AN EVALUATION OF THE UNITED STATES MARINE CORPS
ENLISTED DINING FACILITY. (U) NAVAL POSTGRADUATE SCHOOL
MONTEREY CA L S LUSCZYNISKI ET AL. DEC 83

UNCLASSIFIED
THESIS

AN EVALUATION OF THE UNITED STATES MARINE CORPS ENLISTED DINING FACILITY MANAGEMENT AND ACCOUNTING SYSTEM AT THE MARINE CORPS MOUNTAIN WARFARE TRAINING CENTER, BRIDGEPORT, CALIFORNIA

by
Leon S. Lusczynski
and
Bernard A. Siwicki

December 1983

Thesis Advisors:
D. C. Boger
J. F. Mullane

Approved for public release; distribution unlimited
This thesis is an evaluation of the Marine Corps Dining Facility at the Mountain Warfare Training Center, Bridgeport, California. The objective is to determine why the dining facility has constantly exceeded the authorized inventory level and the Basic Daily Food Allowance. A management survey was conducted into the problem areas. A list of alternative solutions and recommendations are provided.
An Evaluation of the United States Marine Corps Enlisted Dining Facility Management and Accounting System at the Marine Corps Mountain Warfare Training Center, Bridgeport, California

by

Leon S. Lusczynski
Major, United States Marine Corps
B.A., Eastern Connecticut State College, 1969

and

Bernard A. Siwicki
Captain, United States Marine Corps
B.S., Ferris State College, 1975

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December, 1983

Authors:

Leon S. Lusczynski
Bernard A. Siwicki

Approved by:

Joseph E. Mulhern
Co-Advisor

Dan C. Bogen
Co-Advisor

Richard L. Bates
Chairman, Department of Administrative Science

K. T. Marshall
Dean of Information and Policy Sciences
This thesis is an evaluation of the Marine Corps Dining Facility at the Mountain Warfare Training Center, Bridgeport, California. The objective is to determine why the dining facility has constantly exceeded the authorized inventory level and the Basic Daily Food Allowance. A management survey was conducted into the problem areas. A list of alternative solutions and recommendations are provided.
# TABLE OF CONTENTS

## I. INTRODUCTION

- OVERVIEW OF THE DOD FOOD SERVICE PROGRAM
  - Background of Problem
  - Current Problems

## II. CASE REVIEW CRITERIA

- SELECTION OF STANDARDS
  - Basic Principles of Organization
  - Approach to the Case
  - Techniques Employed

## III. PRESENTATION OF DATA

- ENVIRONMENT
  - Location
  - Climate
  - Communication
  - Dining Facility
B. DINING FACILITY MANAGEMENT

1. Basic Daily Food Allowance
2. Actual Cost
3. Inventories
4. Leftovers

IV. ANALYSIS OF RESEARCH DATA

A. COMMUNICATION

1. Hardware
2. Coordination/Planning

B. INVENTORY/SUBSISTENCE REQUISITIONING

1. Auxiliary Direct Support Stock Control
2. 100 Percent Inventory Level
3. Interservice Supports Agreements
4. Field Dining Facility Training

V. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION
B. RECOMMENDATIONS

LIST OF REFERENCES

INITIAL DISTRIBUTION LIST
I. INTRODUCTION

This thesis, presented as a case study, will examine one remote dining facility to determine whether its successful operation is possible considering current regulations and directives. This chapter will present a general overview of the existing subsistence management program within the Department of Defense (DoD) and the United States Marine Corps. A problem statement and assumptions are presented to set the stage for case development.

A. OVERVIEW OF THE DOD FOOD SERVICE PROGRAM

In 1794, the Congress passed the first Navy Ration Law which provided a typical day's ration of 1 lb. of hard bread, 1.5 lbs. of salt beef, .5 pint of rice and included a half pint of distilled spirits or one quart of beer. Through the years the law has changed substantially and the current nutritionally balanced meal provided for Marines and Sailors is a result of the Navy Ration Law of 1933. To implement this entitlement, the DoD provides each dining facility manager a dollar credit to be used to buy the necessary subsistence items based on the number of meals served.

1. Background of Program

Public law entitles each enlisted person one ration of food per day. Although not specifically defined by law,
one ration is generally considered to consist of nutritionally adequate portions of food served 3 times a day. To provide this entitlement, the military departments operate approximately 2,400 dining facilities worldwide (about 1,700 ashore and 700 on ships). Over $700 million of food is consumed annually in the dining facilities. About 750,000 enlisted personnel are authorized to receive their rations in-kind (to eat free of charge in the dining facilities) and 980,000 personnel receive a monetary allowance for food in lieu of rations in-kind. Persons receiving a monetary allowance for food may eat in the dining facilities but are required to pay a predetermined charge for their meals.

2. Current Problems

During the past several years, audit and inspection reports have disclosed repeated problems related to accountability and control of food inventories and access to rations in-kind [Ref. 1: pp. 1]. The House of Representatives, Committee on Appropriations, in their report on the DoD Appropriation Bill, recommended a $15 million reduction in the FY 1980 budget relating to food. The Committee noted, that while it supported funding the request to provide high quality, nutritious subsistence, it "will not, however, tolerate continued mismanagement in this area." A need for a thorough overhaul of the management controls was noted by the Committee [Ref. 2: pp. 179]. Additionally, military departments' audit and inspection reports issued between 1976
and 1979 have disclosed significant internal control weaknesses in the food service program.

B. SUBSISTENCE MANAGEMENT

1. Scope of Marine Corps Subsistence Management

Subsistence Management encompasses both the Food Service and Subsistence Management Programs within the Marine Corps. The administration of these programs is accomplished by requiring compliance with specific manuals and directives issued by the Commandant of the Marine Corps.

