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TECHNICAL REPORT
TR-77/011

**AN EVALUATION OF AN ALL COMMUTED RATION
ASHORE/ A LA CARTE SYSTEM FOR THE NAVY**

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January 1977

UNITED STATES ARMY
NATICK RESEARCH and DEVELOPMENT COMMAND
NATICK, MASSACHUSETTS 01760



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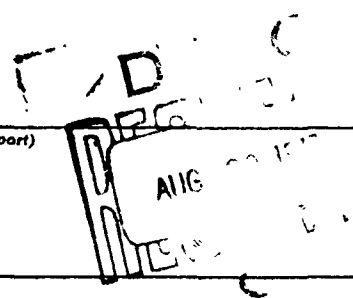
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report presents an evaluation of a food service system wherein all personnel at a Navy base were placed on a monetary allowance (Commuted Ration) and all food was priced a la carte. The result of placing personnel formerly on Rations in Kind (RIK) was a large reduction in their attendance rate and a consequent deterioration in their nutritional intake. In addition the cost of placing these RIK personnel on a monetary allowance made the food service system more expensive even though fewer meals were		



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20. Abstract (cont'd).

served than the conventional system. A La Carte food service, however, was highly accepted by personnel formerly on a Commuted Ration status, and their attendance rate in the dining hall increased. As a result it is recommended that any planned implementation of an all Commuted Ration policy ashore be discontinued because of the threat it poses to the training base for Navy cooks, its expense, and the threat to the nutritional health of personnel on RIK. However, it is recommended that a-la-carte food service for personnel on Commuted Rations be instituted because of its acceptance and the improvement in the quality of food service associated with it.

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PREFACE

As a result of tests by the Air Force of a food service system wherein all enlisted airmen at a base were provided an allowance for subsistence and all items in the dining hall were individually priced, the Office of the Assistant Secretary of Defense for Installations and Logistics directed the Navy to test a similar system at Navy Ashore facilities. The Navy, in turn, tasked the Operations Research and Systems Analysis (OR/SA) Office of NARADCOM to conduct an investigation to determine the feasibility of an All Commuted Ration (COMRAT) Ashore/A La Carte pricing concept for Navy Ashore appropriated fund food service facilities. The result of this investigation was a recommendation to initiate testing of this system in FY 76.¹ Based on this recommendation, the enlisted dining facility at Naval Air Station (NAS), Alameda was renovated and a test was conducted, under the acronym CASH (Commuted rations ASHore)/ALa Carte, by the Operations Research/Systems Analysis Office in cooperation with the Behavioral Sciences Division of the Food Sciences Laboratory, the Navy Food Service Systems Office, the Letterman Army Institute of Research (LAIR) and Supply Office personnel at NAS, Alameda from 1 March 1976 through 31 August 1976. This test was conducted by the OR/SA Office as part of the Department of Defense (DoD) Food RDT&Eng Program under Task AB of Project No. 1T762724AH99, Methods, Techniques, and Measures of Effectiveness in Evaluating Feeding Systems. The Service Requirement was USN 5-2, Cash Collection for Navy Ashore Food Service Facilities. The nutrition work was carried out by the LAIR under the DoD Food RDTE Program, Project No. 3A762760A822, Work Unit No. 086, Nutrition Studies in Support of DoD Food Program.

The objective of this project was to determine the advisability of realigning Navy Ashore appropriated fund food service facilities to an all commuted ration basis with individual food item pricing by running a prototype operation at a Naval base. Such a prototype operation was set up at NAS, Alameda, and the concept was tested within the system framework established by an operating handbook (Appendix A) jointly developed by OR/SA and NAS, Alameda personnel. During the course of this experiment, an extensive program of data collection and surveys was conducted by Natick Research and Development Command (formerly known as the Natick Development Center) and Letterman Army Institute of Research personnel. This report presents an analysis of the results of this test and recommendations relative to any further implementation of the concept to other Naval bases.

¹Rogozenski, Deacon, Siebold and Symington, "Evaluation of a Cash Collection System for Navy Ashore Food Service Operations". TR 76-10-OR/SA, June 1975.

A study of this scope cannot be conducted without a great deal of assistance and cooperation from a large number of individuals. Specifically, the authors would like to thank CPT R. C. Stubbs, Supply Officer, NAS, Alameda, for his personal support and cooperation as well as for insuring the support and cooperation of his staff; CDR J. Eckelberger, Assistant Supply Officer, for his high level of personal involvement and assistance, particularly in the preparation of the operating manual; CW04 S. Jones, Chief V. Menow, Chief J. Coates, and all of the NAS, Alameda Galley Supervisors, watch captains, and cooks without whose complete cooperation nothing could have been accomplished; CPT T. Piazza, CPT R. Tomsuden, and CDR J. Wyatt of the Navy Food Systems Office for their continuing assistance in the project from its very inception; Mr. J. Myer and the rest of the NAS, Alameda Supply Systems Planning Office for their cooperation in insuring the expeditious procurement of all necessary items; Ms. Luanna Oaker whose exceptional secretarial skills enabled the publication of the operating manual, station notices and other necessary correspondence in the face of continuous revisions; and finally Ms. B. Brown and the cashiering staff of Integrity Management Inc., whose high level of cooperation with NARADCOM and LAIR data collectors contributed significantly to the success of the data collection.

TABLE OF CONTENTS

	Page
Preface	1
List of Figures	5
List of Tables	9
SECTION I:	
Executive Precis	13
SECTION II:	
The CASH/A La Carte System	21
1. Consumer Attitude Survey Findings	21
2. Attendance Patterns	38
3. Patron Spending Patterns	64
4. Worker Attitude Survey Findings	73
5. Labor Requirement Analysis	90
6. Nutritional Intake Survey Findings	103
7. Cost Analysis	126
8. Operating Characteristics	135
SECTION III:	
Alphabetical List of References	140
Bibliography	141
Appendices	
A. Operating Manual for the CASH/A La Carte System	143
B. Consumer Interview Protocols	265
C. Consumer Attitude Statistical Analysis	275
D. Food Service Worker Interview Protocols	277
E. Work Sampling Analysis Definitions, Schedules and Data	285
F. Cost Analysis – Detailed Derivations	293

LIST OF FIGURES

	Title	Page
Figure 1.	Mean Rating of the Alameda Dining Hall in Comparison to Other Military Dining Halls for the Three Status Groups Before and After CASH/A La Carte	30
Figure 2.	Mean Ratings of Speed of Service or Lines in the Alameda Dining Hall for the Three Status Groups Before and After CASH/A La Carte	32
Figure 3.	Mean Ratings of Food Quality at NAS Alameda by the Three Ration Status Groups Before and After CASH/A La Carte	34
Figure 4.	Mean Ratings of Regular Meal Variety at NAS Alameda by the Three Ration Status Groups Before and After CASH/A La Carte	35
Figure 5.	Mean Ratings of Short-Order Variety at NAS Alameda by the Three Ration Status Groups Before and After CASH/A La Carte	36
Figure 6.	Plot of Monthly Attendance Rates at Breakfast Meals	42
Figure 7.	Plot of Monthly Attendance Rates at Lunch Meals	43
Figure 8.	Plot of Monthly Attendance Rates at Dinner Meals	44
Figure 9.	Plot of Monthly Attendance Rates at All Meals	45
Figure 10.	Histograms of June Attendance Rates by Meal – RIK Customers	46
Figure 11.	Histograms of June Attendance Rates by Meal – Married COMRATS Customers	48
Figure 12.	Histograms of June Attendance Rates by Meal – Single COMRATS Customers	50
Figure 13.	Histograms of June Attendance Rates by Meal – Total COMRATS Customers	52
Figure 14.	Histograms of June Attendance Rates by Meal – RIK and COMRATS Customers	54

LIST OF FIGURES (cont'd)

	Title	Page
Figure 15.	Histograms of June Attendance Rates by Meal – USS ORISKANY Customers	56
Figure 16.	Histograms of June Attendance Rates by Meal – Marine Customers	58
Figure 17.	Typical Automated Receipt Cost Calculation System Output	66
Figure 18.	Distribution of Breakfast Meal Receipts	75
Figure 19.	Distribution of Lunch Meal Receipts	76
Figure 20.	Distribution of Dinner Meal Receipts	77
Figure 21.	Mean Responses By Food Service Worker to the Job Description Index	83
Figure 22.	Evaluation By Food Service Worker of Job Under CASH/A La Carte	86
Figure 23.	Food Service Worker Preference For New (CASH/A La Carte, BAS/A La Carte) System Versus The Old (Conventional RIK/COMRATS, RIK/BAS) System	87
Figure 24.	Evaluation By Food Service Worker of Ease of Job Under CASH/A La Carte	89
Figure 25.	Worker Activities	92
Figure 26.	Organization Chart of Dining Facility Personnel	94
Figure 27.	Overall Personnel Performance	96
Figure 28.	Nonproductivity By Hour of the Day by Classification of Personnel	98
Figure 29.	Nonproductivity By Day of the Week	100

LIST OF FIGURES (cont'd)

	Title	Page
Figure 30.	Plot of Cumulative Total Monetary Allowances and Net Storeroom Issues by Month	136
Figure 31.	Plot of Cumulative Total Monetary Allowances and Total Food Sales By Month	137
Figure 32.	Plot of Cumulative Net Storeroom Issues and Total Food Sales By Month	138

LIST OF TABLES

	Title	Page
Table 1.	Demographic Characteristics of RIK, Single-COMRATS, and Married-COMRATS Groups Before and After CASH/A La Carte	25
Table 2.	Rank Ordering of Choices for Best Alternative Ration System on Allowance and Pricing Issues	27
Table 3.	Issue by Issue Results of the "Alternative Ration System Survey" (in %)	29
Table 4.	A Comparison of Attendance Rates at NAS, Alameda	40
Table 5.	Percentage of Population Eating No Meals and Eating at Least One Meal Per Workday in the Dining Hall	60
Table 6.	Average June 1976 Attendance Rates by Meal (in %)	62
Table 7.	Average Attendance Rates by Meal by Population Group for Actual Dining Hall Patrons	63
Table 8.	Typical Breakfast Meal Costs	67
Table 9.	Typical Dinner Main Menu Meal Costs	68
Table 10.	Typical Speed Line Meal Costs	69
Table 11.	Comparison Prices	70
Table 12.	Average Actual Total Meal Costs	71
Table 13.	Average Meal Costs for RIK Patrons	72
Table 14.	Comparison of Average Total Meal Costs and Allowances	74
Table 15.	Mode and Median of Original Meal Receipt Sizes	78
Table 16.	Average, Median, and Mode of Seconds Cost	79
Table 17.	Rank of Pre- and Post-Test NAS Alameda Military Food Service Workers	81

LIST OF TABLES (cont'd)

	Title	Page
Table 18.	Attitude Toward Military Service of Pre- and Post-Test NAS Alameda Food Service Workers	81
Table 19.	Format for the Work Scale of the Job Description Index	82
Table 20.	Average Headcounts by Day of Week	97
Table 21.	Comparison of Interview versus Observed Techniques to Estimate Dining Hall Nutrient Intake At NAS Alameda	107
Table 22.	Average Daily Total Nutrient Intake	108
Table 23.	Recommended Daily Dietary Allowance	109
Table 24.	Percentage of Populations with Total Daily Nutrient Intakes Below Recommended Allowances	112
Table 25.	Percent of Total Daily Nutrient Intake Consumed In Dining Hall	117
Table 26.	Percent of Total Daily Nutrient Intake Consumed At Home	118
Table 27.	Percent of Total Daily Nutrient Intake Consumed at Restaurants	119
Table 28.	Percent of Total Daily Nutrient Intake Consumed At Vendors	120
Table 29.	Nutrient Intake Per Dining Hall Meal	121
Table 30.	Quantity (g/Day) Of Food Types Consumed During Meals and Snacks	123
Table 31.	Quantity (g) of Food Types Consumed Per Dining Hall Meal	124
Table 32.	Actual Operating Costs on an Annual Basis	127
Table 33.	Base Population and Attendance Patterns	129
Table 34.	Total Annual System Cost	130

LIST OF TABLES (cont'd)

	Title	Page
Table 35.	Cost Comparison Between Conventional, CASH/A La Carte, and RIK/A La Carte	132
Table 36.	Total Navy Projected Costs of the Present System, the CASH/A La Carte System, and the RIK/A La Carte System in Thousands of Dollars	133

**AN EVALUATION OF AN ALL COMMUTED RATION
ASHORE/A LA CARTE SYSTEM FOR THE NAVY**

SECTION I

EXECUTIVE PRECIS

Conclusions

The summary results presented here are the result of surveys conducted and data collected by the Operations Research and Systems Analysis Office of NARADCOM, the Behavioral Sciences Division of the Food Sciences Laboratory of NARADCOM, and the Department of Nutrition of LAIR. The major emphasis of this study was to quantify and analyze the results of implementing an all COMRAT ashore/a la carte system at NAS Alameda specifically, and throughout the Navy in general. Of particular interest and importance were consumer attitude and reaction, customer attendance, worker attitude and reaction, labor requirements, nutritional intake (both total and in-dining hall), systems costs, customer spending patterns and operating experience. A capitulation of the summary findings in each of these areas follows below. The succeeding section of this report, entitled "The CASH/A La Carte System", presents the detailed discussion of the analysis in each of the aforementioned areas.

1. CONSUMER ATTITUDE

The two primary features of the CASH/A La Carte system – an all COMRATS policy and item pricing – were preferred to the alternatives of a mixed RIK/COMRAT policy and flat-rate meal pricing or meal type pricing by a majority of customers surveyed. Enlisted consumer attitudes toward the dining facility were significantly more favorable after the CASH/A La Carte system had been implemented than they were prior to CASH/A La Carte. Improved food quality and greater meal variety, both for regular and short order meals, appeared to be the most salient features contributing to the positive change in consumer attitudes toward the facility. The only negative rating from pre to post CASH/A La Carte registered by enlisted consumers related to waiting time in line. This was due both to the increased customer selection time with the increase in item variety, as well as to the necessity for cash register operation. The negative effect of increased waiting time was, however, more than offset by the positive effects of food quality and variety, since attitudes overall were more favorable.

2. ATTENDANCE

Customer attendance rates in military garrison dining halls dictate the ability of the military service to keep military cooks gainfully employed and trained in peacetime so as to be ready for mobilization periods. Naturally, as attendance goes down, there is

less capability to keep cooks busy and trained. In the case of the US Navy, this is a particularly critical problem even under conditions of peace, since the Navy must have enough customers in ashore facilities to provide a significant number of ashore billets for cooks between periods of sea duty. Because of the criticality of maintaining or improving enlisted dining facility attendance in the Navy, the pre and post-test customer attendance rates were carefully measured during this experiment. The pre-test attendance rates at Alameda were low, with RIK attendance at approximately 23%, COMRATS singles attendance at approximately 6%, and COMRATS married attendance at approximately 1% — for an overall enlisted attendance rate of only 4.75%.

A very sharp decrease (68%) in the already low attendance by personnel formerly on RIK was experienced at NAS Alameda under the CASH/A La Carte system. The level to which their attendance dropped, however, was approximately equal to that of single personnel formerly on COMRATS. Single and married personnel formerly on COMRATS on the other hand increased their attendance under the A La Carte system (30% and 167%, respectively). At NAS Alameda, with only a small percentage of the enlisted population on RIK (12.4%) these two opposite effects partially cancelled each other so that the net decrease in overall attendance was only 9%. Similarly the percentage of former RIK's that never attended the dining hall increased by 63.5% to a level (27.8%) not significantly different from the COMRAT-Single population (21%), while both COMRAT-Married and COMRAT-Single populations experienced a decrease in the percentage of their members never attending the dining hall. This implies that the decrease in attendance rates for former RIK personnel was due in part to a decrease in the number of meals eaten in the dining hall and in part to their complete loss to the system, while the increase in attendance rates for COMRAT populations was due both to a gain in new customers as well as an increase in the number of meals attended by former patrons.

Even though the decrease in the attendance rate of former RIK's of 68% at Alameda was mostly compensated for by the increased attendance of personnel who were already on COMRATS, since RIK's made up less than 13% of the total population at NAS Alameda, this significant RIK decrease is potentially serious and could significantly affect the Navy's ability to keep cooks busy and trained while ashore. The RIK attendance results obtained during the test at Alameda confirmed previous data from a food service test at Travis Air Force Base wherein a decrease of 66% in RIK attendance was recorded² when RIK's switched to a subsistence allowance. These data also confirmed a strong intuitive feeling that when RIK's were switched to subsistence allowance, their attendance patterns would approximate the existing attendance patterns of single personnel who are also living in barracks but were already on an allowance.

²Wetmiller, J. "An Analysis of Attendance Patterns in the Experimental Food Service System at Travis AFB", NARADCOM TR 75-75-OR/SA

Based upon the test data and the above confirmation, it is apparent that RIK attendance will seriously decrease at any base where an all COMRATS policy is implemented. Therefore, if the numbers of RIK customers in a conventional system are a greater proportion of the total enlisted population of the base than the 12.4% of RIK's at Alameda the overall attendance would decrease more than the 9% decrease recorded at Alameda despite the fact that the existing COMRATS attendance rates should increase. For example, if there had been 25% RIK's rather than 12.4% at Alameda, the overall attendance would have dropped by 35.5% rather than 9% and the training base for cooks which was already marginal because of low attendance rates would have been seriously affected. On the other hand, if RIK personnel were to retain their ration status and an item pricing (a la carte) system were to be implemented in the dining hall for COMRATS personnel, then such a system would enjoy an increased attendance rate for its COMRATS customers, while RIK attendance held constant, resulting in an overall increase in the attendance rate over the conventional system and a consequent strengthening of the training base. If this type of system had been tested at NAS Alameda, the overall attendance rate for base personnel would have increased approximately 32% (i.e., to 6.26%). Projecting this Navy wide, a 14% increase in attendance would be expected.

3. FOOD SERVICE WORKER ATTITUDE

The NAS Alameda food service worker Pre-CASH/A La Carte sample seemed to have a relatively neutral view of the imminent CASH/A La Carte system when asked to speculate about it. However, the Post-CASH/A La Carte samples' views shifted toward the negative their Job Description Index rating of their work was significantly lower than the Pre-A La Carte sample's rating of their work; 40% rated their job in A La Carte as worse than their job in the traditional system while only 20% rated it better; 56% preferred the traditional system to A La Carte while 36% preferred the latter, and 64% found their job to be harder under CASH/A La Carte while only 16% said it was easier. However, of equal importance was the split between "supervisors" and "workers" with the supervisors preferring CASH/A La Carte (83%) and the workers preferring the traditional system (69%).

The main complaint of the Alameda Post-CASH/A La Carte worker concerning a la carte dealt with his perception of long working hours and a heavy workload. This seemed to be a particular burden since the workers claimed to anticipate "easy" shore assignments in compensation for rigorous sea duty. In addition, the workers had assumed a serving function under a la carte which had been the responsibility of the KP contractor under the traditional system.

The Post-A La Carte workers did, however, perceive some positive aspects of CASH/A La Carte citing the variety offered the customer, improved food quality and a decrease in plate waste. The supervisors' preference for the a la carte system emphasized the high degree of control and accounting as well as the timeliness of status assessment provided under the a la carte system.

4. LABOR REQUIREMENTS

Despite complaints relating to heavy workload during the test, productive work time of 56% for all food service workers at NAS Alameda was somewhat lower than that of other military bases (67.8% at Travis AFB, 63.4% at McGuire AFB) suggesting that total staffing levels were more than sufficient. Nonproductive time ranged from 38% for supervisors, to 41% for cooks to 61% for mess cooks. No comparative data on nonproductive time exists for the Pre-CASH/A La Carte system, but productivity in meals per direct man hour increased from 3.82 under the traditional system to 4.10 under the a la carte system. The most significant factor contributing to the high degree of nonproductive time seems to be the cooks' "5 and 2" single shift work schedule which results in a constant work force present at all meals even though the workload varies due to changes in attendance among meals, particularly at breakfasts and on weekends when dining hall attendance drops dramatically. Even though the operation of the new system was more demanding (i.e., progressive cooking, multiple entrees and vegetables, portion control, etc.) the only new category of duty required by the a la carte system was that of cashiering. At NAS Alameda existing civilian contract workers were trained and assigned as cashiers, while the military cooks took over their serving line functions. As can be seen from the relatively high percentage of nonproductive time still holding true under a la carte despite this exchange of duties the a la carte system did not generate any genuinely new labor requirements over the conventional system. The exchange had the added benefit that the cooks now had direct contact and feedback from the consumer on his work. As a result of this experience, it is concluded that an a la carte system can operate without increased labor requirements at any ashore facility providing no serious shortage of food service personnel already exists.

5. NUTRITION

A comparison of average daily total nutrient intakes of each group (RIK, COMRAT-Single and COMRAT-Married) under CASH/A La Carte with recommended dietary allowances identified Vitamin A and thiamine as nutrients of concern. Evaluation of the percentages of the various group populations having nutrient intakes below recommended allowances revealed that conversion to commuted ration status had an adverse effect upon the total nutrient intake of personnel formerly on RIK status. Compared to the Pre-CASH/A La Carte RIK group, a significantly greater percentage of the former RIK's in the Post-CASH/A La Carte survey had energy, protein, calcium, riboflavin and ascorbic acid intakes below the recommended allowances, and a similar trend was noted for phosphorous, iron, Vitamin A and thiamine. Milk and milk product consumption sharply decreased for former RIK personnel after conversion to COMRAT status and contributed greatly to the lower calcium and riboflavin intakes.

The adverse effects were largely influenced by the sharp decrease in dining hall attendance following removal from RIK status. It is interesting to note that the nutrient intakes of these former RIK personnel declined only to the levels of the single group who were on COMRATS during both the Pre and Post CASH/A La Carte surveys. Analysis indicates that groups of personnel who consume a substantial number of their meals in the military dining hall have more satisfactory nutrient intakes than groups who patronize the dining hall infrequently.

A significant proportion (greater than 30%) of the combined (RIK, COMRAT-Single, and COMRAT-Married) group studied in the Pre and Post CASH/A La Carte survey had calcium, Vitamin A, thiamine, riboflavin, niacin and ascorbic acid intakes below NRC allowances. Analysis of nutrient intakes per dining hall meal in the Post-CASH/A La Carte survey indicated that average protein, calcium, phosphorous, iron, Vitamin A, thiamine, riboflavin, and ascorbic acid intakes per dining hall meal decreased somewhat under the CASH/A La Carte system. However, generally speaking, the average nutrient intakes per dining hall meal were equal to or greater than 1/3 of the Daily Dietary Allowances specified by the Surgeon General. Therefore, conversion of personnel from RIK to COMRAT status creates some nutritional problems, while implementation of the A La Carte system may accentuate these nutritional problems for RIK customers due to the somewhat decreased nutritional intakes per dining hall meal. This latter situation can conceivably be overcome by adopting an appropriate pricing system which encourages sound nutrition.

6. SYSTEM COST

The yearly incremental cost of the CASH/A La Carte system over the traditional system (normalized for constant base population, BDFR and COMRATS rate) at NAS Alameda was \$254,523 or about a 10% increase in total systems costs. This net increase was due to an increase of \$354,603 in COMRATS allowances to former RIK's, offset by a reduction in the net of food costs less COMRATS receipts of \$103,900 under CASH/A La Carte. No increase in labor costs were assessed for cashiers since by turning over the serving function to the cooks, the KP contractor assumed the cashier function at no cost. Gross raw food costs were \$46,933 (33%) less in the CASH/A La Carte system for a 10% lower level of feeding. In fact, if one considers the dining facility subsystem (i.e., excluding COMRATS allowance payments) operating costs under CASH/A La Carte were \$100,080 or 12% less than under the conventional system. Generally speaking then while an all COMRATS policy yields a more expensive system, the A La Carte operation is more efficient than the conventional system.

Analysis of a system incorporating a traditional RIK/COMRATS mix combined with A La Carte operation indicates that such an operation would cost \$1,043 or .05% more (primarily cash register rental costs) than the conventional system while serving

approximately 16,000 or 14% more rations (due to the increase in COMRAT customer attendance). Projected to a service wide basis CASH/A La Carte costs over \$35 million more annually than the conventional system while serving 45% fewer rations. RIK/A La Carte costs only \$95,000 more than the conventional system (primarily cash register rental costs), but serves 12.5% more rations (due to increased COMRAT customer attendance) resulting in an 11% decrease in the differential costs per ration.

7. CUSTOMER SPENDING

The sum of the average meal costs for 3 meals to the customer (approximately \$2.24) was less than the BDFA (\$2.67) and the COMRATS allowance (\$2.51). RIK patrons (mostly reservists and transients) yielded an average meal cost for 3 meals 3.1% or 7¢ higher than the overall average. This was due to an awareness on the part of RIK patrons that they were allowed to spend up to the portion of the BDFA set for the type of meal they were eating. As a result, some checked their receipts to see how much of their allowance was left and returned for seconds, mostly on desserts and beverages. Despite this fact, the average 3 meal cost (\$2.31) for RIK patrons was considerably less than the BDFA (\$2.67). It should be remembered, however, that few patrons did in fact eat 3 meals per day in the dining hall and significant percentages of the population spend more than the average.

8. OPERATING CHARACTERISTICS

The performance of the A La Carte system from a management control point of view was a credit to the internal control and accounting system designed for its implementation as well as to the food service staff which applied it. Total Monetary Allowances after 4 months of operation were in the black and within 1.3% of net storeroom issues, and a balance between cumulative Total Food Sales and Net Storeroom Issues had been achieved by the second month of operations. This high caliber performance, which is attributed to the excellent performance of the Food Service Staff at NAS Alameda is further corroborated by the fact that the discards of prepared foods ran only 0.6% of food sales, an achievement many commercial operations might envy. This performance conclusively substantiates that Navy food service personnel can effectively operate an A La Carte System of Food Service with a minimum of additional training.

Recommendations

- 1. Discontinue any planned implementation of an all COMRATS policy ashore ---**

In the current fiscal climate any program suggested as a replacement for an existing one, generally is justified either on the basis of reduced costs for equal benefits or increased benefits for equal or marginally increased costs. The all COMRATS policy, on the other hand, represents a more costly program coupled with a deterioration in overall benefits. The root cause of this situation can be traced to one issue -- attendance. First, under

an all COMRATS policy the government pays each man 100% of his allowance each day, while under a combined RIK/COMRAT policy the government pays for the man on RIK only that percentage of his entitlement as he chooses to avail himself of by attending the dining hall. Due to the low average attendance rates in the Navy, a savings accrues to the service under an RIK/COMRATS system. Secondly, it has been ascertained that converting enlistees on RIK to COMRATS status cuts their ties to the dining hall and a sharp decrease in their attendance rate occurs. If there are few enlisted patrons on RIK, then a drop in their attendance merely makes the food service operation less cost effective. If there are an appreciable number of RIK's, then a sharp drop in their attendance would result in a decrease in the number of food service personnel required, and a consequent loss of ashore billets for rotating cooks. If there are a considerable number of RIK's, then the decrease in attendance rate could result in the closing of dining facilities, and threaten the training base for food service personnel necessary for feeding afloat. Over and above this latter adverse effect is the fact that the nutritional profile for RIK patrons decreases with conversion to a COMRATS status to the point where appreciable numbers of such personnel have total nutritional intakes below the allowances specified by The Surgeon General. To reiterate then, an all COMRATS policy is a costly program which threatens the training base for food service personnel as well as the nutritional well-being of the RIK patron.

2. Implement a la carte food service in Navy enlisted dining halls ashore. This a la carte system should include (a) The internal controls and accounting specified in the Operating Manual attached as Appendix A. (b) An item-pricing policy which encourages sound nutrition. (c) A cook's shift schedule which more closely adheres to the demands of production. (d) An unlimited allowance for RIK patrons with appropriate controls to insure that this privilege is not abused --

The consumer attitude surveys indicated that a la carte food service is preferred by the dining hall patron. Specifically, item pricing is preferred over alternative pricing systems. The significant increase in attendance rate during the test for those personnel who were already on COMRATS (30% for COMRAT-Single and 167% for COMRAT-Married) more than confirmed this strong consumer preference for an item pricing system. The nature and discipline of an item pricing (a la carte) system which requires increased food variety combined with improved food quality engendered by progressive cooking techniques also result in a high level of acceptance by the enlisted patron. In addition, the operating and accounting system designed for the a la carte system provides for a high degree of individual accountability, traceability, internal control, and prompt status assessment resulting in a high degree of acceptance by food service supervisory and management personnel. Most important, however, is that the a la carte system results in increased attendance by patrons normally on COMRATS (i.e., married and senior single enlisted personnel) which will result in significant overall attendance increases if RIK patrons are not put on a monetary allowance. This attendance increase

makes for a more efficient operation than the conventional system for a constant base population; that is, for a small increase in cost (for cash registers), the a la carte system attracts and feeds more customers reducing the cost per ration, while protecting rotational billets ashore as well as the training base for food service personnel.

