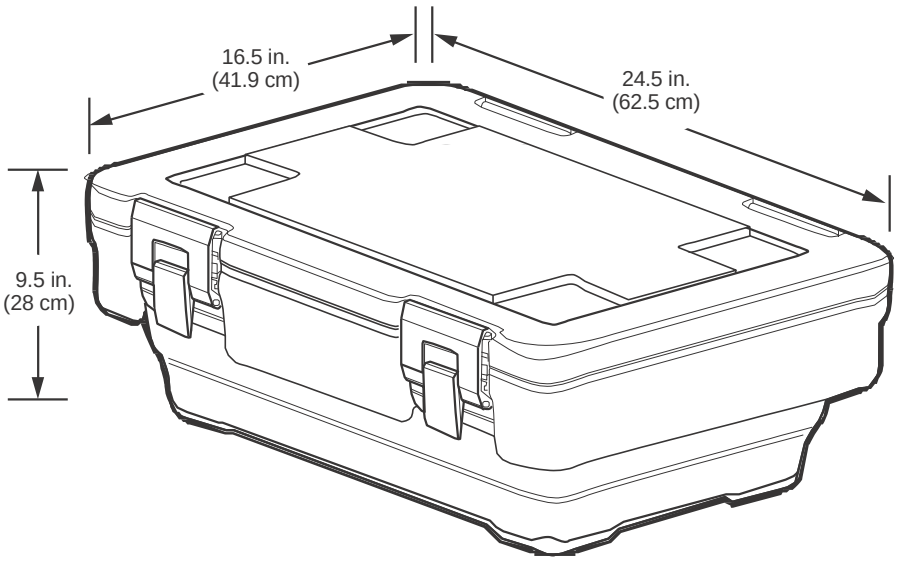


Figure 4-8. Insulated Food Carrier, Stackable.

Preheating Instructions. Perform the following procedures to preheat food:

- Pour 2 quarts of hot water into the container.
- Close the container lid and secure the latches.
- Let stand for at least 30 minutes.
- Drain water. Put hot food in the transporter and replace the cover.
- Close and fasten the container lid by securing the latches.

Chilling and Filling Instructions. Before cold food is placed in the container, perform the following procedures:

- Put crushed ice or 2 quarts of ice water in the container.
- Close the container lid and secure the latches.
- Let stand for 30 minutes.

After the crushed ice or ice water has been inside the container for 30 minutes, perform the following procedures:

- Pour ice or water from the container.
- Put food in the container and fasten the lids.
- Close and fasten the container lid by securing the latches.

Labeling Containers. Each food container will be labeled with the product name, number of servings, date, time, and product temperature when the item was placed in the container. To ensure food products do not exceed the 4-hour time limit for consumption, label the container with a "consume by" or "discard by" time (4 hours from the time the container was filled).

Insulated Beverage Dispenser, Liquid

TAMCN C4546 NSN 7330-01-093-7371

The 5-gallon beverage container (see fig. 4-9 on page 4-11) is a SL-3 component of the EFK, E-TRHS and TRHS, and is to be used for all other liquid dispensing requirements. The container will be cleaned in accordance with the guidelines for the food containers set forth in TM 09211A-14&P, Supplement 1.

Each insulated beverage container will be labeled with the product name. This will allow for ease of product identification for the individual patron as well as food service specialists who are responsible for product replenishments.

Cleaning the Container

The cleaning of all insulated food and beverage containers is mandatory. All parts and components (to include inserts) are to be cleaned before and after every use. All equipment will be washed in hot, dish washing solution. Depending on the container model, inserts and gaskets may be removed for cleaning. After washing the gaskets from the food or beverage container, allow them to air dry before reinserting them in the container. All parts are rinsed and sanitized in water that is at least 170 °F to 180 °F.

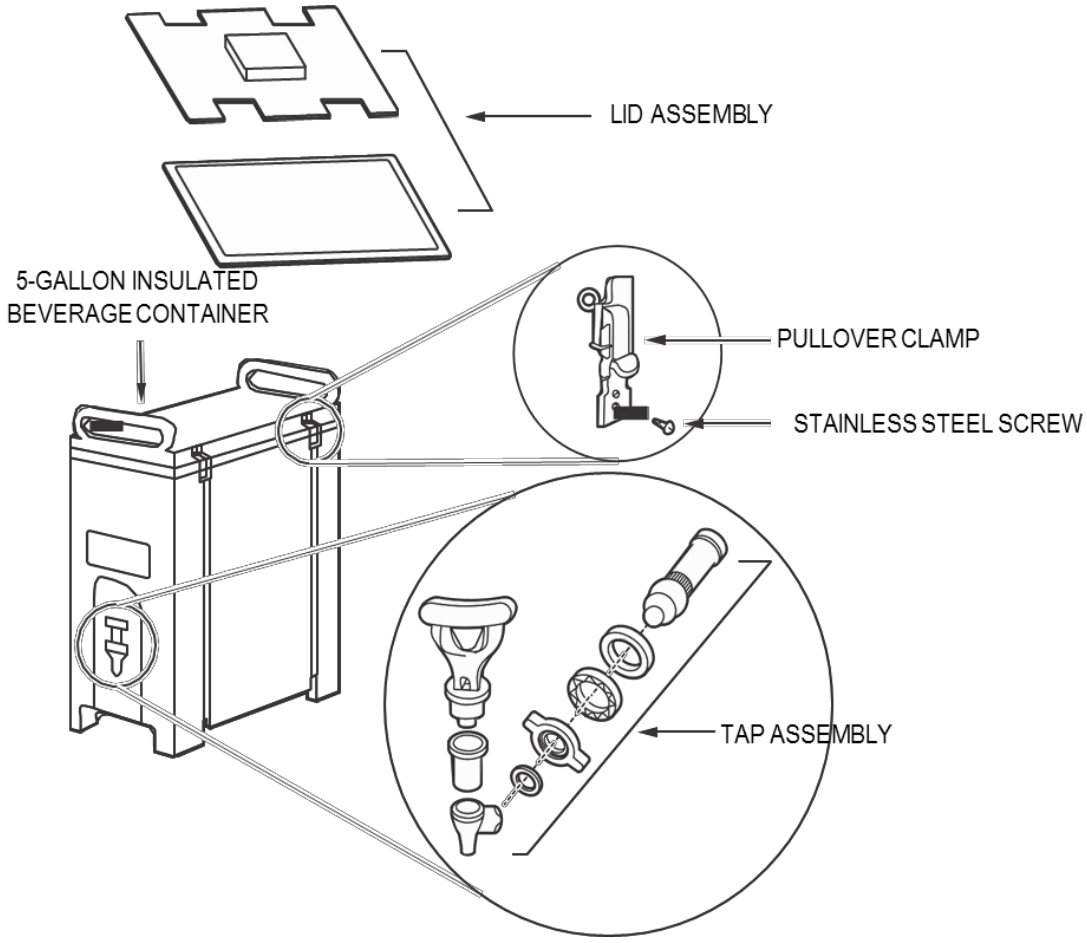


Figure 4-9. Insulated Beverage Container (5-gallon).

Tray Ration Heating System

TAMCN C6621
NSN 7310-01-295-7479

The purpose of the TRHS is to bridge the gap from the use of PORs to the operational field mess. The TRHS is comprised of a tray ration heater and associated SL-3 components, and can produce 250 UGR-H&S rations per meal, or 500 meals in a ration day, with replenishment. The TRHS consists of a stainless steel hot water tank and a multi-fuel AirtronicTM burner that operates from an external fuel source (5-gallon can). The AirtronicTM burner will operate for approximately 10 continuous hours on 5 gallons of fuel. A thermos disc maintains a water temperature between 180 °F and 200 °F. The TRHS will heat 18 tray packs, or 12 tray packs and five number 10 cans at a time to serving temperature in about 40 minutes. It is designed to operate effectively in cold weather down to -25 °F. Each TRHS is equipped with support items including serving tables, serving utensils, insulated beverage containers, side loading pan carriers, can opener, and a rain cover kit (see fig. 4-10 on page 4-12).

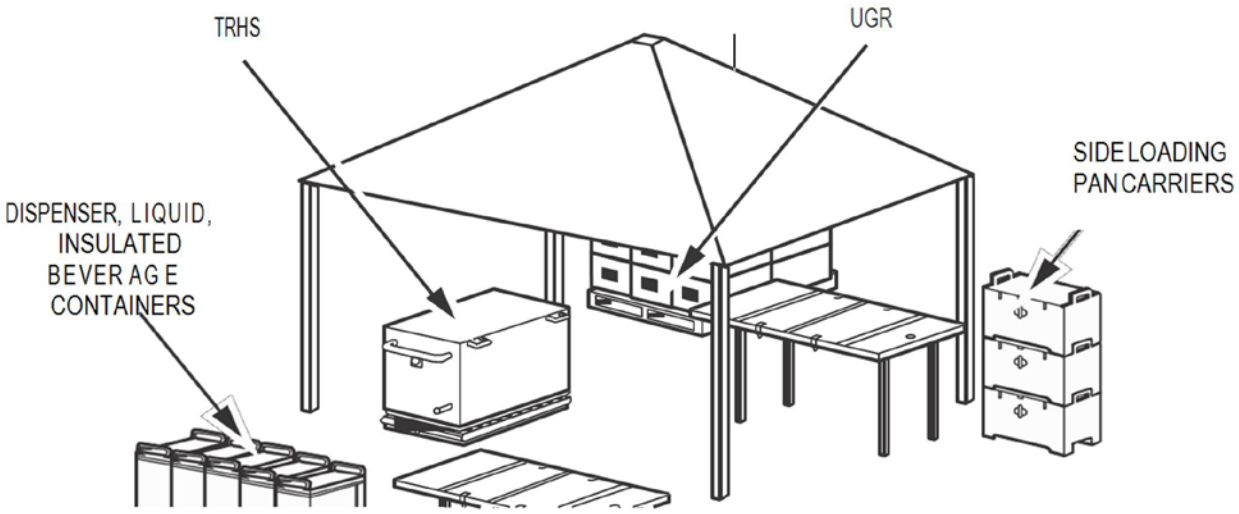


Figure 4-10. Tray Ration Heating System in Static Environment.

Vehicle Mounted

The TRHS can be fully installed on any approved vehicle platform without MHE. Once installed, ratchet-operated tie down straps secure the tray ration heater as well as the collateral equipment. When vehicle mounted, the TRHS is a fully mobile system with heat-on-the-move capability. In this configuration the TRHS will require the use of vehicular electrical power, using a NATO slave plug adapter.

Static Feeding

The TRHS can also be operated in a static environment. The equipment cab be taken off the vehicle and placed in a shelter or covered by a fly tent, which is included with the TRHS. The TRHS will need an electrical connection of 110 volts, single-phased outlet, shore power, or a generator.

TM 09211A-OR, *Operation and Maintenance Manual for the Tray Ration Heating System*, provides detailed information on the operation, maintenance, and safety procedures for the TRHS. Operators are not authorized to perform maintenance tasks outside of the assigned capabilities.

Small Field Refrigeration System

TAMCN B0075
NSN 4130-01-156-7655

The SFRS brings together the transportation benefits of the triple container and the refrigeration capabilities of traditional refrigeration units that normally require their own transportation to field feeding sites (see fig. 4-11on page 4-14). One SFRS unit is structurally compatible to be interlocked with two other SFRS units to form a 20-foot container equivalent using the supplied connecting couplers. Detailed information on the operation, maintenance, and safety procedures for the SFRS is provided in TM 11609A-OI, *Operator/Crew and Field Level Maintenance Manual for Small Field Refrigeration System.* Characteristics, capabilities, and features are as follows:

- Four-way fork-lift pockets.
- Three connecting couplers per SFRS.
- Internal lighting, dual voltage source, 115/230 volts, alternating current (VAC).
- Air curtains in sliding track across door.
- 31-day recording thermostat.
- 208/230 VAC, 3-phase, 60 Hz. Transportable by Marine Corps or other logistics vehicle system.
- Easily converts from refrigerated storage for rations with temperatures from 33 ºF to 40 ºF to frozen rations at temperatures from -5 º F to 32 ºF in ambient environments up to 122 ºF.
- Weight: 3,520 lbs (empty)

Large Field Refrigeration System

TAMCN B0049
NSN 4130-01-562-9914

The large field refrigeration system (see fig. 4-12 on page 4-15) comprises an 8 ft x 8 ft x 20 ft insulated container that meets ISO type 1, 20-foot standards (ISO-20).

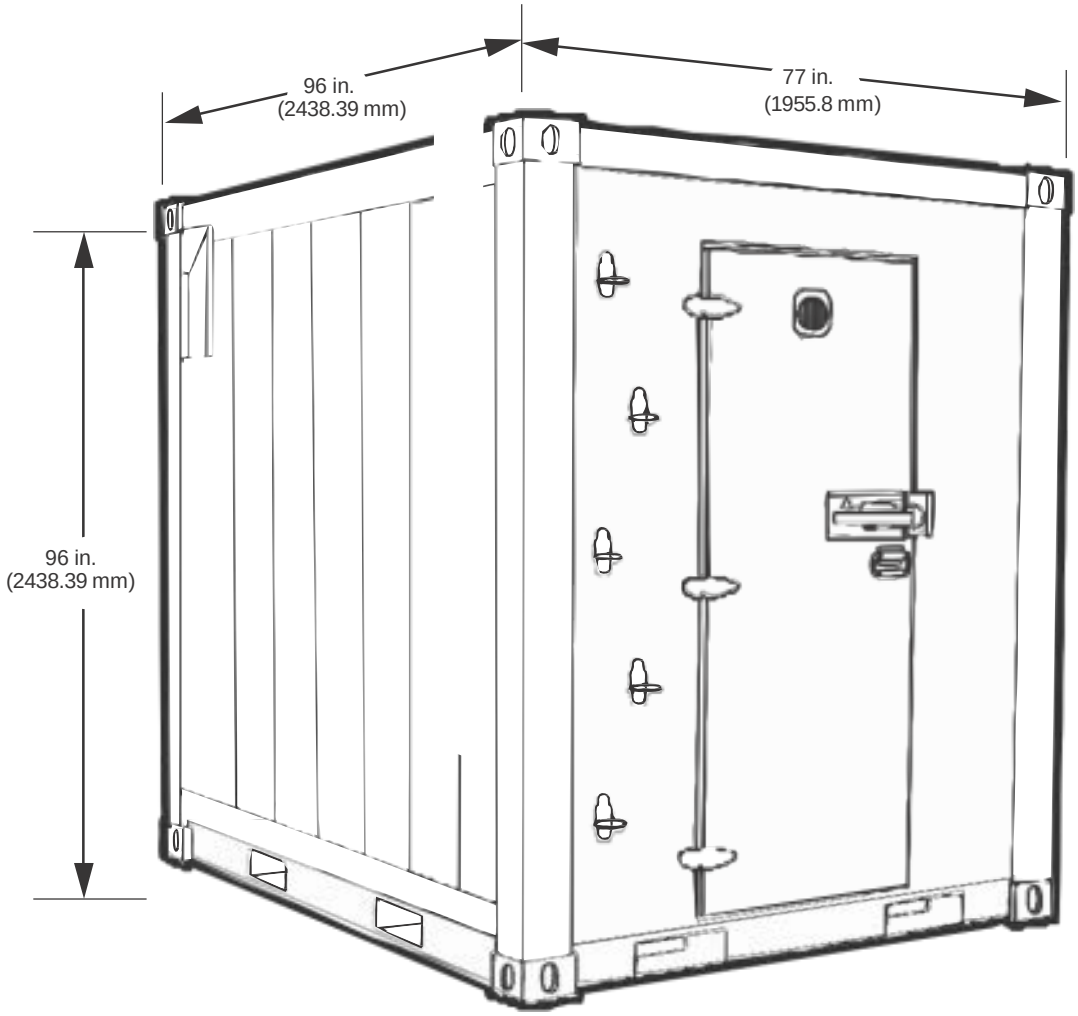


Figure 4-11. Small Field Refrigeration System.

Characteristics, capabilities, and features are as follows:

- Dual mode to refrigerate or freeze perishable items.
- Ambient temperature of enclosure: -25 ºF to 135 ºF.
- Refrigerant: R-404A.
- Designed to be portable and has lifting slots that allow for the use of a fork-lift during installation of the refrigeration box.
- 208 VAC/3-phase, 4-wire power requirement.
- Operational weight: 8,500 pounds.