2. Marine Corps Programs Applicability

The provisions of the Food Service manuals and directives apply to all commands having responsibility for operating dining facilities under the subsistence in-kind program. This also includes furnishing meals to authorized military and civilian personnel on a reimbursable basis when operating costs are financed from appropriated funds [Ref. 3: pp. 3]. Appropriated fund facilities are those operated with funds appropriated by Congress for the expressed purpose of subsisting enlisted personnel.

C. METHODOLOGY

1. Problem

For the purposes of analysis and exposition, the U.S. Marine Corps dining facility located at the Mountain Warfare Training Center (MWTC), Bridgeport, California, has been
selected. This paper then, is an appraisal of the management effectiveness of key areas of that dining facility.

The reason for selecting the dining facility at the MWTC is for its remote location from any large DoD facility. Additionally, a recent inspection (22-23 June 1983), conducted by representatives of the Inspector General of the Marine Corps, found that food services were below average due to improper administration and management of the dining facility [Ref. 4: pp. 1-10]. It is the intention of the authors to evaluate the factors that influence the administration and management of the facility and make appropriate recommendations.

2. Assumptions

In order for this thesis to be of benefit and the recommendations contained herein to be valid, a basic assumption must be made. That assumption is: the existing policies, regulations and manuals, as written, are current in the eyes of the personnel charged with the administration and management of the organization located at the MWTC.
II. CASE REVIEW CRITERIA

A. SELECTION OF STANDARDS

A thorough search of available literature on dining facility management was conducted to obtain standards with which to compare the operation of the Marine Corps Mountain Warfare Training Center (MWTC) Dining Facility at Bridgeport, CA. The search for standards of performance was also extended to the Marine Corps experts in the field, who in some way affected or were interested in the operations at the MWTC.

The authors decided that sole reliance on Marine Corps Standards would seriously limit the depth and scope of this analysis. Accordingly, Marine Corps standards were supplemented, where necessary, by introducing standard management criteria. The basic principles of organization suggested by Pfiffner and Lane are among the criteria selected [Ref. 5].

1. Basic Principles of Organization [Ref. 5]

a) In developing these principles of organization, Pfiffner and Lane prescribe a hierarchy, wherein lines of authority and responsibility run upward and downward through the several levels, with a broad base at the bottom and a single head at the top. This is especially applicable to the Marine Corps, in that each part of an organization that has the responsibility to accomplish a task, (e.g. comply with directives and regulations of higher authority) must also
have authority to accomplish the task. Pfiffner and Lane go on to state that authority and responsibility for action should be decentralized to the unit(s) and individuals responsible for actual performance of the task(s) to the greatest extent possible, "so long as such decentralization does not hamper necessary control over policy on the standardization of procedures." [Ref. 5]

b) Consistent methods of organizational structure should be applied at each level of the organization. This will be of particular importance in this case where the Marine Corps is combining subsets of two larger organizations at a remote location.

c) Each and every unit or person in the organization should be answerable ultimately to the officer at the apex of the hierarchy. This study analyzes whether those units responsible for the problem presented in chapter III are ultimately answerable for their compliance or noncompliance with existing regulations and policies.

d) Channels of command are not violated by staff units. The flow of information between command and staff are critically evaluated in this study. The objective will be to determine whether this principle of organization is complied with both internally and externally in relation to the operation of the MWTC.

By utilizing the existing DoD and Marine Corps standards and the principles of organization just enumerated, the
scope of the study was broadened. Essential facilities and services are examined within the framework criteria prescribed by military standards as well as generally accepted principles of organization. Depth was added to the study by the methodology of organizational analysis suggested by Pfiffner and Lane.

2. Approach To The Case

The study was accomplished along the lines of a management survey and analysis with particular attention to the existing systems that encompass subsistence support at the MWTC.

a) A study was made of the organization, its internal component relationships and any external influences affecting dining facility management at the MWTC.

b) A review was conducted of existing policies and practices, both internally and externally imposed.

c) A comparison of existing management practices was accomplished to determine if they conformed to the requirements of Marine Corps regulations and the Department of Defense directives.

d) A study was conducted of existing systems and procedures to uncover possible defects or irregularities with a view toward recommending more efficient methods of accomplishing given objectives.

e) An evaluation of existing operations was made to ascertain if more effective controls and greater efficiency can be attained.
f) A study of the general personnel requirements and their utilization in the areas under appraisal was conducted.

3. **Techniques employed**

   a) **Personal interviews**: Interviews were conducted with key individuals concerned with effective subsistence management at the MWTC. (i.e. Food Service Officer, Headquarters Marine Corps; Food Service Officer, Camp Pendleton, CA, Commanding Officer, Operations Officer, Logistics Officer, Supply Officer, Dining Facility Manager MWTC).

   b) **Organizational charts**: Organizational structure was analyzed to determine how the MWTC fits into the total base food service system at M. C. Base Camp Pendleton.

   c) **Observation**: A visit to the MWTC was made to conduct personal interviews and observe as much of the base operation as possible within a three day period.
III. PRESENTATION OF DATA

In this chapter, various factors impacting on the food service functions at the Mountain Warfare Training Center (MWTC) are presented. Relevant data concerning those factors are analyzed. In-depth analysis of the dining facility, including the building, subsistence items, requisitioning procedures, and users of the subsistence items are presented.

A. ENVIRONMENT

1. Location

Marine Corps Mountain Warfare Training Center (MWTC), Bridgeport, CA, is located in central California, close to the western border of Nevada in the Sierra Nevada mountain range on the northern side of Yosemite National Forest. Approximately 175 miles east of San Francisco, CA, and 60 miles south of Carson City, NV, it is 4 miles west of highway junction 108 and 395, and about 21 miles northwest of the nearest town, Bridgeport, CA. The population of the town of Bridgeport is approximately 300. The average number of permanent personnel at the MWTC is 169.

The MWTC is accessible by three main roads; however, the road from Modesto, CA (Rt. 108) is closed during the winter months. Training units arriving from Camp Pendleton, CA and Twentynine Palms, CA normally arrive via Bishop, CA (Rt. 395).
Training units arriving by air utilize Naval Air Station, Fallon, NV, which is approximately 120 miles northeast of the MWTC. The MWTC provides military buses from its motor pool for the trip to the MWTC.