A la carte pricing, however, could impact on the nutritional profile of the patrons if it is merely established at raw food cost plus a percentage for condiments and cooking losses for all items. Some adjustments to this simple policy will be necessary to encourage sound nutrition. For example, milk should be priced in such a fashion that cost considerations by the patron do not lead to its rejection in favor of a less nutritious beverage. With such adjustments, an a la carte system should provide an equal level of customer nutrition as the traditional system.

In implementing any future a la carte system, no dollar limit should be placed on how much food the RIK patron should be permitted at any single meal. This position is militated by the fact that the Navy Ration Law specifies a **daily** ration entitlement, and nowhere details any meal-by-meal distribution of this entitlement. This position is justified by the fact that the sum of the average individual meal costs for RIK patrons in the a la carte test was less than the Basic Daily Food Allowance so that no increase in cost with a no-limit policy is envisioned. This is further corroborated by the fact that at the Loring AFB A La Carte Test no limit was placed on RIK patrons and no problem occurred.

Adverse reaction to the a la carte system of food service by the working level cooks was expected because of the increased workload due to the newly imposed level of quality service such as increased item variety and progressive cooking. Since these standards should have been introduced and enforced in the conventional system, it is difficult to assess whether the adverse worker reaction, in fact related to the a la carte system. In any case, this negative reaction can be overcome by instituting a two-shift "5 and 2" schedule which will, additionally, more closely parallel the demands of production and cut down on nonproductive time on the job.

SECTION II

THE CASH/A LA CARTE SYSTEM

For the system study of the actual operating prototype facility at NAS Alameda, measurements had to be made of a broad range of parameters to permit a thorough evaluation of the All COMRATS/A La Carte concept in the Navy environment. The parameters that were measured in the performance of this evaluation were: (1) consumer attitudes, (2) consumer attendance patterns, (3) worker attitudes, (4) worker productivity, (5) customer nutritional intake, both total and in-dining hall, (6) systems costs, (7) consumer spending patterns, and (8) other operating characteristics.

1. CONSUMER ATTITUDE SURVEY FINDINGS

A previous survey,³ conducted in February 1975 as part of the feasibility study of the implementation of an all COMRATS Ashore/A La Carte concept in the Navy, had shown considerable discontent among the NAS Alameda enlisted personnel with regard to the enlisted dining facility. To assess the reaction to the CASH/A La Carte system among the consumer population, surveys and interviews were conducted the second week before and three months after the system was changed. This work was carried out by the Behavioral Sciences Division of the Food Sciences Laboratory at Natick R&D Command.

Because the dining hall as it existed at NAS Alameda was in a stage of deterioration, it was felt that modest decor renovations would be in order so that the dining hall environmental factors did not color the consumers' evaluation of the changes integral to the new food service system. This renovation being completed, a baseline of consumer attitudes needed to be established for the conventional food service system at Alameda including the newly renovated facility. This was the purpose of the survey conducted the second week prior to the implementation of the CASH/A La Carte concept at NAS Alameda. The success of these pre- and post-test surveys in avoiding the confounding of the effects of the dining hall renovations with those produced by the changes integral to CASH/A La Carte are difficult to assess, but the indications are positive in that no changes in attitude with respect to the environmental variables between the pre and post test surveys were noted.

³Siebold, J. R., L. E. Symington, H. L. Meiselman, J. E. Rogozenski, "Consumer and Worker Opinions of a Proposed Cash Food System: NAS Alameda", NARADCOM TR 76-9-FSL, 1975.

A second problem encountered in this project pertained to the classification of respondents according to ration status. It has been the standard procedure in previous studies to divide the consumer survey/interview sample according to ration status, COMRATS versus RIK, and to analyze the responses of the two groups separately. (This procedure has been justified by the differences consistently found between the groups in their food habits and attitudes).⁴ This task was complicated at NAS Alameda where, in preparation for the start of CASH/A La Carte in March 1976, many RIK personnel were prematurely converted to COMRATS, some as early as January 1976. To have divided the sample on the basis of ration status at the time of testing, therefore, would have seriously misrepresented the actual situation. To avoid this, all personnel on RIK status as of January 1976 were considered as one group, separate from the remaining COMRATS group. The later group was further subdivided on the basis of marital status. (The RIK group contained too few married personnel to warrant the formation of a separate subgroup). In the remainder of the subsection, therefore, reference will be made to six different groups: Pre-Test RIK's, Pre-Test M-COMRATS's, and Pre-Test S-COMRATS's, referring to those personnel surveyed/interviewed the second week prior to CASH/A La Carte who, respectively, were on RIK status irrespective of marital status -- married and on COMRATS, and single and on COMRATS -- all as of January 1976, and Post-Test RIK's, Post-Test M-COMRATS's, and Post-Test S-COMRATS's, referring to those personnel surveyed/interviewed 3 months after the start of CASH/A La Carte who shared the other characteristics of the corresponding Pre-Test group.

METHOD

Four different opinion instruments were used in the test. Two were personnel interviews, one for the Pre-Test and one for the Post-Test. Copies of the two interview protocols are contained in Appendix B. Of the total 46 questions in the Pre-Test interview and 58 questions in the Post-Test interview, 37 were in common, allowing for direct Pre-Post-Test comparisons, while the remainder pertained to only one of the tests. Four topics were addressed in the interviews. (a) demographic characteristics of the respondents; (b) their current food habits; (c) their opinions of the dining hall and its food; and (d) their opinions of CASH/A La Carte. (The Pre-Test group responded to the last category of question on the basis of their preconceptions about the system, whereas the Post-Test group reacted to the system as it had actually been implemented.) Three types of questions were involved: objective, rating, and open-ended questions. Rating questions required the participant to select one of a number of scaled responses printed on a card shown to him by the interviewer. Open-ended items allowed respondents to provide as little or as much information as they wished, with interviewers recording the responses verbatim. At a later date, the responses were assigned to categories independently by two members of the Behavioral Sciences Division using preconstructed categories based on the original responses. Agreement between the two judges occurred in 86% of the cases, the remainder being categorized following discussion and mutual agreement.

⁴Siebold, J. R., L. E. Symington, R. C. Graeber, D. L. Maas, "Consumer and Worker Evaluation of Cash Food Systems: Loring AF Base (Part I -- Short Term Findings)", NARADCOM TR 76-35 FSL, 1976.

The remaining two opinion instruments were paper-and-pencil surveys. The first was the 1974 edition of the Consumer's Opinions of Food Service System (COFSS) survey, which is routinely used by the Behavioral Sciences Division in its assessments of consumer satisfaction within the military. It was administered during both the Pre- and Post-Test. The survey is comprised of 57 questions, covering a wide range of variables involved in dining service. Each question has a limited set of possible responses, allowing for computer scoring of the survey booklet. A copy of the survey is contained in Appendix B of the original Alameda study (see Reference 1).

The second paper-and pencil survey was a brief, one-page insert to the COFSS survey, administered at the same time and to the same respondents as the larger survey. Titled "Alternative Rations Systems (ARS) Survey", it required respondents to "design" what for them would be the "best" and "worst" food systems and then rate those systems on a variety of scales. A copy of it is also included in Appendix B of the previously referenced Alameda report.

In total, the paper-and-pencil surveys were administered during the Pre-Test to 297 personnel (81 RIK's, 121 M-COMRATS's, and 95 S-COMRATS's) and during the Post-Test to 245 personnel (89 RIK's, 101 M-COMRATS's and 55 S-COMRATS's). Of these two groups, 122 (47 RIK's, 42 M-COMRATS's, and 33 S-COMRATS's) and 108 (39 RIK's, 46 M-COMRATS's, and 23 S-COMRATS's), respectively, were also interviewed. The remaining persons received the written survey only.

During both tests, the survey/interview sample was selected from the enlisted population and was stratified according to the manpower strength of 12 work units at the installation. If a given work unit included 8% of the installation's enlisted work force, for example, enough personnel were chosen from the unit to comprise 8% of the sample.

Interviews were conducted at the participants' work sites. Groups of five to ten respondents were gathered and initially given the survey to complete. Subsequently, members were taken individually to a different area where they were interviewed by one of the two staff members. As a group, they were given a brief introduction, told about the survey/interview procedure, instructed on some of the more complex items on the survey, cautioned to work by themselves, and told to feel free to ask questions in the event of any uncertainty. In the instructions the respondents were told to answer only those questions that they could and to leave blank items for which they had insufficient familiarity with the dining facility to answer knowledgeably. The survey and the interview typically required approximately 60 and 15 minutes, respectively, to complete.

During both the Pre- and Post-Test, personnel receiving only the paper-and-pencil surveys attended one of two group sessions in an auxiliary area of the dining facility. They received much the same instruction as the interviewees, except, of course, those pertaining to the interview procedure.

RESULTS OF CONSUMER INTERVIEW AND SURVEY*

A. Demographic Characteristics

As shown in Table 1, there were significant differences among the three groups differentiated for study (RIK, S-COMRATS, and M-COMRATS) on the three correlated variables of age (1), time in service (2), and grade (3), across both the Pre-CASH/A La Carte sample and the Post-CASH/A La Carte sample. Consistent with intuition, those personnel on COMRATS who are married tend to be older, higher in grade, and to have been in the Navy longer than, respectively, those personnel on COMRATS who are single and those who are in RIK status. Less intuitively predictable is the significant increase in grade from the Pre- to Post-CASH/A La Carte samples (4), primarily attributable to increases within the younger RIK and S-COMRATS groups. Perhaps related to this increase in grade among the younger seamen, there was a significant increase in re-enlistment probability (5) from Pre- to Post-CASH/A La Carte across all three status groups. As expected once again, the M-COMRATS group was most likely to re-enlist, followed by the S-COMRATS group and then the RIK group (6), but even the RIK group switched from "probably no" as a response to the re-enlistment question to at least "undecided" during the interim between Pre- and Post-CASH/A La Carte. When asked how they felt about military service, however, there were no significant changes between Pre- and Post-CASH/A La Carte sampling, although the separation among status groups was significant (7), M-COMRATS generally liking the service "a little", followed by S-COMRATS and RIKs, who were rather firmly "neutral" in their feelings. There were no other significant demographic differences either among the status groups or between Pre- and Post-CASH/A La Carte sampling sessions on any of the other demographic variables including race, sex, location and type of quarters, level of education, service component (just Navy or Marine, in this case), or number of other installation dining halls regularly patronized.

B. Attitudes Toward the CASH/A La Carte System

All three groups were rather neutral in their general attitudes toward efforts by the Navy to provide them with adequate subsistence both before and after CASH/A La Carte, although there was a significant (13) tendency for M-COMRATS respondents to be more "slightly satisfied" with those efforts than the RIK and S-COMRATS groups, who tended more toward being "neither satisfied nor dissatisfied."

*The results of statistical analyses are indicated by a number in parentheses on the same line as the text, e.g., (1), which is keyed to the corresponding number listed in Appendix C and should not be confused with superscripted footnote notation.

TABLE 1
Demographic Characteristics of RIK, Single-COMRATS, and Married-COMRATS Groups
Before and After CASH/A La Carte*

	BEFORE			AFTER		
	RIK	S-COMRATS	M-COMRATS	RIK	S-COMRATS	M-COMRATS
Mean Age (in years)	20.26 (20.84)	24.58 (24.00)	29.45 (29.57)	23.10 (21.00)	26.02 (26.68)	29.79 (29.62)
Mean Time in Service (in years)	2.44 (2.21)	5.30 (5.09)	9.35 (9.85)	3.75 (2.43)	6.08 (7.36)	10.07 (9.65)
Median Grade	E-3	E-4	E-5	E-4	E-5	E-5

*NOTE. Survey data are shown above in each column and interview data are shown below in parentheses.

Prior to CASH/A La Carte, 28% of the RIK group expressed a preference for retaining their meal cards rather than being placed on COMRATS, due perhaps to some uncertainty about the effects of the change, whereas both married and single COMRATS groups preferred their COMRATS status with the exception of one unmarried individual (3.3%). Following implementation of CASH/A La Carte, however, the preference for COMRATS became unanimous among both S COMRATS and M COMRATS groups, and nearly so among the previously RIK group, with only a single dissenter (2.6%) still preferring his meal card to COMRATS. When asked after CASH/A La Carte whether a return to the traditional meal card system would affect the likelihood of their re-enlistment, 12.5% of the former RIKs said that they would be "less likely to re-enlist" if taken off COMRATS, while the remaining 87.5% did not think that their re-enlistment decision would be substantially affected by their ration status. No one indicated that return to a meal pass would make him or her "more likely to re-enlist."

All of the survey respondents, both pre- and post-CASH/A La Carte, were asked in addition to fill out the "Alternative Rations System Survey", addressing two fundamental issues in military food service. Issue 1 concerns ration status and asked the respondent whether the best food system should have (a) "all individuals receiving COMRATS" or (b) "some receiving COMRATS and others receiving RIK", and Issue 2, concerning pricing style, asked whether the best food system should charge (a) "a fixed amount for each meal (Fixed Meal Pricing)", (b) "for only the items taken (A La Carte)", or (c) "for a 'special', 'regular', or 'short order' meal" (Meal Type Pricing).

Table 2 presents the rank ordering of choices for "best" system considering both issues.

In the Pre CASH/A La Carte phase the 1st choice for COMRATS customers was an all COMRATS, item pricing system while RIK customers preferred the existing system with the conventional RIK/COMRATS policy and fixed meal pricing. This latter result was probably due to apprehension on the part of the RIK customers toward a new system. This conjecture is corroborated by the Post-CASH/A La Carte results in which RIK customers rated the all-COMRATS, item-pricing system as their first choice after exposure to such a system. After the CASH/A La Carte phase COMRATS customers continued to rate the all COMRATS, item-pricing system as their number one choice. The second choice for former RIK customers after CASH/A La Carte was implemented was for a conventional RIK/COMRATS policy with item pricing, while COMRATS customers rated this choice as 3rd and 4th for married and single COMRATS groups, respectively. As the all COMRATS, item-pricing system is the same as the conventional RIK/COMRATS, item-pricing system from the point of view of COMRATS customers (in that they would be on COMRATS allowance in both systems) it would seem that the evaluation of the former RIK customers is the most indicative finding with respect to preferred pricing system; that is, item-pricing is most preferred.

TABLE 2

Rank Ordering of Choices for Best Alternative Ration System on Allowance and Pricing Issues

Rank	Before CASH/A La Carte						After CASH/A La Carte							
	RIK		COM-M		COM-S		RIK		COM-M		COM-S			
	Choice	% of Pop. Making Choice	Rank	Choice	% of Pop. Making Choice	Rank	Choice	% of Pop. Making Choice	Rank	Choice	% of Pop. Making Choice	Rank		
1	R,F	31.0	1	A,I	32.1	1	A,I	46.7	1	A,I	47.2	1	A,I	53.1
2	A,I	27.6	2	A,F	20.5	2	R,I	18.7	2	R,F	15.7	2	A,M	15.6
3	R,I	17.2	3	R,F	17.9	3	R,F	14.7	3	R,I	13.5	3	R,F	9.4
4	A,F	13.8	4	R,I	12.5	4	A,F	10.7	4	R,M	11.2	4	A,F	9.4
5	R,M	8.6	5	R,M	8.9	5	A,M	8.0	5	A,F	6.7	4	R,I	7.8
6	A,M	1.7	6	A,M	8.0	6	R,I	1.3	6	A,M	5.6	5	R,M	4.7

Symbol Key A = All COMRATS
 R = Conventional RIK/COMRATS
 F = Fixed Meal Pricing
 I = Item Pricing (A La Carte)
 M = Meal Type Pricing

This latter view can be corroborated by considering the results on an issue by issue basis as presented in Table 3. As is indicated in this table prior to CASH/A La Carte, RIK patrons were split on Fixed Meal Pricing versus Item Pricing while COMRAT customers, both married and single, marginally preferred item pricing. After CASH/A La Carte had been implemented, the preference for item pricing for all three groups was overwhelming. Similarly, prior to CASH/A La Carte, RIK's preferred the conventional RIK/COMRATS system while the COMRATS customers preferred all COMRATS, and after CASH/A La Carte the preference for all COMRATS by all three groups was overwhelming. As we have mentioned previously, apprehension about being on COMRATS by RIK patrons probably caused the preference for the conventional RIK/COMRAT system before CASH/A La Carte, while experience with the system and the added income after CASH/A La Carte reversed the preference evaluation of the two allowance policies by these former RIK customers.

When asked to rate the Alameda dining facility in comparison to other military dining halls within their experience, all three status groups generally agreed prior to CASH/A La Carte that it was "no better or worse" than any other, a reasonably neutral response. Asked the same question after CASH/A La Carte had been in operation for 3 months, the mean response of all three status groups was that Alameda was "slightly better" than the other facilities, a small but significant (14) and therefore notable improvement. Given this consumer endorsement of the system changes as a whole (shown in Figure 1), the problem is to define those specific changes most particularly responsible for the improved rating of the facility.

C. Dining Environment

As mentioned earlier, there was some concern that the implementation of the CASH/A La Carte system would become confounded with the extensive renovations and physical changes in the dining facility that were completed only three weeks prior to the CASH/A La Carte conversion, both changes perhaps influencing consumer opinion concurrently in an interactive way that might defy partialling apart. Such a confounding apparently did not occur, however, since there were no significant differences between the Pre- and Post-CASH/A La Carte samples, on the average, in their collective opinion of such features as "general dining facility environment", "monotony of same facility", "service by dining facility personnel", "desirable eating companions", "degree of military atmosphere present", "hours of operation", and "convenience of location", although among the three status groups there were significant differences in opinion over some of these features which remained relatively constant from Pre- to Post-CASH/A La Carte sampling. For example, the M-COMRATS group found the "convenience of location" to be slightly less good than the two unmarried groups (15), probably because the M-COMRATS people tend to live off base more, whereas the RIKs found the "hours of operation" to be worse than the two COMRATS groups (16), but again, these differences among groups existed prior to the CASH/A La Carte system and simply continued after its implementation. Similarly, there were no significant changes of opinion either among status groups or

TABLE 3
Issue by Issue Results of the
"Alternative Ration System Survey" (in %)

	Before CASH/A LaCarte			After CASH/A La Carte			ALL
	RIK	COM-M	COM-S	RIK	COM-M	COM-S	
All COMRATS	43.1	60.7	64.8	65.3	59.6	78.1	66.7
Conventional RIK/ COMRATS	56.9	39.3	35.2	34.7	40.4	21.9	33.3
Fixed Meal Pricing	44.8	38.4	36.3	25.3	22.5	18.8	22.4
Item Pricing (A La Carte)	44.8	44.6	39.6	65.3	60.7	60.9	62.3
Meal Type Pricing	10.3	17.0	24.2	9.3	16.9	20.3	15.4

Percentages may not total 100% due to rounding.

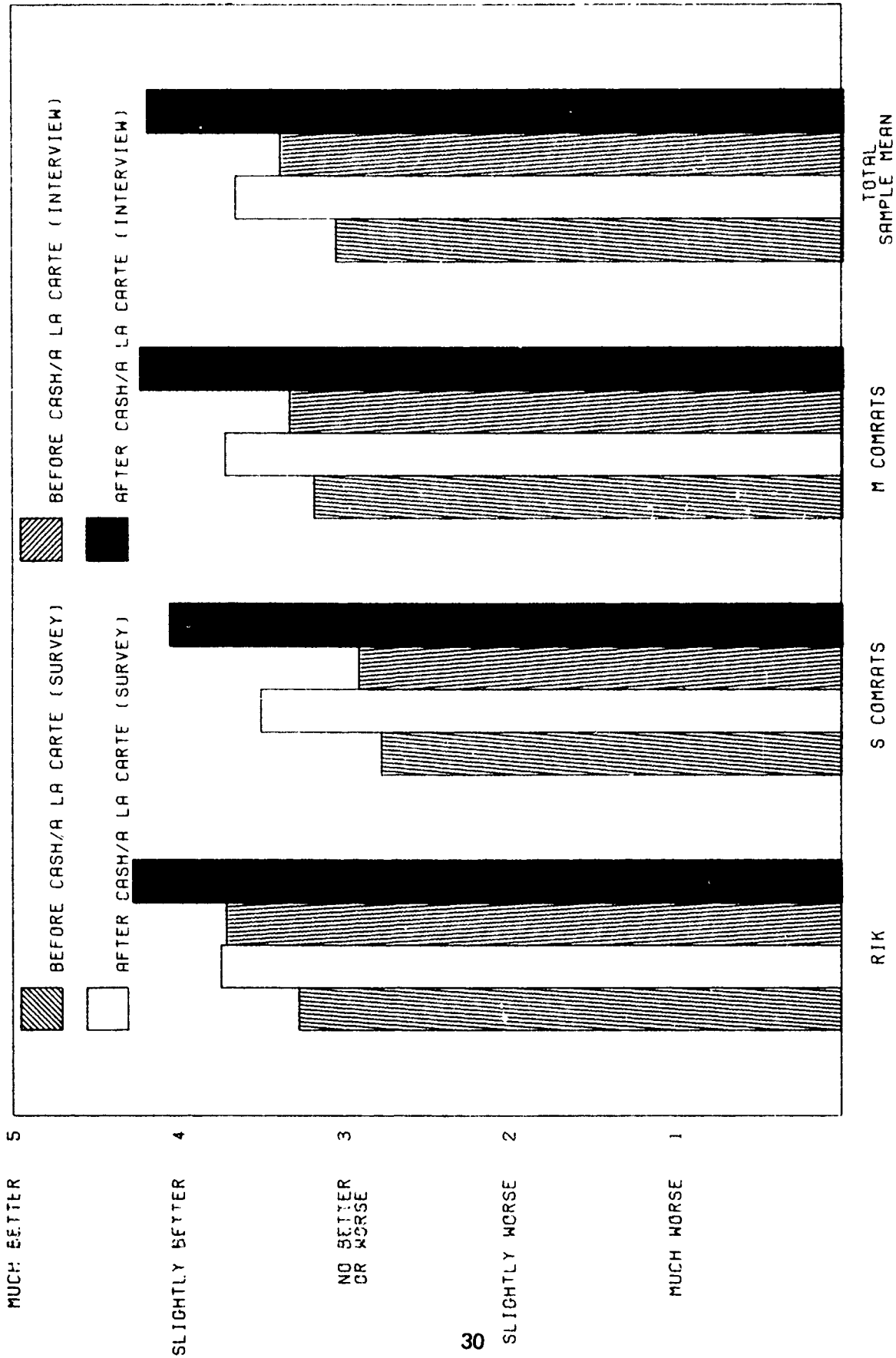


FIGURE 1: MEAN RATING OF THE ALAMEDA DINING HALL IN COMPARISON TO OTHER MILITARY DINING HALLS FOR THE THREE STATUS GROUPS BEFORE AND AFTER CASH/A LA CARTE

between Pre and Post-CASH/A La Carte samples on a host of relatively minor, though not unimportant, issues concerning the eating environment, for example, cleanliness of kitchen area, serving counters, dispensing devices, silverware, trays, dishes and glasses, tables and chairs, floors; pleasantness of interior and exterior appearance and of view, roominess, colorfulness, crowdedness, proper lighting, level of noise, number of safety hazards, proper temperature, stuffiness, presence of odors, presence of silverware and proper condiments, table and tray size, tendency to run out of items, proximity to washrooms, etc

In fact, the only problem created by CASH/A La Carte was an apparent increase in waiting time in the food service line from Pre- to Post-CASH/A La Carte, as indexed by a significant decline (17) in the mean rating for "speed of service or lines" from near neutral toward "moderately bad", particularly for the younger, and presumably more impatient, RIK and S-COMRATS groups (see Figure 2). This finding of longer perceived waiting time as reported by respondents is corroborated by another section of the survey in which both RIK's (18) and S-COMRATS' (19) cited "speed of service or lines" as a "major reason for nonattendance" at the dining hall significantly more often after CASH/A La Carte than they did prior to CASH/A La Carte. When actually asked to estimate the average waiting time in the serving line, the mean response increased quite significantly (20) from 4.50 minutes before CASH/A La Carte to 6.87 minutes after CASH/A La Carte, averaged across groups (among which there were no significant differences). Part of the delay can be attributed to the increased item variety and therefore longer customer selection times as well as the necessity for cash register operation.

In connection with the dining environment, it seems worthy of note that both before and after CASH/A La Carte there was a substantial number of complaints about the presence of uniformed Masters At Arms (MAA's) within the dining hall. Prior to CASH/A La Carte (February 1976), 14% of the RIKs, 32% of the S-COMRATS, and 3% of the M-COMRATS groups interviewed mentioned the presence of the uniformed MAA's as one of their primary reasons for non-attendance at the dining facility. Following implementation of CASH/A La Carte, the number of interviewees citing MAA's as a major deterrent to attendance increased for two of the groups to 21% for RIK's and 13% for M-COMRATS and remained constant at 32% for the S-COMRATS group. Aside from the general negative effect on dining hall attendance that the presence of uniformed MAA's apparently does have, it should also be noted that the incidence of complaints reported did increase slightly, though not significantly, from Pre- to Post-CASH/A La Carte measures, probably due to the greater numbers of MAA's assigned to the dining hall during the CASH/A La Carte test and the increased enforcement by these MAA's of dress and grooming regulations.

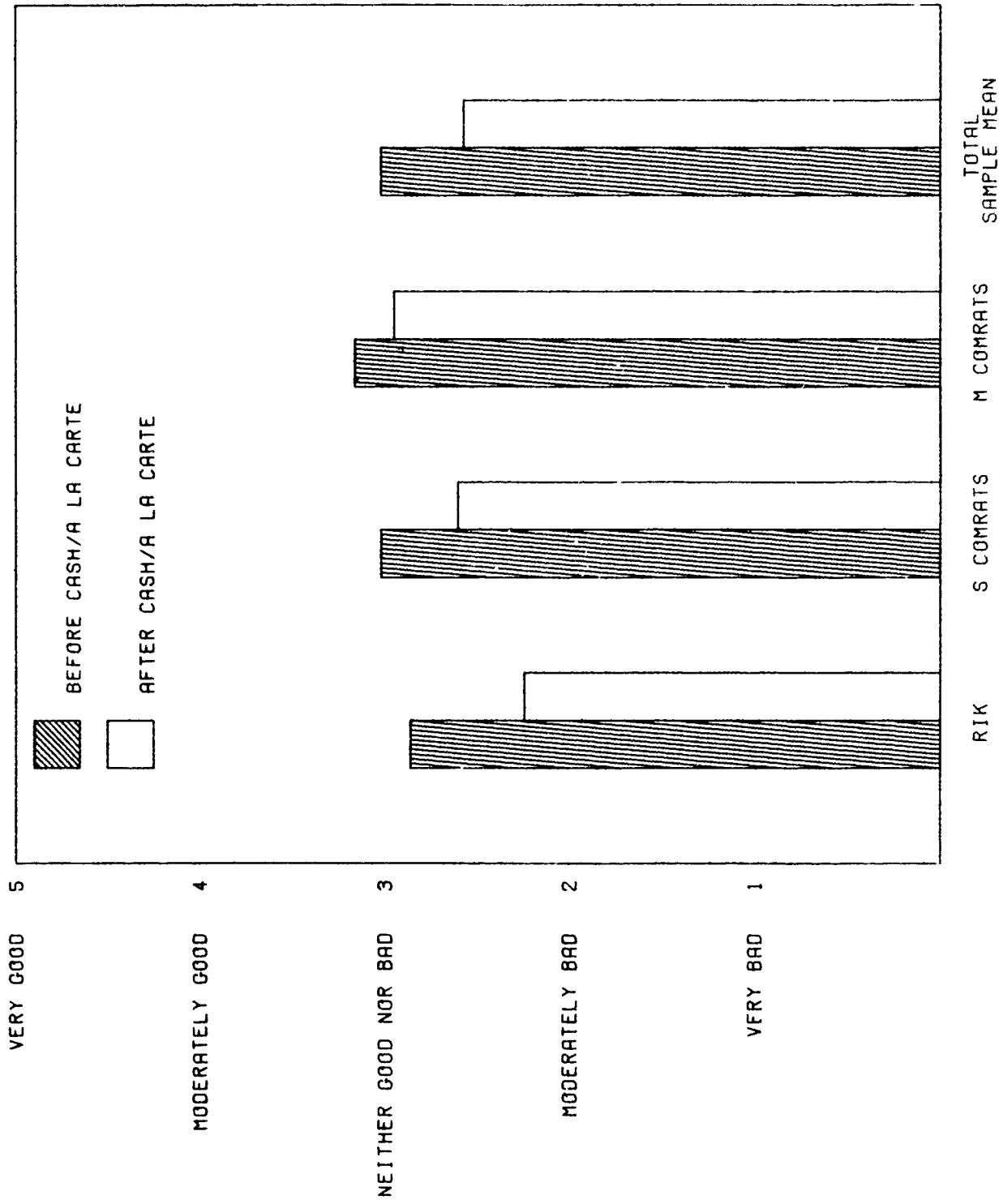


FIGURE 2: MEAN RATINGS OF SERVICE OR LINES IN THE ALAMEDA DINING HALL FOR THE THREE STATUS GROUPS BEFORE AND AFTER CASH/A LA CART

D. Food Features

Given the significantly more favorable rating of the dining hall after CASH/A La Carte than before, unaccompanied by any positive changes in attitude toward the dining environment, and, if anything, contradicted by the negative change in perceived waiting time, the only remaining component of the food service system that could be responsible for the improvement in rating is the food itself, and that certainly seems to be the case. Figures 3, 4, and 5 show the mean ratings of respondents broken down by status group on two attributes of food known to be significantly important to servicemen (Branch, Meiselman, & Symington, 1974)⁵ food quality and food variety, with variety of the regular meal distinguished from that of the short order meal. Consumer opinion was significantly higher after CASH/A La Carte than before for all three food attributes--food quality (21), regular meal variety (22), and short-order meal variety (23). Another question that attempts to define "food quality" in more specific, operationally definable terms showed a significant decline in the tendency of at least one (and sometimes two) ration status groups to attach such negative attributes as "tasteless or bland (24 for RIK, 25 for S-COMRATS)", "raw (26 for RIK)", "fatty (27 for RIK, 28 for S-COMRATS)", "full of gristle (29 for M-COMRATS)", and "stale (30 for RIK)" to the food typically served in the dining hall. When asked during the interview to compare the turnover of selections from day to day during the course of a month at the Alameda facility to others within their experience, the Pre-CASH/A La Carte sample responded, on the average, that it was "neither better nor worse" than the others, whereas the Post-CASH/A La Carte sample felt that it was "slightly better" on the average, a significant improvement (31).