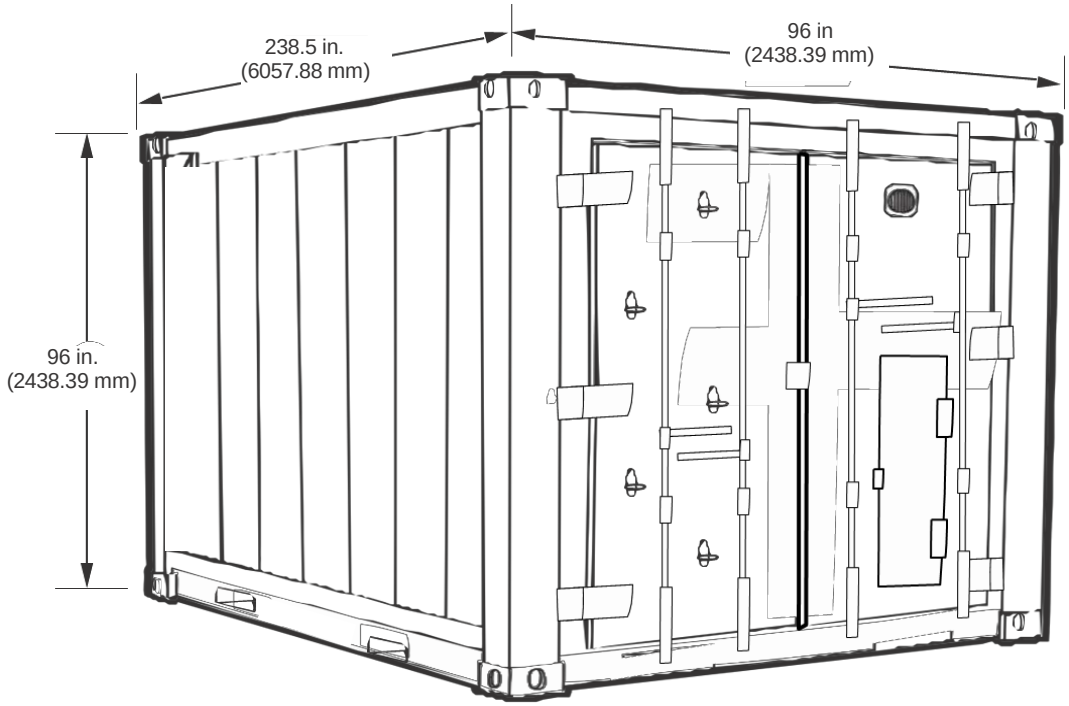


Figure 4-12. Large Field Refrigeration System.

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CHAPTER 5
SAFETY AND SANITATION

Field conditions in expeditionary operations can change rapidly and require foresight to deal with environmental stresses. Urban warfare may require Marines to deploy into an area that previously had modern public utilities such as potable water lines, sanitary sewers, and waste disposal. Areas such as this can change overnight into an urban disaster area where all water, food, and services have the potential of being contaminated or destroyed.

Food service specialists will have to establish a field mess site, setup and operate sanitation capability, provide field-expedient hand washing devices, and dig soakage pits, if required. Augmentation with mess attendants is essential to ensure mission accomplishment. The number of personnel required depends on unit personnel end strength, mission, type of rations being prepared, and type of feeding (e.g., remote site feeding, base camp feeding).

The Bureau of Medicine and Surgery Publication (NAVMED P) P-5010-1, hereafter referred to as the Tri-Service Food Code (TSFC), provides general principles and guidelines to ensure food safety and sanitation in the field feeding environment. Keeping the field mess site safe and sanitary takes more time and precautions than in garrison operations. Food and water supplies must be carefully controlled and maintained in secure locations. Regular and careful inspection of food is of paramount importance and can help prevent foodborne illnesses or threat of contamination. Mishandling of food and water supplies leaves the unit susceptible to foodborne illness or enemy contamination. To prevent these threats, the food service personnel must—

- Ensure a certified person-in-charge is on site.
- Obtain food and water from approved sources.
- Prevent food contamination by ensuring the use of proper food handling, storage, and sanitation procedures.
- Prevent the growth of microorganisms by using proper temperature controls.
- Train personnel in food sanitation, personal health and hygiene standards.
- Dispose of all food-related waste as outlined in the TSFC.
- Ensure vehicles used for transporting rations are sanitary.
- Ensure food and water storage areas are secured and monitored.
- Ensure perishable rations are refrigerated to prevent the potential for foodborne illness.
- Prepare well defined OPLANs for field mess requirements. The OPLAN will dictate feeding support requirements.

The use of proper sanitary measures is extremely critical. The following measures must be emphasized:

- Food handlers should keep serving containers covered, unless actually in use.
- Dishwashing is accomplished using a three-compartment sink. The proper temperature and chemicals are listed in the TSFC.

Combat Field Feeding

Logistical support areas in the theater are high priority targets for enemy CBRN employment. Sophisticated delivery systems for CBRN munitions allow the enemy to employ such munitions from the forward edge of the battle area to the rearmost boundaries of the theater. The main countermeasure to CBRN threat is the ability to continue operations while subjected to a CBRN attack. Marines must still receive rations that are safe to consume. Although the subsistence may be safe, contaminated cooking utensils and equipment may require the use of PORs. The tactical situation and the priorities of decontamination will determine how long PORs are to be consumed.

Mess chiefs should provide safety guidelines through daily meetings and SOPs. Guidelines should be developed to prevent unsafe practices and working conditions or careless use of equipment. Marines must be taught to recognize and rectify unsafe conditions. Marines should use caution when operating can openers. Knives and other sharp instruments should not be used to open corners that the can opener missed. Heated, swollen cans should be tilted in a safe direction to avoid burns from hot juices.

Food service personnel must always be alert when they prepare or serve food. Burns, collisions, and falls are common accidents in a field mess. Training can curtail unsafe working conditions and careless use of equipment. Accidents cost money through the loss of labor hours and through damaged food and equipment. The resulting loss of personnel, subsistence, and equipment could negatively affect mission success. For detailed information on safety, refer to DOD Regulation 4140.1-R, *DOD Supply Chain Materiel Management Regulation*, and MCO 4450.14, *Joint Service Manual (JSM) for Storage and Material Handling*.

Food and Water Risk Assessment

In some areas of operations, availability of approved sources of supply for subsistence and water (bottled) may not be available. In these cases, commanders are required to have a food and water risk assessment completed. Army veterinary personnel are required to complete these assessments for operational commanders using Technical Guide 248, *Guide for Deployed Preventive Medicine Personnel on Health Risk Management*.

When an operational commander determines that contracting lodging and messing support is more economical than establishing a field mess, a food and water risk assessment must also be conducted. This policy also applies when a host nation is providing subsistence support.

Food Management

All food service specialists and mess attendants must be certified as food handlers by medical authorities. Food service specialists must also ensure that the following tasks are completed:

- When enhancements are added to UGR meals, adequate refrigeration support must be provided. Where adequate refrigeration capability is not available, UGRs or PORs will be used exclusively.
- Insulated food containers will be cleaned and sanitized before each use. Containers

will be pre-chilled or preheated, as appropriate. All food products will meet safe temperatures prior to placement into containers.

- Individually packaged condiments are preferred in the field; however, condiments may be dispensed from sanitary dispensers.
- Field-expedient hand washing facilities will be provided at food preparation, serving, and entry areas.
- Waste will be disposed of to minimize insect and rodent attraction. Garbage will be buried, incinerated, or disposed of according to local requirements.
- Fresh fruits and vegetables grown in areas where human excreta is used as fertilizer or where gastrointestinal or parasitic diseases are expected to be prevalent, will not be consumed unless approved by the appropriate authorities (US Army veterinary or medical personnel).

When authorized for consumption, fruits and vegetables, including leafy vegetables, may be eaten raw if thoroughly washed in clean potable water, and then disinfected. Where food service disinfectant is not available, emergency disinfection of fruits and vegetables may be accomplished by thoroughly washing, then soaking for 30 minutes in a 200 parts per million chlorine solution or by immersion in potable water at 160 °F for 1 minute. The chlorine solution is prepared by mixing 1 tablespoon of household liquid bleach with 1 gallon of cool potable water.

Trash Management

Based on the operational scenario, federal, state, local or host nation laws will determine whether to burn, bury, backhaul, or require the use of dumpsters to dispose of waste from field mess sites. The policy on garbage disposal in an area of operations must be disseminated. Waste must be removed from the field mess site, daily.

Liquid Waste

Liquid waste disposal requires a soakage pit or trench equipped with a grease trap that strains out solid matter and grease. The soil absorbs the liquid waste. Two pits are needed so that each pit can rest every other day. In porous soil, a soakage pit 4 ft (1.2 meters) square and 4 ft (1.2 meters) deep will handle 200 gallons (760 liters) of liquid per day. If the ground water level is close to the surface or if there is rock or clay near the surface, a soakage trench is dug. Figure 5-1, on page 5-4, shows how to build a soakage trench with a grease trap. Due to environmental concerns, liquid or solid grease may require separate disposal per local regulations.

Solid Waste

Solid waste disposal is buried, burned, or back-hauled according to procedures described in the following subparagraphs.

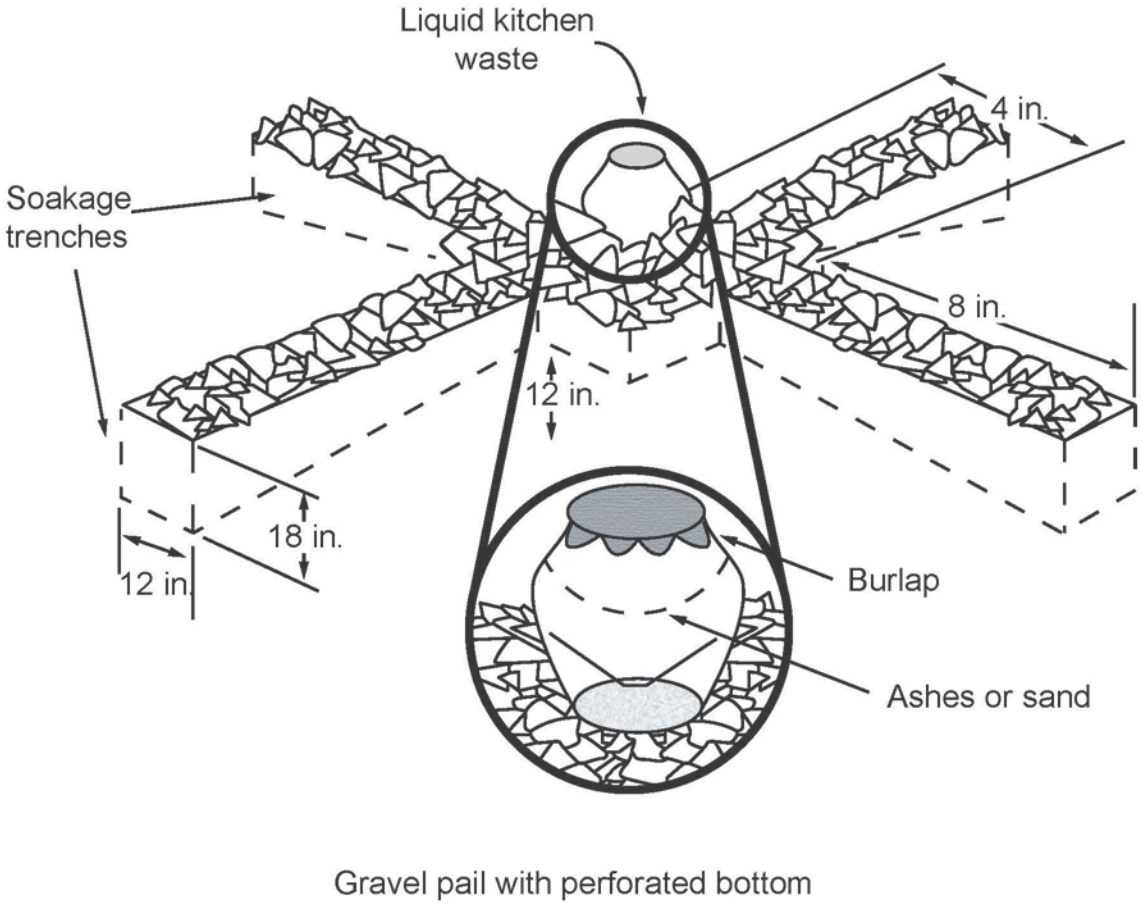

Figure 5-1. Soakage Trench with Grease Trap.

Burying. During peacetime, most state and foreign country laws prohibit burying trash. However, during wartime, if the unit will be at a site for less than one week, solid waste may be buried in pits or trenches. These pits or trenches must be at least 90 ft (27 meters) from the dining area and at least 90 ft (27 meters) away from any water source used for cooking or drinking. If the unit will be at the site for only one day, the garbage pit is used. If the unit will be at the site for two days to one week, a garbage trench is used. Prior to disposal, cans are flattened and boxes are broken down.

Burning. During peacetime, most state and foreign country laws prohibit burning trash. During wartime, if the unit is going to be at the site for more than one week, solid waste may be burned in an open incinerator, either inclined or cross trench. Liquid waste must be separated from solid waste. This can be done by straining the garbage through a coarse strainer, such as an oil can or 55-gallon drum with holes in the bottom. The liquid is poured through a grease trap into a soakage pit or trench, and then remaining solids are burned. Garbage that will not burn must be

buried or hauled to a disposal site. Field incinerators must be at least 150 ft (45 meters) from the mess tent and dining areas so that the odor will not affect the Marines. Figure 5-2 shows how to build inclined and cross trench incinerators.

Note: Incinerators make smoke and should not be used if it is detrimental to force protection.

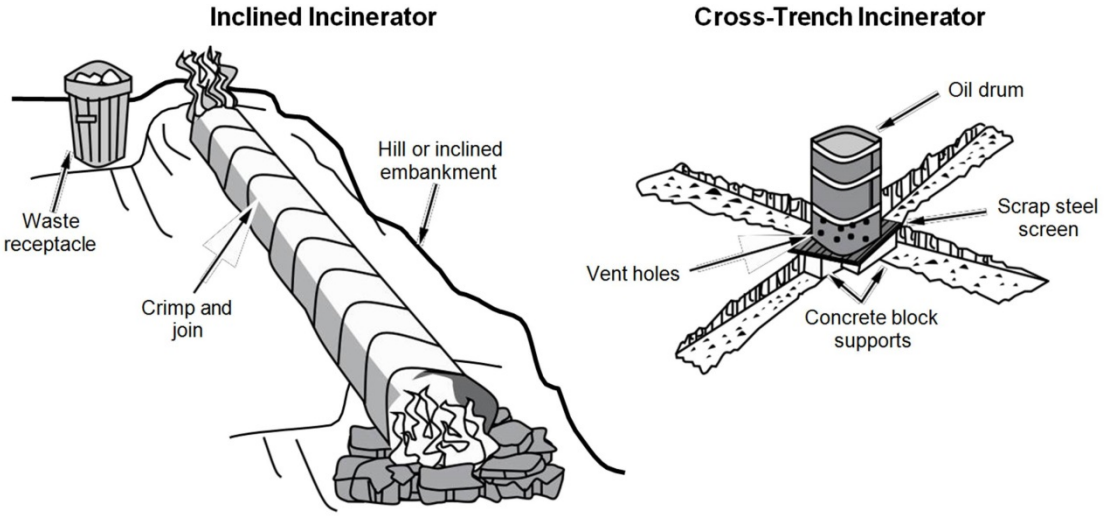

Figure 5-2. Inclined and Cross-Trench Incinerators.

Backhauling Waste

When the OPLAN calls for returning waste to a designated disposal point, the mess chief must arrange for transportation support. Waste should be bagged or boxed when possible.

Protection From Contamination

Personnel Protection

Generally, food is not prepared or served in an environment contaminated by CBRN agents. While food service Marines have the basic understanding to detect contamination, the responsibility of decontamination of subsistence items falls to the Army veterinarians, Navy medical personnel, and CBRN specialists. Field messes must be decontaminated before food service operations can resume. Equipment or personnel may contaminate food or water that is otherwise free from contamination, therefore, equipment and personnel must also be inspected.

Subsistence and Water Source Protection

Subsistence and water sources must be protected from CBRN contamination. Procedures must be a part of OPLANs and SOPs at all levels. Consuming contaminated food or water may cause illness, injury, or death. Food stored outdoors should be covered as mustard agents will damage

or degrade most protective wraps. Some subsistence and water may be decontaminated and consumed; however, decontamination is often a difficult and time consuming process. Subsistence and water must be stored in ways that provide maximum protection in the presence of CBRN contaminants. Planning for storage may mean the difference between having edible or nonedible subsistence. Foods that are packed in cans, bottles, airtight foil or film wraps, as well as food packaged in sealed boxes or multilayered packaging, may be stored outdoors or in partially protected areas. Foods not packaged in this manner must have interior covered storage to protect from CBRN contamination.

Subsistence and Water Source Inspection

Food or water sources that may be contaminated by nuclear fallout or biological or chemical agents must be inspected. The Army veterinary service has the sole responsibility for monitoring and recommending food decontamination or disposition procedures. The Navy preventive medical unit test bulk water sources. If food or water becomes contaminated, it must not be consumed unless it is first decontaminated or approved for consumption.

Disposal

Generally, food and water in airtight containers can be consumed after the containers have been decontaminated. Except in extreme emergencies, unprotected food and water are discarded. Unprotected food and water are decontaminated only when there is no practical alternative. All disposed contaminated items must be marked and treated as CBRN hazard.