2. Climate

In the Sierra Nevada Mountain Range, the year is divided into two seasons: a well defined wet season during the winter and a dry season in the summer. During the winter, snow in the higher portions of the Sierra Nevada averages about 450 inches per year with a recorded high snowfall of 884 inches. The Sierra Nevada, however, is not perpetually covered with snow. Most of the snow disappears in May, June or July and usually does not reappear again until October. Thunderstorms, accompanied by lightning but with little precipitation, occur during the summer. Generally, the winters are moderately cold and very wet, and the summers are moderately warm and very dry. Sunshine is abundant in the summer, but much cloudiness prevails in the winter.

Temperature at Yosemite Valley averages 34 degrees in January and around 70 degrees in July. Temperatures below zero occur more or less regularly above the 7000 foot elevation in the central portion of the Sierra Nevada. The base camp at MWTC is located at approximately the 6000 foot level [Ref. 6: pp. 196-201].

3. Communication

Communication to and from the MWTC is a complicated, primitive procedure due to remoteness. Telephone calls must
be routed through the Marine Corps Base, Camp Pendleton, CA to the operator at the MWTC and then to the specific party. These procedures are reversed for outgoing calls. Military messages to the MWTC are received by the Naval Air Station, Fallon, NV, which is the closest Navy or Marine Corps activity. Routine messages are delivered twice weekly by a scheduled courier run from the MWTC. Regular mail is picked up at the Bridgeport, CA post office daily, Monday through Friday. The Marine Corps is aware of the communication problem. Improvements are included in the ongoing 30 million dollar construction program, which include a new dining facility, subsistence storage area, BEQ/BOQ's, dispensary, and modern communication capabilities.

4. **Dining Facility**

The dining facility consists of two adjoining corrugated metal "Butler" building constructed in 1950. One building houses the food preparation area and the serving area. The other houses the dining area and the scullery (dish washing) area. The dining area is segregated into two areas, one for the permanent personnel and the other for personnel undergoing training at MWTC. Normally, training units do not use the dining facility, as they bring their organic field mess equipment, thereby affording their food service personnel experience in field food preparation. Units which arrive by air would normally not bring their field
kitchen equipment due to the transportation cost involved. In the event that units do not bring their equipment, their personnel will utilize the MWTC dining facility.

B. DINING FACILITY MANAGEMENT

In accordance with the Marine Corps Food Service Program, the utmost in technical direction and financial management is required of all dining facilities to ensure a wholesome, well balanced diet within the limits prescribed by law. According to Marine Corps Directives, the dining facility will be designed to assure a pleasant environment. The decor should be consistent with that found in a first class commercial cafeteria dining establishment. A menu planning board will be established at each activity that operates a dining facility. All the food shall be processed, prepared, and cooked in accordance with MCO P10110.16. These prescribed methods assure consistency in preparation of high quality food items within the monetary allowance (Basic Daily Food Allowance), providing for uniformity of portions and a wholesome product [Ref. 3: pp. 3-5].

1. Basic Daily Food Allowance

"The Basic Daily Food Allowance (BDFA) is a prescribed quantity of food, defined by components and monetary value, which is required to provide a nutritionally adequate diet for one individual for one day". It provides no more than three meals daily [Ref. 3: pp. 1-3].
The Basic Daily Food Allowance (BDFA) is the monetary value of 53 specific subsistence items. Headquarters Marine Corps, Washington, DC, monthly computes the cost for 51 of the 53 subsistence items. The results of this partial computation are furnished to all Marine Corps activities in a letter format or by message prior to the first day of the month for which the BDFA will become effective. The remaining two items, bread and milk, are locally procured items. The monetary value of bread and milk will be computed by the local activities and added to the partial value computed by Headquarters Marine Corps. Once established, these values will not change during the month unless there is an error or a price correction. Headquarters Marine Corps allocates 37.5 pounds of bread and 200 pints of milk per 100 servings. To the value just computed, an additional 2 percent for condiments and accessory food is added. This new total is the value of the standard Basic Daily Food Allowance for one individual at the specific location. This BDFA is the figure the dining facility manager strives to attain in operating his dining facility. An analysis of the first five months of 1983 has shown actual cost to be 31 percent in excess of the MWTC BDFA. This excessive cost to feed affects only the MWTC dining facility and not the training unit personnel.

2. Actual Cost

The BDFA is essentially a budgeting and funding value for the dining facility managers' planning and control purposes.
Computing the actual cost to feed one individual for one day is a tedious computational process involving consumption and inventories as well as the count of the actual numbers of persons fed.

a. Consumption

The total subsistence consumed for a reporting period (one month) is a basic accounting inventory problem. Total subsistence consumed is the beginning inventory plus subsistence items purchased during the reporting period less the ending inventory:

\[ \text{CONSUMPTION} = \text{BEG INV} + \text{PURCHASES} - \text{ENDING INVENTORY}. \]

It is possible, but not probable, for the value of subsistence consumed to be negative if the dining facility turned in excess inventory for credit greater than the amount purchased during the period.

b. Man-Days Fed

The computation of man-days fed is less straightforward but is completely documented by the records of personnel actually fed during the month. Thus, the Meal Signature Records and the Paid Supernumerary Ration Register for the period are vital records in the control process.