Interestingly enough, there were no significant or even systematic differences in opinion concerning two rather obviously outstanding variables that were most certainly affected by CASH/A La Carte--food quantity and its expense--either among the ration status groups or between the Pre- and Post-CASH/A La Carte measures. All three groups seemed to agree that the quantity of food served in the dining halls was "neither bad nor good" and that the expense involved was "moderately good", both before and after CASH/A La Carte.

CONCLUSIONS

The conclusions that may be drawn from these statistics are:

1. The two primary features of the CASH/A La Carte system--an all COMRATS policy and item pricing--were preferred to the alternative choices of a mixed COMRATS/RIK policy and flat-rate meal or "special" meal pricing by a majority of customers surveyed.

⁵Branch, L. G., Meiselman, H. L., Symington, L. E., "A Consumer Evaluation of Air Force Food Service", NARADCOM, TR 75-22-FSL.

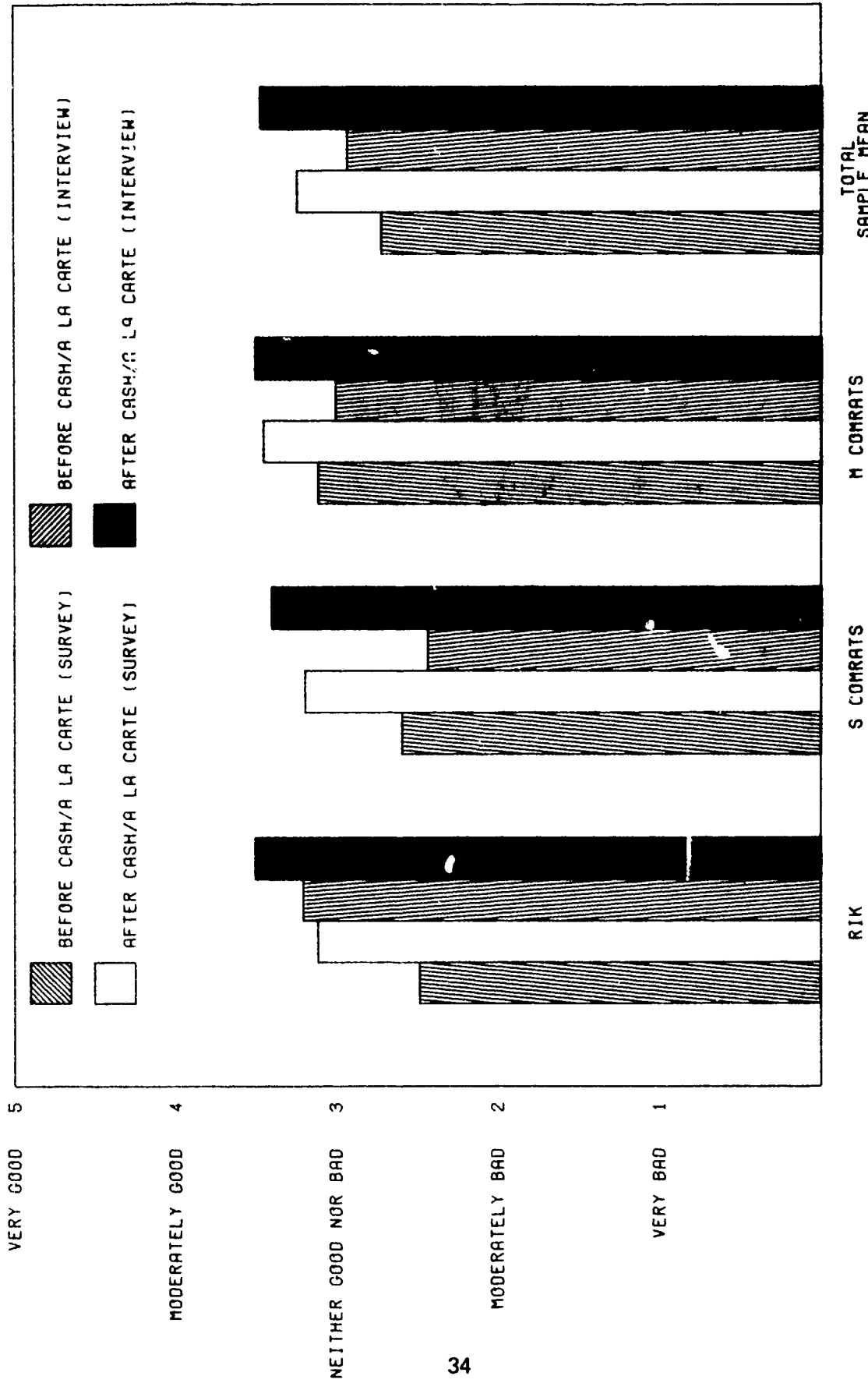


FIGURE 3: MEAN RATINGS OF FOOD QUALITY AT MRS ALAMEDA BY THE THREE RATION STATUS GROUPS BEFORE AND AFTER CASH/A LA CARTE

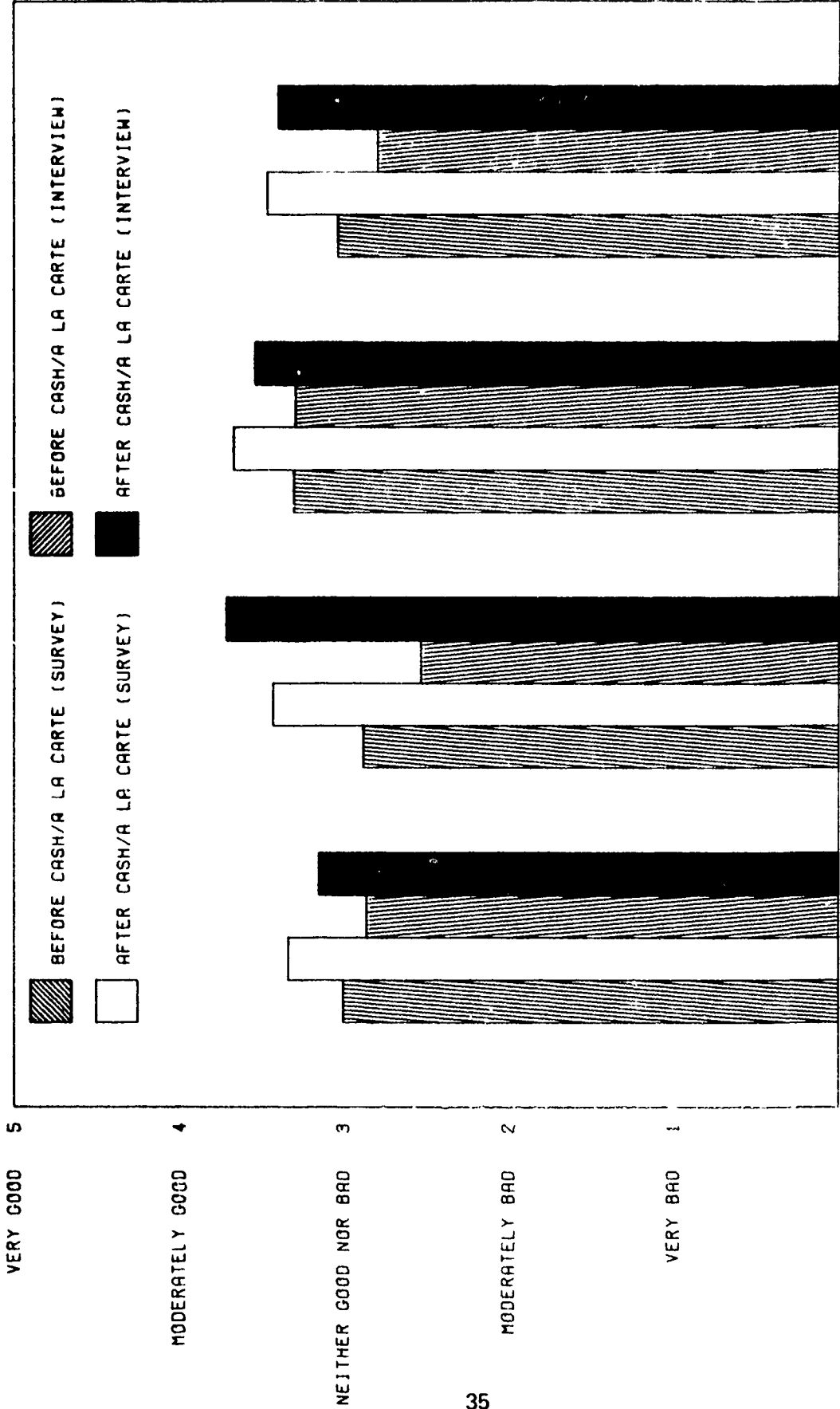


FIGURE 4: MEAN RATINGS OF REGULAR MEAL VARIETY AT NAS ALAMEDA BY THE THREE RATION STATUS GROUPS BEFORE AND AFTER CASH/A LA CARTE

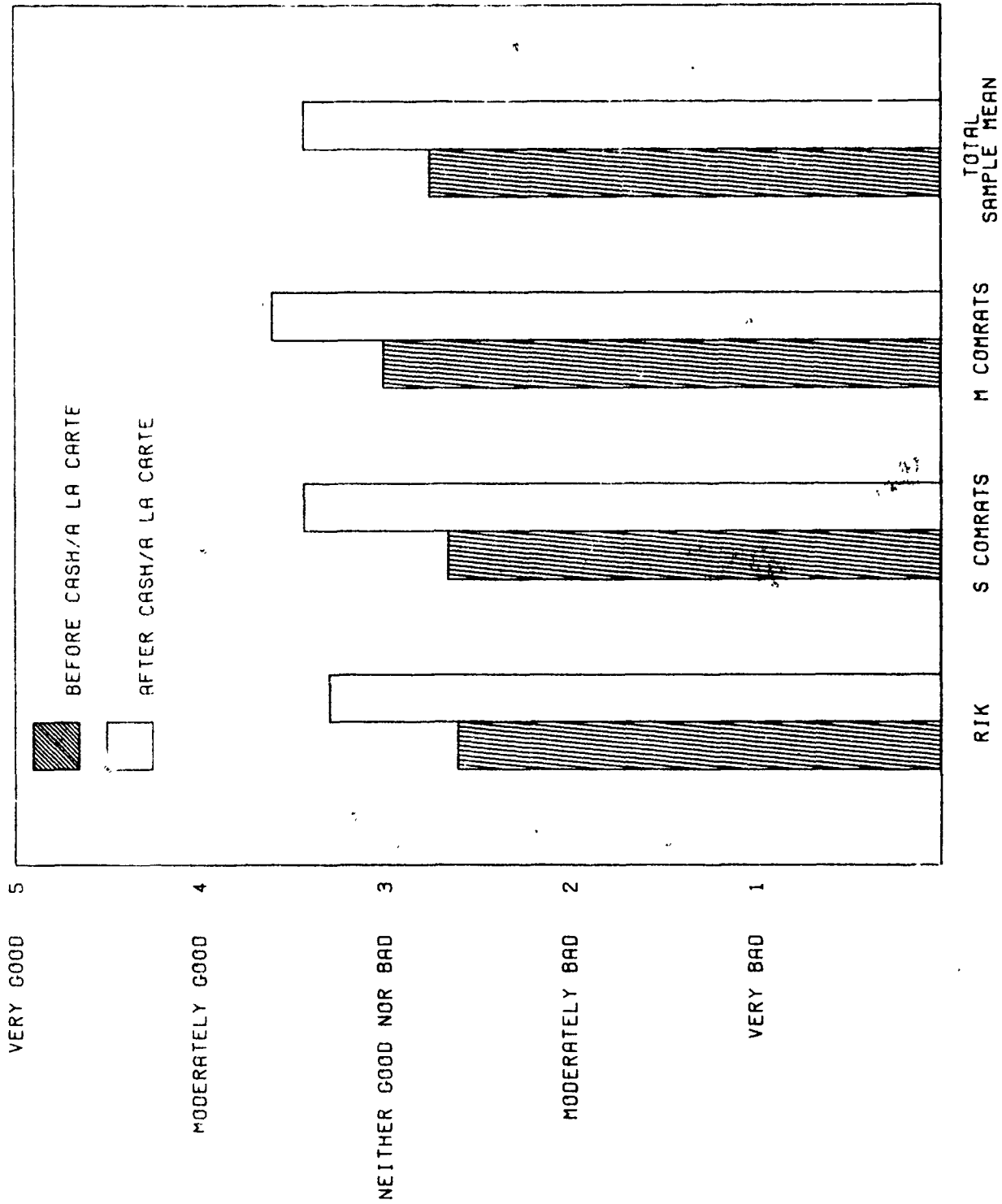


FIGURE 5: MEAN RATINGS OF SHORT-ORDER VARIETY AT NAS ALAMEDA BY THE THREE RATION STATUS GROUPS BEFORE AND AFTER CASH/A LA CARTE

2. Enlisted consumer attitudes toward the Alameda dining facility were significantly more favorable after the CASH/A La Carte system had been implemented than they were prior to CASH/A La Carte

3. Improved food quality and greater meal variety, both for "regular" and "short-order" type meals appeared to be the most salient features of the food service system contributing to the positive change in consumer attitudes toward the facility.

4. The extensive physical renovations of the dining facility appeared to have relatively little impact upon the attitudes and/or opinions of the consumer, indicating either.

- a. that the consumers had indeed assimilated the new decor sufficiently during the three weeks prior to the pre-CASH/A La Carte attitude measures to include their feelings about it in that prior measure; or
- b. that the physical features of the dining environment are of relatively little importance to the consumer in comparison to the food features found to be most salient.

5. The only problem created by CASH/A La Carte was an apparent increase in waiting time in the food service line from pre- to post-CASH/A La Carte measures indexed by significantly more negative ratings from the post-CASH/A La Carte respondents than from the pre-CASH/A La Carte sample. The negative effect of increased waiting time was apparently more than offset by the positive effects of improved food quality and variety, however, since attitudes overall were more favorable in spite of the increased waiting time.

2. ATTENDANCE PATTERNS

The collection of attendance data was considered to be particularly important both for its implications with respect to the training base for Navy cooks as well as its direct relationship to system costs. Attendance data is also a secondary indication of consumer attitude toward the system. For analysis purposes, the enlisted population at NAS, Alameda was conceptualized as comprising three groups of primary interest and three groups of secondary interest. The three groups of primary interest were: (1) Navy personnel on RIK (rations in kind) and permanently stationed at NAS, Alameda in the three months prior to 1 March 1976, (2) married Navy persons on COMRATS and permanently stationed at NAS, Alameda prior to 1 March 1976, and (3) single Navy persons on COMRATS and permanently stationed at NAS, Alameda prior to 1 March 1976. These groups, therefore, had experienced the standard Navy food service system at Alameda after the facility had been redecorated, but before the new CASH/A La Carte system had been implemented. The three groups of secondary interest were: (1) Marine Corps personnel, (2) NAS, Alameda permanent party Navy personnel who came on board after 1 March 1976, (3) Aircraft Carrier USS Oriskany personnel who were subsisted in the dining hall from 15 April 1976 on while the ship was being decommissioned. All of these personnel were issued a plastic CASH/A La Carte Experiment ID Card, color coded for the group the individual was categorized in, with a four-digit ID number. An example of this card is shown below. In the period 1 March through 30 June 1976, as each



NAVY CASH A LA CARTE EXPERIMENT

1196

U.S. ARMY NATICK DEVELOPMENT CENTER
OPERATIONS RESEARCH/SYSTEMS ANALYSIS OFFICE

PLASTIC ID CARD

customer was processed through the register, an entry was made to the register reflecting his card color. In addition, during the month of June, card ID numbers were also recorded. This permitted the assessment of individual as well as average attendance rates. These 6 groups did not comprise the entire range of diners at the enlisted man's dining facility. Other diners, not having plastic CASH/A La Carte ID Cards, included: (1) drill reserves, transients, and newly arrived, impecunious personnel all having meal passes entitling them to subsist at government expense, (2) transients on COMRATS to whom the issue of plastic ID cards was an insurmountable problem, (3) military dependents and other civilian guests, (4) officers, and (5) civilian KP contractor personnel. These 5 categories were lumped into 3 categories when processed at the cash register: (1) "coupon" for personnel on Rations in Kind, (2) "no card" for enlisted personnel on COMRATS, but not possessing a plastic CASH/A La Carte ID card, and (3) "guests" for civilians and officers.

A prior feasibility study, conducted in FY 75 (which recommended that a prototype CASH/A La Carte System be tested at NAS, Alameda), addressed the question of attendance patterns at NAS, Alameda under the conventional combined RIK/COMRAT's System, although not to the same level of detail as the current analysis.⁶ The results, at that time, indicated an 8.52% overall attendance rate for all personnel authorized to subsist in the dining hall, including Navy Regular and USMC Personnel. Attendance rates for Regular Navy base personnel sample populations of RIK's, COMRAT single, and COMRAT married personnel indicated attendance rates of 22.95%, 5.66% and 1.02%, respectively. A comparison of these rates with June 1976 attendance rates for the CASH/A La Carte System, is presented in Table 4. It will be noted that the large decrease in former RIK attendance was, to a great extent, offset by increases in attendance by former COMRAT personnel. The result was a decrease of 8% to 9% in overall attendance. This was due, in large part, to the fact that RIK's were such a small percentage (12% to 13%) of total personnel. In a situation in which they formed a more significant percentage of the population, their large scale (68%) defection from the system could pose a serious threat to the existence of the enlisted dining facility as a training base for cooks.

The increase for COMRAT-married personnel was made more dramatic by the fact that a small change in a small number results in a large percentage change. The point to be emphasized is that the attendance rate for these customers was still very low. While constraints of lifestyle, that is dining mainly with family, set a limit on the attendance rate for married personnel, considerable room for further increases is available. The attendance rates under CASH/A La Carte for former COMRAT-single and former RIK personnel were not statistically different. This is a result that could have been predicated as the two groups were of approximately the same age and have similar lifestyles. The internal consistency of these figures is attested to by the fact that the decrease in overall attendance was approximately equal to the decrease in attendance for the combination of the three Navy Regular groups.

⁶Rogozenski, Deacon, Siebold, and Symington, "Evaluation of A Cash Collection System Navy Ashore Food Service Operations", TR 76-10, OR/SA, June 1975.

TABLE 4.

A Comparison of Attendance Rates at NAS, Alameda

	Conventional System	CASH/A La Carte	Percentage Increase (Decrease)
Overall Attendance	8.52% ^a	7.80% ^b	(8.45%)
Regular Navy			
RIK	22.95% ^c	7.30% ^d	(68.19%)
COMRAT-Total	2.15% ^e	3.90% ^d	80.56%
COMRAT-Married	1.02% ^c	2.72% ^d	166.77%
COMRAT-Single	5.82% ^c	7.59% ^d	30.41%
RIK & COMRAT- Total	4.75% ^f	4.32% ^d	(9.05%)

^a Jan - Feb 1975 Data for Regular Navy and USMC personnel authorized to subsist in the Enlisted Dining Facility.

^b June 1976 Data for Regular Navy (including USS Oriskany personnel) and USMC personnel authorized to subsist in the Enlisted Dining facility

^c Data for a sample of 47 RIK, 59 COMRAT-Single, and 54 COMRAT-Married Regular Navy Base personnel over a 17 day period in March 1975.

^d Data for a sample of 186 RIK, 319 COMRAT-Single, and 998 COMRAT-Married Regular Navy Base personnel over a 30 day period in June 1976.

^e Data normalized for comparison purposes using proportions of married and single COMRAT Regular Navy Base personnel holding in June 1976 (75.8% and 24.2%, respectively).

^f Data normalized for comparison purposes using proportions of RIK, COMRAT-Single and COMRAT-Married Regular Navy Base personnel holding in June 1976 (12.4%, 21.2% and 66.4%, respectively).

Prior to the experiment, conjectures had been made as to the changes in attendance rates that might be expected for RIK and COMRAT personnel. The actual changes agreed with the projections in direction, but were somewhat more dramatic in magnitude. However, the projection that the two effects would effectively cancel, resulting in no significant reduction in overall attendance, was fulfilled.

The shifts in attendance rates with time from March 1976 through June 1976 by meal and for all meals combined are presented in Figures 6 through 9. The trend for Regular Navy RIK's demonstrated a consistent decline, while the Marines and Carrier Personnel attendance trends were generally in an increasing mode. The trends for Navy Regular COMRAT's single and married personnel seemed to fluctuate in a less consistent manner and, consequently, so did the combined COMRAT and COMRAT/RIK statistics. The decline in RIK attendance, however, extrapolated to a level consistent with COMRAT single personnel. The figures were particularly close for lunch and dinner meals.

Figures 10 through 16 present histograms of June 1976 attendance rates by meal and for all meals combined so that a visual assessment can be made of this fluctuation of individual behavior about the population averages, of which some have previously been quoted. It will be noted that there were large variations in attendance within each population group. Again, RIK and COMRAT single populations exhibited similar behavior. Some very significant statistics can be derived from these distributions. Table 5 presents a comparison between the conventional⁷ and the CASH/A La Carte system for the percentage of the three populations of interest (Navy RIK, COMRAT-Single, and COMRAT-Married) eating zero meals and at least one meal per workday (i.e., 22 or more meals in 30 days). It will be noted that the percentage of former RIK's never attending the dining hall increased by 63.5% to a level (27.8%) not significantly different from the COMRAT-Single population (21.0%). Both COMRAT populations on the other hand experienced a decrease in the percentage of their members never attending the dining hall (59.3% in March 1975 to 21% in June 1976 for COMRAT-Single and 83.3% in March 1975 to 58.8% in June 1976 for COMRAT-Married personnel) as a result of the conversion to the A La Carte system. Similarly the percentage of RIK's attending at least one meal per workday in the dining hall decreased (by 80.4%) to the same level (9.6%) as the COMRAT-Single population, while both COMRAT populations experienced an increase in the percentage of their members attending at least one meal per workday (8.5% in March 1975 to 9.6% in June 1976 for COMRAT-Single and 0% in March 1975 to 2.4% in June 1976 for COMRAT-Married personnel). We may conclude therefore, that the decrease in attendance rates for former RIK personnel was due in part to a decrease in the number of meals attended and in part to their complete loss to the system, while the increase in attendance rates for COMRAT populations was due to both a gain in new customers as well as an increase in the number of meals attended by former patrons.

⁷ Rogozenski, Deacon, Siebold and Symington "Evaluation of a Cash Collection System for Navy Ashore Food Service Operations," NARADCOM, TR 76-10-OR/SA, 1975.