Decontamination

Foods that cannot be decontaminated are disposed of according to local laws or military regulations. If food preparation equipment or food service personnel have been exposed to CBRN agents, they must be decontaminated. Food service equipment should be decontaminated by power-driven decontamination equipment or by steam cleaners. A hot water and soapy wash must follow to ensure all decontaminants are removed before food products can be prepared.

CHAPTER 6
CLASS I STORAGE AND HANDLING PROCEDURES

Storage Considerations

A covered storage area is in a walled and roofed structure. An open storage area can be protected by tarpaulins, tents, field-expedient huts or sheds. Class I supplies should be kept in a covered storage area. However, the rapid turnover in the field eliminates many long-term storage problems.

Supplies are stored so that those with the oldest date of packing are easily issued first. To prevent total destruction in the event of enemy attack, perishable and semi perishable subsistence are stored in separate locations.

Material Handling Equipment

Depending on the size and duration of the operation, unit organic assets may not be sufficient to manage a large Class I lot. Many suppliers are conforming to commercial standards, which utilize 20-ft and 40-ft containers for shipping rations. The Class I lot may need a variety of MHE on hand to accommodate material handling operations. Typical organic assets should include—

- Extended boom forklift.
- Rubber-tired, articulated-steering, multipurpose tractor.
- 5k tactical forklift.

Kalmar forklifts and pallet jacks are additional assets that would improve unit supportability for larger operations and may require advanced or special planning.

Perishable Storage

It is important that proper temperatures, humidity, and air circulation are maintained and that only compatible products are stored together.

Temperature. It is important to store perishable items in accordance with the prescribed temperature ratings in order to prevent product deterioration or spoilage. In accordance with the TSFC—

- Temperature for storing frozen subsistence should not exceed 0 °F.
- During transportation, the temperature should not exceed 10 °F.
- Chilled items should be stored at 32 °F to 41 °F.

Each storage container (mobile or fixed) is equipped with a thermometer that must be checked at a minimum of twice a day.

Humidity. Managing humidity levels prevents items from gaining or losing moisture. A high humidity level allows moisture to condense on an item and can be absorbed by the product packaging. A humidity level that is too low causes the subsistence item to dry out.

High Humidity. Avoid high humidity when possible because it encourages the growth of bacteria and mold 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 weaken.

Air Circulation. Proper circulation of refrigerated air is the prime factor in maintaining a consistent temperature in all parts of storage spaces. To prevent contamination, pallets or dunnage will be used to raise containers 6 inches above the floor to permit the free circulation of air. Storage containers will be stacked so that there is a 4-inch wall clearance and a 2-foot ceiling clearance; allowing for adequate working space between stacks. The use of fans or a duct system helps maintain proper circulation. Items should not be stacked in front of the refrigeration unit or cooling fans in prefabricated units as this prevents the free flow of air and causes rapid deterioration of products.

ProductCompatibility. Storing incompatible products together may result in color loss, taste changes, and odor absorption. Products should be grouped according to compatibility. Odor-absorbing items such as bread should not be stored with odor-producing items such as onions.

Storage Precautions. As soon as frozen items are delivered, they should be transferred to a freezer storage unit. If the newly received product's temperature is higher than the temperature in the freezer, the items should be placed on pallets or hand trucks in the center of the unit to allow the air to circulate and quickly reduce the product temperature. The containers may be stacked more compactly once a uniform temperature of all the products is achieved. Items that have been thawed are never to be refrozen.

Items should not be stacked so high that the weight of the containers on the top damage the underlying products (e.g. contents are crushed and or bruised).

Items are stored so that the oldest lots, by date of packing, are issued first (first in, first out). The only exception to this first in, first out rule is when older lots are in better condition than newer ones as determined by an Army veterinarian.

> *Note: Properly stored perishable items should not lose more than 20 percent of the overall storage life.*

Semi-perishable Storage

Semi-perishable products are not as susceptible to spoilage as perishables. These products may still spoil if not handled or stored correctly, or if they are kept beyond the prescribed shelf-life.

> *Note: Properly stored perishable items should not lose more than 20 percent of the overall storage life.*

Correct Storage. Items should not be stacked so high that boxes and contents are damaged. Items will not be placed directly on the floor. Bagged items should not be stored in corners, and no subsistence will be stored directly against walls. In open storage areas, items should be placed on pallets and organized for ease of access.

Freezing Temperatures. For dry or low moisture semi perishable items, freezing temperatures will do little or no damage. Freezing may cause damage to the packaging of items that have a high water content. In these cases, seams may split (commercial and tray pack), and POR pouches may be ripped or ruptured. This damage can lead to serious health risk if items are not properly handled and inspected by Army veterinary personnel. Metal cans are not generally engineered for freezing. Frozen cans and POR pouches should not be roughly handled as this may compound the likelihood of damage to the packaging. Storage life of semi perishable rations may be extended by the lower temperature (from 50 °F to as low as 32 °F).

High Temperatures. High temperatures in storage areas encourage the growth of bacteria and molds; promote insect infestation; and can shorten the shelf life of all types of rations. The serviceable shelf life of PORs is up to 36 months when stored at 80 °F but reduces to only 6 months at 100 °F, and as low as 3 months at temperatures up to 120 °F.

The Marine Corps' primary UGRs have been designed to have a minimum shelf life of 18 months when stored at 80 °F but reduces to only 6 months at 100 °F.

In fixed warehouse facilities, rations should not be stacked close to the ceiling, as temperatures are routinely higher in these areas. Rations should not be stacked near hot water heaters, steam or heat pipes. Additionally, metal buildings and trailers without adequate ventilation will allow heat to buildup rapidly. Ventilation fans should be used to circulate air and reduce hot temperatures. Rations, to include bottled water, should not be stored in direct sunlight. Natural cover can help reduce damage from direct sunlight and high temperatures when other forms of cover cannot be provided.

> *Note: Refrain from covering rations with dark colored tarpaulins when in a field environment. Dark colors intensify temperatures and causes rapid deterioration of subsistence.*

Exposure to Light

Items packed in clear containers may lose flavor due to over-heating and may become discolored when exposed to light for prolonged periods. Clear containers should be boxed or placed in areas with reduced light exposure.

Packaged Operational Rations Handling in Freezing Temperatures

The flexible film pouch used for POR items such as the entree or wet pack fruit becomes less flexible and more brittle at temperatures below 0 °F. 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 if roughly handled. When the contents are thawed, bacteria can begin to grow and the food becomes unfit for consumption.

To reduce the possibility of damaged pouches and foodborne illnesses, the following procedures should be followed:

- PORs that become frozen during exercises will be kept frozen until issued for immediate consumption.
- Frozen PORs that are returned to storage and thawed 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]).”

  Note: The holding period allows for adequate time to ensure PORs are safe for consumption after inspection.

- Frozen PORs are tempered to ensure that the center of each pallet or box reaches room temperature (77 °F).
- PORs should not be cycled through more than five freeze and thaw cycles.

Note: The product quality will deteriorate with each cycle.

Sanitation at Storage Points

Sanitation must be maintained in accordance with the TSFC. Contaminated food caused by improper handling or temperature abuse can lead to illness or death, and can have an adverse impact on mission accomplishment.

Personnel

Personnel handling Class I subsistence must be medically cleared as food handlers. Personnel will not smoke or chew tobacco when handling subsistence. Disposable gloves will be used while handling fresh foods and ready-to-eat items will be impermeable to contamination. Personnel will wash their hands thoroughly before starting work and handling subsistence items.

Area and Equipment

Storage areas will be kept clean, orderly, and free of garbage at all times. Empty cartons will be removed from the premises promptly. Garbage will be disposed of in approved containers with tight-fitting lids. Spilled food should be cleaned up as soon as possible to prevent insect and rodent infestation. Scales and MHE will be kept clean. Hand washing facilities will be readily available.

> *Note: Environmental protection laws and regulations must be followed when disposing of subsistence items, to include POR boxes and flameless ration heaters.*

Pest Control

Personnel assigned to the Class I storage point must assist in preventing pest infestation by establishing a proper sanitation and pest control plan. Pest-proofing t h e storage area, food deprivation, and the use of appropriate extermination measures can control pests. If areas do become infested, contact preventative medicine activity for corrective action and control measures.

Insects

Incoming supplies will be inspected carefully for infestation. When supplies are received, doors and screens may be open for the shortest time possible. In fixed facilities, screens will be used on outside doors. Cracks in the walls and floors will be filled to prevent infestation.

Rodents

The first step in rodent control is to prevent entry into the storage facility. Cover or fill holes, and close doors tightly. The next step is to eliminate rodent hiding places by keeping subsistence on pallets away from walls. If areas become infested, traps and poison baits can be used for elimination. A medical authority from preventive medicine activity must approve the use of poison baits; approval is based on compliance with environmental stewardship principles. All environmental laws and regulations must be adhered to in the use of poison baits.

Inspections

Subsistence supplies are inspected upon receipt and then periodically until they are consumed. Inspections ensure that only food fit for consumption is received, properly stored and issued.

Inspections must be performed on all subsistence items before they are accepted. This inspection ensures that items are received in good condition and in the authorized quantities. The accountable officer is responsible for inspecting all subsistence as it is received at a storage point. The Army veterinary food inspector on receipt does not inspect semi perishable items coming from an approved source of supply unless requested by the accountable officer for local procurement. If the subsistence is wholesome, complies with contract requirements, and the contractor requirements, and the contractor can be identified from container markings or shipping

documents, the Army veterinary food inspector stamps the delivery documents. Army veterinary food inspectors are also responsible for conducting inspections on subsistence in storage to detect early signs of deteriorating food. Cases of semi perishables that pass inspection are stamped with an inspection test date. The inspection test date indicates the approximate remaining shelf life. Rejected items are reported to the accountable officer who then initiates appropriate disposal action. There are three types of inspections: visual, sampling, and full.

Visual Inspection

Usually, food service and supply Marines perform the visual inspection. The inspector checks the outside of the Class I item or its container for damage or deterioration. The Army veterinary service will inspect damaged containers, such as broken boxes and dented cans.

Sampling Inspection

In sampling, the Army veterinary food inspector chooses a number of units at random and inspects them thoroughly. If any of the samples are damaged or deteriorated, the Army veterinary food inspector performs a full inspection.

Full Inspection

Full inspections should be conducted on a random schedule, or when a particular shipment or lot has failed a sampling inspection. The Army veterinary food inspector thoroughly examines all units of a particular item or shipment. Damaged or deteriorated items are set aside, and the Army veterinary food inspector advises the accountable officer on disposition.

Canned Goods

Individual cans will be inspected when there is reason to believe they may be damaged. If boxes are broken or bent, they will be opened, and each can inspected. The Army veterinary food inspector will inspect cans that are rusted, swollen, leaking, or dented, and those that have been stored for a long period of time or exposed to high temperatures.

> *Note: Items used during sampling or full inspections are accounted for on Department of Army Form (DA Form) 7539,* Request for Veterinary Laboratory Testing & Food Sample Record, *as an identifiable loss.*

Operational Rations Inspections

Packages are inspected for damage such as swelling, rust, and gray spotting. Packages with any of the following defects will be set aside for further inspection and possible destruction:

- Leaks from a pinhole, fracture, or incomplete seal where the contents of tray packs are on the outside of the container.
- Cans with dents that are so severe they cause leakage or affect usability.

- Buckles or bends in the top that extend into the end seam of the tray pack.
- Gray spotting caused by leaking products.

Other Semi-perishables

All products will be inspected for signs of insects or rodents and damage from moisture or mishandling. Semi-perishables sold in jars, cardboard containers, and paper bags will spoil if they are mishandled or improperly stored. Products in clear containers will be visually inspected for color variations. If any of these signs are evident, an Army veterinary food inspector will be notified.

Fresh Fruits and Vegetables

Fresh fruits and vegetables will be inspected upon receipt, with daily re-inspections until issued. Fruits and vegetables must also be inspected for insect infestations including fruit flies, roaches, and worms. Preventive medicine and Army veterinary personnel must be notified if insects are detected. An effective test to determine if fruit and produce are fit for consumption is to cut them open and taste them. Freezer damaged items will appear glassy, and chill damaged items may be discolored and have an off-flavor.

Frozen Items

Frozen products will be checked for signs of thawing and refreezing (packages are checked on all sides for ice, which is a sign that they have thawed and have refrozen). If there are signs of thawing, Army veterinary food inspectors may perform an open package inspection prior to usage. The findings and recommendations for disposal will be presented to the accountable officer.

United States Army Veterinary Public and Animal Health Services

The DOD Directive 6400.04E, *DOD Veterinary Public and Animal Health Services*, designates the Secretary of the Army as the DOD Executive Agent for Veterinary Public and Animal Health Services, responsible for food wholesomeness and quality assurance. Regional veterinary service support commands are responsible for the development of a product verification program that will ensure the quality of all Class I for theater operations. This program includes cursory spot checks, specific product audits, and special audits directed by DLA Troop Support or at the customer's request. Veterinary services will be utilized to the fullest extent possible.The following services are available:

- Training the ordering activity personnel in evaluating food products at the point of receipt, to include delivery vehicle sanitation and specific commodity knowledge.
- Laboratory examination of food products.
- Development of the approved lists of food suppliers and the publication of USAPHC Circular 40-1, *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*.

Accountability

Ration Issue

Class I supplies used during field operations should be picked up by the using unit at the material readiness branch issue point (rations warehouse), Class I lot, or in some cases, may be direct delivered by the prime vendor. Upon delivery of the rations, the receiving unit is responsible for all accounting measures. Manual or automated means will be used to reflect the receipt and issue of each item. Unitized group rations and PORs are recorded under a single NSN for each module type. Enhancements will be accounted for by the pack size or unit of issue (e.g., case or pound). Accountability for receipt and issue of Class I will remain the same regardless of the type of logistics distribution system.

Receipt

Receipts must be obtained from all sources of supply when deliveries are received. When receiving rations, personnel will conduct a quality and quantity inspection at the time of receipt to determine the condition of cans and packing materials and to verify the quantities received by signing and dating the forms provided. Personnel will keep a copy of all receipts for proper accounting and reconciliation.

Inventory

A daily running inventory of subsistence items on-hand in the field mess or Class I storage point must be maintained. This inventory is kept using manual or approved automated accounting methods, and may be included in the unit's daily logistical readiness reporting (using a days-of-supply concept).

Reconciliation

When supported by the US Army, a financial record is maintained by the Troop Issue Subsistence Activity (commonly referred to as TISA). which, when automated, can provide an account update to the field mess on a scheduled cycle. Unit commanders will ensure financial records are reconciled regularly before departing. A copy of the final document will be included in the unit's subsistence financial report. Personnel must maintain all invoices and reconcile all transactions for price changes and quantity received before closing the operation.

Accounting

Subsistence accounting must be performed in a manner that subsistence supplies are efficiently received, stored, and issued to using units. To give management personnel sufficient data to properly manage subsistence supplies, the following management control forms should be used (these forms can be physical or automated forms):

- Subsistence issue receipts.
- Stock record and inventory control cards.

- Inventory, requisition, and issue forms.
- Daily cost analysis and financial status.

All subsistence accounting must be kept accurate and up-to-date. During wartime, the method for accounting is referred to as combat accountability (rations issued equals rations consumed). During peacetime, the prescribed method of accounting is completion of the subsistence financial report. A financial report will be prepared for each operation by the using unit. The approved subsistence financial report will then be submitted by the using unit, via the appropriate chain of command, to the MEF G4 (FSO) no later than 15 calendar days following the end of the operation or at the close of the reporting period. Operations that cross over fiscal years must be closed out with all accounting information at the end of the current quarter, and accounting will begin again in the first quarter of the new fiscal year. This will allow for the submission of the quarterly subsistence financial report with accurate fiscal year accounting. Supporting documents will include the following:

- Subsistence financial report.
- NAVMC 565-1, *Man-Day Fed Report*, for each day of feeding.
- Day folders for each day of feeding:
  - Subsistence issue receipts.
  - Stock record and inventory control cards.
  - Inventory, requisition, and issue forms.
  - Daily cost analysis and financial status.
- NAVMC 10789, *Meal Verification Record*, if applicable (copy of personnel status report for all block signatures).
- NAVMC 10298, *Cash Meal Payment Sheet*, if applicable.
- Voucher for disbursement and or collections
- (SF 1080, *Voucher for Transfer Between Appropriations and/or Funds*, or DD Form1131, *Cash Collection Voucher*), if applicable.
- Applicable HNS and/or HNM billing documents.
- Copies of invitational travel orders for foreign military personnel, if applicable.
- Applicable inter-Service or intra-Service, support agreements or memorandums
- of understanding.
- POR and UGR receipt and turn-in documents.
- Subsistence Total Order and Receipt Electronic System Web, sent order details and sent order receipts.
- Veterinary Service Food Sample Record (Medical Command Form 817, *Quality Assurance Representative's Correspondence*, or DA Form *7539.*

The submission to the MEF will include the following:

- Subsistence financial report.
- NAVMC 565-1, consolidated for each operation.
- Voucher for disbursement and/or collections (SF 1080 or DD Form 1131).
- Applicable HNS and/or HNM billing documents.
- Copies of invitational travel orders for foreign military personnel, if applicable.