Since each meal has been allocated a different percentage of the BDFA, the number of personnel fed at each meal must be totalled separately. Marine Corps regulation [Ref. 3] prescribes 20 percent of the BDFA for breakfast and 40 percent to both lunch and dinner. On weekends and holidays
whereby two meals are served, the ratio is 45 percent for the morning or early meal and 55 percent for the evening or late meal. Thus, the computation of man-days fed is:

Regular Days

<table>
<thead>
<tr>
<th>Meal Type</th>
<th>Percentage</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Breakfasts</td>
<td>0.2</td>
<td>=</td>
</tr>
<tr>
<td>Total Lunches</td>
<td>0.4</td>
<td>=</td>
</tr>
<tr>
<td>Total Dinners</td>
<td>0.4</td>
<td>=</td>
</tr>
</tbody>
</table>

Non-weekdays

<table>
<thead>
<tr>
<th>Meal Type</th>
<th>Percentage</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Meal</td>
<td>0.45</td>
<td>=</td>
</tr>
<tr>
<td>Late Meal</td>
<td>0.55</td>
<td>=</td>
</tr>
</tbody>
</table>

Total Man-Days Fed

c. Actual Daily Cost

By dividing the value of the subsistence actually consumed from a. above, by the total man-days fed, the dining facility manager computes the actual cost to feed an individual per day for the month. The goal is for the actual cost per man per day to equal the BDFA. If the actual cost differs from the BDFA by 5 percent in either direction, the unit commanding officer, who has operational control of the dining facility, will report the variance to the activity commander. The report will explain the variances as well as indicate what corrective actions are being taken to prevent the variances from recurring.

3. Inventories

In addition to the financial constraints imposed by the BDFA, the dining facility manager is restricted in the value of subsistence items held in inventory.
a. Inventory Restriction

Marine Corps directives restrict the monetary value of the monthly ending inventory to no more than 20 percent of what should be the monthly "standard" consumption figure [Ref. 3]. This value is 20 percent of the product of the actual man-days fed for the month and the BDFA (not the actual cost):

ENDING INVENTORY GOAL: \(0.20 \times (\text{ACTUAL MAN-DAYS FED}) \times (\text{BDFA})\).

Prices used in valuing the inventory are those listed in the Federal Supply Catalog Price List C8900-PL for standard subsistence items. Locally procured items are valued on a FIFO basis, although regulations are not clear on this point.

b. Other Factors

(1) Order/Ship Time. One of the most critical factors in a remote installation is the long order/shipping lead time. The 20 percent inventory value is a standard to be used in dining facilities co-located with their supply source. The average order/ship time for the MWTC is 16 days [Ref. 7]. Problems created by the remoteness, as indicated in the section on environment, may cause the figures to be greater. Additional complications could arise due to the out of stock condition at the issue point. In the case of the MWTC, the issue point is the MCB, Camp Pendleton, CA.
Subsistence requisitioning procedures will be identified later in this chapter.

(2) **Personnel Loading.** Since the inventory level is predicated both on the BDFA and the actual man-days fed, the base personnel loading figure becomes critical at the MWTC. The mission of the MWTC includes support of the units aboard for training, and thus, the personnel strengths of those units is a key factor in computing inventory levels. The problem associated with computing the personnel strength of training units will be identified later in this chapter.

c. **Unit of Issue**

Most Marine Corps dining facilities support 400 to 1000 personnel [Ref. 8]. Quite often, several dining facilities are located at one major installation, close to the source of supply. In these instances, unit of issue is not a factor. However, in a small and remote installation such as the MWTC, unit of issue is a significant factor. Several examples are identified in Table 3-1 for consideration.

d. **Menu Planning**

Menu planning at Marine Corps dining facilities is performed by the activity Food Service office in conjunction with a menu planning board. In the instance of the MWTC, the menu planning is performed by MCB Camp Pendleton as described later in this chapter. The MWTC normally utilizes the 42 day Master Menu prescribed by Camp Pendleton. For field training units, a 14 day field feeding menu, also
TABLE 3-1
Normal Meal Usage/Unit of Issue

MWTC

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity Used Per Meal</th>
<th>Smallest Unit Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Dogs</td>
<td>2 Lbs</td>
<td>40 Lbs</td>
</tr>
<tr>
<td>Liver</td>
<td>8 Lbs</td>
<td>40 Lbs</td>
</tr>
<tr>
<td>Bologna</td>
<td>6 Lbs for 10 day period</td>
<td>55-60 Lbs</td>
</tr>
<tr>
<td>Lima Beans</td>
<td>5 Cans</td>
<td>30 Cans Per Box</td>
</tr>
<tr>
<td>Okra</td>
<td>7 Cans</td>
<td>36 Cans Per Box</td>
</tr>
<tr>
<td>Rice</td>
<td>10 Lbs</td>
<td>60 Lbs</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>3 Can</td>
<td>24 Cans Per Box</td>
</tr>
</tbody>
</table>

prescribed by Camp Pendleton, is utilized. The meals prescribed in these menus will dictate what subsistence items are held in the inventory.

(1) Forty-Two Day Master Menu. The Camp Pendleton Master Menu is developed by representatives of all the major commands that come under the jurisdiction of the Commanding General, Marine Corps Base, Camp Pendleton, CA. The representatives from each command consist of the dining facility officer, dining facility manager and enlisted personnel who subsist in the dining facilities. There are three voting members on the menu planning board: the Marine Corps Base Food Service Officer, the Subsistence Officer, who purchases the subsistence items and the dietitian, who ensures that the meals are nutritionally sound.
In the master menu there are multiple entrees which consist of a high cost and low cost items. For example, on day 6 of the master menu, the two lunch entrees are Beef Ball Stroganoff (low cost) and Fried Ham Steak (high cost); with the two dinner entrees being Newport Fried Chicken (low cost) and BBQ Spareribs (high cost). On day 25 of the master menu, the two lunch entrees are Pepper Steak (high cost) and Chili Con Carne (low cost) and the two dinner entrees are Breaded Port Chops (high cost) and New England Boiled Dinner (low cost) [Ref. 9: pp. 12 + 50].