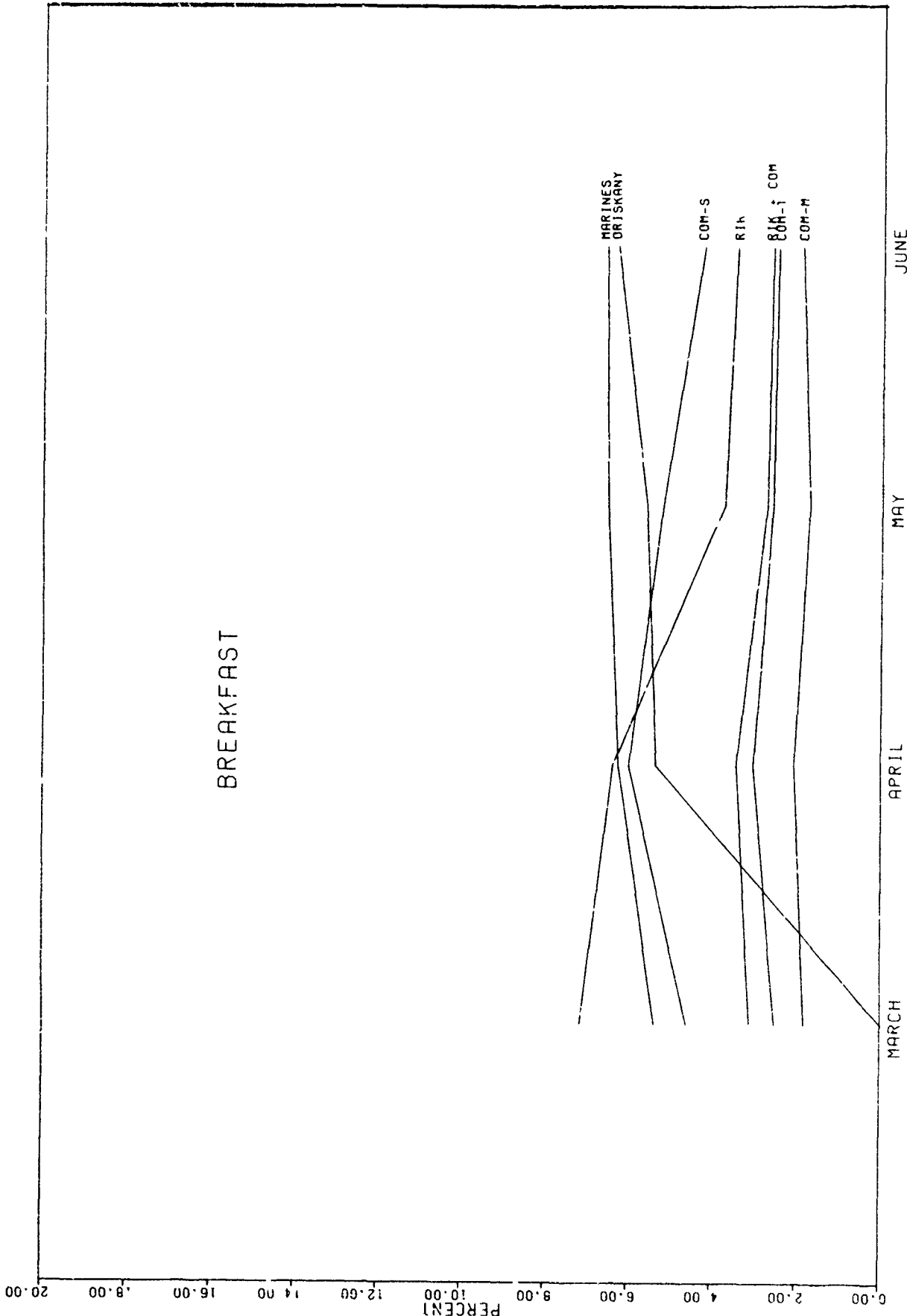


FIGURE 6: PLOT OF MONTHLY ATTENDANCE RATES AT BREAKFAST MEALS

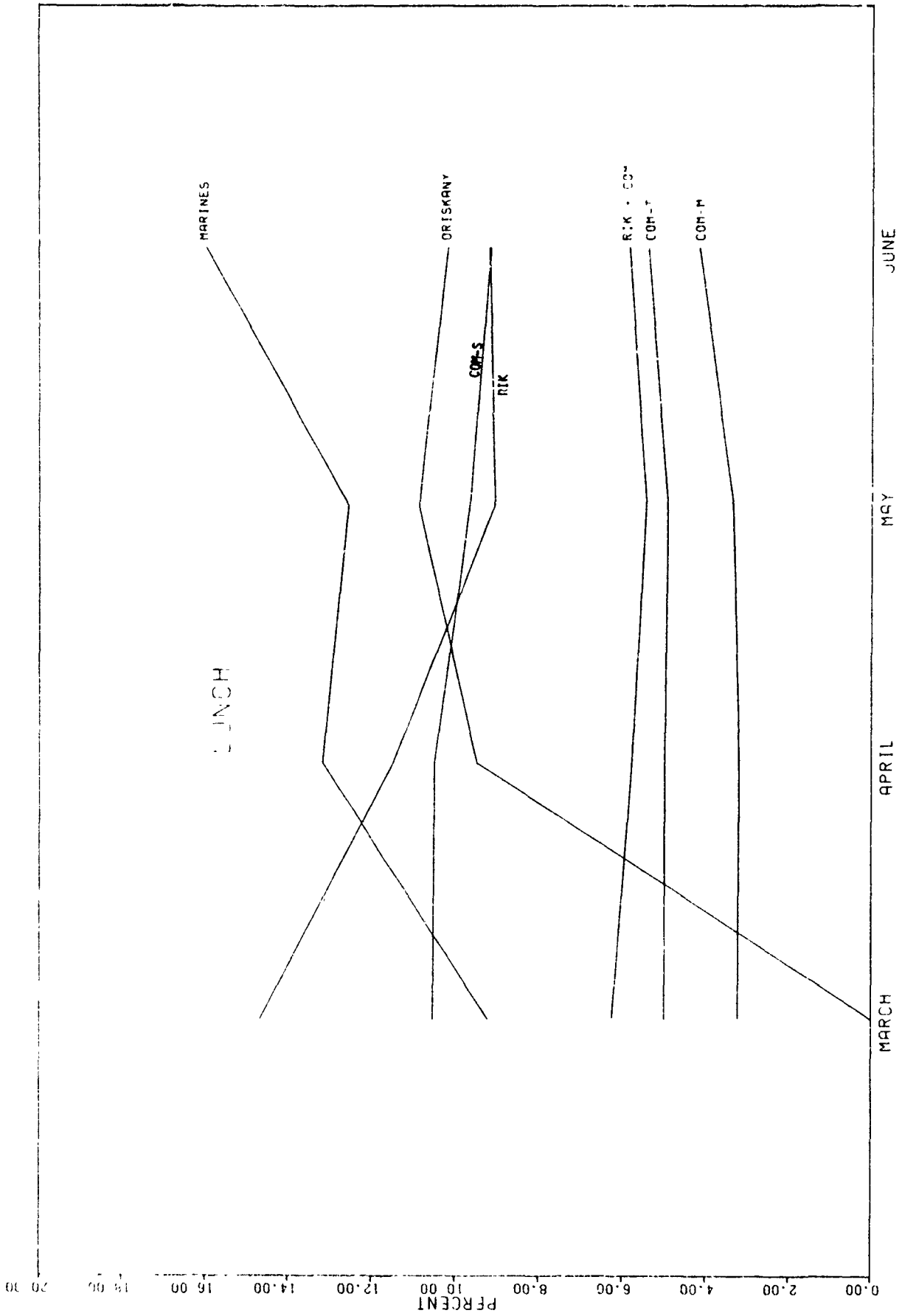


FIGURE 7: PLOT OF MONTHLY ATTENDANCE RATES AT LUNCH MEALS

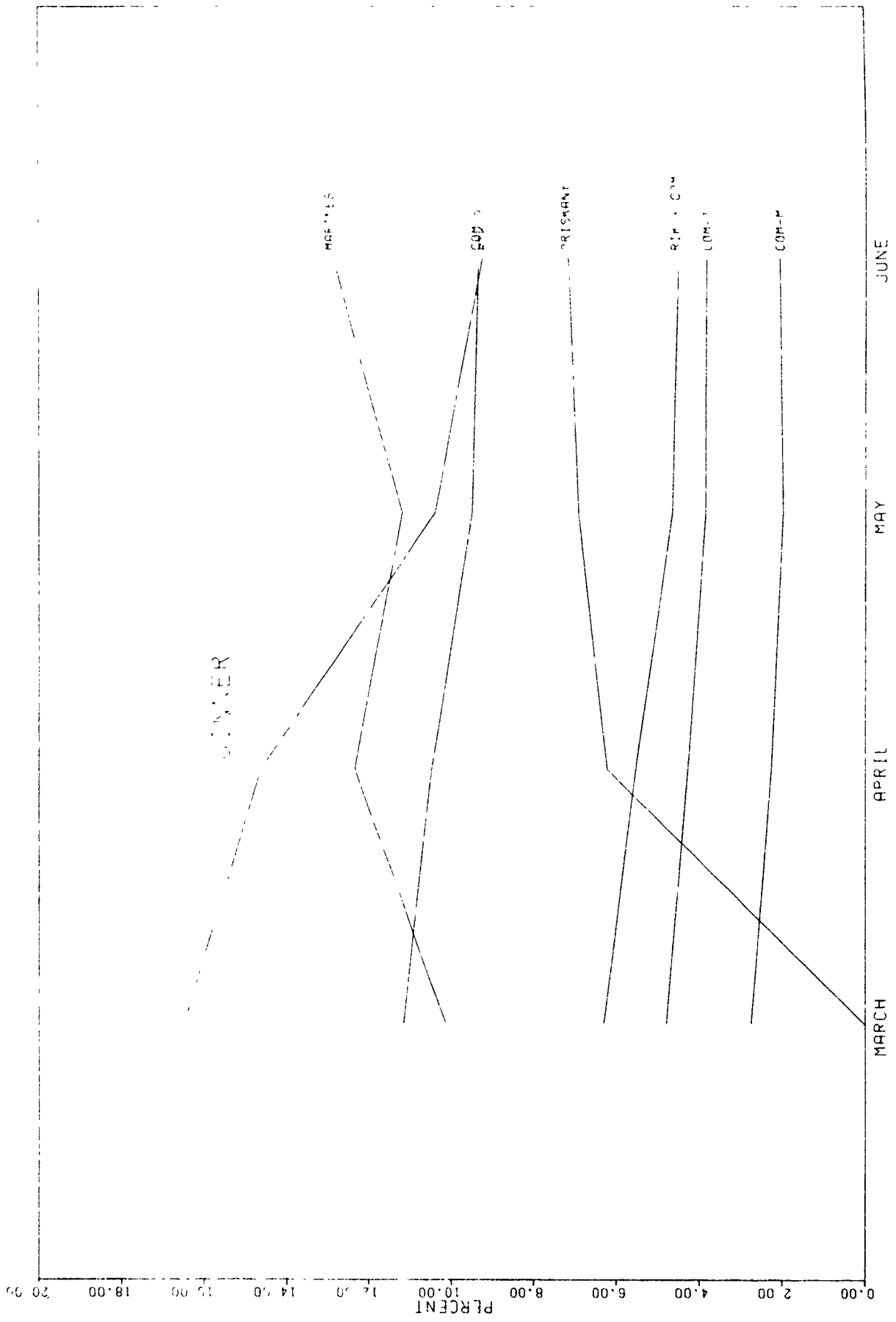


FIGURE 8: PLOT OF MONTHLY ATTENDANCE RATES AT DINNER MEALS

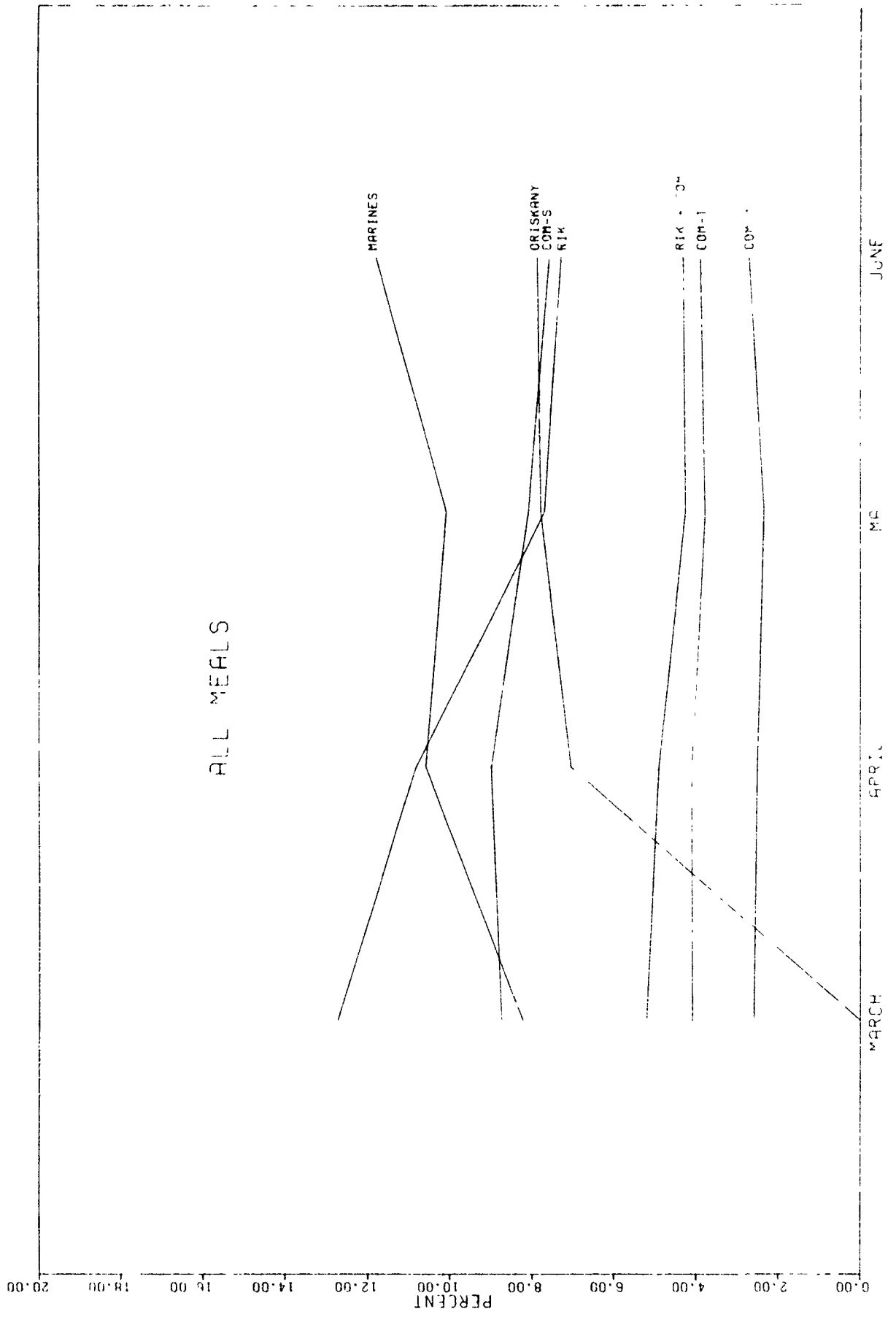


FIGURE 9. PLOT OF MONTHLY ATTENDANCE RATES AT ALL MEALS

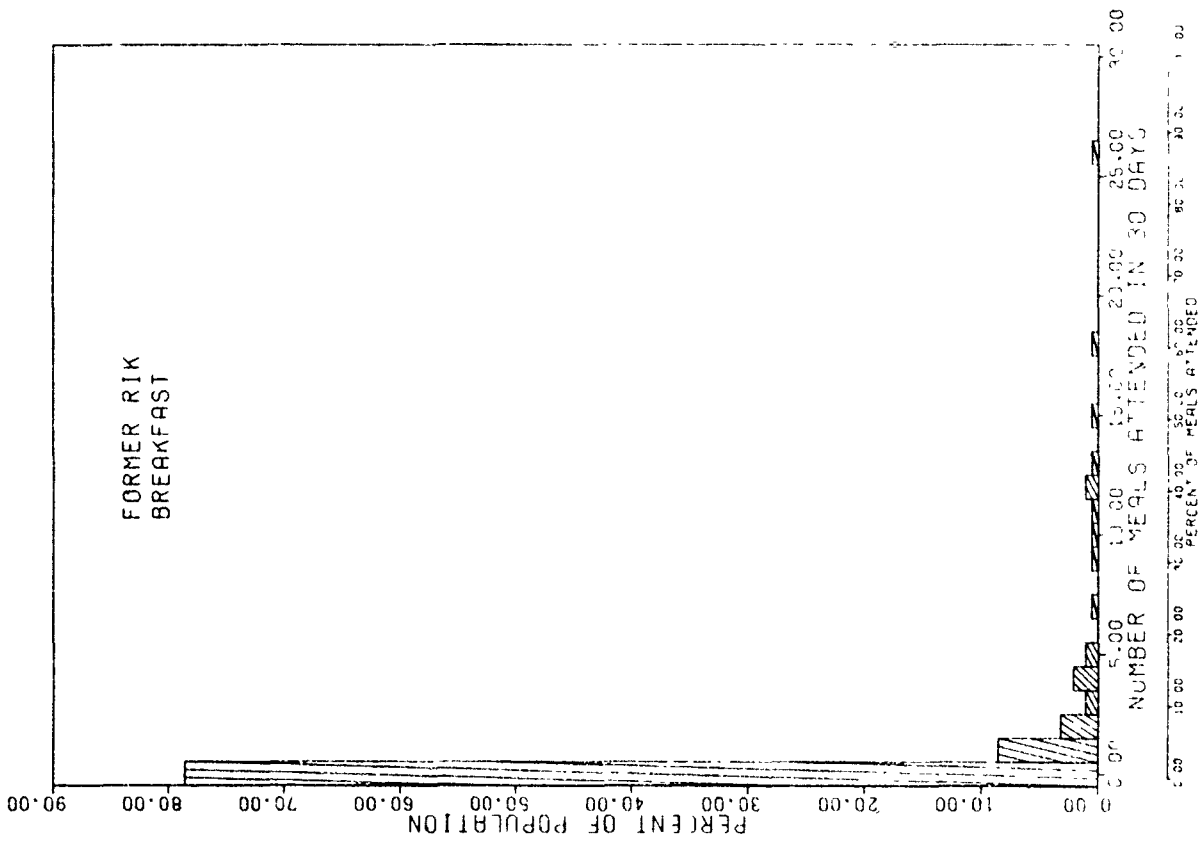
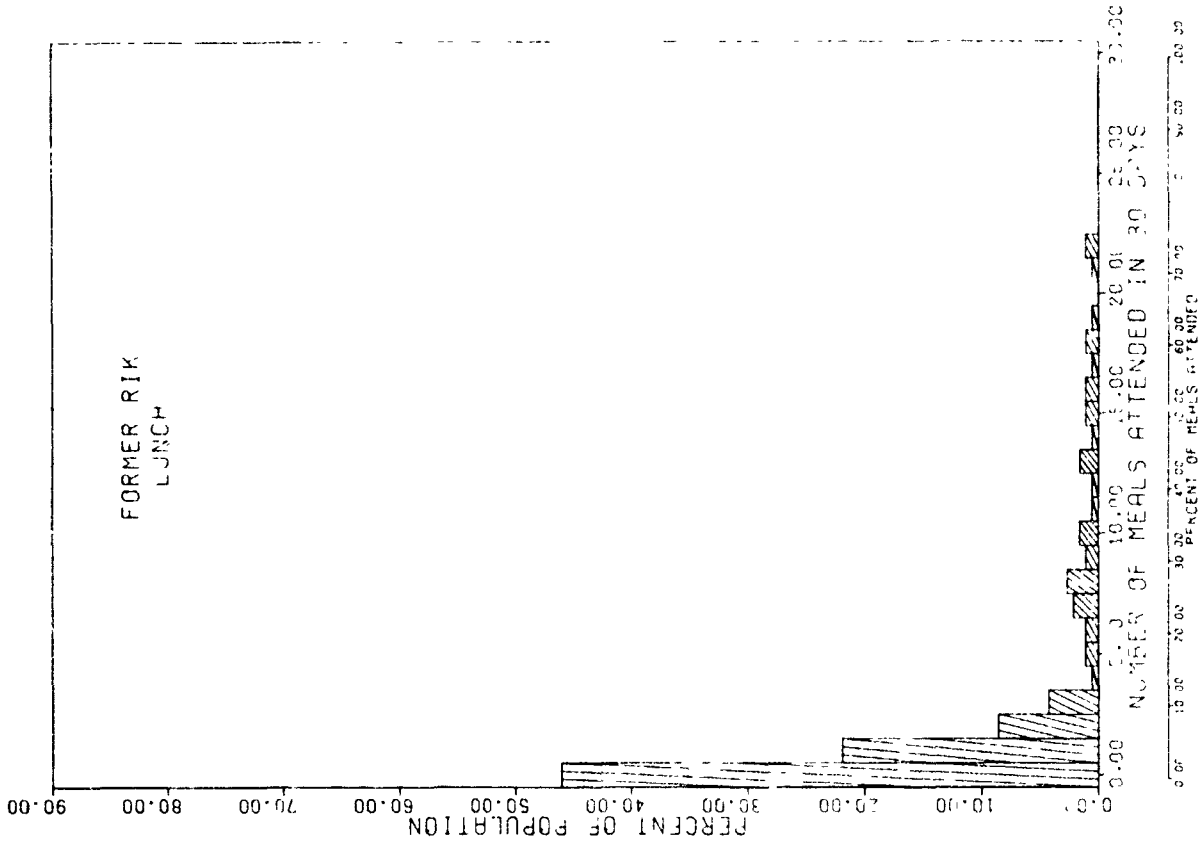


FIGURE 10 HISTOGRAMS OF ATTENDANCE BY MEAL - RIK CUSTOMERS

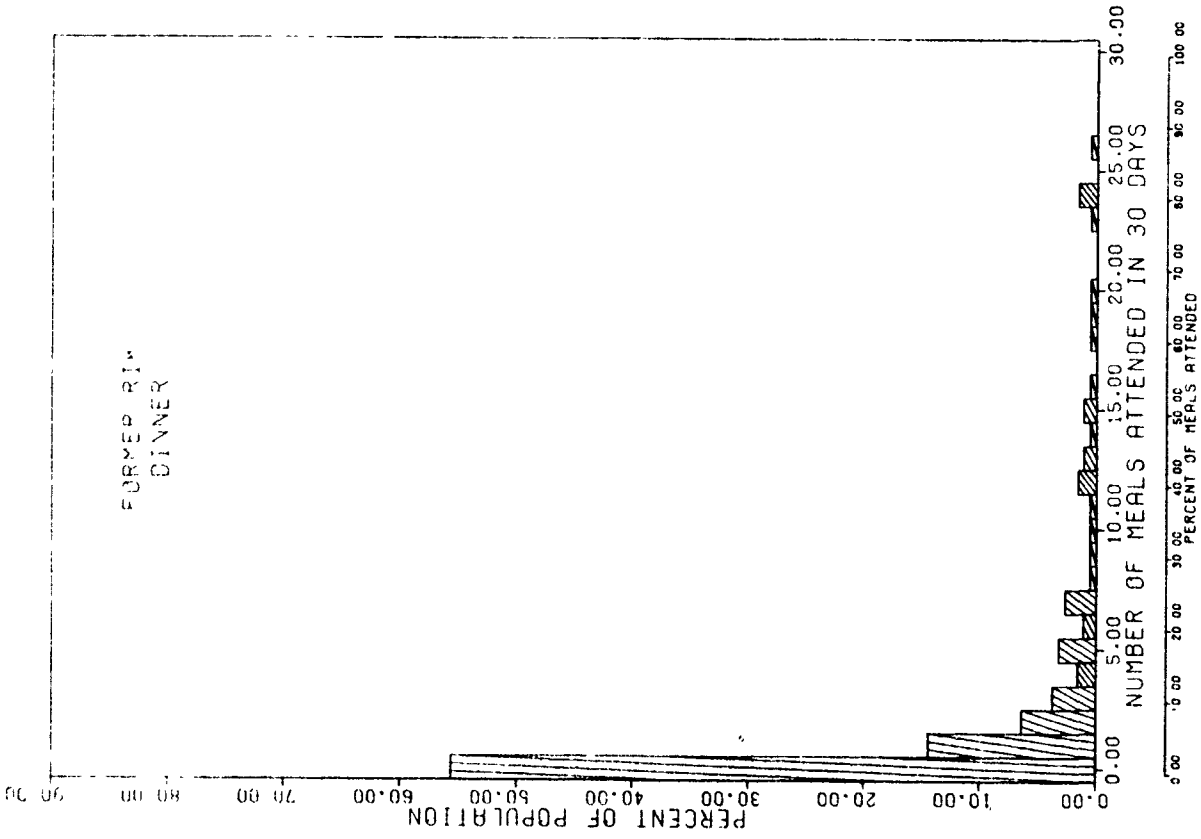
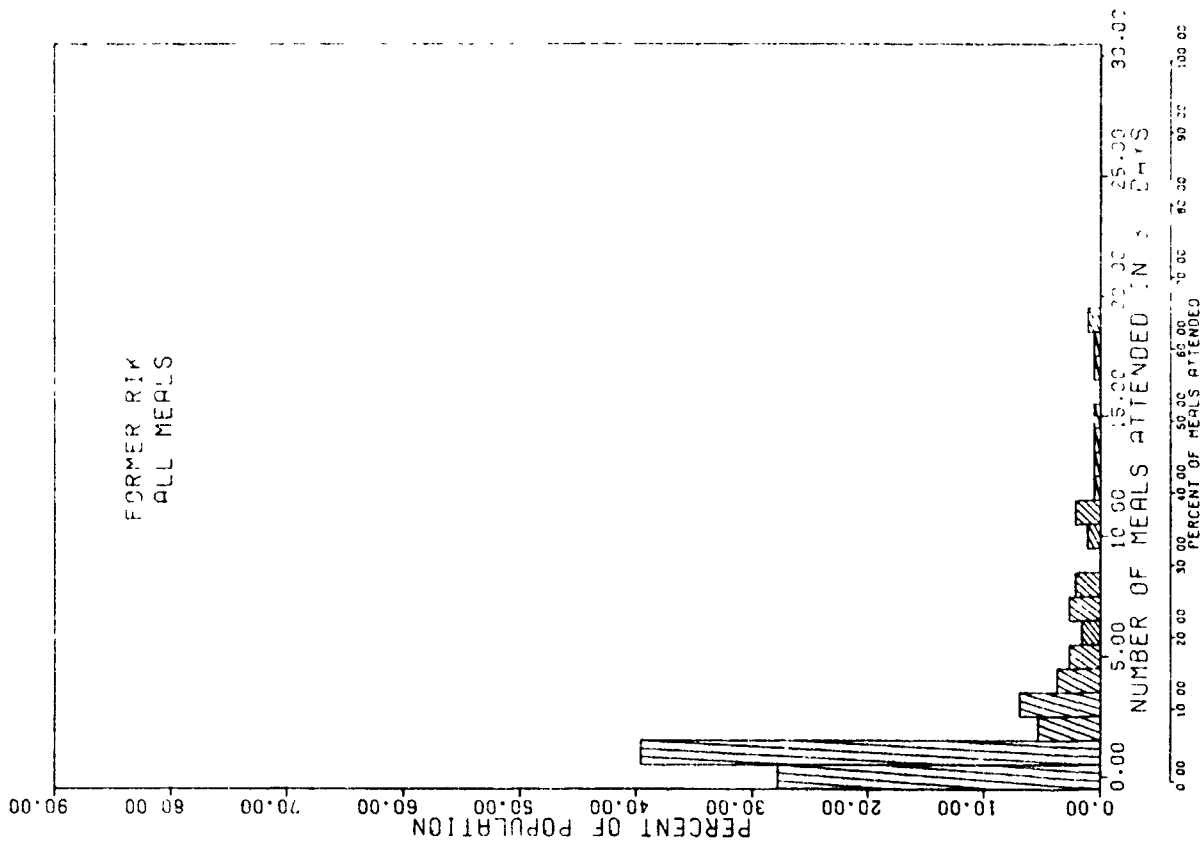


FIGURE 10: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - RIK CUSTOMERS

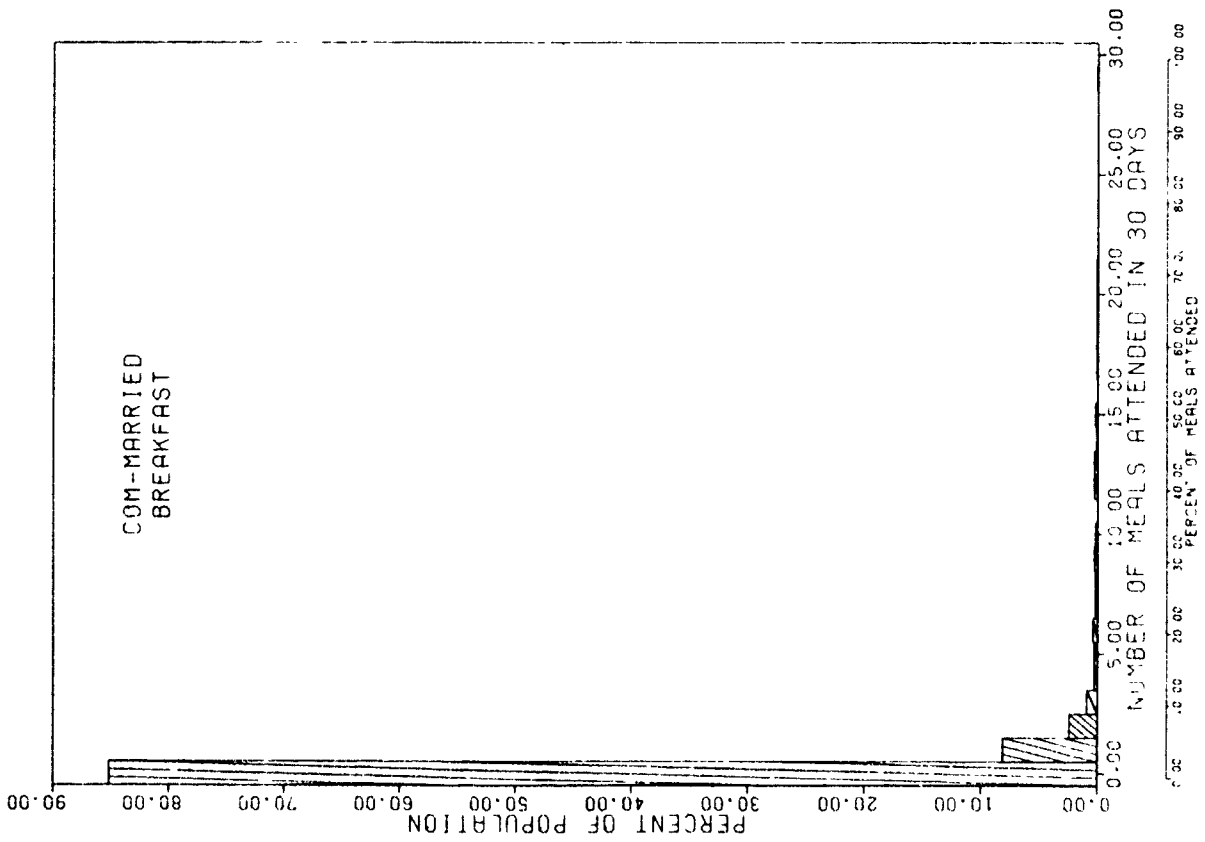
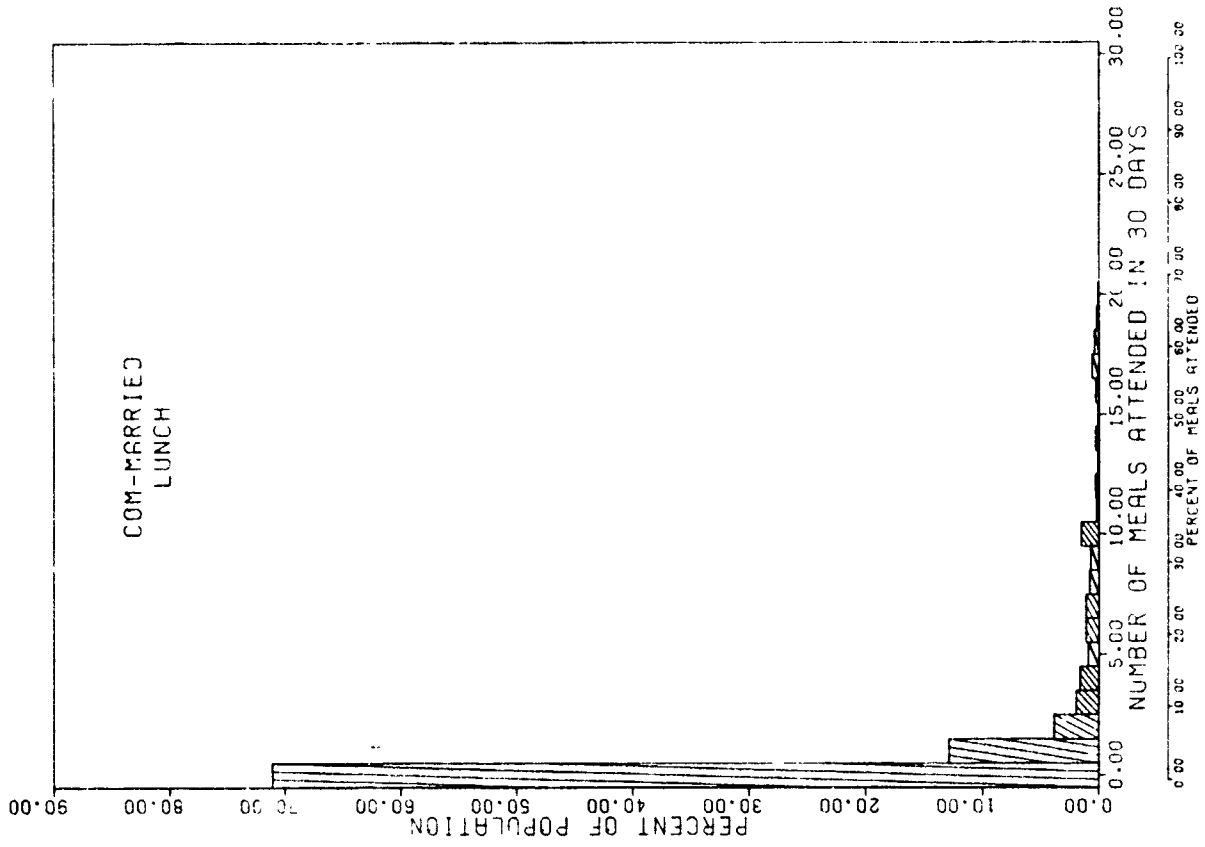