- Applicable inter-Service or intra-Service, support agreements or memorandums of understanding.
- A consolidated subsistence financial report of all field feeding activities in theater, listing each operation separately.
- The subsistence financial report must be maintained with the responsible major supporting command for 2 fiscal years (plus current year).

The subsistence financial report provides accurate accounting of MPMC and RPMC subsistence funds to MCICOM G-4 for the purchase and consumption of UGRs, PORs, enhancements, contract feeding, and HNS. Additionally, it provides the numbers of personnel fed by category. This report also documents historical data and justification for budget submissions, as required by higher headquarters, as well as detailed documentation of budget execution to the HQMC Programs and Resources Department (Code P&R), Fiscal Division (Code RFD).

Combat accountability is a modification to normal operating accounting and reporting procedures and is used during wartime or contingency operations. When the Commandant of the Marine Corps authorizes combat accountability for procurement of Class I using MPMC funding, reporting guidance will be provided to the force commander. When the Marine Corps is the executive agent for Class I operations and funding, amplifying guidance may be published accordingly in the applicable annex of the OPORD. A monthly combat accountability subsistence report with the type and value of rations received and the number of personnel fed, by category, will be reported by the using unit and forwarded to MCICOM G-4 through appropriate chain of command.

Ration Turn-in

Before leaving the field exercise or operation, the using unit will contact veterinarian services to schedule a ration inspection appointment before contacting the material readiness branch issue point (rations warehouse), for turn-in. The using unit is responsible for all required documentation to support the chain of custody for the rations to be inspected. Army veterinary personnel are not responsible for inventory control and documentation at the time of inspection. If the using unit cannot verify receiving and issuing paperwork, the rations will not be accepted for inspection and will require the appointment to be rescheduled. Army veterinary personnel will document all nonconforming actions by the unit and issue memorandums to appropriate commands for action, as deemed necessary. The using unit maintains complete responsibility for all rations until turn-in.

> *Note: Prior to being veterinarian inspected, rations must be segregated and documented according to ration type, lot number, date of pack, and quantity.*

At the time of the inspection, the using unit should report any known issues or discrepancies with the rations (e.g., swollen cans, rusty cans, and insects). Once the veterinarian has completed the inspection and documented findings, units will then make an appointment with the material readiness branch issue point for final turn-in. The final turn-in should be scheduled immediately following the final veterinarian inspection to avoid the risk of new spoilage or damage to the rations.

The material readiness branch issue point will only accept unopened cases or modules of rations (previously inspected by local Army veterinary personnel). Using units must provide all issuing or receiving documentation (e.g. DD Form 1348-1A) in addition to the veterinary services inspection certification.

> *Note: All unopened rations will be turned in; using units are not authorized to store rations outside of prescribed timelines.*

Packaged operational ration cases (not individual meals) that have been veterinarian inspected and certified may be retained by the using unit and reissued for other immediate requirements, or stored for no more than 30 days (or 90 days for Reserve units with insufficient active days to conduct field training).

Accounting for Residuals

Residuals are cases of PORs or UGRs that have been opened, but have unused components leftover. The base or installation FSO will provide guidance and proper procedures for transferring POR or UGR residuals to another field mess or a supporting garrison mess hall, on a non-reimbursable basis. When internal redistribution is not possible, the residuals may be eligible for the food recovery program. Seek authorization through the appropriate chain of command for qualifying criteria.

> *Note: Under no circumstances will unfit or deteriorated food be considered for donation (these items will be discarded or destroyed in accordance with current directives).*

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APPENDIX A
DEPLOYMENT PLANNING CONSIDERATIONS

Mission

- What is the unit's mission?
- What are the geographical, climatic, and environmental factors impacting mission accomplishment?
- What is the projected length of mission?
- Were the logistic support plan and Annex D (Logistics) to the OPORD evaluated?
- What headquarters is directing the deployment?
- Are supporting units specified?
- When does the external support begin?
- What support will the unit receive?
- Is there a deployment contingency plan?
- What food service personnel and equipment are included in the deployment plan? Do they travel with the unit? Who supports if food service personnel and equipment are not included in the initial deployment?
- Is there an internal logistic support plan or Class I portion of Annex D (Logistics) to the OPORD?
- Should the basic load of Class I DOS be issued to the individual Marine before deployment?
- Will the basic load be consumed during the operation?
- Have the supply source and operational dates for Class I been identified?
- What are lead times for ration/supply requests?
- What is the method of Class I distribution?
- What is the flow of requisitions and Class I to using units?

- What are Class I requirements to the supporting organization?
- Where are the supply and service locations (Class I, water, fuel, and landfill)?
- What is the trash removal plan?
- Are units trained in trash removal/disposition procedures?
- What is the subsistence retrograde plan?
- Are Army veterinary personnel available for subsistence support requirements?
- If there are HNS facilities, do they meet US sanitation guidelines? (refer to NAVMED P-5010-1)
- Has funding for the HNS been established?

Personnel

- Evaluate mission requirements to determine personnel needs.
- Determine status of personnel, experience, training, and capabilities.
- Evaluate projected workload to determine mess attendant support requirements
- Determine tours of duty for food service personnel.
- Determine training requirements, to include familiarization with unit/local SOPs and environmental standards in the area of operations.
- Determine if personnel are trained in accountability procedures.
- Determine cash meal payment and/or field meal reimbursement procedures.
- Review medical threat briefing with particular attention to potable water supply, chlorine residual, foodborne illnesses of local populations, and sanitary quality of local food supply.

Equipment

- Review table of equipment, consolidated memorandum receipts, and temporary loan receipts for equipment to determine shortages, if any.
- Evaluate status of equipment on-hand to determine maintenance requirements.
- Evaluate workload and mission to determine supplemental equipment and storage needs.

- Evaluate spare parts on-hand and order shortages.
- Evaluate projected ration mix to determine refrigeration and ice 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.
- Ensure equipment is prepared and inspected before embarkation and all items are included in the UDL/load plan.

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.
- 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 disposables.

Subsistence

- Determine ration accounting methods. Procure appropriate forms and establish procedures. What is the menu and ration cycle?
- Determine the feed plan, ration mix/theater, and menu/type of rations needed.
- Determine if the menu has been published and distributed.
- Determine if enhancements have been requested and programmed.
- Determine if warming and cooling beverages have been considered, ordered, and funded.
- Determine number of personnel to subsist. Establish amounts of rations to request.
- 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?

- Evaluate food storage procedures to determine security needs.
- Review inventory management procedures to reduce/control waste, loss, and excessive residuals.

Miscellaneous

- Check publications and forms needed for the deployment.
- Determine local waste disposal procedures and locations.
- Coordinate plans for site selection and layout of the field mess.
- Determine meal serving periods.
- Coordinate with supported units. Determine feeding level requirements and the need for remote site feeding.
- Establish deployment teams for sending TRHS forward to deployed units.
- Review equipment operations, safety, and sanitation requirements with team.
- Identify any site specific environmental issues.
- Coordinate with CBRN personnel for potential decontamination support.
- Identify forms for daily folder.
- Procure US Government laptop computer.
- File copies of invoices for operational ratio

APPENDIX B
DEPLOYMENT CHECKLISTS, FLOWCHARTS, AND FOOD SERVICE CAPABILITY SETS

SECTION I. CHECKLISTS

Predeployment Checklist

Projected/ Submitted	Completed	Action Required	
		Review local SOPs	
		Site survey (trash/gray water disposal)	
		Feed plan submitted to appropriate channels	
		Rations requests (30 days CONUS, 90 days OCONUS)	
		Enhancements submission	
		Submit environmental request (if applicable)	
		Predeployment equipment checks	
		Heavy equipment lift requirements identified and submitted	
		Joint limited technical inspection (if required)	
		Bill of materials list submitted	
		Personnel (cooks/messpersons) identified	
		Cooks/messpersons physicals completed	
		Personnel gear inspections	
		Contractor (S-4/supply officer) requests submitted	
		Daily cost analysis financial preparations (deployable computer)	
		Embark staging	(date and location)
		Power, water, and fuel requirements submitted	
		Supporting equipment (e.g., 6 containers together, tents, water bladders) plus additional items as needed	
		Preventive medical unit point of contact	(name)
		Army veterinary point of contact	(name)
		Contact made with motor transport representative	(name)
		Contact made with engineer/generator mechanic	(name)
		Camp commandant/company gunnery sergeant	(name)

Notes:

Post-deployment Checklist

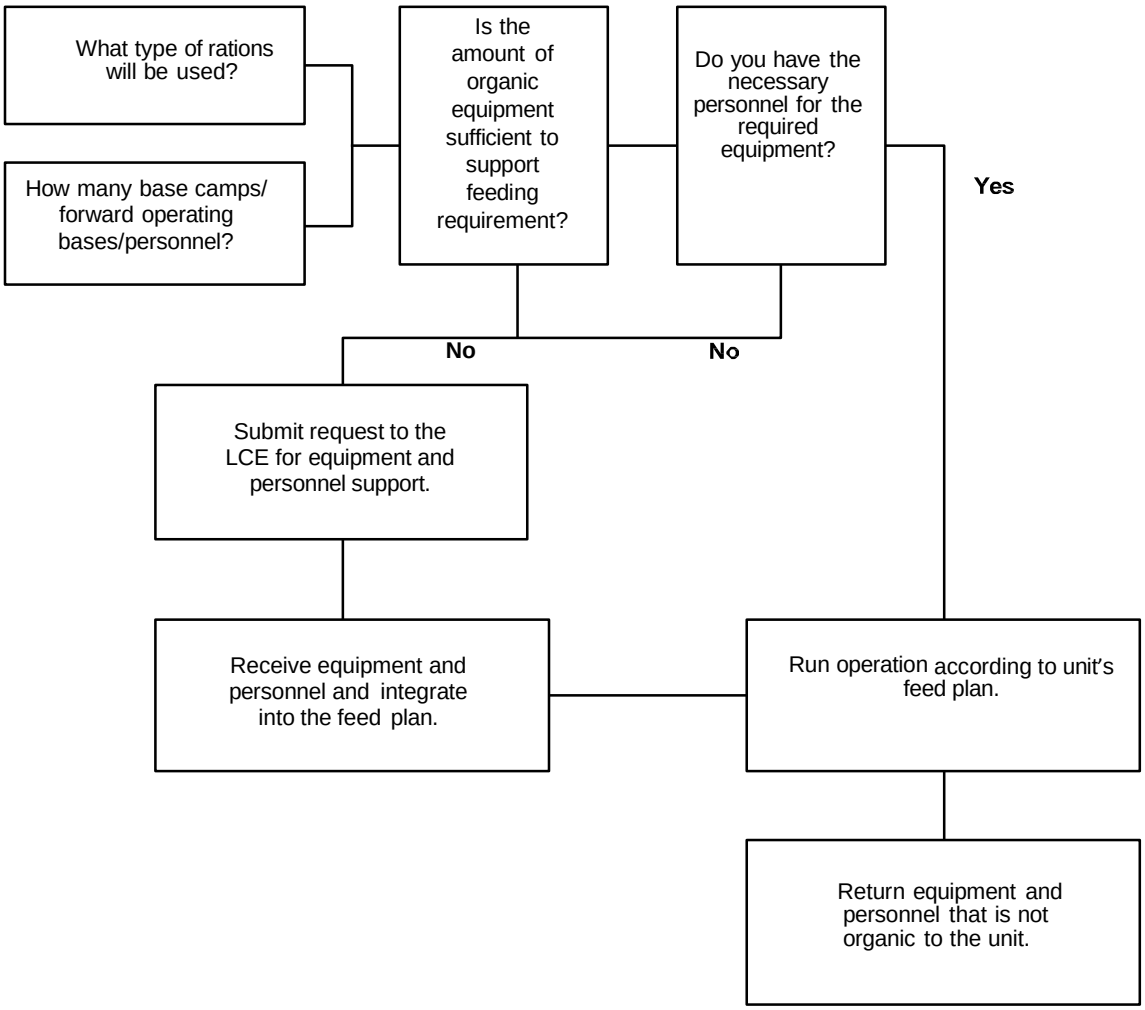
Projected/ Submitted	Completed	Action Required	
		Collect and retain true-bills/1348s	
		Schedule veterinary appointment	
		Rations turn in	
		Equipment repairs using exercise cost job order number (JON)	
		Submit subsistence financial report	
		After action report	

Notes:

SECTION II. FLOWCHARTS

Equipment and Personnel Planning Flowchart

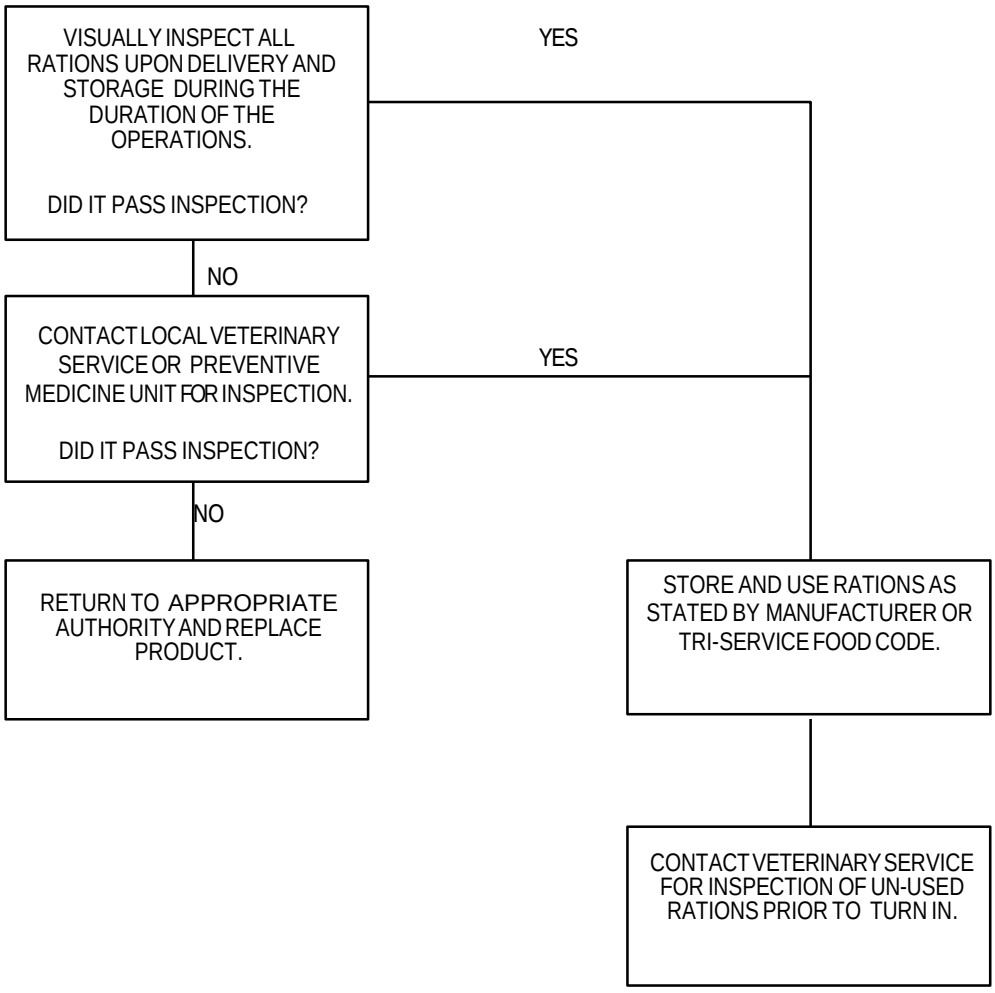
When computing equipment and personnel, multiple feeding locations (e.g., base camp, forward operating base sites) should be taken into account. Use the following equipment and personnel planning flowchart as a guide and submit requests through appropriate channels.



Inspection of Rations Flowchart (Receiving and Storage)

The following flowchart should be used when inspecting rations. Remember to—

- Look for noticeable defects (e.g., broken seals, boxes, and leaking cans).
- Look for abnormal colors and odors before using products.
- Verify expiration date.
- Use your local Army veterinary service for all inspections; if the Army veterinary service is not available, contact preventive medicine unit.
- Record results from inspections on appropriate forms according to the product and/or status of product after inspection.
- Inspect, by Army veterinary service personnel, all rations upon turn in for proper disposition.