However, commands that serve less than 150 man-days per day (MWTC) are exempt from the multiple entree policy and are authorized to deviate from the master menu. The dining facility manager must use good judgment in selecting the main entree. In the selection of the main entree, the dining facility manager has to stay within the limits of the Basic Daily Food Allowance at the same time scheduling the frequency of these meals within the 42 day cycle. Use of the 42-day menu allows for a wider variety of subsistence items for the permanent personnel stationed at the MWTC. However, this requires a broader range of subsistence items in inventory which, considering the unit of issue problem, makes the 20 percent inventory goal impossible to attain. The MWTC feeds, on the average, 50 servings per meal. The actual number of servings varies with training schedule.

(2) 14 Day Field Feeding Menu. Units 24
planning/conducting training at the MWTC are required to use the Camp Pendleton Field Feeding Menu [Ref. 10: pp. 1]. The field menu, published by the Food Service Officer, Camp Pendleton, CA, is a 14 day cyclic menu. It is based on the food preference of the troops, the availability of items in the supply system and the limited amount of labor, equipment and facilities available for food preparation and meal service in a field environment. Seasonal menu alternatives and substitutions for adapting to the limitations of equipment and facilities have been programmed into the menu. All menu items and/or alternatives contained in the menu can be prepared with field equipment. It is noted here that the MWTC dining facility provides storage for subsistence items used by the training unit field mess. The storage facility is large enough to accommodate a 30 day subsistence inventory for a battalion size training unit.

e. MWTC Inventories

Due to the long order/ship time and the requirement to provide subsistence items to training units, the Food Service Officer at Camp Pendleton has permitted the MWTC dining facility to maintain an inventory level of 30 percent instead of 20 percent prescribed in the Marine Corps directives. However, for the first five months of 1983, the MWTC has shown an average monthly inventory of 204 percent [Ref. 11].
c. Subsistence Requisitioning

The mission of the MWTC requires the MWTC dining facility to effect subsistence requisitioning for training unit personnel as well as its own organic, permanent personnel. To order subsistence items from Camp Pendleton, the dining facility manager must submit orders on a schedule directed by the Camp Pendleton Food Service Officer. Basically, the schedule permits five requisitions through a two month period. Several problems, inherent in the function of the MWTC, affect the smooth operation of these procedures. Specifically, these problems are, first, determining the number of personnel requiring subsistence, second, long order ship time, and third, inexperience of training unit field mess managers.

(1) Determining the Number of Personnel Requiring Subsistence. The MWTC dining facility manager can determine fairly easily the number of permanent personnel requiring subsistence. However, to support the training units, the dining facility manager requires a personnel strength report from the training unit. The MWTC requires units to provide this information 45 days in advance of a unit's arrival. During interviews with the MWTC Logistics officer and the MWTC Operations officer, it was disclosed that the accuracy of these reports is often not reliable. Frequently, personnel figures change right up to the date of the unit's arrival. Lack of proper coordination between staff
sections of the MWTC compounded the problem of determining accurate training personnel strengths [Ref. 12].

The training unit field subsistence manager, with the aid of the MWTC dining facility manager and without automated support, combines the unit personnel strength with the 14-day field menu to compute subsistence requirements to support his unit. This coordination is normally done over the telephone, by naval message, or by utilizing the regular U. S. Mail service.

2. Long Order/Ship Time. Current delivery schedules to the MWTC from the Camp Pendleton supply point result in a 16 day order/ship time. It would be ideal for training units to arrive one day after a resupply, thereby reducing inventory maintenance. However, training unit arrival and resupply dates are currently independent functions. At the worst case, the dining facility manager would need to requisition training units' subsistence upwards of 3 to 4 weeks prior to arrival. If training units' early personnel estimates were reliable, this would not be a significant factor. But combining the unreliability of personnel estimates with the long order/ship time, a significant effect on the inventory levels could result.

3. Training Unit Field Mess Managers. This area relates to the field mess manager of the training unit. The majority of dining facilities aboard large Marine Corps installations, that support Marine Infantry Battalions,
have been consolidated to support two or more battalions. Therefore, even though an infantry battalion may show on its Table of Organization (T/O) the personnel necessary to operate a dining facility, they are actually working in a consolidated facility under the control of a regimental food service officer [Ref. 8]. When a battalion deploys for training, cooks, bakers, and a mess manager are added back to the battalion T/O for the exercise. This could lead to a situation where training units are provided with field mess managers who do not possess knowledge or experience in field mess management. The individual chosen as a field mess manager, for a particular battalion training cycle at the MWTC, could have been a chief cook or baking specialist in a consolidated regimental dining facility. To compound this problem, the individual is usually not included in the initial planning that takes place 45 days prior to the training units arrival. He, therefore, is not part of the coordination that should be taking place between the training unit staff sections and the MWTC staff sections (operations and logistics). One must remember that, in order to meet usage requirements, subsistence items must be ordered at least 16 days prior to a unit's arrival. The result is the development of a subsistence support package (menus planned and food ordered) that is put together with inaccurate planning figures.
4. **Leftovers**

Leftovers affect the 42-day master menu in the same way as they affect the 14-day field feeding menu. Leftovers are viewed by the Marine Corps as being divided into two categories. The first are leftovers that can be preserved and served again and the second are those leftovers that must be consumed on the day of preparation. Only the latter is made available for "seconds" once everyone has been served. Once either type of leftover reaches a prescribed time limit after preparation, it must be disposed of. All disposals contribute to an increased cost to feed.
IV. ANALYSIS OF RESEARCH DATA

In this chapter, the data will be examined and interpreted to develop the causal factors of each problem area. Additionally, alternative courses of action will be introduced as possible remedies.

A. COMMUNICATION

1. Hardware

Communications within an organization and between interacting organizations is the key to successfully completing a common goal. In the context of this case study, the organizations involved are the MWTC and a visiting unit (usually of battalion size, 600-800 personnel). The common goal is a successful training period (usually 30 days) in which the visiting organization learns to survive and operate in a mountainous environment. The ability to communicate requires the physical capability to pass information and requirements over distances in a timely fashion and the capability of managers within an organization to talk to each other to collectively complete a required mission.