FIGURE 11: HISTOGRAMS OF ATTENDANCE BY MEAL - MARRIED COMRATS CUSTOMERS

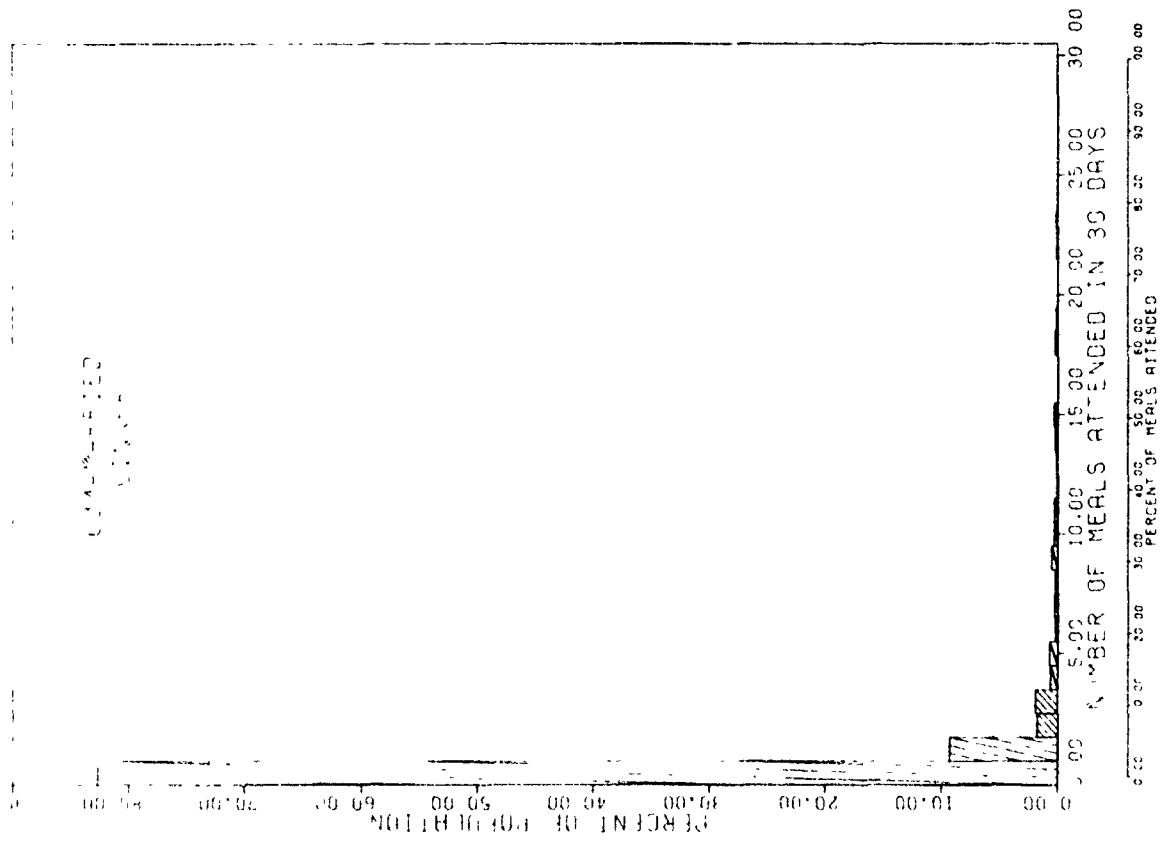
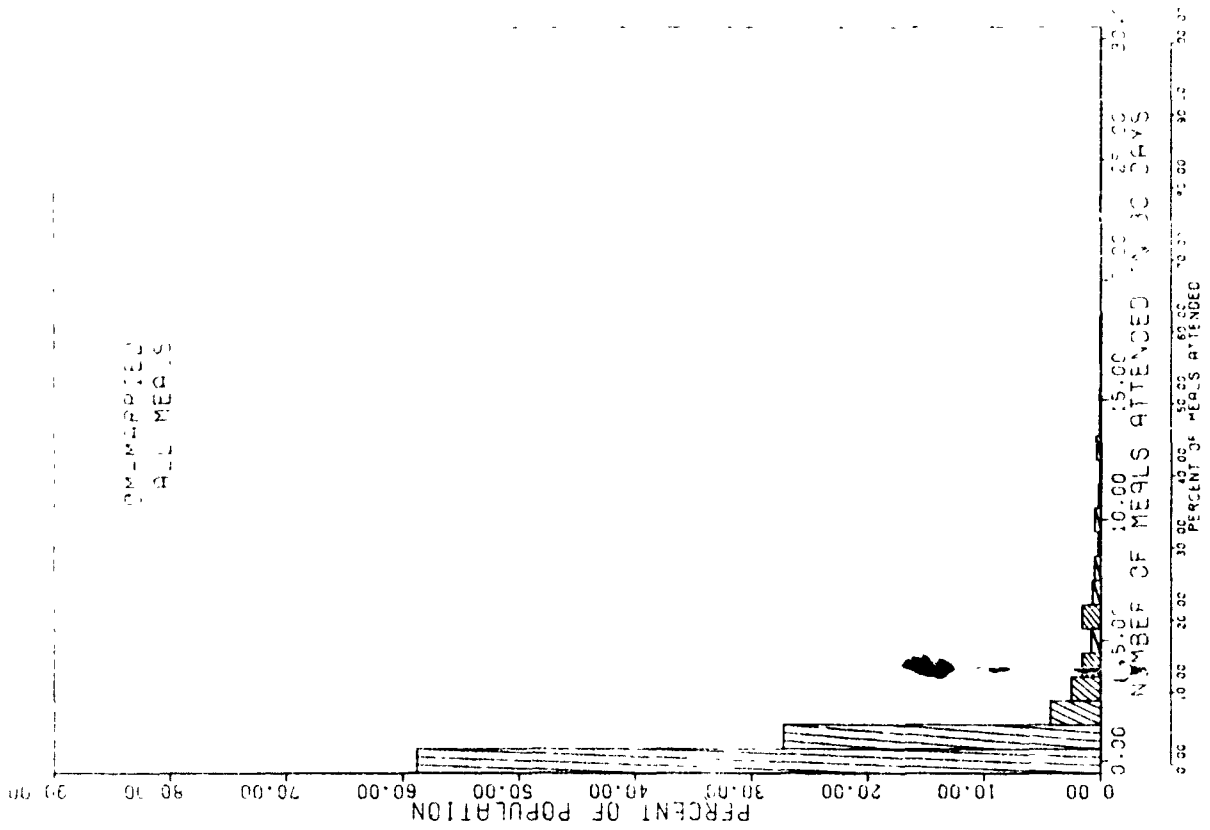


FIGURE 11: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - MARRIED COMRATS CUSTOMERS

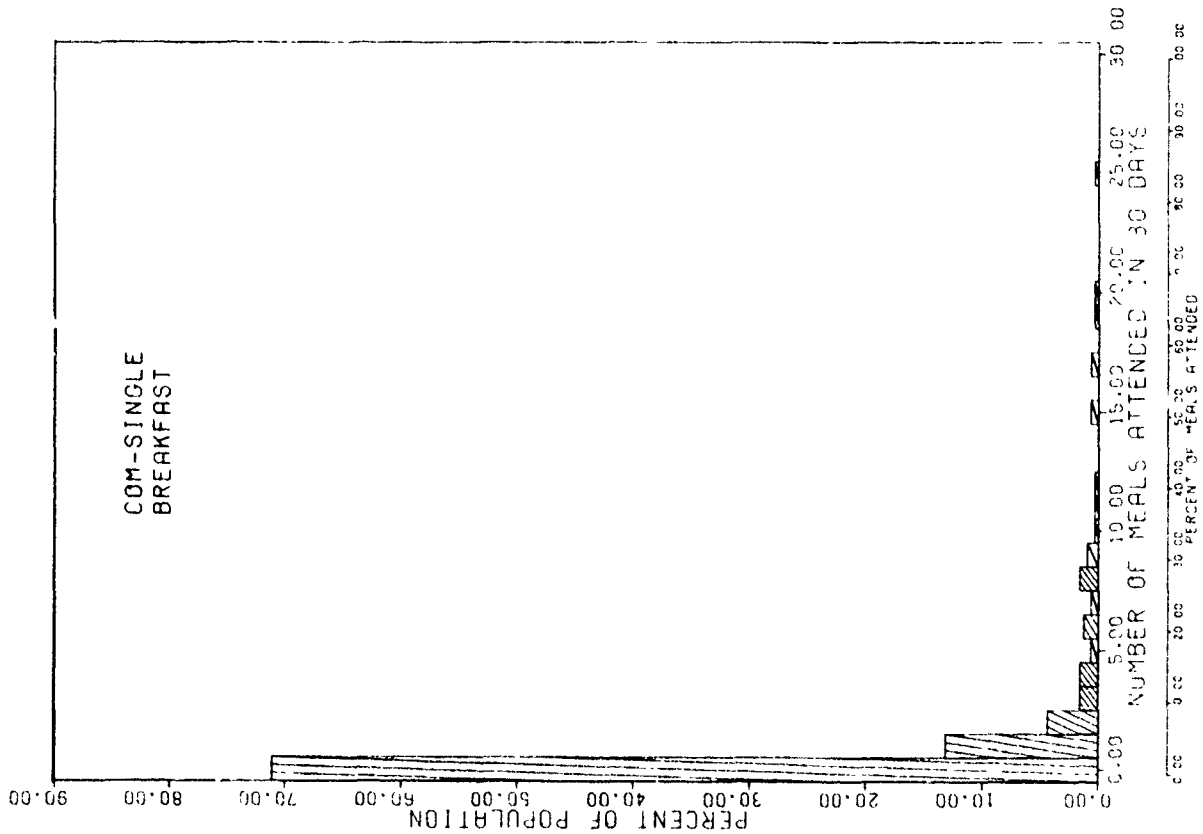
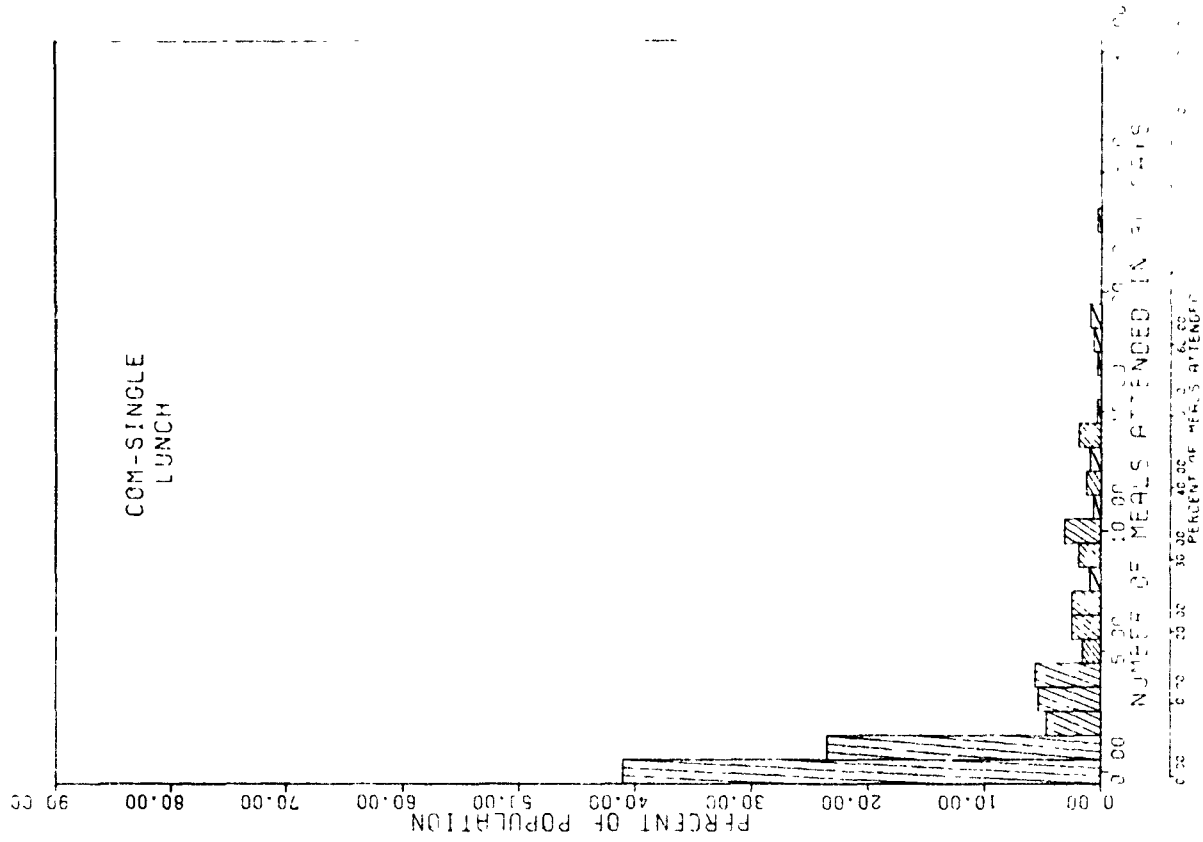


FIGURE 12. HISTOGRAMS OF ATTENDANCE BY MEAL - SINGLE COMRATS CUSTOMERS

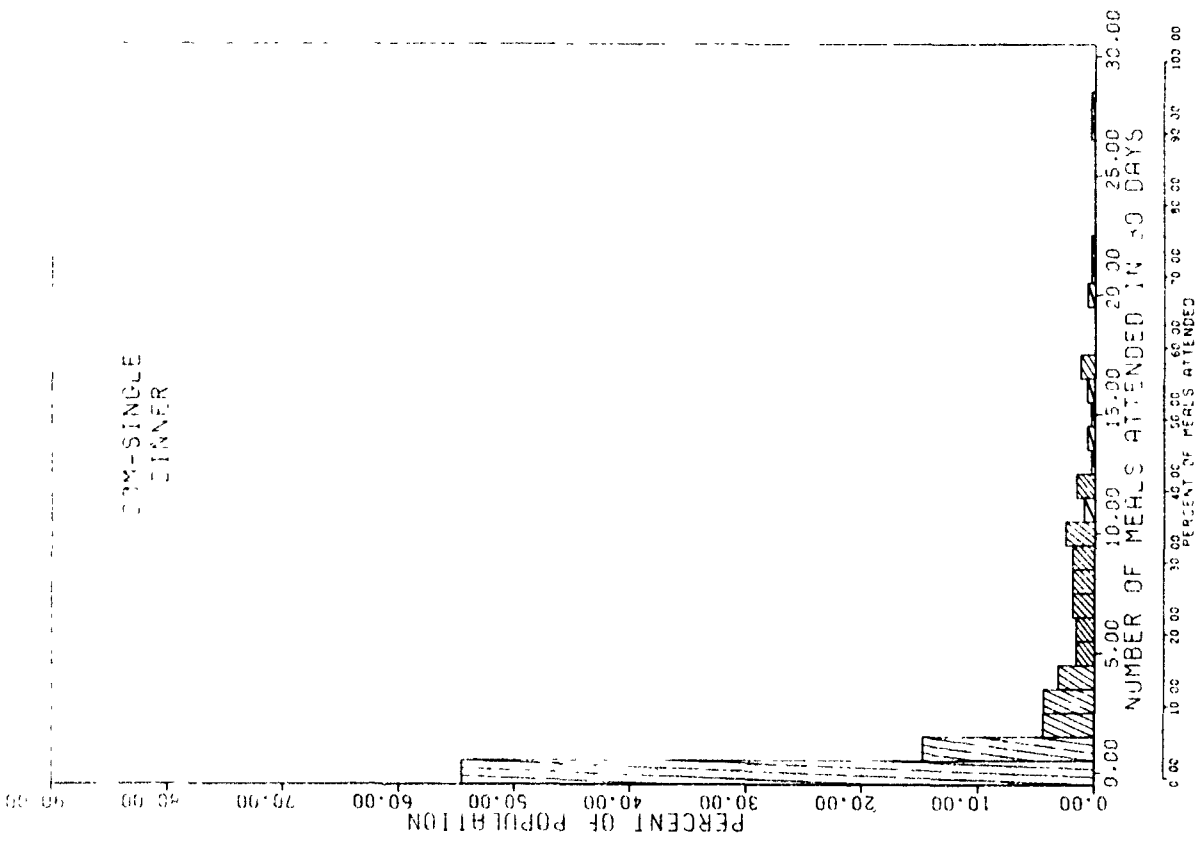
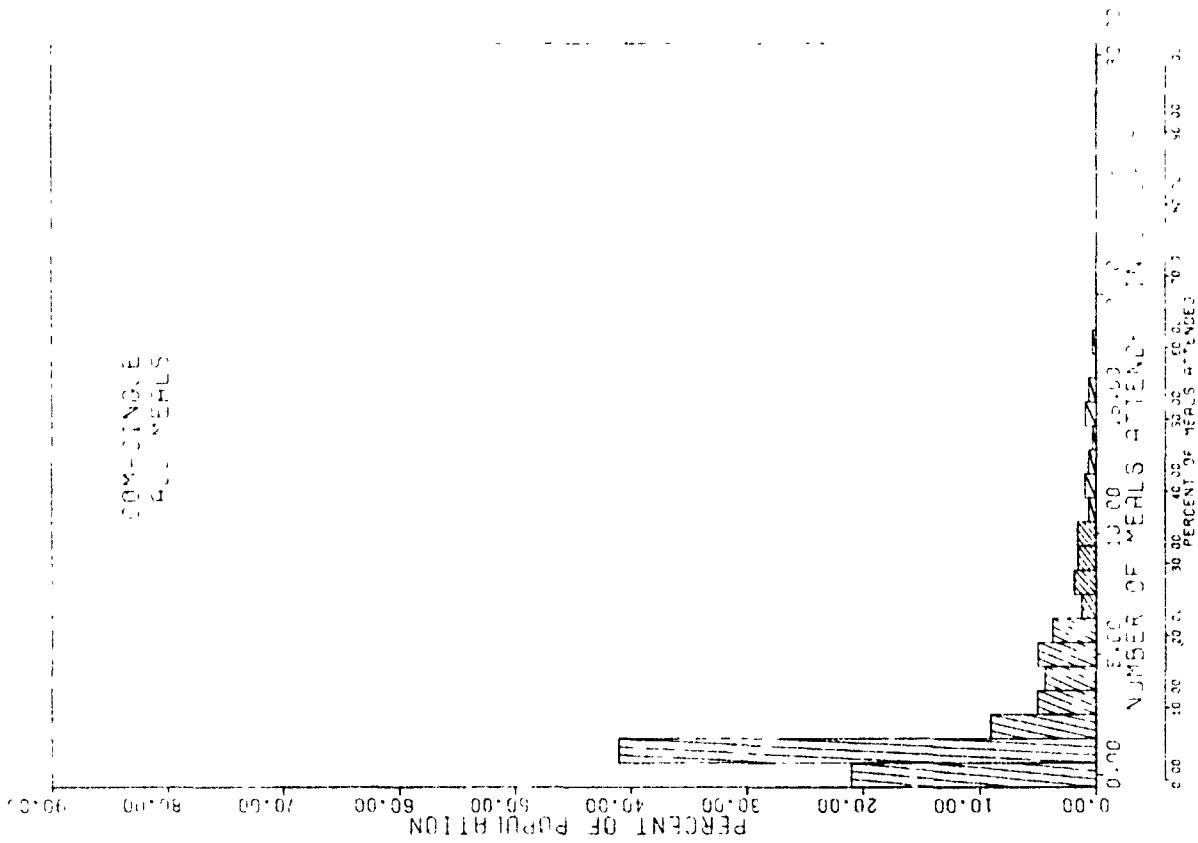


FIGURE 12: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - SINGLE COMRATS CUSTOMERS

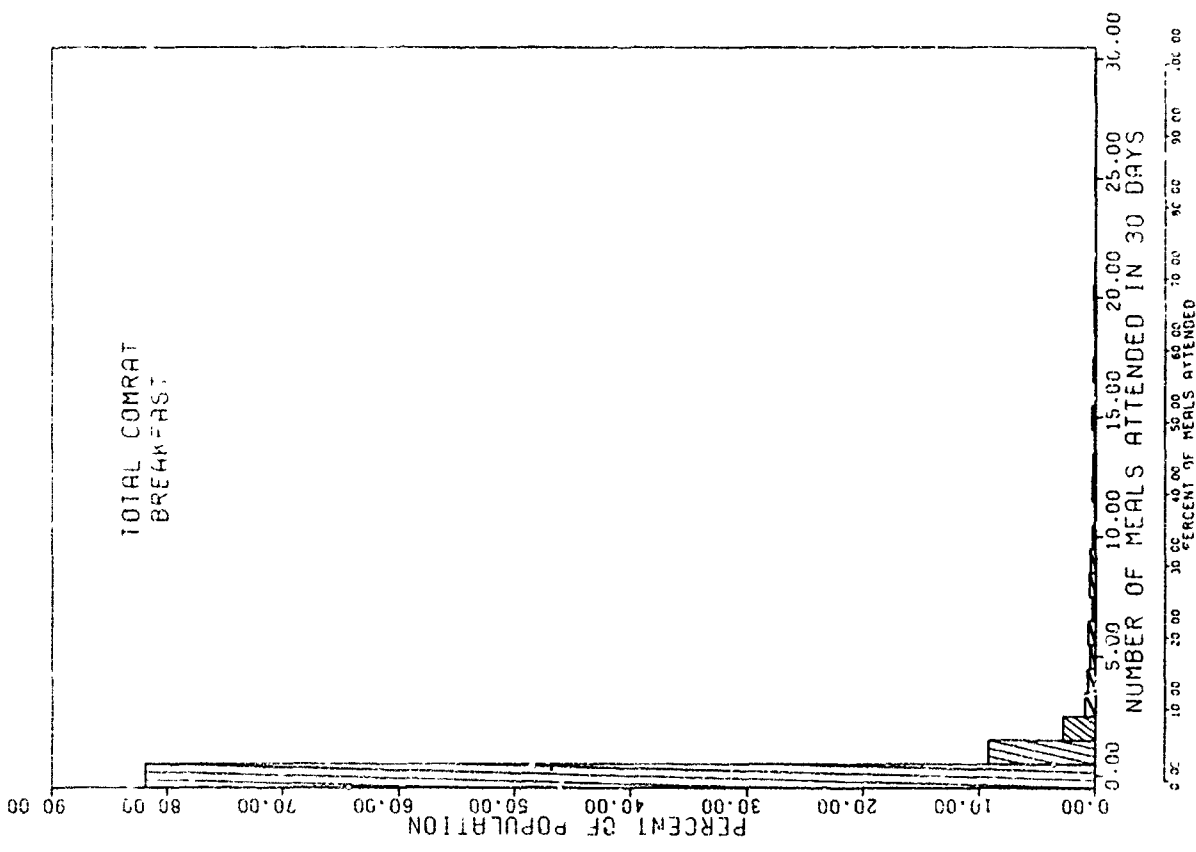
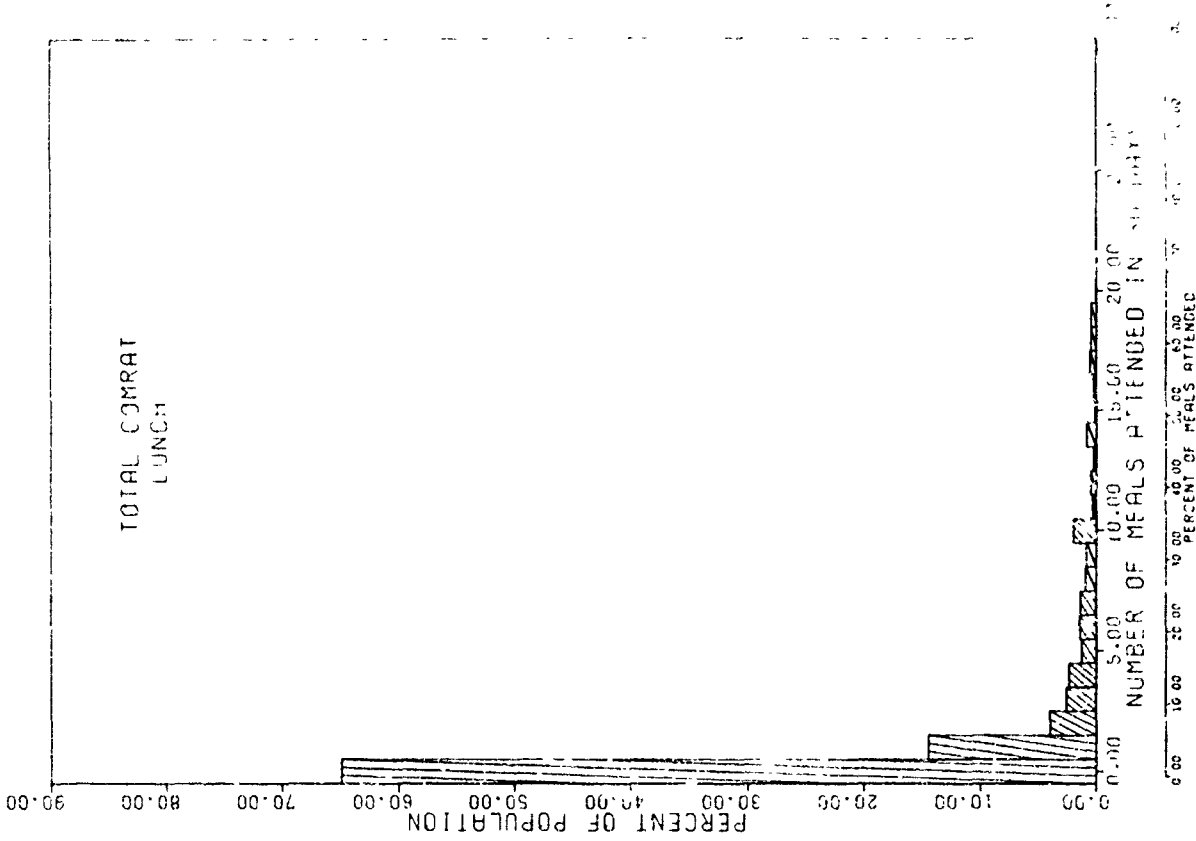