SECTION III. FOOD SERVICE CAPABILITIES SETS

MEF Headquarters Group
10 TRHS feeds 250 each = 2,500 total 2,500 total capability to support planning factor

Infantry Regiment
3 TRHS feeds 250 each = 750 total
750 total capability to support planning factor

Infantry Battalion
1 TRHS feeds 250 each = 250 total
250 total capability to support planning factor

Marine Wing Support Squadron
7 TRHS feeds 250 each = 1,750 total
1 E-TRHS feeds 350 each = 350 total
2 EFK feeds 700 each = 1,400 total
3,500 total capability to support planning factor

Marine Logistics Group
15 TRHS feeds 250 each = 3,750 total
10 E-TRHS feeds 350 each = 3,500 total
14 EFK feeds 750 each = 10,500 total 17,750 total capability to support planning factor

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APPENDIX C
FEED PLAN MATRIX

Personnel (PAX) (per feeding site)	Menu Plan					LOGCAP/ Contract Oversight
	A* POR/UGR-E (3) Meals	**B*** UGR-H&S (1) Hot (2) MRE	**C*** UGR-H&S (2) Hot (1) MRE	**D*** UGR-M (2) Hot (1) MRE	**E*** UGR-M/A (2) Hot (1) MRE	
1-99	**0** (0)	**1** (1)	**2** (2)	**3** (3)	**3** (4)	**1** (1)
100-150	**0** (0)	**1** (2)	**2** (2)	**3** (3)	**3** (4)	**1** (2)
150-199	**0** (0)	**2** (2)	**2** (2)	**3** (4)	**4** (4)	**2** (2)
200-250	**0** (0)	**2** (2)	**3** (3)	**3** (4)	**4** (4)	**3** (3)
251-350	**0** (0)	**3** (3)	**4** (4)	**3** (5)	**4** (6)	**3** (3)
351-450	**0** (0)	**3** (5)	**5** (6)	**6** (6)	**5** (8)	**4** (3)
451-550	**0** (0)	**4** (6)	**6** (6)	**6** (10)	**5** (10)	**4** (4)
551-650	**0** (0)	**4** (8)	**6** (8)	**6** (12)	**6** (14)	**5** (4)
651-750	**0** (0)	**6** (10)	**9** (10)	**9 (14)**	**6 (18)**	**5** (5)
Equipment	**N/A**	**TRHS, Power/Water Source, and Limited Refrigeration**		**E-TRHS, Power Plus**	**EFK, Power Plus**	**Responsible for: Quality Assurance, Entry Control and Force Protection**
		Water Source and Refrigeration				
		Water Source, Refrigeration and Freezer				

*** Note: The first number in each cell denotes the minimum number of Food Service Specialists and the number in parenthesis identifies the minimum number of mess attendant.**

Force Size	Menu Plan					Totals*
	A*	B*	C*	D*	E*	
MEU (up to 2.5K)	**0** (0)	**0** (0)	**20** (18)	**3** (5)	**0** (0)	**23** (23)
Equipment	Note: Up to 650 will be sole diet of PORs	**TRHS, Power/Water Source, and limited Refrigeration** (Support Up to 1500)		**E-TRHS, Power Plus,** **Water Source and Refrigeration** (Support up to 350)	Limited capability to support additional menu options.	**6 TRHS** **1 E-TRHS** **0 EFK**
		The EFK is not part of the MEU Equipment set				
MEB (up to 17K)	**0** (0)	**0** (0)	**126** (126)	**18** (30)	**36** (108)	**180** (264)
Equipment	N/A	**TRHS, Power/Water Source, and limited Refrigeration** (Support Up to 10500)		**E-TRHS, Power Plus** **Water Source and Refrigeration** (Support up to 2100)	**EFK, Power Plus**	**42 TRHS** **6 E-TRHS** **6 EFK**
		Water Source, Refrigeration and Freezer (Support up to 4500)				
MEF (up to 45K)	**0** (0)	**0** (0)	**378** (378)	**54** (90)	**108** (324)	**540** (792)
Equipment	Note: MEF numbers are based on personnel requirement (objective) and NOT on T/O (threshold)	**TRHS, Power/Water Source, and limited Refrigeration** (Support Up to 31,500)		**E-TRHS, Power Plus** **Water Source and Refrigeration** (Support up to 6,300)	**EFK, Power Plus**	**126 TRHS** **18 E-TRHS** **18 EFK**
		Water Source, Refrigeration and Freezer (Support up to 13,500)				

Objective: Equals 61% UGR H&S and 39% UGR-M or better

Threshold: Is 14 % PORs only, 47% UGR H&S and 39% UGR-M or better

MENU PLAN – A	Menu Plan A is comprised completely of Packaged Operational rations and requires no Food Service Specialists or equipment.
	DESCRIPTION	**U/I**
	FIRST STRIKE RATION, 3 MENUS, 9 MEAL/BOX, ACR-F-07	CS
	MEAL, READY-TO-EAT, IND, TPK-2 ITEM, MENU 1-12, 1/12 MEA L CT BX, ACR-M-026	CS
	MEAL, RELIGIOUS, HALAL, IND, RTE, 1/12 CT BX	CS
	MEAL, RELIGIOUS, KOSHER, IND, RTE, 1/12 CT BX	CS
	UGR-E, 18 MEALS, BREAKFAST MENU 1, CREAMED GROUND BE EF , HAM, BISCUIT	CS
	UGR-E, 18 MEALS, BREAKFAST MENU 2, CORNED BEEF HASH, SAUSAGE, BREAKFAST CAKE	CS
	UGR-E,18 MEALS, BREAKFAST MENU 3 CREAMED GRAVY W/BEE F, TURKEY SAUSAGE	CS
	UGR-E, 18 MEALS, BREAKFAST MENU 4 PORK SAUSAGE IN GRAVY, CORN BEEF HASH	CS
	UGR-E ,18 MEALS, LUNCH/DINNER MENU 1, PASTA WITH SAUSA GE & PEAS	CS
	UGR-E MENU 2, CHICKEN BREAST IN GRAVY WITH CORNBREAD STUFFING	CS
	UGR-E MENU 3, BURGUNDY BEEF STEW & GREEN BEANS	CS
	UGR-E MENU 4, BARBECUE PORK RIBS WITH MACARONI & CHEESE	CS
	UGR-E, 18 MEALS, LUNCH/DINNER MENU 5, SZECHWAN CHICKEN WITH BROWN RICE & CARROTS	CS
	UGR-E MENU 6, SPAGHETTIE WITH MEATBALLS & GREEN BEAN S	CS
	UGR-E MENU 7 PORK CARNITAS, RICE, & CORN	CS
	UGR E MENU 8, CHICKEN POT PIE FILLING, MASHED POTATOES, & GREEN BEANS	CS
	Ultra-High Temperature Milk (Milk Shelf-stable)	
	MILK, LF, UHT, 1%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, LF, UHT, 1.5%, 27/200 ML CO	CS
	MILK, LF, UHT, CHOC, 1.5%, 27/200 ML CO	CS
	MILK, RF, UHT, BANANA, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, CHOC, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, SBERRY, 2%, ASEPTIC PG, 27/236 ML CO	CS
	Authorized Enhancements IAW Authorized Allowances	
	Assorted Beverages	
	BEV, CARB, COLA, SF, (DIET PEPSI), W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SF, W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SWT, (PEPSI), 24/330 ML CO	CS
	BEV, CARB, COLA, SWT, 24/330 ML CO	CS
	BEV, CARB, DIET SPRITE, 24/330 ML CN	CS
	BEV, CARB, DR. PEPPER, 24/12 OZ CANS	CS
	BEV, CARB, LEMON-LIME, SWT, (7 UP), 24/330 ML CN	CS
	BEV, CARB, ORANGE, SWT, 24/330 ML CN	CS
	BEV, CARB, ROOT BEER, SWT, 24/330 ML CN	CS
	BEV, CARB, SBERRY, SWT, 24/330 ML CN	CS
	BEV, CARB, SPRITE, 24/330 ML CN/CS	CS
	JUICE, APPLE 24/200ML CO/CS	CS
	JUICE, GRAPEFRUIT, 24/200 ML CO/CS	CS
	JUICE, ORANGE, 24/250 ML CS	CS
	JUICE, PINEAPPLE, 24/250 ML CS	CS
	Miscellaneous Breads, Cereal, Condiments, and Snacks	
	BREAD, PITA, FZN, WHITE, POCKET, 24/6 CT PG, 144/57 GM EA	CS

	BREAD, PITA, FZN, WHL WHEAT, POCKET, 24/6 CT PG, 144/57 GM PG	CS
	BREAD, WHEAT, FZN, SLICED, IND WRAPPED, 632 GM PG, 15/CASE	CS
	BREAD, WHITE, FZN, SL, IW, 18/575 GM PG	CS
	MUFFIN, ENGLISH, FZN, SLICED, 144/2 OZ EA	CS
	DANISH PASTRY, DATE NUT, FZN, 144/1-1/2 OZ EA	CS
	DANISH PASTRY, HONEY BUN, FZN, PLAIN, 30/144 GM PG	CS
	BAGELS, VARIETY, FZN, 72/3 OZ EA	CS
	COOKIES, CHOC CHIP, FAMOUS AMOS, BITE SIZE, 60/2 OZ PG	CS
	BEEF SNACK, JERKY, MESQUITE SMK, 48/0.9 OZ BG	CS
	CEREAL, VARIETY, GEN MILLS, FAMILY PACK, 60/1.3 -2.6 OZ CUP,1/6.98 LB CS	CS
	CEREAL, VARIETY, HEALTHY, 60/1.25 -2.7 OZ CO, 1/8.25 LB CS	CS
	CEREAL, VARIETY, KELLOGGS, 60/1.3-2.1 OZ CUP CO	CS
	CEREAL,OATMEAL,INST,VARIETY,MAPLE BRN SUGAR/APPLE CIN/CIN SPICE, 64/1.5 OZ PG	CS
	SNACK MIX TRAIL MIX 48/2 OZ PG/CS	CS
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	APPLES, EATING, RED, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	BANANAS, FRESH, BULK, BUY IN 1 LB INCREMENTS	LB
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	CATSUP, TOMATO, 1000/9 GM PG	CS
	SALT, TABLE, 6000/0.75 GM PG	CS
	SPICE, PEPPER, BLACK, GRD, 3000/.20 GM PG/CO	CS
	SUGAR SUB, SWT N LOW, SACCHARIN, 2000/1 GM PG	CS
	SUGAR, REFINED, GRANULATED, 3000/0.1 OZ PG	CS

Note: Menu Plan (A) doesn't require refrigeration, but beverages and fruit would be better served chilled, and would have a longer shelf-life. Operational climate will determine necessity for refer support. Some rations may not be supportable in some environments without proper refrigeration.

MENU PLAN - B	Menu Plan B is comprised of (1) hot UGR H&S meal and (2) MREs daily. The Menu is supported with limited A-Ration enhancements.
	DESCRIPTION	**U/I**
	FIRST STRIKE RATION, 3 MENUS, 9 MEAL/BOX, ACR-F-07	CS
	MEAL, READY-TO-EAT, IND, TPK-2 ITEM, MENU 1-12, 1/12 MEAL CT BX, ACR-M-026	CS
	MEAL, RELIGIOUS, HALAL, IND, RTE, 1/12 CT BX	CS
	MEAL, RELIGIOUS, KOSHER, IND, RTE, 1/12 CT BX	CS
	UGR H&S BF1 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S BF2 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S BF3 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S L/D1 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D2 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D3 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D4 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D5 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D6 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D7 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D8 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D9 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D10 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D11 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D12 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D13 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D14 SS 50 MEALS, REQ BREAD & MILK	CS
	Ultra-High Temperature Milk (Milk Shelf-stable)	
	MILK, LF, UHT, 1%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, LF, UHT, 1.5%, 27/200 ML CO	CS
	MILK, LF, UHT, CHOC, 1.5%, 27/200 ML CO	CS
	MILK, RF, UHT, BANANA, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, CHOC, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, SBERRY, 2%, ASEPTIC PG, 27/236 ML CO	CS
	Authorized Enhancements IAW Authorized Allowances	
	Assorted Beverages	
	BEV, CARB, COLA, SF, (DIET PEPSI), W/ASP, 24/330 ML C N	CS
	BEV, CARB, COLA, SF, W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SWT, (PEPSI), 24/330 ML CO	CS
	BEV, CARB, COLA, SWT, 24/330 ML CO	CS
	BEV, CARB, DIET SPRITE, 24/330 ML CN	CS
	BEV, CARB, DR. PEPPER, 24/12 OZ CANS	CS
	BEV, CARB, LEMON-LIME, SWT, (7 UP), 24/330 ML CN	CS
	BEV, CARB, ORANGE, SWT, 24/330 ML CN	CS
	BEV, CARB, ROOT BEER, SWT, 24/330 ML CN	CS
	BEV, CARB, SBERRY, SWT, 24/330 ML CN	CS
	BEV, CARB, SPRITE, 24/330 ML CN/CS	CS
	JUICE, APPLE 24/200ML CO/CS	CS
	JUICE, GRAPEFRUIT, 24/200 ML CO/CS	CS

	JUICE, ORANGE, 24/250 ML CS	CS
	JUICE, PINEAPPLE, 24/250 ML CS	CS
	Fresh Fruits and Vegetables (FF&V)	
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	APPLES, EATING, RED, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	BANANAS, FRESH, BULK	CS
	BROCCOLI, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CANTALOUPES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	CARROTS, FRESH, BULK	CS
	CAULIFLOWER, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CUCUMBERS, BULK, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	HONEYDEW MELONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LEMONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ICEBERG, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ROMAINE, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEPPERS, GREEN, SWEET, FRESH, FOR STUFFING, 3 RD, US 1 OR LOCAL EQUIV	CS
	PEPPERS, RED, SWEET, FRESH, US 1 OR LOCAL EQUIV	CS
	PEPPERS, SWT, FRESH, YELLOW, BULK PACK	CS
	PLUMS, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	RADISHES, RED, TOPPED, FRESH, BULK, US NO. 1 GR	CS
	SPINACH, RTU, FRESH, CRINKLED-LEAF OR FLAT LEAF, US NO 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	LB
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TOMATOES, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	WATERMELON, FRESH, US NO. 1 GR, OR LOCAL EQUIV, 1 TO 3/BOX	CS
		CS
	Miscellaneous Breads, Cereal, Condiments, and Snacks	
	BREAD, PITA, FZN, WHITE, POCKET, 24/6 CT PG, 144/57 GM EA	CS
	BREAD, PITA, FZN, WHL WHEAT, POCKET, 24/6 CT PG, 144/57 GM PG	CS
	BREAD, WHEAT, FZN, SLICED, IND WRAPPED, 632 GM PG, 15/CASE	CS
	BREAD, WHITE, FZN, SL, IW, 18/575 GM PG	CS
	MUFFIN, ENGLISH, FZN, SLICED, 144/2 OZ EA	CS
	DANISH PASTRY, DATE NUT, FZN, 144/1-1/2 OZ EA	CS
	DANISH PASTRY, HONEY BUN, FZN, PLAIN, 30/144 GM PG	CS
	BAGELS, VARIETY, FZN, 72/3 OZ EA	CS
	COOKIES, CHOC CHIP, FAMOUS AMOS, BITE SIZE, 60/2 OZ PG	CS
	BEEF SNACK, JERKY, MESQUITE SMK, 48/0.9 OZ BG	CS
	CEREAL, VARIETY, GEN MILLS, FAMILY PACK, 60/1.3 -2.6 OZ CUP,1/6.98 LB CS	CS
	CEREAL, VARIETY, HEALTHY, 60/1.25 -2.7 OZ CO, 1/8.25 LB CS	CS

	CEREAL, VARIETY, KELLOGGS, 60/1.3-2.1 OZ CUP CO	CS
	CEREAL,OATMEAL,INST,VARIETY,MAPLE BRN SUGAR/APPLE CIN/CIN SPICE, 64/1.5 OZ PG	CS
	SNACK MIX TRAIL MIX 48/2 OZ PG/CS	CS
	FRUIT YOGURT, APRICOT, FRESH, 30/135 GR.	CS
	FRUIT YOGURT, STRAWBERRY, FRESH, 30/135 GR.	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV, BUY IN 1 LB INCREMENTS	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	YOGURT, REG, MANGO, CHL, 30/135 GM	CS
	CATSUP, TOMATO, 1000/9 GM PG	CS
	MUSTARD, 1000/9 GM PG	CS
	DRESSING, SALAD, ASSORTED FLAVORS, 1000/9 GM PG	CS
	SALT, TABLE, 6000/0.75 GM PG	CS
	SPICE, PEPPER, BLACK, GRD, 3000/.20 GM PG/CO	CS
	SUGAR SUB, SWT N LOW, SACCHARIN, 2000/1 GM PG	CS
	SUGAR, REFINED, GRANULATED, 3000/0.1 OZ PG	CS

Note: Some components of Menu Plan (B) <u>requires</u> refrigeration. Operational climate will determine necessity for refer support. Some rations may not be supportable in some environments without proper refrigeration.