The limited physical capability to communicate, whether by naval message or telephone in a timely fashion was presented in Chapter III. Plans to convert this situation are contained in the current military construction budget and are ongoing.
at the present time. It is recommended that consideration be
given not only to modernizing the telephone service to the
MWTC but also constructing/installing the capability for the
MWTC to enter and utilize the world wide message service.
This will not only provide up-to-the minute coordination data
between the MWTC and units planning to utilize the MWTC but
also allow communication between deployable units in training
at the MWTC and the outside world.

2. Coordination/Planning

The primary mission of the MWTC is to provide train-
ing support/logistics support for U. S. Marine Corps units
and other DoD activities throughout the training year. Ob-
servations made by the authors at the MWTC proved that the
mission (i.e. providing nutritious food in a timely and
consistent manner) was being accomplished 100 percent of the
time. On the other hand, there are higher levels of authority
(Marine Corps Base, Camp Pendleton and Headquarters, Marine
Corps) that believe that there is a problem, i.e., the mission
is being accomplished, but not within the limitations set by
existing regulations. The question immediately then sur-
faces: Is the system, as it is operated by the MWTC, being
managed incorrectly or are the regulations as they are written
inapplicable to the unique situation that encompasses the MWTC?
This incongruence between higher headquarters and the MWTC, in
perceiving the degree of the mission completion, can only be
dealt with through efforts by higher authority. Support from
levels higher than the MWTC, (e.g. Marine Corps Base, Camp Pendleton, Headquarters Marine Corps, Washington, D. C.) where the resources and the authority exist to analyze the problem and modify current regulations, if necessary, must be provided to effect a solution.

Finally, communication between the staff sections, responsible for developing, updating and providing information to the dining facility manager is crucial to sound planning. Here, the authors specifically address the Operations (S-3) and the Logistics (S-4) sections of the MWTC. It is suggested that the sections reevaluate and reemphasize the importance of this communication link to maintain/establish efficient management control. A standard training plan which incorporated the necessary logistics support required to accomplish that plan could lead to the flow of sound and usable information both internally (within MWTC) and externally (between the MWTC and the Training unit). This Standard Plan can be viewed as a Training Menu, where the training unit commander selects the training package desired and the MWTC develops and provides the logistics support required to complete the package. Utilizing historical data and projected training operations, the S-4 can suggest when to use A-rations or Meals Ready to Eat (MRE's) to allow better coordination/planning of inventories of each.

Our point is best made by P. F. Drucker, "another requirement is a demand for universal communications responsibility. Every member of the systems structure, but
especially every member of everyone of the managing groups, has to make sure that mission, objective and strategies are fully understood by everyone, and that the doubts, questions, and ideas of every member are heard, listened to, respected, thought through, understood, and resolved" [Ref. 13: pp. 596].

In other words, plans, changes, and requirements need to be shared by the staff sections to ensure positive compliance with requirements both external and internal to the organization. James E. Webb adds, "more than anything else, the executives within a large-scale endeavor must be able, one by one, and altogether, to see and understand the totality of the job that the end result was designed to do. Each must see and understand the relationship of his evolving and changing individual assignment, and the functions and people involved in that assignment, to the whole job and its requirement. This requires more than knowing his place and his responsibility within the organization itself, or knowing the organization upside down. It requires an awareness between the total job as he sees it at the time, and his own particular job within the total framework including the elements of the environment that are so much a part of the total" [Ref. 14: pp. 135-137].

A unified and coordinated planning effort demonstrated by the staff of the MWTC will provide the leadership and example to training units which provide information to the MWTC.

B. INVENTORY/SUBSISTENCE REQUISITIONING

At the head of a productive-distribution system, a manager must have raw materials and supplies in order to carry out the productive process [Ref. 15: pp. 159]. In the context of this case study, the dining facility at the MWTC acts within the productive system to produce for the permanent personnel of the MWTC and within the distribution system to order, store, and distribute raw materials to training units subsisting from field mess equipment. Presently, the individual responsible for these functions is a Gunnery Sergeant (E-7) with five months experience at the MWTC.
At this time, the MWTC operates and supports a training schedule eight months out of the year. The eight months are divided into a four month summer cycle and a four month winter cycle. The remaining four months (two in the spring and two in the fall) are used by the MWTC for internal training and refitting prior to beginning a new season of training support.

During the eight months of training support, the dining facility manager is responsible for ordering, storing, and issuing the raw materials necessary to support a field mess operation. Planning for a training unit's support begins forty-five days prior to the unit's arrival. At this point, initial personnel figures are required and the menu to be served is developed from the Camp Pendleton 14-day Field Feeding Menu [Ref. 10]. The dining facility manager, MWTC, is required to submit the requisition for subsistence raw materials at least 16 days prior to their intended use. The 16 day (order/ship time) is a requirement set by Marine Corps Base, Camp Pendleton [Ref. 7]. It takes two days to transport the subsistence items from Camp Pendleton to the MWTC.

Interviews with key personnel painted a picture of the normal planning cycle that consisted of several stages. The pre-deployment stage usually commences at day 45 and ends with the unit arriving at the MWTC. Initial planning figures are normally high, because the training unit is not sure, 45 days prior, of exactly how many personnel will be training
at the MWTC. The figure will continually change, usually decreasing, right up until the unit has totally arrived and a count is taken. These changes, which are compounded by the communications problems discussed in section A of this chapter and Chapter III, combined with the required order/ship time tend to inflate the required subsistence support required by the training unit. Once the unit (anywhere from 600 to 800 personnel on the average) has arrived, it is time to place the order for the second half of their training cycle (orders are normally placed to cover 10 to 14 feeding days). This second order is then submitted, during the normal confusion that exists during the first few days of a large unit's arrival, without sufficient usage data to develop accurate requirements. At the same time, the MWTC dining facility manager is involved with planning/submitting orders for the next training unit to follow. Subsistence orders begin to overlap and the inventory error begins to inflate. Once the four month training cycle is completed, the MWTC is left with an excessive inventory which it must consume (contributing to an excessive BDFA) or roll back to Camp Pendleton.