FIGURE 13: HISTOGRAMS OF ATTENDANCE BY MEAL - TOTAL COMRATS CUSTOMERS

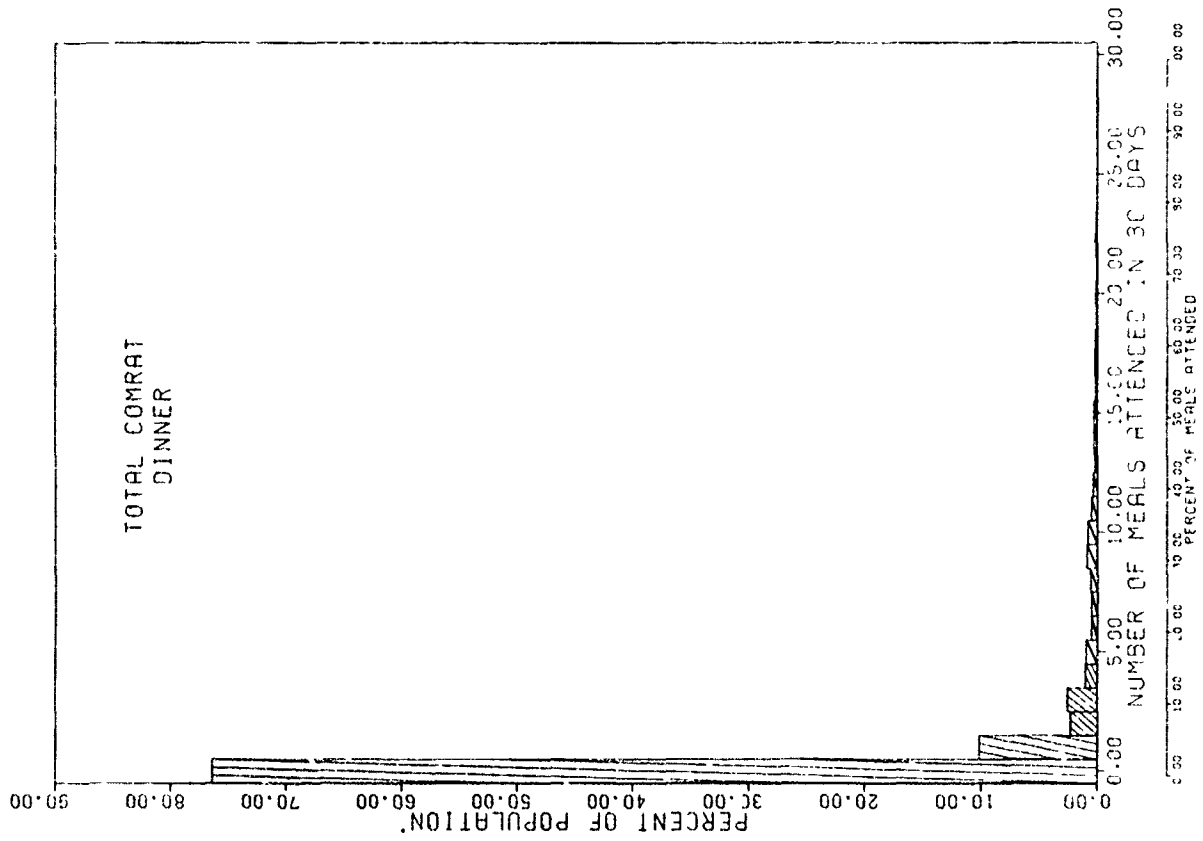
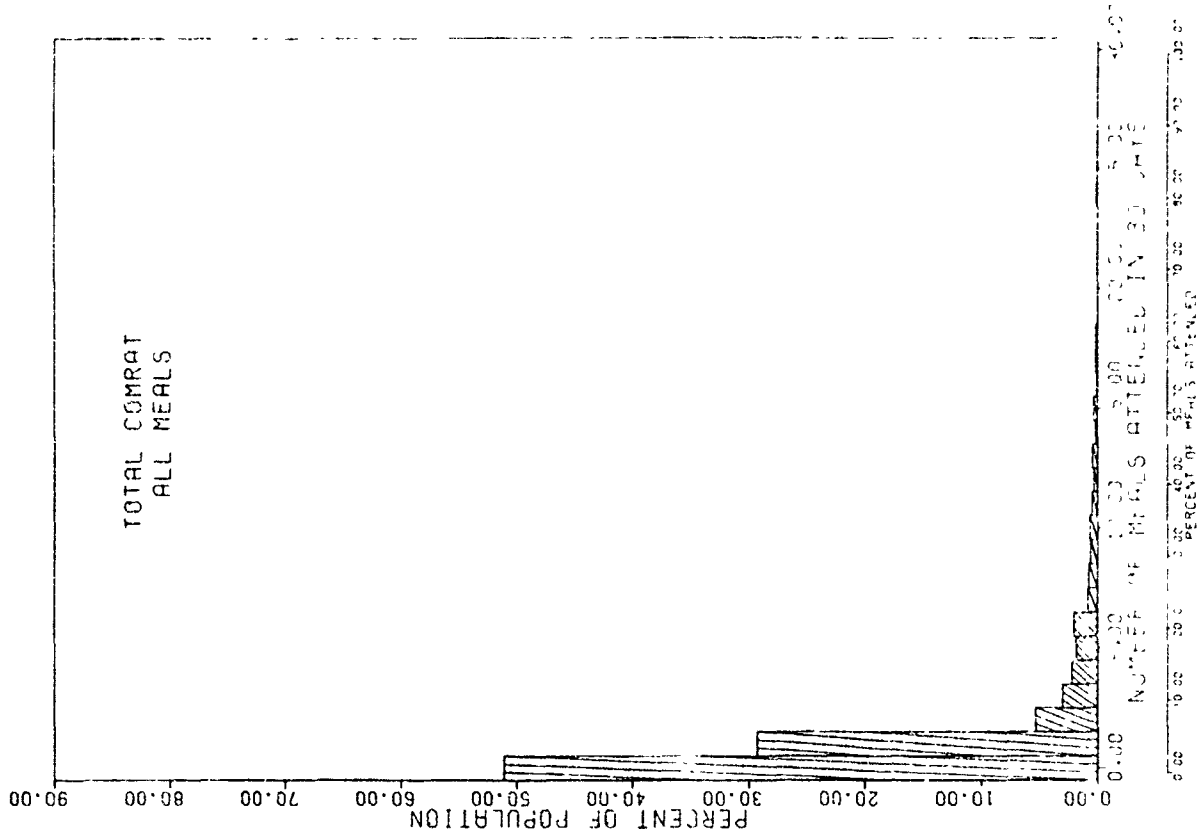


FIGURE 13: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - TOTAL COMRATS CUSTOMERS

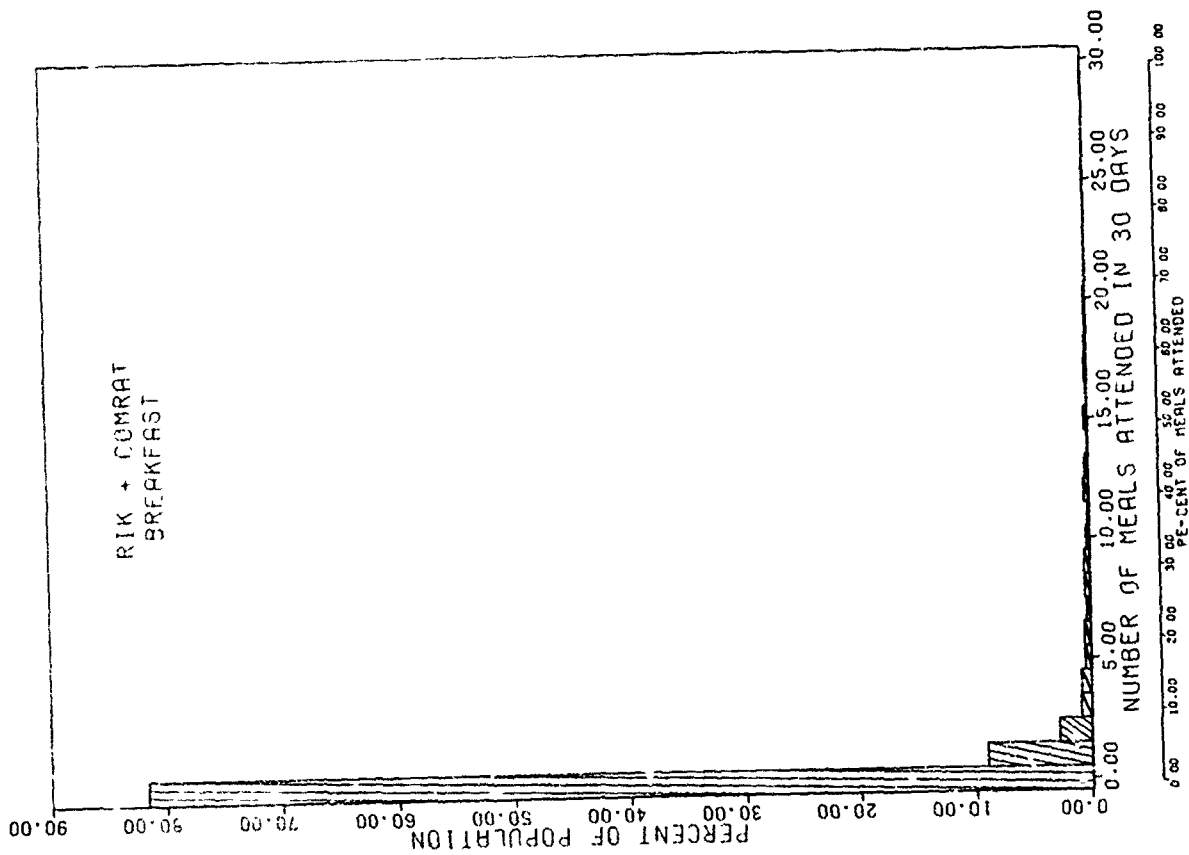
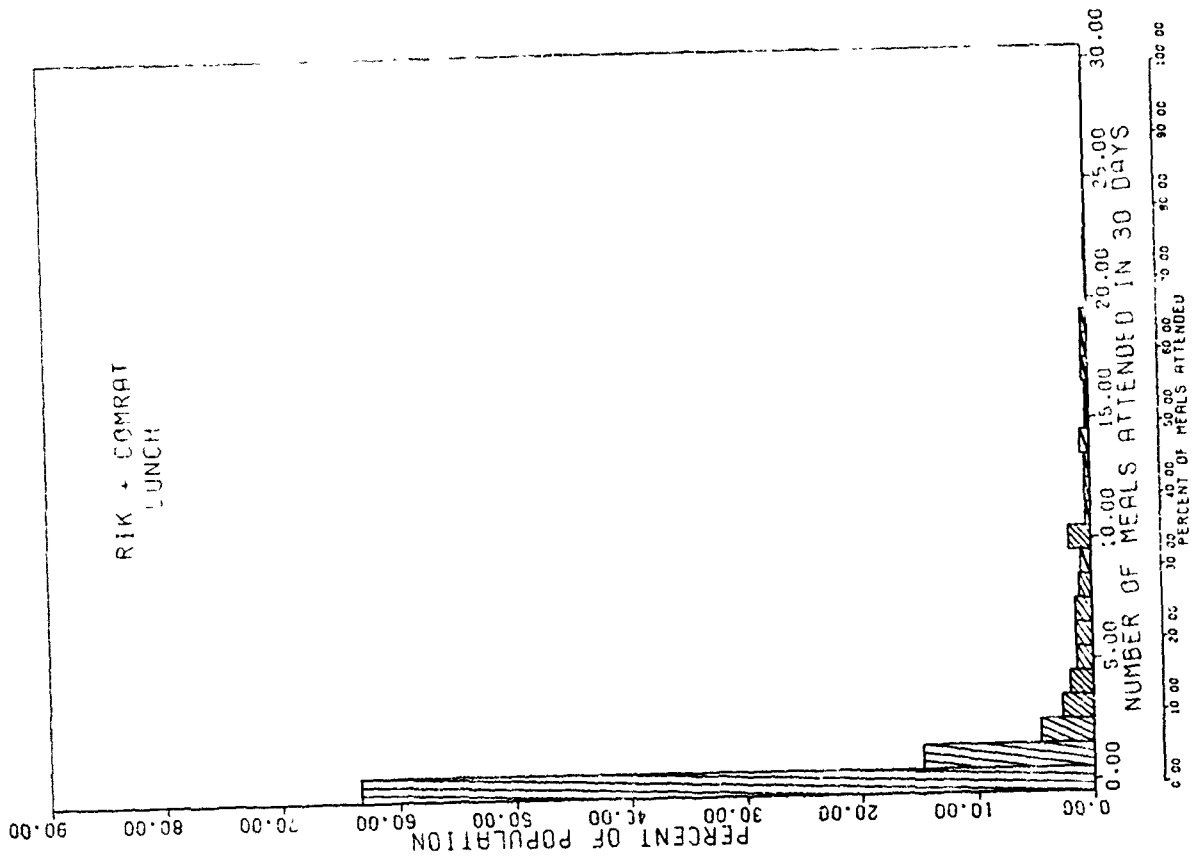


FIGURE 14: HISTOGRAMS OF ATTENDANCE BY MEAL - RIK AND COMRAT CUSTOMERS

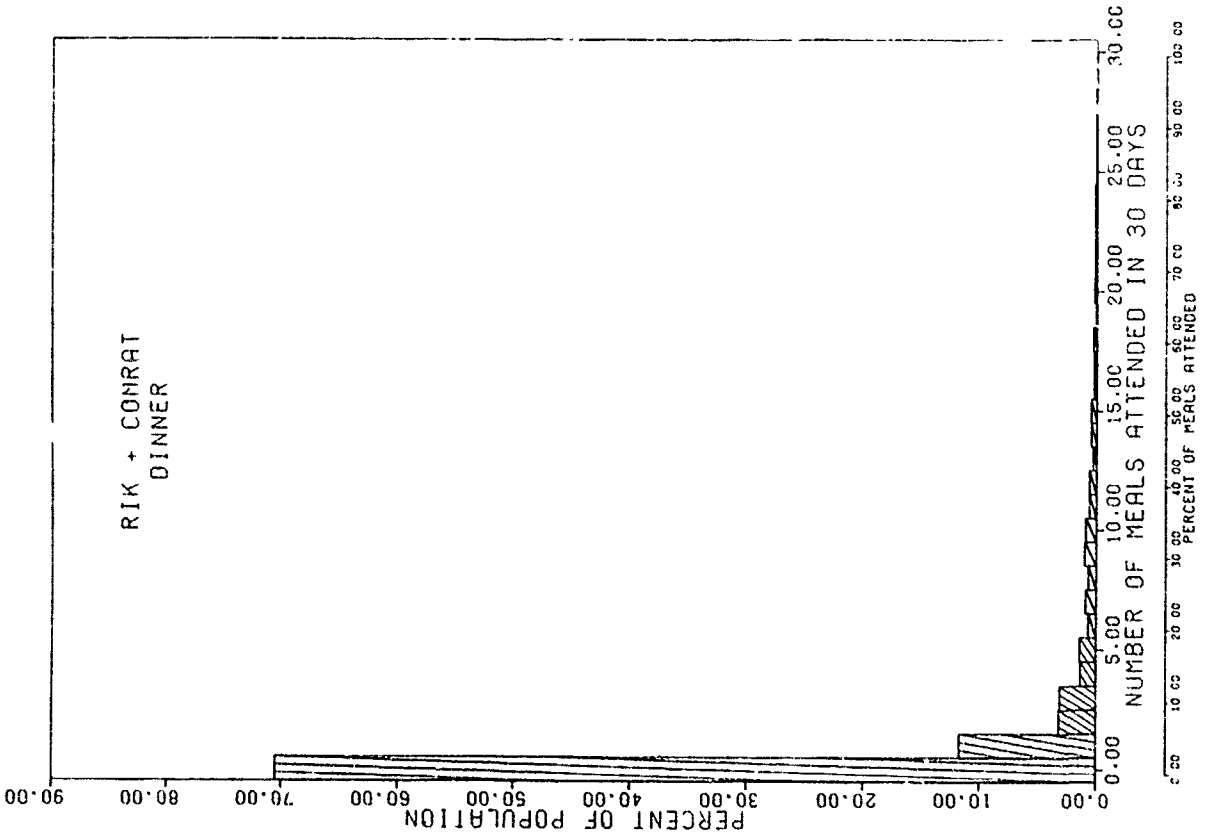
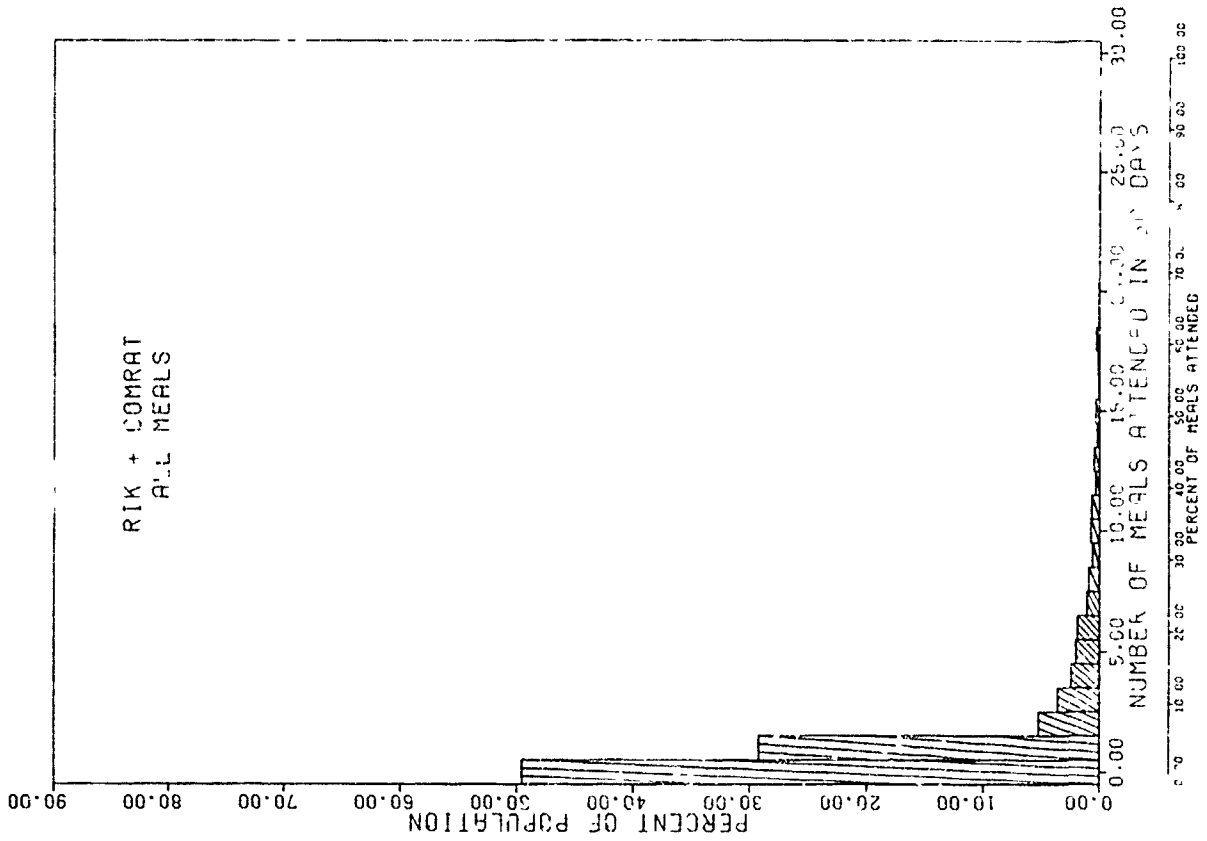


FIGURE 14: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - RIK AND COMRAT CUSTOMERS

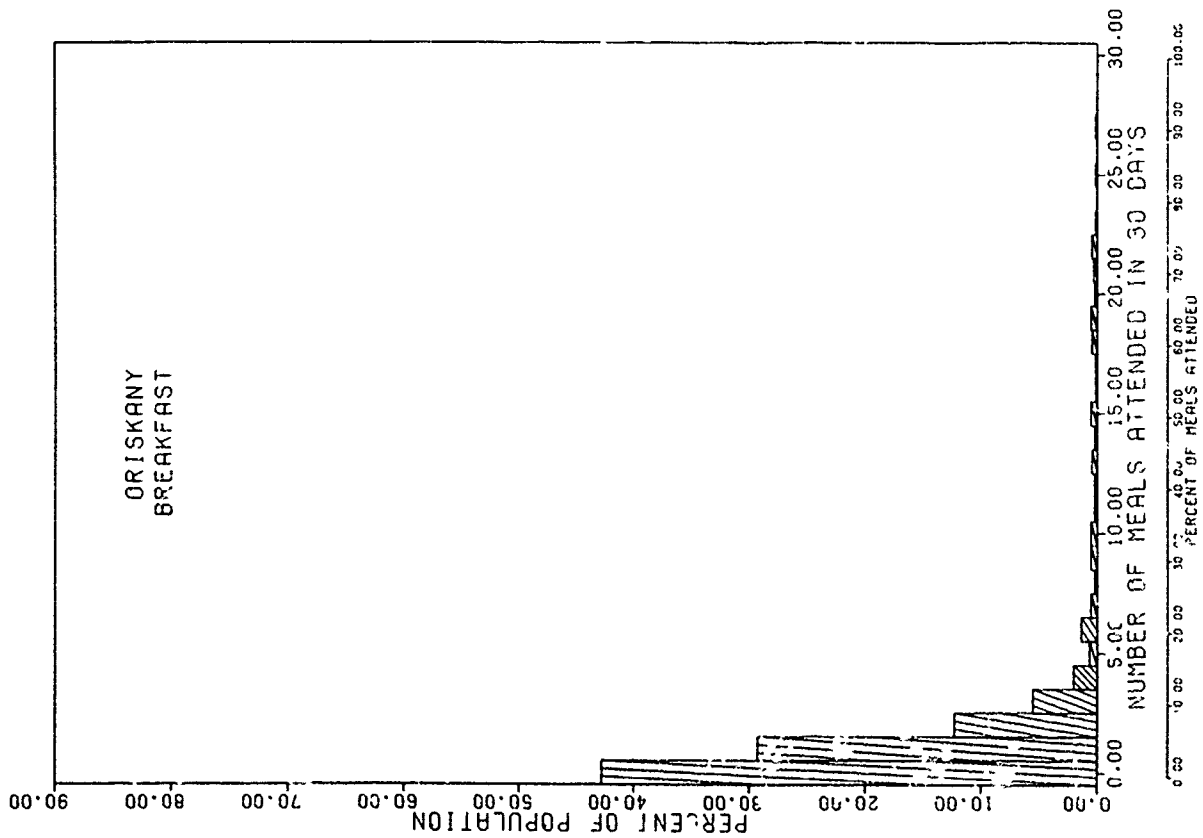
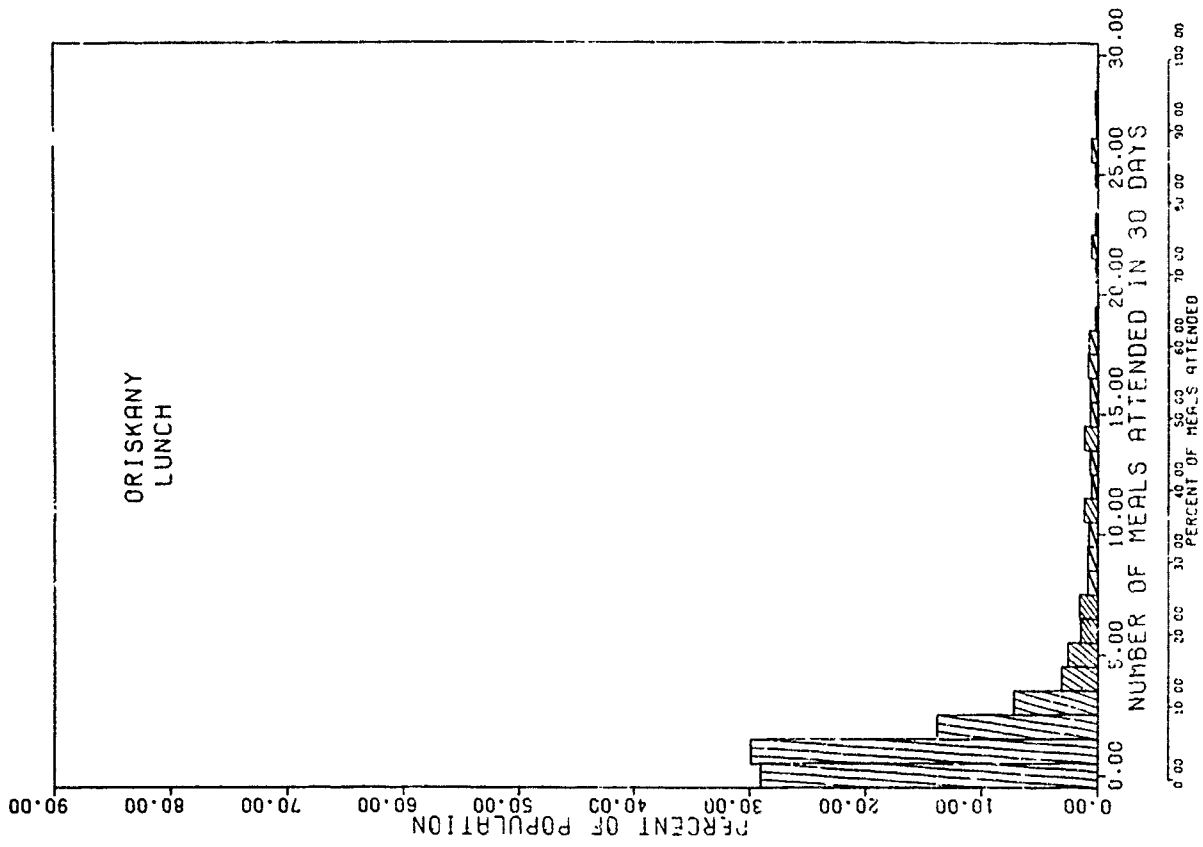


FIGURE 15: HISTOGRAMS OF ATTENDANCE BY MEAL - USS ORISKANY CUSTOMERS

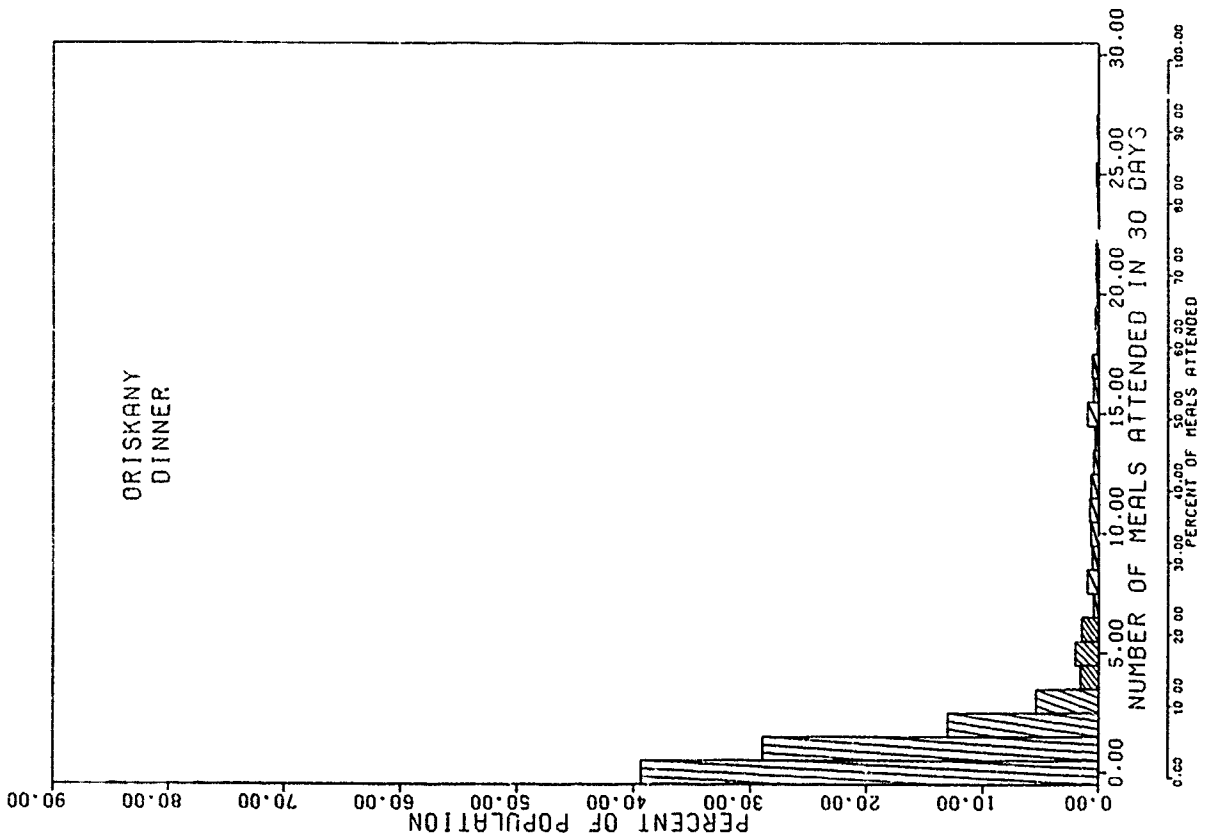
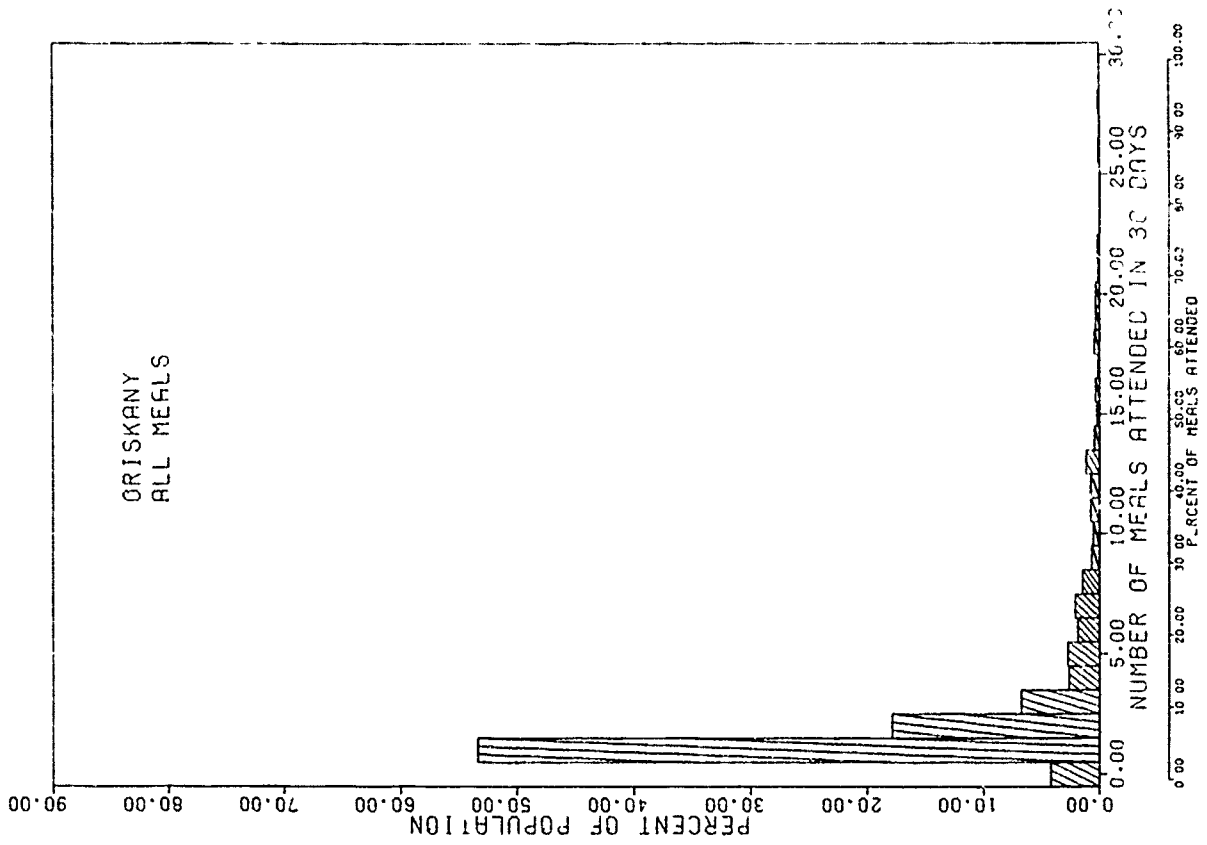