MENU PLAN - C	Menu Plan C is comprised of (2) hot UGR H&S meal and (1) MRE daily. The Menu is supported with limited A-Ration enhancements.
	DESCRIPTION	**U/I**
	FIRST STRIKE RATION, 3 MENUS, 9 MEAL/BOX, ACR-F-07	CS
	MEAL, READY-TO-EAT, IND, TPK-2 ITEM, MENU 1-12, 1/12 MEAL CT BX, ACR-M-026	CS
	MEAL, RELIGIOUS, HALAL, IND, RTE, 1/12 CT BX	CS
	MEAL, RELIGIOUS, KOSHER, IND, RTE, 1/12 CT BX	CS
	UGR H&S BF1 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S BF2 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S BF3 SS, 50 MEALS, REG BREAD & MILK	CS
	UGR H&S L/D1 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D2 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D3 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D4 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D5 SS 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D6 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D7 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D8 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D9 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D10 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D11 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D12 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D13 SS, 50 MEALS, REQ BREAD & MILK	CS
	UGR H&S L/D14 SS 50 MEALS, REQ BREAD & MILK	CS
	Ultra-High Temperature Milk (Milk Shelf-stable)	
	MILK, LF, UHT, 1%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, LF, UHT, 1.5%, 27/200 ML CO	CS
	MILK, LF, UHT, CHOC, 1.5%, 27/200 ML CO	CS
	MILK, RF, UHT, BANANA, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, CHOC, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, SBERRY, 2%, ASEPTIC PG, 27/236 ML CO	CS
	Authorized Enhancements IAW Authorized Allowances	
	Assorted Beverages	
	BEV, CARB, COLA, SF, (DIET PEPSI), W/ASP, 24/330 ML C N	CS
	BEV, CARB, COLA, SF, W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SWT, (PEPSI), 24/330 ML CO	CS
	BEV, CARB, COLA, SWT, 24/330 ML CO	CS
	BEV, CARB, DIET SPRITE, 24/330 ML CN	CS
	BEV, CARB, DR. PEPPER, 24/12 OZ CANS	CS
	BEV, CARB, LEMON-LIME, SWT, (7 UP), 24/330 ML CN	CS
	BEV, CARB, ORANGE, SWT, 24/330 ML CN	CS
	BEV, CARB, ROOT BEER, SWT, 24/330 ML CN	CS

	BEV, CARB, SBERRY, SWT, 24/330 ML CN	CS
	BEV, CARB, SPRITE, 24/330 ML CN/CS	CS
	JUICE, APPLE 24/200ML CO/CS	CS
	JUICE, GRAPEFRUIT, 24/200 ML CO/CS	CS
	JUICE, ORANGE, 24/250 ML CS	CS
	JUICE, PINEAPPLE, 24/250 ML CS	CS
Fresh Fruits and Vegetables (FF&V)		
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	APPLES, EATING, RED, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	BANANAS, FRESH, BULK	CS
	BROCCOLI, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CANTALOUPES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	CARROTS, FRESH, BULK	CS
	CAULIFLOWER, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CUCUMBERS, BULK, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	HONEYDEW MELONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LEMONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ICEBERG, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ROMAINE, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEPPERS, GREEN, SWEET, FRESH, FOR STUFFING, 3 RD, US 1 OR LOCAL EQUIV	CS
	PEPPERS, RED, SWEET, FRESH, US 1 OR LOCAL EQUIV	CS
	PEPPERS, SWT, FRESH, YELLOW, BULK PACK	CS
	PLUMS, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	RADISHES, RED, TOPPED, FRESH, BULK, US NO. 1 GR	CS
	SPINACH, RTU, FRESH, CRINKLED-LEAF OR FLAT LEAF, US NO 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	LB
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TOMATOES, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	WATERMELON, FRESH, US NO. 1 GR, OR LOCAL EQUIV, 1 TO 3/BOX	CS
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
Miscellaneous Breads, Cereal, Condiments, and Snacks		
	BREAD, PITA, FZN, WHITE, POCKET, 24/6 CT PG, 144/57 GM EA	CS
	BREAD, PITA, FZN, WHL WHEAT, POCKET, 24/6 CT PG, 144/57 GM PG	CS
	BREAD, WHEAT, FZN, SLICED, IND WRAPPED, 632 GM PG, 15/CASE	CS
	BREAD, WHITE, FZN, SL, IW, 18/575 GM PG	CS
	MUFFIN, ENGLISH, FZN, SLICED, 144/2 OZ EA	CS
	DANISH PASTRY, DATE NUT, FZN, 144/1-1/2 OZ EA	CS
	DANISH PASTRY, HONEY BUN, FZN, PLAIN, 30/144 GM PG	CS

	BAGELS, VARIETY, FZN, 72/3 OZ EA	CS
	COOKIES, CHOC CHIP, FAMOUS AMOS, BITE SIZE, 60/2 OZ PG	CS
	DOUGHNUT, FZN, VARIETY PACK, YEAST RAISED, GLAZED,JELLY CINNROLL, 2.5 OZ, 48/CS	CS
	BEEF SNACK, JERKY, MESQUITE SMK, 48/0.9 OZ BG	CS
	CEREAL, VARIETY, GEN MILLS, FAMILY PACK, 60/1.3 -2.6 OZ CUP,1/6.98 LB CS	CS
	CEREAL, VARIETY, HEALTHY, 60/1.25 -2.7 OZ CO, 1/8.25 LB CS	CS
	CEREAL, VARIETY, KELLOGGS, 60/1.3-2.1 OZ CUP CO	CS
	CEREAL,OATMEAL,INST,VARIETY,MAPLE BRN SUGAR/APPLE CIN/CIN SPICE, 64/1.5 OZ PG	CS
	SNACK MIX TRAIL MIX 48/2 OZ PG/CS	CS
	FRUIT YOGURT, APRICOT, FRESH, 30/135 GR.	CS
	FRUIT YOGURT, STRAWBERRY, FRESH, 30/135 GR.	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV, BUY IN 1 LB INCREMENTS	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	YOGURT, REG, MANGO, CHL, 30/135 GM	CS
	CATSUP, TOMATO, 1000/9 GM PG	CS
	SALT, TABLE, 6000/0.75 GM PG	CS
	MUSTARD, 1000/9 GM PG	CS
	DRESSING, SALAD, ASSORTED FLAVORS, 1000/9 GM PG	CS
	SPICE, PEPPER, BLACK, GRD, 3000/.20 GM PG/CO	CS
	SUGAR SUB, SWT N LOW, SACCHARIN, 2000/1 GM PG	CS
	SUGAR, REFINED, GRANULATED, 3000/0.1 OZ PG	CS
	Morale Meal Items (If Approved)	
	BEEF, GRD, PATTIES, P/C, FZN, FLAME BROILED, 78/3.8 OZ EA	CS
	FRANKS, BEEF, FZN, 4/1, 6 LG, 2/5 LB BX, 40/4 OZ EA	CS
	SAUSAGE, ITALIAN, LINKS, HOT, FZN, 4:1, 12 LB CS	CS
	SAUSAGE, POLISH, LINKS, P/C, FZN, KIELBASA, SMK, NAT CASING, 6-7 LG, 80/4 OZ EA	CS
	ROLLS, FRANKS, FZN, SL, WHITE, 8 , 80 GM, 15/6 CT PG	CS
	ROLLS, HAMBURGER, FZN, SLICED, W/SESAME SEEDS, 58 GM EA, 108/CS	CS
	CHEESE, AM, SL, CHL, YELLOW, 160 CT PG, 4/5 LB PG	CS
	CHEESE, CHDR, NAT, SHRD, FZN, MILD, 4/5 LB CO	CS
	CHEESE, SWISS, NAT, SL, CHL, 0.75 OZ SL, 8/1.5 LB PG	CS

Note: Some components of Menu Plan (C) <u>requires</u> refrigeration. Operational climate will determine necessity for refer support. Some rations may not be supportable in some environments without proper refrigeration.

MENU PLAN - D	Menu Plan D is comprised of (2) hot UGR-M meal and (1) MRE daily. The menu is supported with limited A-Ration enhancements.
	DESCRIPTION	**U/I**
	FIRST STRIKE RATION, 3 MENUS, 9 MEAL/BOX, ACR-F-07	CS
	MEAL, READY-TO-EAT, IND, TPK-2 ITEM, MENU 1-12, 1/12 MEAL CT BX, ACR-M-026	CS
	MEAL, RELIGIOUS, HALAL, IND, RTE, 1/12 CT BX	CS
	MEAL, RELIGIOUS, KOSHER, IND, RTE, 1/12 CT BX	CS
	UGR-B BREAKFAST 1 - PANCAKE, SAUSAGE	CS
	UGR-B BREAKFAST 2 - EGGS & SAUSAGE	CS
	UGR-B BREAKFAST 3 - CREAMED CHIP BEEF	CS
	UGR-B BREAKFAST 4 - CREAMED SAUSAGE	CS
	UGR-B BREAKFAST 5 - PANCAKE	CS
	UGR-B DINNER 1 - BEEF & GRAVY	CS
	UGR-B DINNER 2 - CHICKEN CREOLE	CS
	UGR-B DINNER 3 - PORK CHOPS/WGRAVY	CS
	UGR-B DINNER 4 - CHICKEN ALA KING	CS
	UGR-B DINNER 5 - SHRIMP JAMBALAYA	CS
	UGR-B DINNER 6 - SHEPARDS PIE	CS
	UGR-B DINNER 7 - MEXICAN CHKN MAC	CS
	UGR-B DINNER 8 - BAKED CKN & RICE	CS
	UGR-B DINNER 9 - SPAGHETTI W/MEAT	CS
	Ultra-High Temperature Milk (Milk Shelf-stable)	
	MILK, LF, UHT, 1%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, LF, UHT, 1.5%, 27/200 ML CO	CS
	MILK, LF, UHT, CHOC, 1.5%, 27/200 ML CO	CS
	MILK, RF, UHT, BANANA, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, CHOC, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, SBERRY, 2%, ASEPTIC PG, 27/236 ML CO	CS
	Authorized Enhancements IAW Authorized Allowances	
	Assorted Beverages	
	BEV, CARB, COLA, SF, (DIET PEPSI), W/ASP, 24/330 ML C N	CS
	BEV, CARB, COLA, SF, W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SWT, (PEPSI), 24/330 ML CO	CS
	BEV, CARB, COLA, SWT, 24/330 ML CO	CS
	BEV, CARB, DIET SPRITE, 24/330 ML CN	CS
	BEV, CARB, DR. PEPPER, 24/12 OZ CANS	CS
	BEV, CARB, LEMON-LIME, SWT, (7 UP), 24/330 ML CN	CS
	BEV, CARB, ORANGE, SWT, 24/330 ML CN	CS
	BEV, CARB, ROOT BEER, SWT, 24/330 ML CN	CS
	BEV, CARB, SBERRY, SWT, 24/330 ML CN	CS
	BEV, CARB, SPRITE, 24/330 ML CN/CS	CS
	JUICE, APPLE 24/200ML CO/CS	CS

	JUICE, GRAPEFRUIT, 24/200 ML CO/CS	CS
	JUICE, ORANGE, 24/250 ML CS	CS
	JUICE, PINEAPPLE, 24/250 ML CS	CS
	Fresh Fruits and Vegetables (FF&V)	
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	APPLES, EATING, RED, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	BANANAS, FRESH, BULK	CS
	BROCCOLI, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CANTALOUPES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	CARROTS, FRESH, BULK	CS
	CAULIFLOWER, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CUCUMBERS, BULK, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	HONEYDEW MELONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LEMONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ICEBERG, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ROMAINE, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEPPERS, GREEN, SWEET, FRESH, FOR STUFFING, 3 RD, US 1 OR LOCAL EQUIV	CS
	PEPPERS, RED, SWEET, FRESH, US 1 OR LOCAL EQUIV	CS
	PEPPERS, SWT, FRESH, YELLOW, BULK PACK	CS
	PLUMS, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	RADISHES, RED, TOPPED, FRESH, BULK, US NO. 1 GR	CS
	SPINACH, RTU, FRESH, CRINKLED-LEAF OR FLAT LEAF, US NO 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	LB
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TOMATOES, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	WATERMELON, FRESH, US NO. 1 GR, OR LOCAL EQUIV, 1 TO 3/BOX	CS
	Miscellaneous Breads, Cereal, Condiments, and Snacks	
	BREAD, PITA, FZN, WHITE, POCKET, 24/6 CT PG, 144/57 GM EA	CS
	BREAD, PITA, FZN, WHL WHEAT, POCKET, 24/6 CT PG, 144/57 GM PG	CS
	BREAD, WHEAT, FZN, SLICED, IND WRAPPED, 632 GM PG, 15/CASE	CS
	BREAD, WHITE, FZN, SL, IW, 18/575 GM PG	CS
	MUFFIN, ENGLISH, FZN, SLICED, 144/2 OZ EA	CS
	DANISH PASTRY, DATE NUT, FZN, 144/1-1/2 OZ EA	CS
	DANISH PASTRY, HONEY BUN, FZN, PLAIN, 30/144 GM PG	CS
	BAGELS, VARIETY, FZN, 72/3 OZ EA	CS
	COOKIES, CHOC CHIP, FAMOUS AMOS, BITE SIZE, 60/2 OZ PG	CS
	DOUGHNUT, FZN, VARIETY PACK, YEAST RAISED, GLAZED,JELLY CINNROLL, 2.5 OZ, 48/CS	CS

BEEF SNACK, JERKY, MESQUITE SMK, 48/0.9 OZ BG	CS
CEREAL, VARIETY, GEN MILLS, FAMILY PACK, 60/1.3 -2.6 OZ CUP,1/6.98 LB CS	CS
CEREAL, VARIETY, HEALTHY, 60/1.25 -2.7 OZ CO, 1/8.25 LB CS	CS
CEREAL, VARIETY, KELLOGGS, 60/1.3-2.1 OZ CUP CO	CS
CEREAL,OATMEAL,INST,VARIETY,MAPLE BRN SUGAR/APPLE CIN/CIN SPICE, 64/1.5 OZ PG	CS
SNACK MIX TRAIL MIX 48/2 OZ PG/CS	CS
FRUIT YOGURT, APRICOT, FRESH, 30/135 GR.	CS
FRUIT YOGURT, STRAWBERRY, FRESH, 30/135 GR.	CS
GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV, BUY IN 1 LB INCREMENTS	CS
PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
YOGURT, REG, MANGO, CHL, 30/135 GM	CS
CATSUP, TOMATO, 1000/9 GM PG	CS
MUSTARD, 1000/9 GM PG	CS
DRESSING, SALAD, ASSORTED FLAVORS, 1000/9 GM PG	CS
SALT, TABLE, 6000/0.75 GM PG	CS
SPICE, PEPPER, BLACK, GRD, 3000/.20 GM PG/CO	CS
SUGAR SUB, SWT N LOW, SACCHARIN, 2000/1 GM PG	CS
SUGAR, REFINED, GRANULATED, 3000/0.1 OZ PG	CS
Morale Meal Items (If Approved)	
BEEF, GRD, PATTIES, P/C, FZN, FLAME BROILED, 78/3.8 OZ EA	CS
FRANKS, BEEF, FZN, 4/1, 6 LG, 2/5 LB BX, 40/4 OZ EA	CS
SAUSAGE, ITALIAN, LINKS, HOT, FZN, 4:1, 12 LB CS	CS
SAUSAGE, POLISH, LINKS, P/C, FZN, KIELBASA, SMK, NAT CASING, 6-7 LG, 80/4 OZ EA	CS
ROLLS, FRANKS, FZN, SL, WHITE, 8 , 80 GM, 15/6 CT PG	CS
ROLLS, HAMBURGER, FZN, SLICED, W/SESAME SEEDS, 58 GM EA, 108/CS	CS
CHEESE, AM, SL, CHL, YELLOW, 160 CT PG, 4/5 LB PG	CS
CHEESE, CHDR, NAT, SHRD, FZN, MILD, 4/5 LB CO	CS
CHEESE, SWISS, NAT, SL, CHL, 0.75 OZ SL, 8/1.5 LB PG	CS

Note: Some components of Menu Plan (D) requires refrigeration. Operational climate will determine necessity for refer support. Some rations may not be supportable in some environments without proper refrigeration.