There are several alternatives that could be utilized to control the problem of excessive inventory. The criterion of each alternative must be judged according to the impact the decision has on other functions, organizations and the Marine Corps as a whole. If an alternative is chosen that affects only one function, MWTC, then the decision can be made at the
lowest possible level. Otherwise, it will have to be made on a higher level where the impact on all affected organizations can be considered and it must be made in close consultation with managers of the other affected organizations and services [Ref. 13]. The criterion to be analyzed should encompass such things as budget limitations, transportation capabilities, personnel limitations, and existing regulations and directives. Some of the following alternatives can be combined with each other to utilize existing DoD facilities and capabilities more efficiently.

1. **Auxiliary Direct Support Stock Control**

   Since the MWTC is an extension of Marine Corps Base, Camp Pendleton, it would seem logical to organize and install an auxiliary Direct Support Stock Control (DSSC) issue point at the MWTC. The auxiliary DSSC would be placed under the control of the MWTC Supply Officer and would be an extension of the parent DSSC located at Marine Corps Base, Camp Pendleton, CA (see Figure 1). Its primary function would be to provide subsistence support required at the MWTC. The auxiliary DSSC would assume the responsibility to effectively manage the subsistence inventory currently under the control of the MWTC dining facility manager.

   Under the supervision of the supply officer, the auxiliary DSSC NCOIC or his/her representative would become a member of the current MWTC planning group. The planning group consists primarily of representatives from the S-3 (Operations)
PRESENT TABLE OF ORGANIZATION

PROPOSED TABLE OF ORGANIZATION WITH AUXILLARY DSSC FUNCTION ADDED

Figure 1 Table of Organization
and the S-4 (Logistics) sections. With the experience and the weight of the supply officer behind him/her, the auxiliary DSSC NCOIC could insure that information required for planning and operation of both dining facilities (MWTC and training unit) is current and up to date, thus improving internal coordination/planning. The supply officer could also develop historical data (two year analysis) to determine the optimum level of subsistence items to be maintained within the inventory. The requirement to maintain no more than 30 percent of operational inventory should be removed until the study is completed and a realistic level established which is mutually agreeable between Headquarters Marine Corps, Marine Corps Base, Camp Pendleton and the MWTC.

Two additional areas must be discussed when considering the establishment of an auxiliary DSSC; the Table of Organization (personnel requirements) and the capability of existing/future facilities to allow a separate storage and issue point for subsistence items. The key individual in this alternative is an experienced supply officer. The individual must have a broad knowledge of supply matters and be of sufficient rank to manage this remote activity. During interviews conducted at the MWTC, it was found that for the first time since the establishment of the training center, a supply officer (senior captain) had been recently assigned. Interviews with this individual showed that he had become aware of the problems presented in Chapter III and already had begun to make some
progress in their solution. His actions have included increased liaison/coordination with the parent command at Camp Pendleton and organizations of other DoD activities closer to the MWTC. He is currently studying the use of the inter-service support agreement and the expanded use of the direct or open purchase capability (purchases from the civilian market) to decrease the order-ship time from Camp Pendleton. Rank and experience must be a consideration for all future supply officer assignments to the training center. Additionally, it is recommended that three individuals be added to the supply section's Table of Organization to manage the new subsistence sections. These individuals should include a subsistence NCOIC and two subsistence supply men (MOS 3061).

Discussions conducted at the MWTC by the authors revealed that current and future facilities will be able to support an auxiliary DSSC function. This includes secure storage space to effectively control the inventory.

Finally, use of an auxiliary DSSC would improve the accounting procedures currently used. At present, the training unit is held accountable by the Division Food Service Officer for its BDFA while operating a field mess at the MWTC. Once training is completed, any excess inventory that resulted from poor planning/last minute changes is left with the MWTC dining facility manager and reflects as an inefficiency in his operation. The use of an auxiliary DSSC would allow increased accounting for items ordered, consumed,
and left behind by the training unit and remove this responsibility from the dining facility manager of MWTC. It could also allow the MWTC dining facility manager to draw a portion of a unit pack which would enable him to better control his BDFA during non-training months. This would be possible because of the much smaller operation at the MWTC compared to Camp Pendleton, thus allowing customized issues.

2. **100 Percent Inventory Control**

   Increase the inventory level allowed from 30 percent to at least 100 percent of the subsistence items consumed in one month. This alternative would not remove the responsibility of inventory control from the dining facility manager (MWTC) but would allow more flexibility in dealing with fluctuations and place the inventory limit in line with realities of the resupply function. On a 16 day order/ship time, a minimum of 53 percent of a month's subsistence items are delivered, based upon a 30 day month. Considering the other factors of distance, weather conditions, and uncertainties of training unit personnel strengths, a safety figure of 50 percent is not an unrealistic figure. Combining a safety figure of 50 percent and a resupply figure of 53 percent, an inventory size of 100 percent is feasible. Considering the present inventories of 200+ percent, a 100 percent or 120 percent inventory figure would provide incentive for the MWTC personnel to strive toward. This would require increased emphasis on improved communication and planning control, as described in Section A of
this chapter, but would provide an achievable goal, considering the other advantages improved communications would provide.

3. **Interservice Support Agreements**

Some effort should be devoted to establishing and utilizing interservice support agreements between the MWTC and other military activities of the Department of Defense (DoD) which are in close proximity to the training center. The Defense Retail Interservice Support (DRIS) program is designed to promote interservice and interdepartmental support between retail activities of DoD and non-DoD elements. Its purpose is to provide commanders with a means of improving their operations by achieving the greatest overall effectiveness and economy in retail operations by acquiring support services from other military services/Defense agencies through the use of a support agreement [Ref. 16: pp. 1]. The DRIS program is designed to reduce defense costs through the elimination of duplicate support services between DoD activities, without jeopardizing mission requirements.