FIGURE 15: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - USS ORISKANY CUSTOMERS

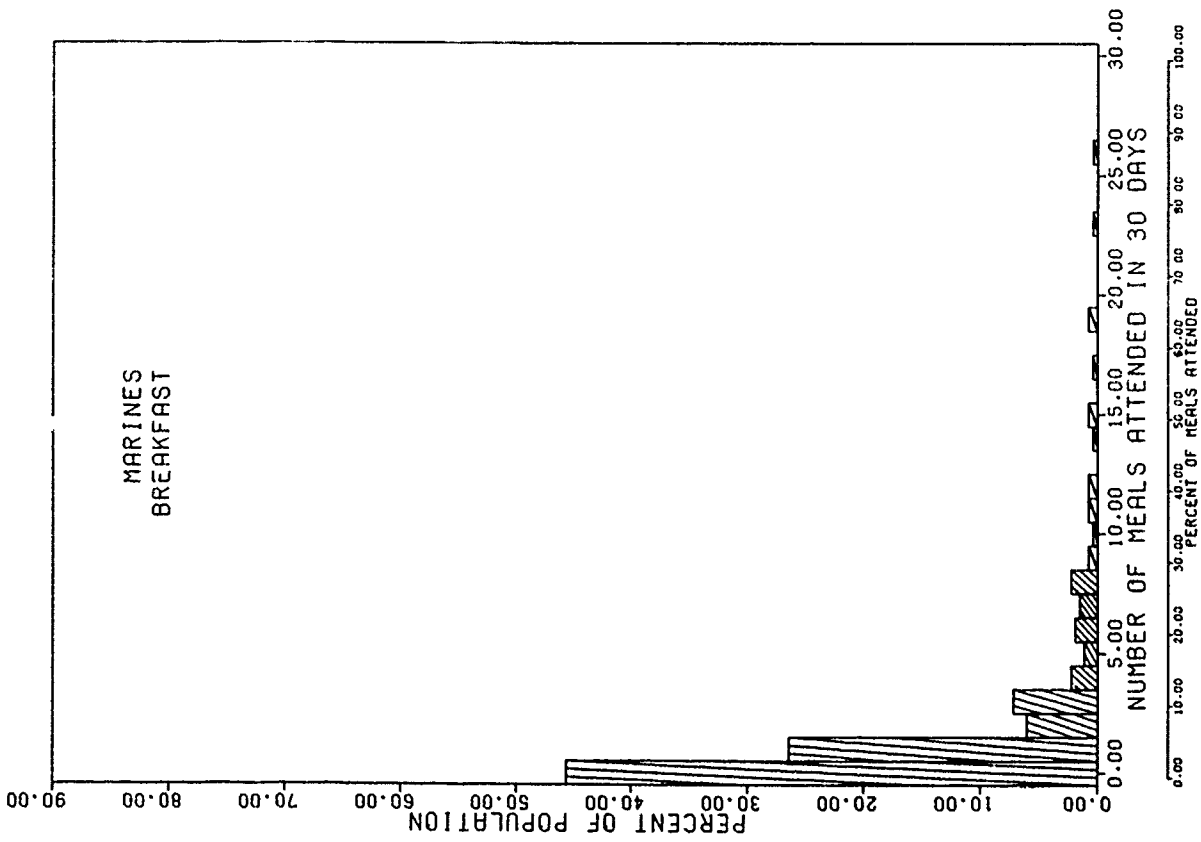
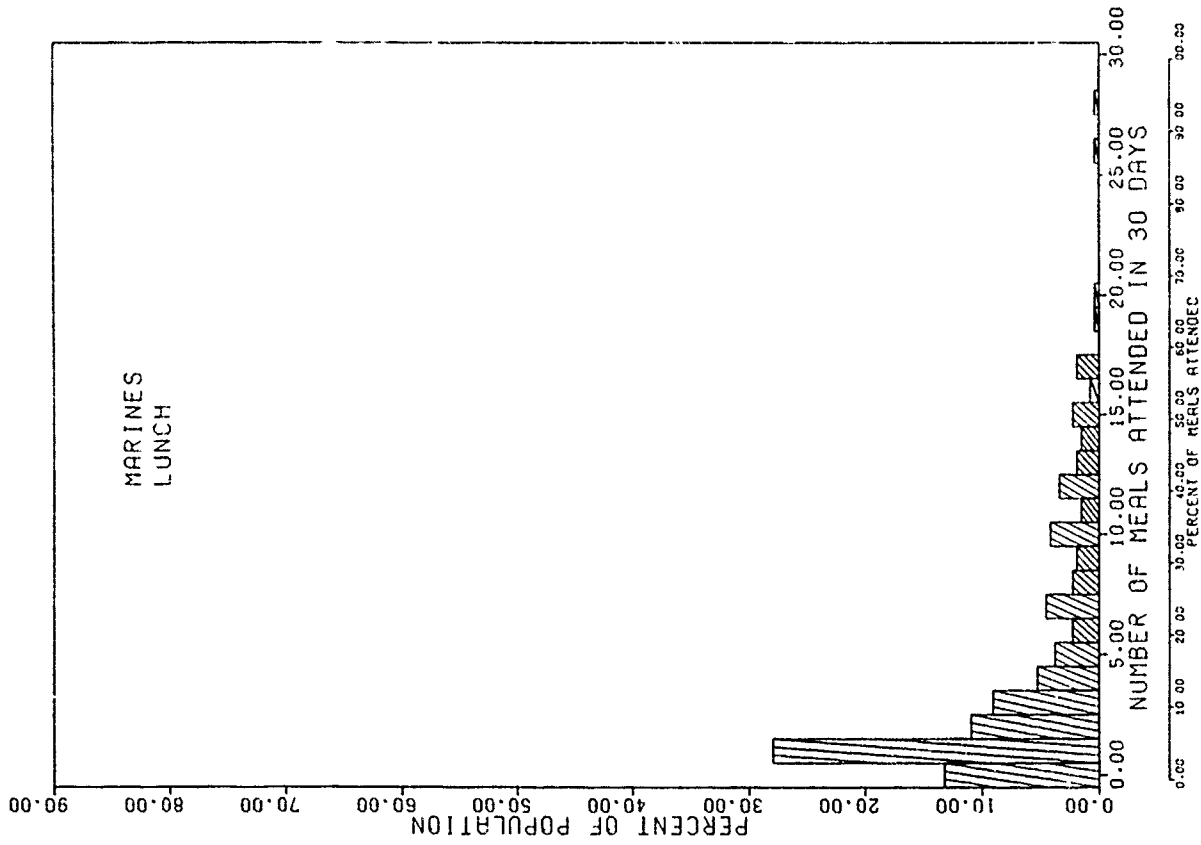


FIGURE 16: HISTOGRAMS OF ATTENDANCE BY MEAL - MARINE CUSTOMERS

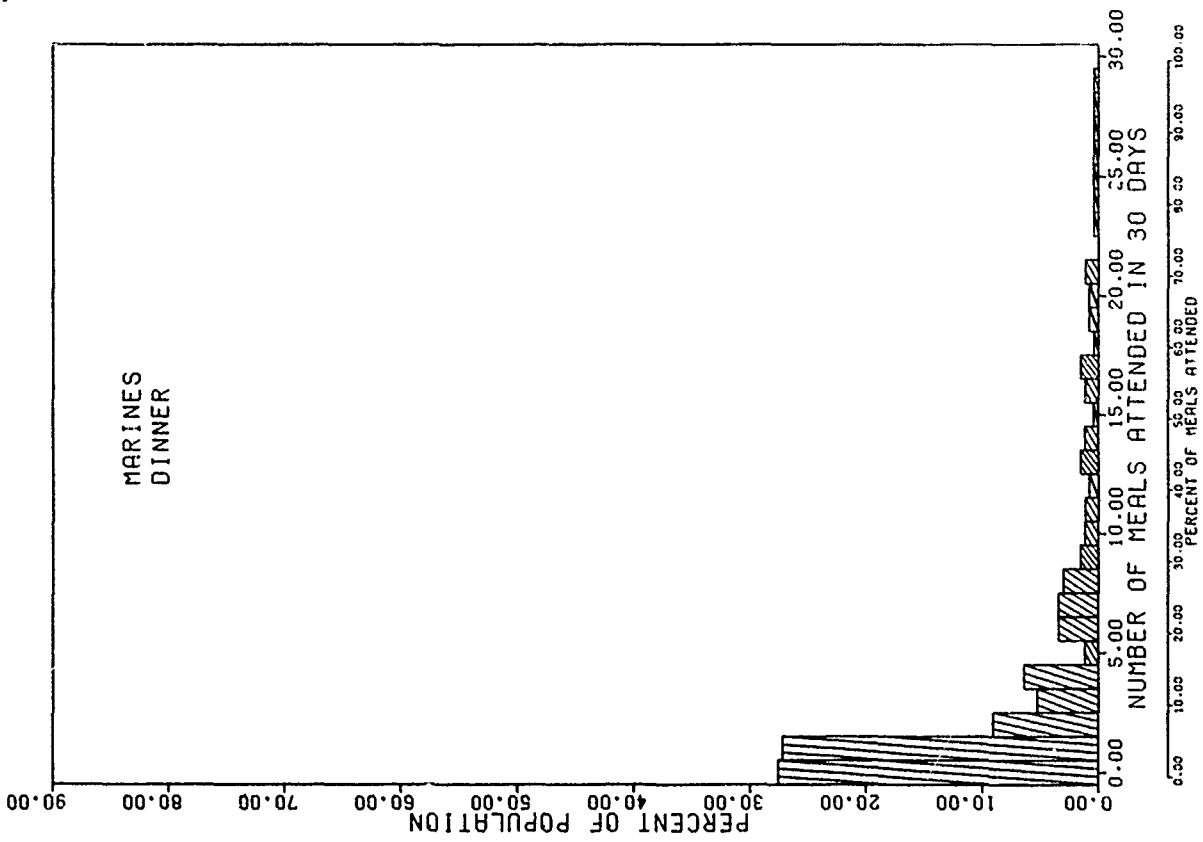
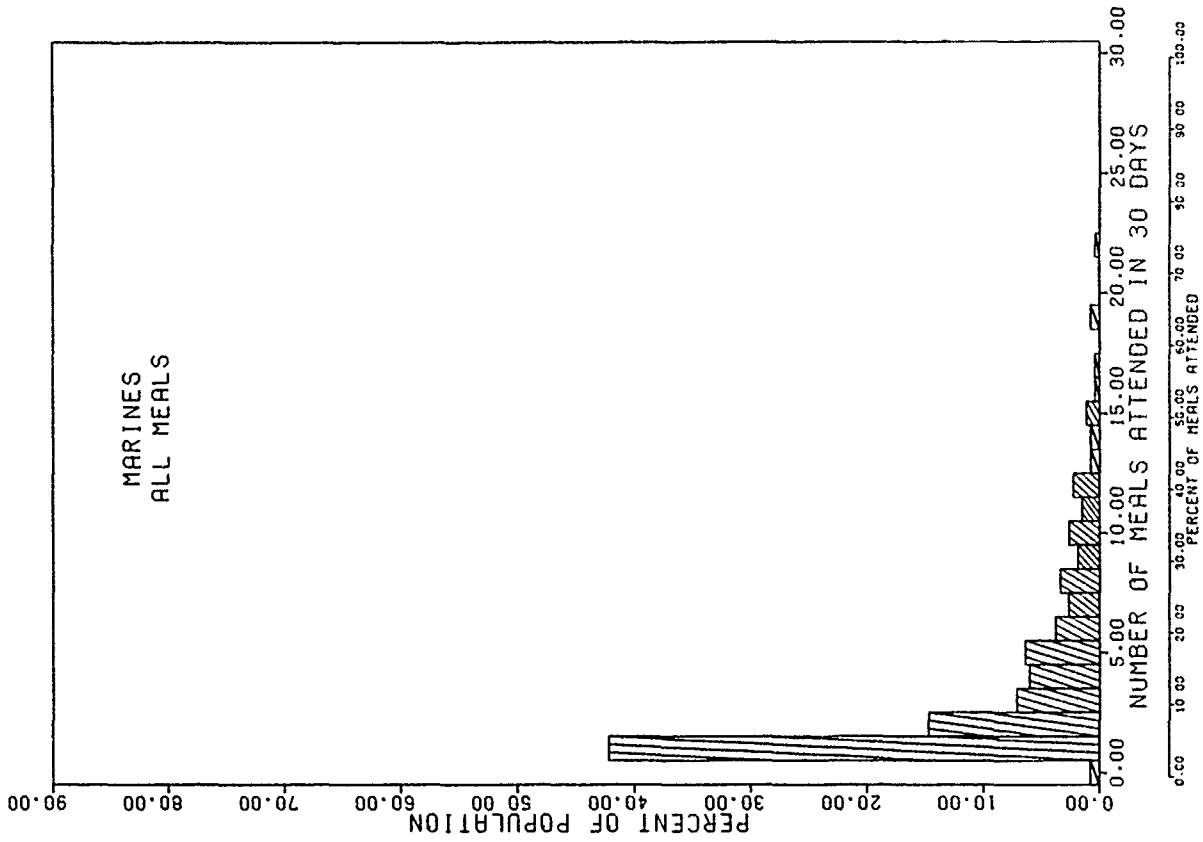


FIGURE 16: (Cont'd) HISTOGRAMS OF ATTENDANCE BY MEAL - MARINE CUSTOMERS

TABLE 5

Percentage of Population Eating No Meals and Eating at Least One Meal Per Workday in the Dining Hall

	Conventional* System	CASH/A La Carte System	Percentage Increase (Decrease)
No Meals Eaten in the Dining Hall			
RIK	17.0%	27.8%	63.5%
COMRAT-Single	59.3%	21.0%	(64.6%)
COMRAT-Married	83.3%	58.8%	(29.4%)
At Least One Meal Per Workday Eaten in the Dining Hall			
RIK	49.0%	9.6%	(80.4%)
COMRAT-Single	8.5%	9.6%	12.9%
COMRAT-Married	0.0%	2.4%	00

*Sample of 47 RIK, 59 COMRAT-Single, and 54 COMRAT-Married Sailors for 17 day period in March 1975.

An interesting point that may be noted from the average attendance rates by meal, tabulated in Table 6 is that the RIK and COMRAT single populations attended the dinner meal more often than the other two meals, while the other population groups attended the lunch meal most frequently. This can be attributed to the fact that these two groups inhabited the barracks areas in greater numbers than any of the other groups, and the barracks were immediately adjacent to the dining hall. Therefore, the dining hall was particularly convenient to these former RIK and COMRAT single personnel when they came back to their rooms from work. On the other hand, all population groups were consistent in attending the breakfast meal the least frequently of the three meals.

The previous analysis has reflected the overall attendance statistics for all personnel in each population group. It is also meaningful to limit attention to those personnel within each population that actually patronize the dining hall, that is, those who ate at least one meal per month at the enlisted dining facility. Table 7 presents the average attendance rates by population group for these actual patrons by meal and for all meals combined. Naturally, since all those with a "0" attendance were not included, all values were higher than the statistics presented earlier. Nevertheless, the attendance rate statistics were low even for this group. In addition, the modal (most frequent) value for all population groups of actual patrons was only one meal per day in the dining hall. All this indicates that a multitude of outlet would more closely meet the dining habits of the crew rather than the single outlet that is now operated.

During the June 1976 survey, the dining hall was the focal point for enforcement of dress and grooming codes. Security personnel stationed at the door would not permit those in violation of the codes to enter the dining hall. Such was not the case during the March 1975 survey. The impact of this factor on dining hall utilization cannot be directly assessed, but it may have reduced attendance, based upon the number of unsolicited comments by the subjects to the LAIR interviewers, as well as comments to the NARADCOM Behavioral Science Division psychologists reported in the previous subsection.

CONCLUSIONS

1. Attendance rates for personnel formerly on RIK decreased 68% under CASH/A La Carte to a level approximately equal to that of single personnel formerly on COMRATS.
2. Single and married personnel formerly on COMRATS increased their attendance under the A La Carte System by 30% and 167%, respectively.
3. The decrease in attendance under CASH/A La Carte for personnel formerly on RIK was due in part to a decrease in the number of meals eaten in the dining hall and in part to their complete loss to the system.

TABLE 6**Average June 1976 Attendance Rates
By Meal (in %)**

Meal	Marines	Former RIK	Former COMRATS Married	Single	Carrier Personnel	Total COMRAT	RIK & COMRAT
Breakfast	6.57	3.46	1.92	4.24	6.31	2.48	2.60
Lunch	15.96	9.19	4.17	9.16	10.18	5.38	5.85
Dinner	12.88	9.25	2.07	9.35	7.17	3.83	4.50
All Meals	11.80	7.30	2.72	7.59	7.89	3.90	4.32

TABLE 7

**Average Attendance Rates by Meal by Population Group
for Actual Dining Hall Patrons**

Meal	Marines	Former RIK	Former COMRAT Married	Former COMRAT Single	Carrier Personnel	Total COMRAT	RIK & COMRAT
Breakfast	12.2%	16.1%	11.9%	13.8%	10.6%	12.7%	13.2%
Lunch	17.5%	17.0%	13.9%	15.5%	13.8%	15.0%	15.6%
Dinner	17.2%	20.7%	12.0%	18.9%	11.7%	15.8%	17.1%
All Meals	11.9%	10.0%	6.4%	9.3%	8.0%	7.7%	8.3%

4. The increase in attendance rates under CASH/A La Carte for personnel formerly on COMRATS was due in part to an increase in the number of meals eaten in the dining hall and in part to a gain in new customers.

5. At NAS Alameda, where personnel formerly on RIK made up only 12.4% of the population, the decrease in their attendance rate under CASH/A La Carte was mostly compensated for by the increased attendance of personnel already on COMRATS. As a result, the net decrease in overall attendance was only 9%. However, if there had been twice as many former RIK's, that is, if they made up 25% of the population rather than 12.4%, the overall attendance under CASH/A La Carte would have dropped by 35.5% rather than 9%; and the training base for cooks, which was already marginal because of low attendance rates, would have been seriously affected.

6. If RIK personnel were to retain their ration status and an item pricing (A La Carte) system were to be implemented in the dining hall for COMRATS personnel, then such a system would enjoy an increased attendance rate for its COMRATS customers, while RIK attendance held constant, resulting in an overall increase in the attendance rate over the conventional system and a consequent strengthening of the training base. If this type of system had been tested at NAS Alameda, the overall attendance rate for base personnel would have increased approximately 32% (i.e., to 6.26%). Projecting this Navy wide, a 14% increase in attendance would be expected.

3. PATRON SPENDING PATTERNS

Under the conventional system currently in force in the Navy, the pricing for meals is set at a flat rate commensurate with the daily commuted ration (COMRAT) rate, that is, 55¢ for breakfast, \$1.00 for lunch, and \$1.00 for dinner. With the implementation of the a la carte concept, all items served in the enlisted dining facility were individually priced so that the total meal price for any individual varied depending upon his preferences and choices. The pricing policy established for the test still reflected the general military policy of subsidizing the enlisted dining facility, that is, no charges were made to enlisted personnel patronizing the dining facility for labor and overhead costs. Prices were established purely and simply on raw food costs, plus a percentage surcharge to cover normal cooking losses and condiments provided to the customer at no additional charge. For the period March through June 1976, this percentage was set at 15%; but based on the operating experience from that period, it was lowered on July 1, 1976 to 10%. All prices were rounded to the nearest nickel to avoid the necessity for handling large quantities of pennies.

The establishment of item prices by manual technique for the broad range of items offered in the dining hall can be a large scale, error prone task. Instead, a computerized "Automated Recipe Cost Calculation System" was used for this purpose. This computer

program automatically established the cost of an individual portion, including surcharge, for all recipes in its data base once it had been provided with the Navy's Fixed Price List. This price list is issued quarterly by the Navy Food Service Systems Office in Washington, DC, and is the basis for establishing the cost of stores consumed throughout the Navy. A typical output is presented in Figure 17. Tables 8, 9, and 10 present the costs of typical breakfast, dinner type and speedline type meals. A low, medium, and high cost alternative was provided in each case. Table 11 presents some comparison prices with the Navy Exchange System at NAS Alameda. It is apparent that the subsidized nature of the enlisted dining facility mentioned above resulted in the lowest prices available. In fact, since prices were rounded to the nearest nickel, some items actually sold at below cost, making the cost for dining at the enlisted facility cheaper than preparing the equivalent item at home.

Special attention and effort was devoted to prominently marking the prices for all items available to insure that the enlisted man was fully aware of the cost of his choices. Menu boards, with prices, were hung at the entrances and behind the serving lines, and individual item price holders were placed next to each item. Finally, the cash register issued a receipt for the customers listing each item purchased and its associated price, as well as the total bill. It was, in fact, the duplicate copy of these receipts that provided the necessary information for the preparation of histograms of the distribution of meal sales costs presented below.

Table 12 presents average a la carte meal costs by month for March through June 1976. Generally speaking, the meal costs from month to month were quite closely clustered. The notable exception was the lower average meal costs in June. This, however, is explained by management action in June, lowering the costs of all cold beverages from 10¢ to 5¢, to balance an underissue situation and pass the savings on to the crew. If one adds 5¢ to the June lunch and dinner meal costs and 4¢ to the June breakfast meal costs (because of the increased hot beverage consumption, unaffected by the price reduction, and corresponding decreased cold beverage consumption at breakfast), the June meal prices fall into line. As expected, breakfast is the least costly meal, and it may also be noted that lunch is less costly than dinner. This is due to the greater percentage of short order meals, which are less costly, consumed at lunch (35%) versus dinner (25%).

While the figures quoted above reflect average daily expenditures for three meals (a day's ration) for all customers, one particular subgroup was of particular interest, the RIK customer, that is the customer provided subsistence at government expense. As was mentioned previously, reservists, some transients, and some newly arrived sailors without funds were on an RIK status. Table 13 presents the average expenditure by meal for RIK patrons for each month separately as well as the overall average. It will be noted that in all cases the expenditure for RIK patrons was considerably less than the BDFA of \$2.67, but was a few cents higher than the average meal costs for all patrons presented in Table 12. This latter fact was due to an awareness on the part of the RIK patrons

Prepared: 06 Oct 76
Gusi Dated: 76181

NSN	Ingredient	Quan./Hd.	Veal Parmesan	2 Tbs Sauce	1 Slice
				Unit Price	Cost
8905000000007	Italian Veal Steaks LP	31.25 Lb		\$1.21	\$37.813
8910000433198	Eggs	1.25 Lb		.65	.813
8910001396707	Dry Milk	.20 Lb		.74	.148
8910007822837	Mozzarella Cheese	6.25 Lb		1.10	6.875
8910007823765	Grated Cheese	.50 Lb		2.11	1.055
8915001279303	Tomato Paste	2.88 Lb		.33	.950
8915006160200	Dry Onions	1.50 Lb		.06	.090
8920001656863	Flour	1.63 Lb		.15	.245
8920007535776	White Bread	2.00 Lb		.25	.500
8925001273074	Sugar	.25 Lb		.20	.050
8945006160091	Shortening	1.00 Lb		.32	.320
8950000627750	Cayenne Pepper	.01 Lb		1.89	.019
8950001278067	Black Pepper	.03 Lb		1.16	.035
8950002628886	Salt	.44 Lb		.07	.31
8950005399542	Garlic	.02 Lb		.59	.012

Total Food Cost/Hd. Portions \$48.956
 Food Cost/Individual Serving \$.490
 Additional Cost of 10% \$.049
 Selling Price/Ind. Portion \$5.39

FIGURE 17

Typical Automated Recipe Cost Calculation System Output

TABLE 8

Typical Breakfast Meal Costs

Orange Juice	\$0.05	Grapefruit Juice	\$0.05	Orange Juice	\$0.05
Pancakes (2)	.20	Scrambled Eggs (2)	.10	Bacon (2)	.20
Milk	<u>.10</u>	Sausage Links (2)	.20	Cheese Omelette	.20
	\$.35	Toast & Butter (2)	.05	Hash Brown Potatoes	.05
		White Milk	.10	Waffles	.30
		Cold Cereal	<u>.10</u>	Milk	.10
			\$.60	Doughnut	.05
				Coffee	<u>.05</u>
					\$1.00

TABLE 9

Typical Dinner-Main Menu Meal Costs

Meat Loaf	\$0.30	Vegetable Soup	\$0.10	Minestrone Soup	\$0.15
Mashed Potatoes	.05	Baked Flounder	.50	Tossed Salad	.10
Peas	.05	Fried Rice	.20	Roast Beef	.85
Bread	.05	Broccoli	.10	Lyonnais Potatoe	.05
Strawberry Gelatin	.10	Bread	.05	Green Beans	.05
Milk	<u>.10</u>	Milk	.10	Bread (2)	.05
	\$.65	Ice Cream	<u>.10</u>	Milk	.10
			\$1.15	Cake	.10
				Coffee	<u>.05</u>
					\$1.50

TABLE 10

Typical Speed Line Meal Costs

Hamburgers (2)	\$0.50	Chicken Noodle Soup	\$0.15	Lettuce & Tomato Salad	\$0.15
French Fries	.10	Fried Chicken	.45	Grilled Sirloin	1.05
Soda	<u>.10</u>	Baked Beans	.15	French Fries	.10
	\$.70	Bread (2)	.05	Milk	.20
		Milk (2)	.20	Vanilla Pudding	<u>.05</u>
		Brownie	<u>.10</u>		\$1.55
			\$1.10		

TABLE 11
Comparison Prices

	Dining Hall	Navy Exchange
Orange Juice	\$0.05	\$0.40
Eggs (2)	.30	.30
Cheese Omelet	.20	.75
Pancakes (3)	.30	.75
Bacon	.20	.75
Sausage	.20	.75
Doughnut	.05	.20
Milk	.30	.25
Hamburger	.25	.70
Fried Chicken	.45	1.30
Steak	1.05 (8 Oz Sirloin)	1.60 (4 Oz Ribeye)

TABLE 12

Average Actual Total Meal Costs^a

	Breakfast	Lunch	Dinner	Total^b
March	\$0.52	\$0.85	\$0.87	\$2.23
April	.51	.86	.89	2.26
May	.52	.84	.87	2.23
June ^c	.49	.79	.82	2.09
June Adjusted ^d	.52	.84	.87	2.23
All Months	.51	.83	.86	2.21
All Months Adjusted ^d	.52	.85	.88	2.24

^aIncludes the costs of seconds.