MENU PLAN - E	Menu Plan E is comprised of (2) hot UGR-M or UGR-A meals and (1) MRE daily. The menu is supported with limited A-Ration enhancements.	
	DESCRIPTION	U/I
	FIRST STRIKE RATION, 3 MENUS, 9 MEAL/BOX, ACR-F-07	CS
	MEAL, READY-TO-EAT, IND, TPK-2 ITEM, MENU 1-12, 1/12 ME AL CT BX, ACR-M-026	CS
	MEAL, RELIGIOUS, HALAL, IND, RTE, 1/12 CT BX	CS
	MEAL, RELIGIOUS, KOSHER, IND, RTE, 1/12 CT BX	CS
	UGR-B BREAKFAST 1 - PANCAKE, SAUSAGE	CS
	UGR-B BREAKFAST 2 - EGGS & SAUSAGE	CS
	UGR-B BREAKFAST 3 - CREAMED CHIP BEEF	CS
	UGR-B BREAKFAST 4 - CREAMED SAUSAGE	CS
	UGR-B BREAKFAST 5 - PANCAKE	CS
	UGR-B DINNER 1 - BEEF & GRAVY	CS
	UGR-B DINNER 2 - CHICKEN CREOLE	CS
	UGR-B DINNER 3 - PORK CHOPS/WGRAVY	CS
	UGR-B DINNER 4 - CHICKEN ALA KING	CS
	UGR-B DINNER 5 - SHRIMP JAMBALAYA	CS
	UGR-B DINNER 6 - SHEPARDS PIE	CS
	UGR-B DINNER 7 - MEXICAN CHKN MAC	CS
	UGR-B DINNER 8 - BAKED CKN & RICE	CS
	UGR-B DINNER 9 - SPAGHETTI W/MEAT	CS
	UGR A, BF1, PERISHABLE, 50 MEALS, REQ 8970-01-525-6344 (BF1-S), REQ BREAD and MILK	CS
	UGR A, BF1, SEMI-PERISHABLE, 50 MEALS, REG 8970015256726 (BF1-P), REQ BREAD and MILK	CS
	UGR A, BF2, PERISHABLE, 50 MEALS, REQ 8970-01-525-6366 (BF2-S), REQ BREAD and MILK	CS
	UGR A, BF2, SEMI-PERISHABLE, 50 MEALS, REG 8970015256729 (BF2-P), REQ BREAD and MILK	CS
	UGR A, BF3, PERISHABLE, 50 MEALS, REQ 8970-01-525-6370 (BF3-S), REQ BREAD and MILK	CS
	UGR A, BF3, SEMI-PERISHABLE, 50 MEALS, REG 8970015256733 (BF3-P), REQ BREAD and MILK	CS
	UGR A, BF4, PERISHABLE, 50 MEALS, REQ 8970-01-525-6372 (BF4-S), REQ BREAD and MILK	CS
	UGR A, BF4, SEMI-PERISHABLE, 50 MEALS, REG 8970015256735 (BF4-P), REQ BREAD and MILK	CS
	UGR A, BF5, PERISHABLE, 50 MEALS, REQ 8970-01-525-6377 (BF5-S), REQ BREAD and MILK	CS
	UGR A, BF5, SEMI-PERISHABLE, 50 MEALS, REG 8970015256739 (BF5-P), REQ BREAD and MILK	CS
	UGR A, BF6, PERISHABLE, 50 MEALS, REQ 8970-01-525-6389 (BF6-S), REQ BREAD and MILK	CS
	UGR A, BF6, SEMI-PERISHABLE, 50 MEALS, REG 8970015256740 (BF6-P), REQ BREAD and MILK	CS
	UGR A, BF7, PERISHABLE, 50 MEALS, REQ 8970-01-525-6720 (BF6-S), REQ BREAD and MILK	CS
	UGR A, BF7, SEMI-PERISHABLE, 50 MEALS, REG 8970015256744 (BF7-P), REQ BREAD and MILK	CS
	UGR A, D1, PERISHABLE, 50 MEALS, REQ 8970-01-525-6783 (D 1-S), REQ BREAD and MILK	CS
	UGR A, D1, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256813 (D1-P), REQ BREAD and MILK	CS
	UGR A, D10, PERISHABLE, 50 MEALS, REQ 8970-01-525-6805 (D10-S), REQ BREAD and MILK	CS
	UGR A, D10, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256830 (D10-P), REQ BREAD and MILK	CS
	UGR A, D11, PERISHABLE, 50 MEALS, REQ 8970-01-525-6806 (D11-S), REQ BREAD and MILK	CS
	UGR A, D11, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256832 (D11-P), REQ BREAD and MILK	CS
	UGR A, D12, PERISHABLE, 50 MEALS, REQ 8970-01-525-6807 (D12-S), REQ BREAD and MILK	CS

	UGR A, D12, SEMI-PERISHABLE, 50 MEALS, REQ 89700156849 (D12-P), REQ BREAD and MILK	CS
	UGR A, D13, PERISHABLE, 50 MEALS, REQ 8970-01-525-6809 (D13-S), REQ BREAD and MILK	CS
	UGR A, D13, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256852 (D13-P), REQ BREAD and MILK	CS
	UGR A, D14, PERISHABLE, 50 MEALS, REQ 8970-01-525-6810 (D14-S), REQ BREAD and MILK	CS
	UGR A, D14, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256856 (D14-P), REQ BREAD and MILK	CS
	UGR A, D2, PERISHABLE, 50 MEALS, REQ 8970-01-525-6785 (D2-S), REQ BREAD and MILK	CS
	UGR A, D2, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256815 (D2-P), REQ BREAD and MILK	CS
	UGR A, D3, PERISHABLE, 50 MEALS, REQ 8970-01-525-6786 (D3-S), REQ BREAD and MILK	CS
	UGR A, D3, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256816 (D3-P), REQ BREAD and MILK	CS
	UGR A, D4, PERISHABLE, 50 MEALS, REQ 8970-01-525-6789 (D4-S), REQ BREAD and MILK	CS
	UGR A, D4, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256817 (D4-P), REQ BREAD and MILK	CS
	UGR A, D5, PERISHABLE, 50 MEALS, REQ 8970-01-525-6790 (D5-S), REQ BREAD and MILK	CS
	UGR A, D5, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256818 (D5-P), REQ BREAD and MILK	CS
	UGR A, D6, PERISHABLE, 50 MEALS, REQ 8970-01-525-6783 (D6-S), REQ BREAD and MILK	CS
	UGR A, D6, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256820 (D6-P), REQ BREAD and MILK	CS
	UGR A, D7, PERISHABLE, 50 MEALS, REQ 8970-01-525-6796 (D7-S), REQ BREAD and MILK	CS
	UGR A, D7, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256823 (D7-P), REQ BREAD and MILK	CS
	UGR A, D8, PERISHABLE, 50 MEALS, REQ 8970-01-525-6803 (D8-S), REQ BREAD and MILK	CS
	UGR A, D8, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256825 (D8-P), REQ BREAD and MILK	CS
	UGR A, D9, PERISHABLE, 50 MEALS, REQ 8970-01-525-6804 (D9-S), REQ BREAD and MILK	CS
	UGR A, D9, SEMI-PERISHABLE, 50 MEALS, REQ 8970015256827 (D9-P), REQ BREAD and MILK	CS
	Ultra-High Temperature Milk (Milk Shelf-stable)	
	MILK, LF, UHT, 1%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, LF, UHT, 1.5%, 27/200 ML CO	CS
	MILK, LF, UHT, CHOC, 1.5%, 27/200 ML CO	CS
	MILK, RF, UHT, BANANA, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, CHOC, 2%, ASEPTIC PG, 27/236 ML CO	CS
	MILK, RF, UHT, SBERRY, 2%, ASEPTIC PG, 27/236 ML CO	CS
	Authorized Enhancements IAW Authorized Allowances	
	Assorted Beverages	
	BEV, CARB, COLA, SF, (DIET PEPSI), W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SF, W/ASP, 24/330 ML CN	CS
	BEV, CARB, COLA, SWT, (PEPSI), 24/330 ML CO	CS
	BEV, CARB, COLA, SWT, 24/330 ML CO	CS
	BEV, CARB, DIET SPRITE, 24/330 ML CN	CS
	BEV, CARB, DR. PEPPER, 24/12 OZ CANS	CS
	BEV, CARB, LEMON-LIME, SWT, (7 UP), 24/330 ML CN	CS
	BEV, CARB, ORANGE, SWT, 24/330 ML CN	CS
	BEV, CARB, ROOT BEER, SWT, 24/330 ML CN	CS
	BEV, CARB, SBERRY, SWT, 24/330 ML CN	CS
	BEV, CARB, SPRITE, 24/330 ML CN/CS	CS
	JUICE, APPLE 24/200ML CO/CS	CS
	JUICE, GRAPEFRUIT, 24/200 ML CO/CS	CS

	JUICE, ORANGE, 24/250 ML CS	CS
	JUICE, PINEAPPLE, 24/250 ML CS	CS
	Fresh Fruits and Vegetables (FF&V)	
	APPLES, EATING, GRN, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	APPLES, EATING, RED, SWT, FRESH, BULK, USF OR LOCAL EQUIV	CS
	BANANAS, FRESH, BULK	CS
	BROCCOLI, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CANTALOUPES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	CARROTS, FRESH, BULK	CS
	CAULIFLOWER, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	CUCUMBERS, BULK, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
	GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
	HONEYDEW MELONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LEMONS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ICEBERG, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	LETTUCE, ROMAINE, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV	CS
	PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	PEPPERS, GREEN, SWEET, FRESH, FOR STUFFING, 3 RD, US 1 OR LOCAL EQUIV	CS
	PEPPERS, RED, SWEET, FRESH, US 1 OR LOCAL EQUIV	CS
	PEPPERS, SWT, FRESH, YELLOW, BULK PACK	CS
	PLUMS, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	RADISHES, RED, TOPPED, FRESH, BULK, US NO. 1 GR	CS
	SPINACH, RTU, FRESH, CRINKLED-LEAF OR FLAT LEAF, US NO 1 GR, OR LOCAL EQUIV	CS
	STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	LB
	TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
	TOMATOES, FRESH, US NO. 1 GR, OR LOCAL EQUIV	CS
	WATERMELON, FRESH, US NO. 1 GR, OR LOCAL EQUIV, 1 TO 3/BOX	CS
	Miscellaneous Breads, Cereal, Condiments, and Snacks	
	BREAD, PITA, FZN, WHITE, POCKET, 24/6 CT PG, 144/57 GM EA	CS
	BREAD, PITA, FZN, WHL WHEAT, POCKET, 24/6 CT PG, 144/57 GM PG	CS
	BREAD, WHEAT, FZN, SLICED, IND WRAPPED, 632 GM PG, 15/CASE	CS
	BREAD, WHITE, FZN, SL, IW, 18/575 GM PG	CS
	MUFFIN, ENGLISH, FZN, SLICED, 144/2 OZ EA	CS
	DANISH PASTRY, DATE NUT, FZN, 144/1-1/2 OZ EA	CS
	DANISH PASTRY, HONEY BUN, FZN, PLAIN, 30/144 GM PG	CS
	BAGELS, VARIETY, FZN, 72/3 OZ EA	CS
	COOKIES, CHOC CHIP, FAMOUS AMOS, BITE SIZE, 60/2 OZ PG	CS
	DOUGHNUT, FZN, VARIETY PACK, YEAST RAISED, GLAZED,JELLY CINNROLL, 2.5 OZ, 48/CS	CS
	BEEF SNACK, JERKY, MESQUITE SMK, 48/0.9 OZ BG	CS

CEREAL, VARIETY, GEN MILLS, FAMILY PACK, 60/1.3 -2.6 OZ CUP,1/6.98 LB CS	CS
CEREAL, VARIETY, HEALTHY, 60/1.25 -2.7 OZ CO, 1/8.25 LB CS	CS
CEREAL, VARIETY, KELLOGGS, 60/1.3-2.1 OZ CUP CO	CS
CEREAL,OATMEAL,INST,VARIETY,MAPLE BRN SUGAR/APPLE CIN/CIN SPICE, 64/1.5 OZ PG	CS
SNACK MIX TRAIL MIX 48/2 OZ PG/CS	CS
FRUIT YOGURT, APRICOT, FRESH, 30/135 GR.	CS
FRUIT YOGURT, STRAWBERRY, FRESH, 30/135 GR.	CS
GRAPEFRUIT, FRESH, US NO. 1 GRADE, OR LOCAL EQUIV	CS
GRAPES, WHITE, SEEDLESS, FRESH, BULK, US 1 GR, OR LOCAL EQUIV	CS
ORANGES, FRESH, ANY VARIETY EXCEPT TEMPLE, US NO. 1 GR, OR LOCAL EQUIV	CS
PEACHES, FRESH, US NO. 1, OR LOCAL EQUIV, BUY IN 1 LB INCREMENTS	CS
PEARS, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
STRAWBERRIES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
TANGERINES, FRESH, BULK, US NO. 1 GR, OR LOCAL EQUIV	CS
YOGURT, REG, MANGO, CHL, 30/135 GM	CS
CATSUP, TOMATO, 1000/9 GM PG	CS
MUSTARD, 1000/9 GM PG	CS
DRESSING, SALAD, ASSORTED FLAVORS, 1000/9 GM PG	CS
SALT, TABLE, 6000/0.75 GM PG	CS
SPICE, PEPPER, BLACK, GRD, 3000/.20 GM PG/CO	CS
SUGAR SUB, SWT N LOW, SACCHARIN, 2000/1 GM PG	CS
SUGAR, REFINED, GRANULATED, 3000/0.1 OZ PG	CS
Morale Meal Items (If Approved)	
BEEF, GRD, PATTIES, P/C, FZN, FLAME BROILED, 78/3.8 OZ EA	CS
FRANKS, BEEF, FZN, 4/1, 6 LG, 2/5 LB BX, 40/4 OZ EA	CS
SAUSAGE, ITALIAN, LINKS, HOT, FZN, 4:1, 12 LB CS	CS
SAUSAGE, POLISH, LINKS, P/C, FZN, KIELBASA, SMK, NAT CASING, 6-7 LG, 80/4 OZ EA	CS
ROLLS, FRANKS, FZN, SL, WHITE, 8 , 80 GM, 15/6 CT PG	CS
ROLLS, HAMBURGER, FZN, SLICED, W/SESAME SEEDS, 58 GM EA, 108/CS	CS
CHEESE, AM, SL, CHL, YELLOW, 160 CT PG, 4/5 LB PG	CS
CHEESE, CHDR, NAT, SHRD, FZN, MILD, 4/5 LB CO	CS
CHEESE, SWISS, NAT, SL, CHL, 0.75 OZ SL, 8/1.5 LB PG	CS
BEEF LOIN, T-BONE STEAK, FZN PORTION-CUT 48/14 OZ PG (42 LB CS)	LB
PORK SPARERIBS, CKD, FZN, ST LOUIS, VAC PAC, 10/2.2-3.1 LB SLAB, N 559a	LB
SAUCE, STEAK, 12/15 FL OZ BT	CS
CKN QTR F/C, IQF, FZN, ROTISSERIE STYLE, MARIN, SEASONED 50/8 OZ EA	LB

Note: Some components of Menu Plan (E) <u>requires</u> freezer support. Operational climate will determine necessity for refer support. Some rations may not be supported in some environments without proper refrigeration and freezer capability.

APPENDIX D
STANDARD FEED PLAN FORMAT

Exercise/Operation Name:	**Feeding Location:**
Unit:	
MSC:	**FY:** **QTR:**
Start Date:	**End Date:**

		BREAKFAST			LUNCH			DINNER		
DAY	**DATE**	**PAX**	**RATION**	**QTY**	**PAX**	**RATION**	**QTY**	**PAX**	**RATION**	**QTY**
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
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26										
27										
28										
29										
30										
PAX				**QTY**	**PAX**		**QTY**	**PAX**		**QTY**
TOTALS										

Individual Ration Cost: $_____ $_____ $_____ **Ration Total Value (Cost x Qty) =** $_____ $_____ $_____

Enhancement Percentage (8%, 15%, 25%) = x_____ x_____ x_____ **Enhancement Funding (% x Total Value) =** $_____ $_____ $_____

Required Delivery Dates: **1ST RDD** **2ND RDD** **3RD RDD** **4TH RDD**

POR/UGR				
Enhancements				

Mess Chief Signature: _____

Planning Factors

MRE: unit of issue is box (12 meals per box): 48 boxes per standard warehouse pallet; 12 meals per box x 48 boxes per pallet = 576 meals per pallet. (Special note: 760 boxes fit in a 20 foot ISO container).

UGR-H&S: unit of issue is each ("each" is one module of 50 portions; 1 portion is 1 meal): each module comes in 3 boxes; 24 boxes (8 modules) per standard warehouse pallet; 50 portions per module (3 boxes) x 8 modules (24 boxes) per pallet = 400 portions per pallet.

UGR-M: unit of issue is each ("each" is one module of 50 portions; 1 portion is 1 meal): each module comes in 3 boxes; 24 boxes (8 modules) per pallet; 50 portions per module (3 boxes) x 8 modules (24 boxes) per pallet = 400 portions per pallet.

APPENDIX E
ICE REQUIREMENTS

The planning factor for potable ice is based on:

- 6 pounds for each Marine per day in a temperate climate.
- 11 pounds for each Marine per day in an arid climate.

Although ice is a Class I item, it will not be purchased with subsistence funds; operational or exercise O&MMC funds will be used.

To feed 700 personnel for 7 days (two hot meals, UGR/UGR-M or UGR-H&S) the amount of ice is determined by using the following guidelines:

Temperate climate
- 6 lbs per Marine per day.
- 700 Marines x 6 lbs = 4,200 lbs per day.
- 4,200 lbs x 7 days = 29,400 lbs for 7 days.