There are several DoD activities which have facilities closer to the MWTC than Marine Corps Base, Camp Pendleton that could be used to provide subsistence support. These activities are run by the Air Force, the Navy and the Defense Logistics Agency.

The Air Force has three bases in the vicinity of Sacramento, CA (Mather, McClellan, and Travis Air Force Bases). Castle Air Force Base is located near Merced, CA. The Air Force Bases are about 4 to 5 driving hours from the MWTC.
The Navy has a Naval Air Station in Fallon, NV about 2 driving hours away. Complete or partial subsistence support would substantially reduce the order/ship time required prior to a training unit's arrival. A shorter response time will allow more flexibility in determining correct personnel figures. Exact documentation of the support capabilities of these activities is beyond the scope of this thesis. A thorough investigation conducted by key representatives of the MWTC and Marine Corps Base, Camp Pendleton, is required to correlate support needed with capabilities available. It is important to note at this time that review of historical unit usage data for the MWTC revealed that the Training Center is periodically used by services other than the United States Marine Corps, for cold weather training or testing of new equipment.

The final DoD activity is the Defense Logistics Agency, Alameda, CA. This facility provides subsistence items for all DoD activities on the West coast. This activity could be used in conjunction with the alternative to provide direct support through an auxiliary DSSC issue point at the MWTC.

4. **Field Dining Facility Training**

The MWTC should have the capability to conduct training for the food service personnel assigned to the visiting battalion. The MWTC would be required to provide (to the training unit) the equipment and the raw materials necessary
to set up and operate a complete field dining facility. This alternative would require the following:

1. The addition of food service instructors to the T/O of the MWTC.

2. The storage and maintenance of field kitchen equipment at the MWTC for issue.

3. The addition of maintenance personnel to the T/O of the MWTC capable of servicing the additional equipment.

If this additional training capability is established at the MWTC, it is envisaged that several benefits will result. First, the Marine Corps Base Camp Pendleton, Food Service Officer will have a vehicle to train and update food service personnel on field mess operation and management. Second, transportation costs of moving field kitchen equipment to and from the MWTC with each training battalion will be deleted. Third, the training vehicle will require close coordination/communication between the subsistence section, the S-3 Training section, the S-4 section, and the dining facility manager/food service personnel of the training unit. Fourth, the operation of a field food service program would help ease the excessive inventory problem. This would occur because the MWTC would be responsible for preparing the 14-day menu for each training unit. Because of the experience factor and historical data present at the MWTC, the menu preparation and subsistence requisitioning could be accomplished
in a more efficient and effective manner. Finally, this alternative would relieve the training unit commander of the burden to effectively manage the field mess and allow him to accomplish his primary reason for bringing his unit to the MWTC. While he is training his troops in the mountainous environment, he could be confident that his field dining facility was being operated and managed efficiently because the MWTC training section was providing the guidance and instruction required to his food service section. Overall, more of the training unit personnel would be involved in some type of formal training while at the MWTC.
V. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

The MWTC cannot continue, under current regulations and organization, and hope to correct the problems listed within this thesis. Changes are required to allow greater flexibility in dealing with the unique position in which the MWTC finds itself.

B. RECOMMENDATIONS

Based on the analysis presented in this thesis, several recommendations to alleviate the problems of subsistence management at the MWTC may be considered. These recommendations may be considered independently or each in conjunction with others.

1. Increase the subsistence inventory level to a required 120 percent.

2. Establish an auxiliary DSSC subsistence issue point at the MWTC.

3. Utilize the defense Retail Interservice Support System by establishing an agreement for support with another DoD activity in close proximity to the MWTC. This agreement could be extended to support other than subsistence items to further reduce the extended lines of supply from Marine Corps Base, Camp Pendleton, CA.
4. In conjunction with the Marine Corps Base, Camp Pendleton Food Services Office, establish a field food service training program at the MWTC separate from the Training Unit's organization.


7. Director, Base Food Service Officer, Marine Corps Base, Camp Pendleton, CA, Ordering Schedule for Marine Corps Mountain Warfare Training Center; Revision Of, BL2/ETM/Ism, 10110, 30 June 1983.

8. Conversation with LtCol Lewis, Base Food Service Officer, Camp Pendleton, CA, 12 Dec 1983


<table>
<thead>
<tr>
<th>No.</th>
<th>Copies</th>
<th>Initial Distribution List</th>
</tr>
</thead>
</table>
| 1.  | 2      | Defense Technical Information Center
Cameron Station
Alexandria, Virginia 22314 |
| 2.  | 2      | Library, Code 0142
Naval Postgraduate School
Monterey, California 93943 |
| 3.  | 1      | Department Chairman, Code 54
Department of Administrative Science
Naval Postgraduate School
Monterey, California 93943 |
| 4.  | 1      | Professor D. C. Boger, Code 54Bk
Department of Administrative Science
Naval Postgraduate School
Monterey, California 93943 |
| 5.  | 5      | Lieutenant Colonel J. F. Mullane, Code 0309
Department of Administrative Science
Naval Postgraduate School
Monterey, California 93943 |
| 6.  | 2      | Major L. S. Lusczynski
529 Palisades Blvd.
Crownsville, MD 21032 |
| 7.  | 2      | Captain B. A. Siwicki
2nd FSSG
Camp LeJeune, NC 28542 |
| 8.  | 1      | Base Food Service Officer
Marine Corps Base
Camp Pendleton, California 93055 |
| 9.  | 1      | Commandant of the Marine Corps
Code LFS-4
Headquarters Marine Corps
Washington, D.C. 20380 |
| 10. | 1      | Commanding Officer
Mountain Warfare Training Center
Bridgeport, California 93517 |
| 11. | 1      | Commandant of the Marine Corps
Code MMOA-3
Headquarters Marine Corps
Washington, D.C. 20380 |
END

FILMED

6-84

DTIC