Arid climate
- 11 lbs per Marine per day.
- 700 Marines x 11 lbs = 7,700 lbs per day.
- 7,700 lbs x 7 days = 53,900 lbs for 7 days

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APPENDIX F
FUEL REQUIREMENTS

To feed up to 750 personnel for 7 days (two hot meals, UGR-M or UGR-H&S; 14 hot meals total) the amount of fuel is determined by using the following guidelines:

Expeditionary field kitchen

- One per 750 personnel.
- 750 personnel divided by 750 personnel per EFK = 1 EFK.
- 1 EFK x 90 minutes of fuel consumption per EFK per meal = 90 minutes.
- 1.5 hours per meal x 14 meals = 21 hours.
- 5 gallons of fuel will burn continuously in the EFK for approximately 1 hour.

Note: Actual fuel usage is dependent on the amount of equipment operating at the same time. Calculations are based off of averages needed to support an estimated 90 minutes per 750 personnel.

- 5 gallons of fuel per 1-hour period x 21 hours of operational time = 105 gallons.
- 105 gallons of fuel will support 21 hours of operational time.

Note: Additional fuel requirements depend on the quantity and type of generators used; for detailed information coordinate with bulk fuel and utilities.

Enhanced tray ration heating system

- One per 350 personnel.
- 750 personnel divided by 350 personnel per E-TRHS = 2.14 E-TRHS. 2.14 E-TRHS x 90 minutes of fuel consumption per E-TRHS per meal = 193 minutes.
- 193 minutes divided by 60 minutes per hour = 3.2 hours.
- 3.2 hours per meal x 14 meals = 44.8 hours.
- 5 gallons of fuel will burn continuously in the E-TRHS for approximately 1.75

Note: Actual fuel usage is dependent on the amount of equipment operating at the same time. Calculations are based off of averages needed to support the estimated 90 minutes per 350 servings and is based on using multiple feeding sites.

- 44.8 hours divided by 1.75 hours = 25.6 1.75-hour periods.
- 5 gallons of fuel per 1.75 hour period x 25.6 hours of operational time = 128 gallons.
- 128 gallons of fuel will support 44.8 hours of operational time.

Note: Additional fuel requirements depend on the quantity and type of generators used and the usage rate for the SFRS; for detailed information, coordinate with bulk fuel and utilities.

Tray ration heating system

- One per 250 personnel.
- 750 personnel divided by 250 personnel per TRHS = 3 TRHS.
- 3 TRHS x 90 minutes of fuel consumption per TRHS per meal = 270 minutes.

Note: The estimated 90 minutes per 250 servings is based on using multiple feeding sites.

- 270 minutes divided by 60 minutes per hour = 4.5 hours.
- 4.5 hours per meal x 14 meals = 63 hours.
- 5 gallons of fuel will burn continuously for approximately 10 hours.
- 63 hours divided by 10 hours = 6.3 10-hour periods.
- 5 gallons of fuel per 10-hour period x 6.3 10-hour periods = 31.5 gallons.
- 31.5 gallons of fuel will support 63 hours of continuous burning.

Note: The TRHS will automatically shut off and turn on when the switch is placed on automatic, allowing for more than 10 hours of use.

Freezing points for the most commonly used fuel

- Diesel (DF-2) freeze point less than or equal to 30 °F.
- F-24 freeze point less than or equal to -40 °F.
- JP-5 freeze point less than or equal to -45 °F.
- JP-8 freeze point less than or equal to -47 °F

APPENDIX G
WATER REQUIREMENTS FOR TEMPERATE, TROPICAL, ARID, AND ARCTIC ZONES

Temperate Zones	Daily Gallons-Per-Marine Requirements	
	Sustaining	Minimum
Company		
Drinking	1.5	1.5
Personal hygiene	1.7	0.3
Field feeding	0.3	0.8
Subtotal	3.5	2.6
+10% Waste	0.4	0.3
Total	3.9	2.9
Battalion		
Drinking	1.5	1.5
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Subtotal	6.0	3.3
+10% Waste	0.6	0.3
Total	6.6	3.6
MEB		
Drinking	1.5	1.5
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Division-level medical treatment	0.4	0.4
Subtotal	6.4	3.7
+10% Waste	0.6	0.4
Total	7.0	4.1
MEF		
Drinking	1.5	1.5
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Division-level medical treatment	0.4	0.4
Hospital-level medical treatment	0.7	0.7
Subtotal	7.1	4.4
+10% Waste	0.7	0.4
Total	7.8	4.8

Tropical Zones	Daily Gallons-Per-Marine Requirements	
	Sustaining	Minimum
Company		
Drinking	3.0	3.0
Personal hygiene	1.7	0.3
Field feeding	0.3	0.8
Heat casualty treatment	0.2	0.2
Subtotal	5.2	4.3
+10% Waste	0.5	0.4
Total	5.7	4.7
Battalion		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Subtotal	7.7	5.0
+10% Waste	0.8	0.5
Total	8.5	5.5
MEB		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Division-level medical treatment	0.4	0.4
Subtotal	8.1	5.4
+10% Waste	0.8	0.5
Total	8.9	5.9
MEF		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Division-level medical treatment	0.4	0.4
Hospital-level medical treatment	0.9	0.9
Subtotal	9.0	6.3
+10% Waste	0.9	0.6
Total	9.9	6.9

Arid Zones	Daily Gallons-Per-Marine Requirements	
	Sustaining	Minimum
Company		
Drinking	3.0	3.0
Personal hygiene	1.7	0.3
Field feeding	0.3	0.8
Heat casualty treatment	0.2	0.2
Vehicle maintenance	0.2	0.2
Subtotal	5.4	4.5
+10% Waste	0.5	0.5
Total	5.9	5.0
Battalion		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Vehicle maintenance	0.2	0.2
Subtotal	7.9	5.2
+10% Waste	0.8	0.5
Total	8.7	5.7
MEB		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Vehicle maintenance	0.2	0.2
Division-level medical treatment	0.4	0.4
Centralized hygiene	1.8	0.0
Construction	0.5	0.0
Aircraft maintenance	0.2	0.2
Subtotal	10.8	5.8
+10% Waste	1.1	0.6
Total	11.9	6.4
MEF		
Drinking	3.0	3.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Heat casualty treatment	0.2	0.2
Vehicle maintenance	0.2	0.2
Division-level medical treatment	0.4	0.4
Hospital-level medical treatment	2.8	2.8
Centralized hygiene	1.8	0.0
Construction	1.5	0.0
Aircraft maintenance	0.2	0.2
Laundry	2.1	0.0
Subtotal	16.7	8.6
+10% Waste	1.7	0.9
Total	18.4	9.5

Arctic Zones	Daily Gallons-Per-Marine Requirements	
	Sustaining	Minimum
Company		
Drinking	2.0	2.0
Personal hygiene	1.7	0.3
Field feeding	0.3	0.8
Subtotal	4.0	3.1
+10% Waste	0.4	0.3
Total	4.4	3.4
Battalion		
Drinking	2.0	2.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Subtotal	6.5	3.8
+10% Waste	0.7	0.4
Total	7.2	4.2
MEB		
Drinking	2.0	2.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Division-level medical treatment	0.4	0.4
Subtotal	6.9	4.2
+10% Waste	0.7	0.4
Total	7.6	4.6
MEF		
Drinking	2.0	2.0
Personal hygiene	1.7	1.0
Field feeding	2.8	0.8
Division-level medical treatment	0.4	0.4
Hospital-level medical treatment	0.7	0.7
Subtotal	7.6	4.9
+10% Waste	0.8	0.5
Total	8.4	5.4

REFERENCES AND RELATED PUBLICATIONS

Federal Issuances

United States Code, Title 10, *Armed Forces*

Department of Defense Issuances

Department of Defense Regulation (DODR)
4140.1-R DoD Supply Chain Materiel Management Procedures

Department of Defense Directive (DODD)
6400.04E DOD Veterinary Public and Animal Health Services

Military-Standard (MIL-STD-)
1366 Interface Standard for Transportability Criteria

Military-Handbook (MIL-HDBK-)
1791 Designing for Internal Aerial Delivery in Fixed Wing Aircraft

Bureau of Medicine and Surgery (NAVMED) Publications

P-5010-1 Tri-Service Food Code
P-5010-9 Manual of Preventive Medicine, Chapter 9 – Preventive Medicine for Ground Forces

Navy/Marine Corps Departmental Publications (NAVMCs)

2907 Prepositioning Objective for Maritime Prepositioning Force and Marine Corps Prepositioning Program-Norway
3500.35 Food Service Training and Readiness Manual
565-1 Man-Day Fed Report
10789 Meal Verification Record
10298 Cash Meal Payment Sheet

Army Publications

Army Techniques Publication (ATP)
4-41 Army Field Feeding and Class I Operations

United States Army Public Health Command (USAPHC) Technical Guide
248 Guide for Deployed Preventive Medicine Personnel on Health Risk Management

United States Army Public Health Command (USAPHC) Circular
40-1 Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement

Marine Corps Publications

Marine Corps Bulletins (MCBuls)

3501	Maritime Prepositioning Force (MPF) Force Lists (F/L)
10110	Meal Rates and Reimbursement Policy

Marine Corps Orders (MCOs)

10110.14	Marine Corps Food Service and Subsistence Program
1000.6	Assignment, Classification, and Travel Systems Manual
4400.39	War Reserve Materiel Policy
P10110.42	Armed Forces Recipe Service
P10110.43	Index of Recipes Armed Forces Recipe Service
4400.150	Consumer-Level Supply Policy
4450.14	Joint Service Manual (JSM) for Storage and Material Handling
4790.25	Ground Equipment Maintenance Program (GEMP)

Marine Corps Warfighting Publications (MCWPs)

3-17	Engineering Operations
4-11.8	Services in an Expeditionary Environment

Marine Corps Reference Publications (MCRPs)

3-17.7Q	Water Support Operations
4-11.1D	Field Hygiene and Sanitation Services
4-11G	Petroleum Operations
4-11.01	Waste Management for Deployed Forces

Technical Manuals (TMs)

11805A-OI/1	Expeditionary Field Kitchen
11609A-OI	Operator/Crew and Field Level Maintenance Manual for Small Field Refrigeration System
09211A-OR	Operation and Maintenance Manual for the Tray Ration Heating System
09211A-14&P	Operation Manual and Component List for the Enhanced Tray Ration Heating System (ETRHS); Supplement to Tray Ration Heating System (TRHS), Supplement 1
11574A	Operator/Crew and Field Level Maintenance Manual for Large Field Refrigeration System

Combat Center Order (CCO)

3500.14A	Marine Air Ground Task Force Training Command Integrated Training Exercise Order

GLOSSARY

SECTION I. ACRONYMS

ACE.....aviation combat element
AIS..... automated information system

CBRN.....chemical, biological, radiological, and nuclear
Cm.....centimeter(s)
CONUS.....continental United States
CPAC..... corrosion prevention and control

DA..... Department of the Army
DD form..... Department of Defense form
DLA.....Defense Logistics Agency
DOD.....Department of Defense
DOS.....days of supply

EDL .....equipment density list
EFK..... expeditionary field kitchen
E-TRHS.....enhanced-tray ration heating system

F .....Fahrenheit
FSO ..... food service officer
FSR ..... first strike ration
ft ..... foot/feet

G-3 .....operations staff section
G-4 .....assistant chief of staff, logistics
GCE..... ground combat element

HCP.....health and comfort pack
HDR ..... humanitarian daily ration
HNM ..... host nation messing
HNS..... host-nation support
HQMC.....Headquarters, United States Marine Corps
Hz.....hertz

in ..... inches
ISO ..... International Organization for Standardization

Kg.....kilogram(s)
kW.....kilowatt

lb ..... pound(s)
LCE ..... logistics combat element
LOGCAP ..... logistics civil augmentation program (Army)

MAGTF ..... Marine air-ground task force
MAGTFTC ..... Marine Air-Ground Task Force Training Command
MCAGCC ..... Marine Corps Air-Ground Combat Center
MARFORRES ..... Marine Forces Reserve
MCFFP ..... Marine Corps field feeding program
MCICOM ..... Marine Corps Installation Command
MCO ..... Marine Corps order
MCW ..... meal, cold weather
MEB ..... Marine expeditionary brigade
MEF ..... Marine expeditionary force
METT-T ..... mission, enemy, terrain and weather, troops and support available-time available
MEU ..... Marine expeditionary unit
MHE ..... materials handling equipment
MIL-STD ..... military standard
mm ..... millimeter(s)
MOS ..... military occupational specialty
MPF ..... maritime prepositioning force
MPMC ..... Military Personnel, Marine Corps
MPSRON ..... maritime prepositioning ships squadron
MRE ..... meal, ready to eat
MTVR ..... medium tactical vehicle replacement

NATO ..... North Atlantic Treaty Organization
NAVMC ..... Navy/Marine Corps departmental publication
NAVMED P ..... Bureau of Medicine and Surgery publication
NSN ..... .national stock number

O&MMC ..... operations and maintenance, Marine Corps (funding)
O&MMCR ..... operations and maintenance, Marine Corps, Reserve (funding)
OCONUS ..... outside the continental united states
OPLAN ..... operation plan
OPORD ..... operation order

PBA ..... performance-based agreement
P M B ..... powered multifuel burner

RPMC ..... reserve personnel, marine corps
RSFH ..... ration supplement, flameless heater

SFRS ..... small field refrigeration system
SIK ..... subsistence in kind
S-4 ..... logistics office

SL-3 ..... stock list-3
SMR ..... source, maintenance, and recoverability
SOP ..... standard operating procedure

TAMCN ..... table of authorized materiel control number
TM ..... technical manual
TRHS ..... tray ration heating system
TSF ..... Tri-Service Food Code

UDL ..... unit deployment list
UGR ..... unitized group ration
UGR-A ..... unitized group ration -A
UGR-E ..... unitized group ration-express
UGR-H&S ..... unitized group ration-heat and serve
UGR-M ..... unitized group ration-M
UHT ..... ultra-high temperature
US ..... United States
USAPHC ..... United States Army Public Health Command

VAC ..... volts, alternating, current

WRM ..... war reserve materiel

SECTION II. DEFINITIONS

contract feeding—Any feeding that is prepared by a contractor (inside and/or outside the continental United States) or host nation government outside the Service's mess hall, where individual meals are provided. (Proposed for inclusion in the next edition of MCRP 5-12C.)

direct support—A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance. (JP 1-02)

field feeding—Feeding of packaged operational rations or unitized ration while deployed on exercises/operations in an expeditionary/austere environment. (Proposed for inclusion in the next edition of MCRP 5-12C.)

field mess—A galley operated in the field using field food service equipment. (Proposed for inclusion in the next edition of MCRP 5-12C.)

field support—Feeding in which the contractor or host nation procures only bulk food from an approved supply source for the Military Services to set up a field mess and prepare meals. (Proposed for inclusion in the next edition of MCRP 5-12C.)

food service host-nation support—Selected subsistence items procured from the local economy and prepared by Marine Corps food service personnel. (Proposed for inclusion in the next edition of MCRP 5-12C.)

food service specialist—An enlisted Marine in grades private through master gunnery sergeant who possesses military occupational specialty 3381. (Proposed for inclusion in the next edition of MCRP 5-12C.)

food service officer—A limited duty officer, chief warrant officer, or warrant officer who possesses military occupational specialty 3302. Also called **FSO**. (Proposed for inclusion in the next edition of MCRP 5-12C.)

general support—That support which is given to the supported force as a whole and not to any particular subdivision thereof. (JP 1-02, part 1 of a 2-part definition)

health and comfort pack—A Service contingency item designed to provide necessary health and comfort items for military personnel. Also called **HCP**. (Proposed for inclusion in the next edition of MCRP 5-12C.)

host nation feeding—Feeding that consists of one or more of the following types of support: host-nation support, host nation messing, contract feeding, and field support. (Proposed for inclusion in the next edition of MCRP 5-12C.)

host nation messing—Bulk food purchased for US military organizations (as opposed to individual Service members), with the host nation or contractor providing the food and its preparation. Host nation messing differs from food service host-nation support in that

the Marines actually receive full messing support in a foreign military or civilian dining establishment. Also called **HNM**. (Proposed for inclusion in the next edition of MCRP 5-12C.)

mess attendant—An enlisted Marine outside the 3300 occupational field who is detailed to the food service platoon to assist in the serving of food and cleanup. (Proposed for inclusion in the next edition of MCRP 5-12C.)

packaged operational ration—Rations composed of semi-perishable items specially packaged, precooked, or prepared for personnel conducting combat operations in fighting positions or widely dispersed at remote sites. The packaged operational ration is designed for individual or group feeding when the tactical situation will not permit a field mess to be established. Also called **POR**. (Proposed for inclusion in the next edition of MCRP 5-12C.)

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