^bMay not total due to rounding.

^cAll cold beverage prices reduced from 10¢ to 5¢.

^dAdjusted costs, see text for explanation.

TABLE 13

Average Meal Costs for RIK Patrons

	Breakfast	Lunch	Dinner	Total
March	\$0.51	\$0.92	\$0.94	\$2.37
April	.50	.92	.90	2.32
May	.50	.89	.89	2.28
June ^a	.47	.86	.83	2.16
June Adjusted ^b	.50	.91	.88	2.29
All Months	.49	.89	.89	2.27
All Months Adjusted ^b	.50	.91	.90	2.31

^aAll cold beverage prices reduced from 10¢ to 5¢

^bAdjusted costs, see text for explanation.

that they were allowed to spend up to the portion of the BDFA set for the type meal they were eating. As a result, some checked their receipts to see how much of their allowance was left and returned for seconds, mostly on desserts and beverages.

Table 14 presents a comparison of average meal costs versus the various meal allowances. In all cases, the average customer expenditure under a la carte was lower than either the COMRAT's he received or the BDFA dining hall allocation for a ration under the conventional system. On a daily basis it was, in fact, 43¢ lower than the BDFA and 29¢ lower than the COMRAT allowance. It should be remembered that this was average behavior for personnel eating in the dining hall, and that a total expenditure of \$2.24 assumes the consumption of all three meals in the dining hall. As will be seen in the histograms of meal cost presented below, significant percentages of the population spent more than the average. In addition, as we have noted, a large percentage of personnel do not eat any meals in the dining hall.

Just as in the section on attendance, Figures 18 through 20 present histograms, this time of original meal receipt sizes for a period covering a complete pay cycle in June. These histograms give a sense of the variations for individual patrons from the average figures discussed above. The mode (most frequent) and median (1/2 of all values above and below) of these distributions are presented in Table 15. As this was June data, adjusted figures are again presented to reflect the fact that the prices of cold beverages were reduced 5¢ below actual cost as a management action to reduce an underissue situation. These values were appreciably lower than the average total meal costs in Table 12, because they do not include seconds which are taken by about 13% of all customers overall (10% at breakfast, 13% for lunch, 13% for supper). Table 16 presents average cost of seconds by meal as well as median and mode values. All data was collected at the same time original meal receipt data was collected in June. Adjusted figures reflecting the cold beverage price change are also included.

4. WORKER ATTITUDE SURVEY FINDINGS

Surveys and interviews were administered to as many main dining facility military food service workers as were available. In the Pre-Test phase, 30 military workers were surveyed/interviewed during the same week the customer work was performed. In the Post-Test phase, 25 military workers were surveyed/interviewed in mid-May, 2-1/2 months after the implementation of CASH/A La Carte. Most of the workers (22) were surveyed/interviewed in both phases.

The survey was administered in both the Pre- and Post-Test phases to individual workers by a Behavioral Sciences Division staff member. (See Appendix D for a copy of the survey form.) In both instances, data first were collected concerning demographic characteristics of the workers which might affect job satisfaction: rank or grade level, age, time in food service and attitude toward the military service (military personnel only).

TABLE 14

**Comparison of Average Total Meal Costs
and Allowances**

	Breakfast	Lunch	Dinner	Total
Average Meal Cost	\$.52	\$.85	\$.88	\$2.24
BDFA*	.53	1.07	1.07	2.67
COMRATS	.53	1.00	1.00	2.53

*Navy 4th quarter BDFA for NAS, Alameda.

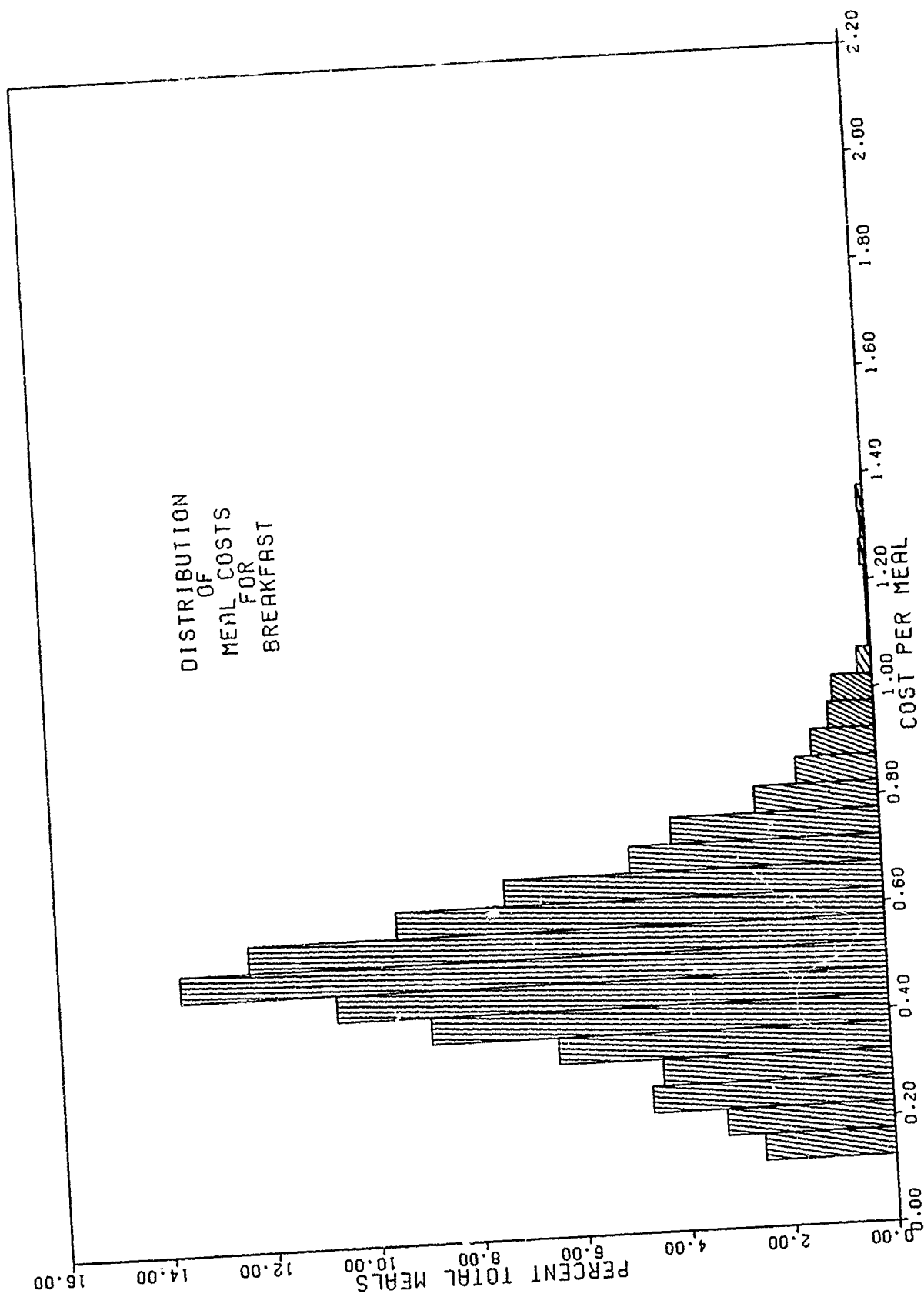


FIGURE 18: DISTRIBUTION OF BREAKFAST MEAL RECEIPTS

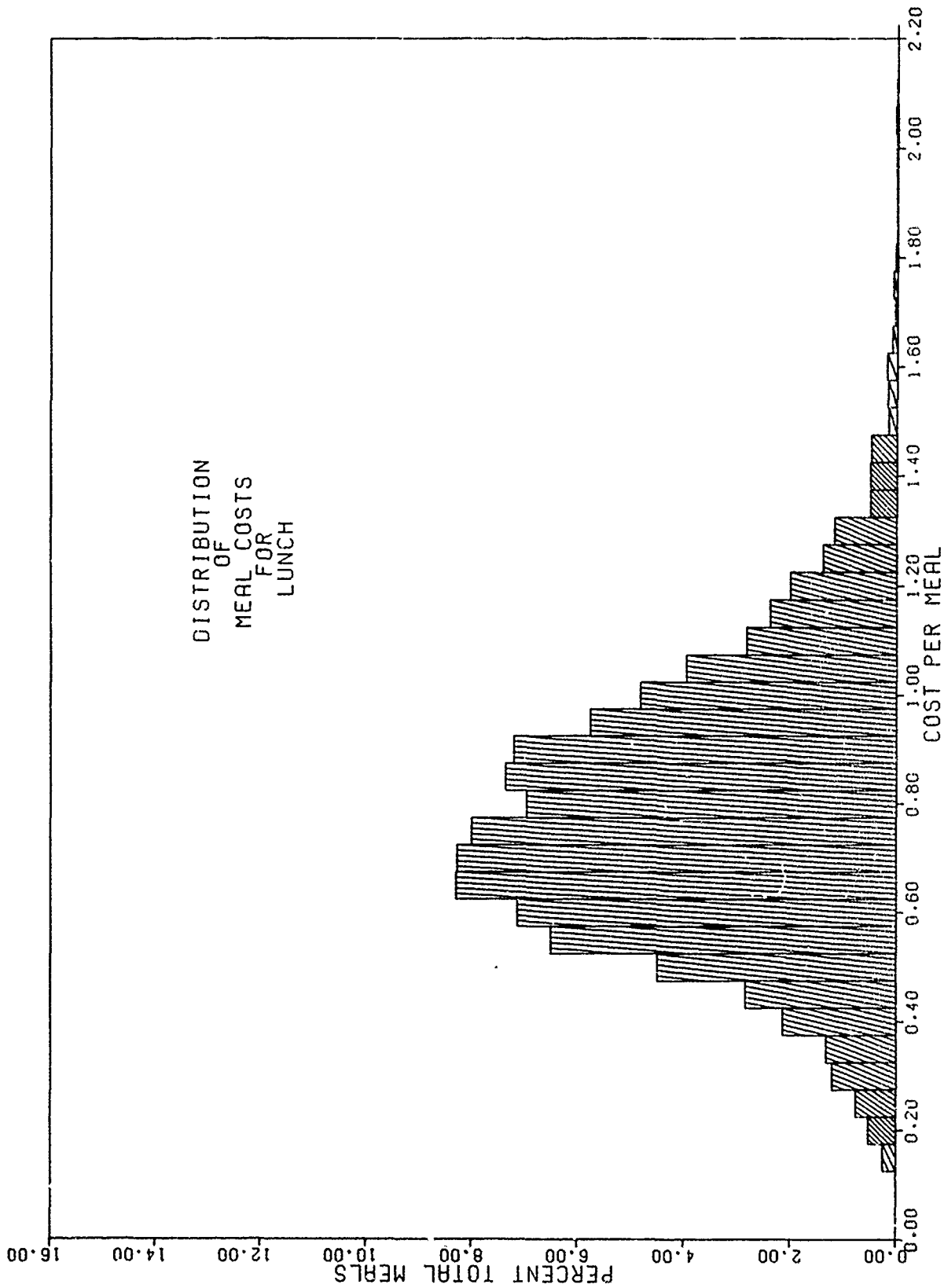


FIGURE 19: DISTRIBUTION OF LUNCH MEAL RECEIPTS

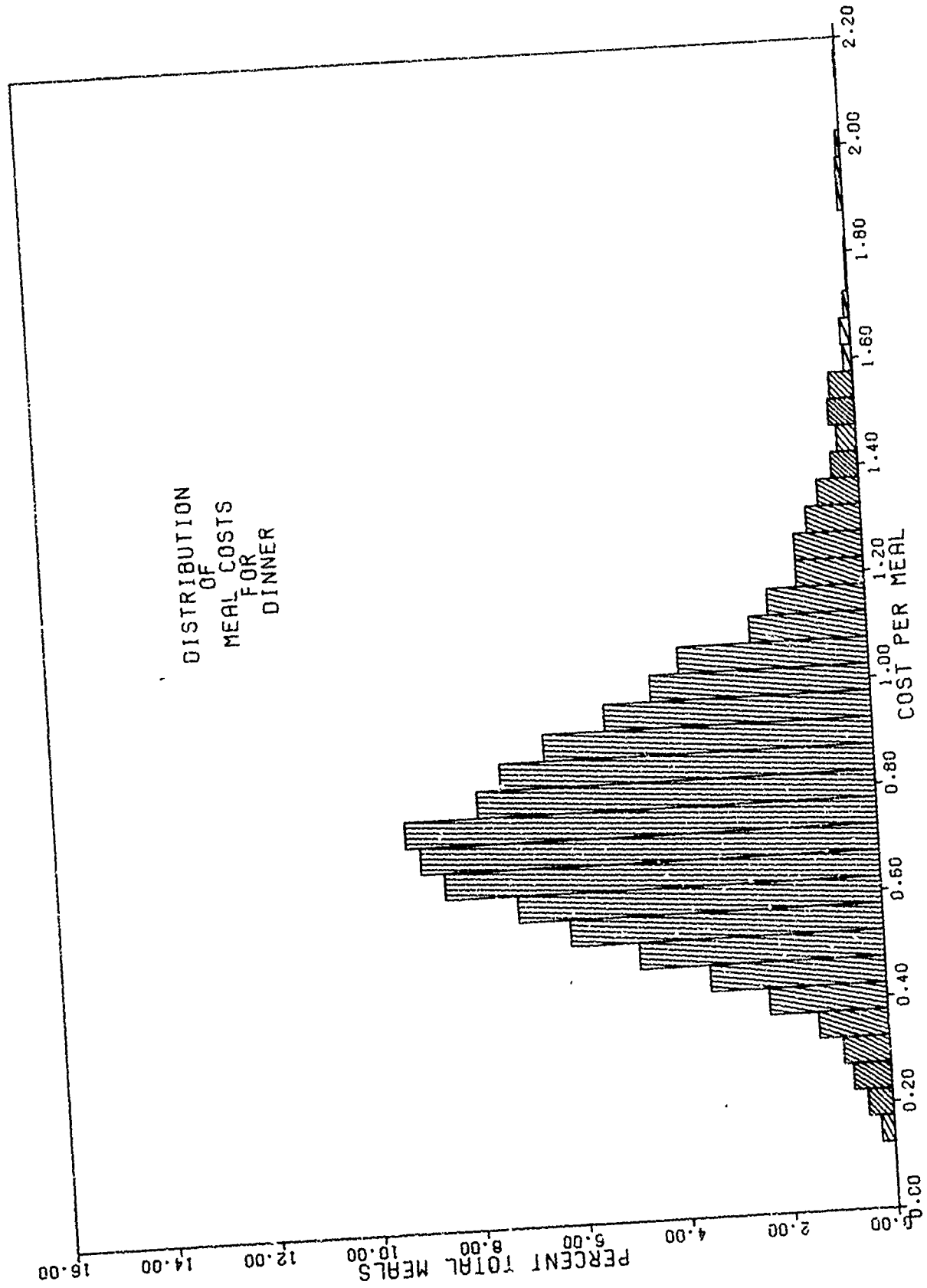


FIGURE 20: DISTRIBUTION OF DINNER MEAL RECEIPTS

TABLE 15

Mode and Median of Original Meal Receipt

Sizes^a

	Breakfast	Lunch	Dinner
Mode	\$0.50	\$0.65 - .70 ^b	\$0.75
Adjusted Mode	.55	.70 - .75 ^b	.80
Median	.50	.75	.75
Adjusted Median	.55	.80	.80

^aDoes not include seconds.

^bTwo maxima for lunch meals.

TABLE 16

Average, Median, and Mode of Seconds

	Cost		
	Breakfast	Lunch	Dinner
Average	\$0.06	\$0.08	\$0.08
Average Adjusted	.06	.11	.11
Median	.05	.05	.05
Median Adjusted	.05	.10	.10
Mode	.05	.05	.05
Mode Adjusted	.05	.10	.10

Next, workers were given the Job Description Index (JDI) (Smith, Kendall, & Hulin, 1969),⁸ a standard pencil and paper instrument which measures satisfaction in five areas (the work itself, the supervision, the co-workers, the opportunities for promotion, and the pay). Each area is evaluated by positive, negative, or neutral responses to a list of adjectives or descriptive phrases (18 words and phrases each for work, supervision, and co-workers; nine each for pay and promotions).

Two different individual interviews were conducted, one in both the Pre- and Post-Tests and a second in only the Post-Test. The former dealt with workers' opinions of the advantages and disadvantages of CASH/A La Carte compared to the traditional military food service system. The Pre-Test workers were asked to speculate about the new system, while Post-Test workers were asked to comment from experience. In the second interview, Post-Test respondents were asked about their perceptions of the effect of CASH/A La Carte on consumer satisfaction, an approach somewhat different from the usual procedure of limiting questions to the worker's own role in the system (e.g., Symington & Meiselman, 1975).⁹

Workers Opinions of the CASH/A La Carte and Traditional Systems Demographics. Table 17 shows the rank of the military workers interviewed at NAS Alameda in both the Pre- and Post-Test phases. Twenty-two of the 25 workers interviewed in the Post-Test had also been interviewed in the Pre-Test. Therefore, not surprisingly, the two samples had similar age ranges (19-41 and 19-42, respectively) as well as similar ranges for the length of time they had spent in their Navy food service careers (from a few months to 20 years for both groups). Their attitudes toward the military were also extremely similar, being positive on the average, with the Pre-Test group mean being a bit higher (Table 18).

⁸Smith, P.C., L.M. Kendall, & C.L. Hulin, "The Measurement of Satisfaction in Work and Retirement," Chicago: Rand McNally & Co., 1969.

⁹Symington, L.E. and Meiselman, J.L., "The Food Service Worker and the Travis Air Force Base Experimental Food System: Worker Opinions and Job Satisfaction", US Army Natick Laboratories Technical Report 75-94-FSL, 1975.

TABLE 17

Rank of Pre- and Post-Test NAS Alameda Military Food Service

Sample	Rank						Warrant Officer
	E-2	E-3	E-4	E-5	E-6	E-7	
Pre-Test	2	3	11	8	4	2	0
Post-Test	2	2	7	7	4	2	1

TABLE 18

Attitude Toward Military Service of Pre- and Post-Test NAS Alameda Food Service Workers

	1 Dislike Very Much	2 Dislike Moderately	3 Dislike a Little	4 Neither Like nor Dislike	5 Like a Little	6 Like Moderately	7 Like Very Much
Pre-Test	2	2	2	2	3	10	9
Post-Test	2	2	1	4	1	5	9

Pre-Test mean = 5.27

Post-Test mean = 5.13

Job Description Index. The Job Description Index (JDI) is a standard paper and pencil instrument which measures satisfaction within five areas of a job: the work itself, the supervision, the co-worker on the job, the opportunities for promotion, and the pay (Smith et al., 1969).¹⁰ Before discussing the responses of the pre- and post-test workers to this instrument, a brief explanation of the scoring should be undertaken.

Each of the five areas of the JDI is evaluated by responses to a list of words or descriptive phrases (18 words and phrases each of work, supervision, and co-workers; nine each for pay and promotion). Table 19 shows the format and four of the words/phrases

¹⁰Smith, Kendall and Hulin, "The Measurement of Satisfaction in Work and Retirement", Chicago, Rand McNally & Co., 1969.

from the work scale. The respondent circles the "Y" (yes) or "N" (no) to indicate whether or not the word/phrase describes his job. He circles "?" for those items which he does not understand or on which he cannot decide.

TABLE 19

Format for the Work Scale of the Job Description Index (JDI)

Work	Y	N	?
Fascinating	Y	N	?
Routine	Y	N	?
Boring	Y	N	?
Good	Y	N	?

Based on a large number of respondents who were asked to describe the best and worst possible jobs for themselves, the developers of the JDI (Smith et al., 1969) determined which response should be scored as "satisfied" for each item. For example, in Table 19 "routine" and "boring" are scored in the satisfied direction if the individual responds, "N"; and "fascinating" and "good" are scored in the satisfied direction if he answers, "Y".

Traditional scoring methods would probably suggest a scoring of 2 for a "satisfied" answer, 1 for a "?" answer, and 0 for a "dissatisfied" answer. Smith, however, has scored "satisfied" answers as 3, "dissatisfied" answers as 0, and "?" answers as 1. This departure from traditional methodology was based on the response of the sample mentioned above where it was concluded that the "?" response was more indicative of dissatisfaction than of satisfaction. For each scale or area of the JDI, the range of possible scores is from 0 to 54, with scores on each work or phrase being summed for the work, supervision, and co-worker scales; and summed, then doubled, on the pay and promotion scales.

Figure 21 shows the mean responses of the Pre- and Post-Test NAS Alameda military food service workers to the five scales of the JDI. It also shows the mean responses from a sample of military food service workers surveyed at three Air Force bases (Travis, Minot, and Homestead AFB/Symington and Meiselman, 1975)¹¹ and Smith's set of norms

¹¹Symington, L.E. and Meiselman, H.L. "Job Satisfaction and Opinion of the Air Force Food Service Worker." U.S. Army Natick Research and Development Command Technical Report 76-11-FSL, 1975.

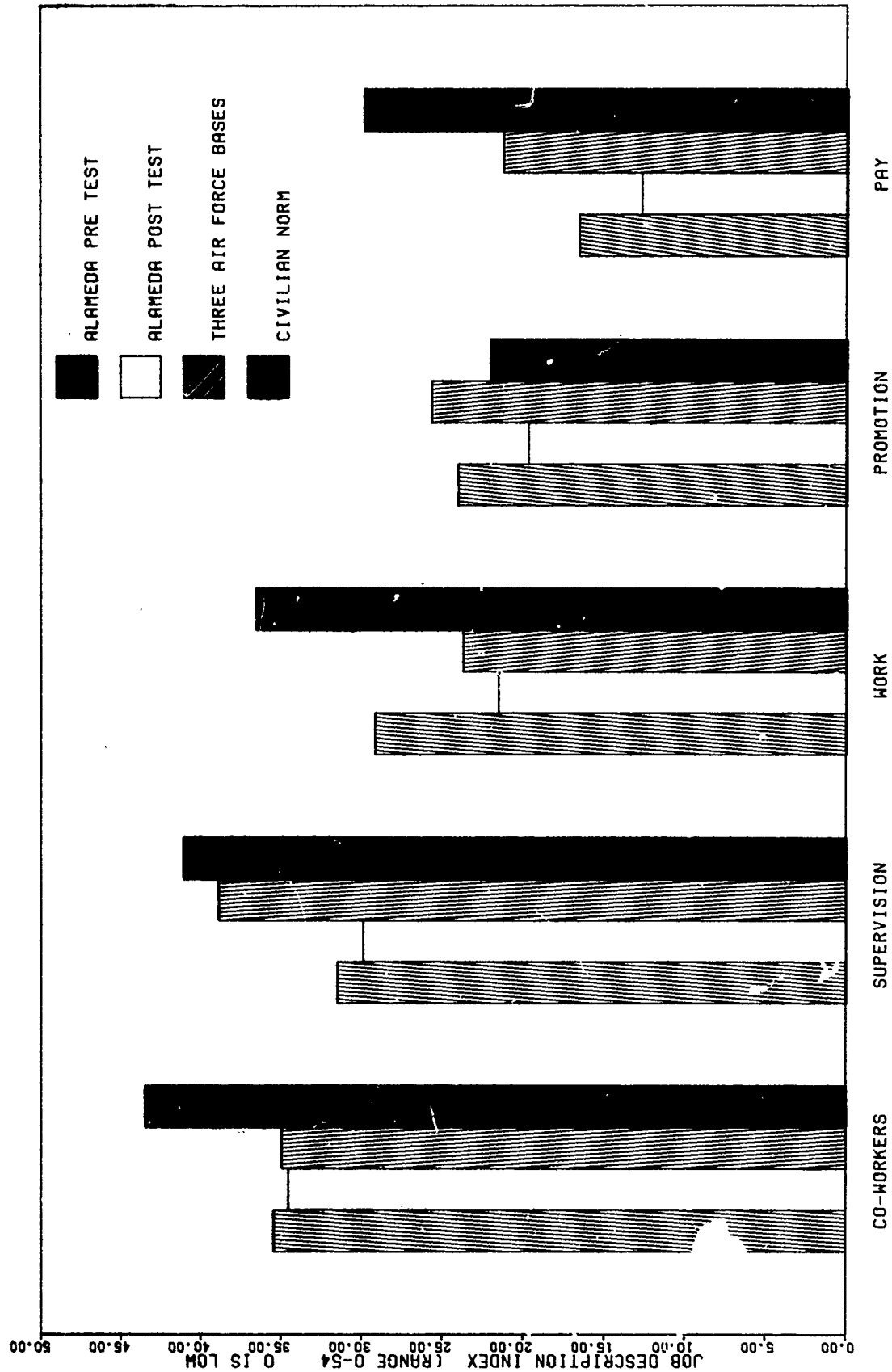


FIGURE 21: MEAN RESPONSES BY FOOD SERVICE WORKER TO THE JOB DESCRIPTION INDEX

obtained from a large non-food service, civilian sample. This later normative sample was drawn from private business organizations of fifty or more employees--and from all levels within these organizations. The companies included production plants, retail stores, banks and research organizations, among others (Smith et al., 1969).¹²

Figure 21 can be summarized with several observations. The NAS Alameda workers, both Pre- and Post-Test, expressed their highest level of satisfaction with their co-workers, followed by supervision, work, promotion, and pay in that order. Comparisons of the NAS Alameda workers' scores with the civilian norms find the NAS Alameda mean scores lower with the exception of the Pre-Test score on the promotion scale; however, note that the Air Force food service worker scores follow a similar pattern. Comparing the NAS Alameda Pre-Test scores to the Air Force scores shows two scales, co-workers and promotion, where the means were approximately equal; two where NAS Alameda means were lower, supervision and pay; and one, work, where NAS Alameda workers were more satisfied.

The critical comparisons for this study, of course, are between the Pre- and Post-Test samples. On each of the five scales the Post-Test sample has a lower mean than the Pre-Test sample, indicating a lower level of satisfaction. While four of these differences are not statistically significant, one -- between the scores on the work scale -- is. This is in marked contrast to the study of BAS/A La Carte at Loring AFB where Post-Test workers had a higher (although not statistically significant) JDI work scale score than Pre-Test workers. NAS Alameda workers, then, were significantly less satisfied with their work in the CASH/A La Carte system implemented at NAS Alameda than they were with their work in the traditional system.

Interview. Several questions in the worker interviews provided responses which further amplify the dissatisfaction with CASH/A La Carte suggested by the JDI data. The Pre-Test interview centered around the workers' feelings about the proposed CASH/A La Carte system and their perceptions of what their jobs might be like in the new system. The Post-Test questions addressed the same areas in terms of the workers' actual experiences.

¹²Smith, Kendal and Hulin "The Measurement of Satisfaction in Work and Retirement," Chicago, Rand McNally & Co., 1969.

Figure 22 presents the workers' responses to questions asking whether their jobs were (would be) better, worse, or about the same in the CASH/A La Carte system. Whereas half the Pre-Test workers anticipated a positive effect of CASH/A La Carte in their jobs, only 20% of the Post-Test workers felt that their jobs were better, and 40% felt that their jobs were worse. This more negative view of CASH/A La Carte by the Post-Test sample was statistically significant.

Another question asked the workers to express their preference for the CASH/A La Carte or traditional system. Again Pre-Test workers were asked to speculate about the question while Post-Test workers were asked to respond based on their experience. Figure 23 shows the responses of the Pre- and Post-Test NAS Alameda workers and, for comparison, the responses of the Post-Test Loring AFB workers.

Note that the Pre-Test sample at NAS Alameda was fairly evenly divided in opinion of the impending shift to CASH/A La Carte with 43% anticipating preferring it, 17% anticipating no preference, and 40% anticipating that they would still prefer the traditional system. The Post-Test responses shifted toward the traditional system with 56% of the workers preferring it, 36% preferring CASH/A La Carte, and 8% stating no preference. While this shift was not a statistically significant one it does result in more than half of the workers not preferring CASH/A La Carte. This non-positive evaluation of CASH/A La Carte by the Post-Test NAS Alameda workers is again in strong contrast to the very positive response of the Loring workers where 83% of the workers preferred BAS/A La Carte and only 7% preferred the traditional system (this difference between Alameda and Loring Post-Test samples is statistically significant).

An interesting observation can be made about the Post-Test Alameda workers who "extremely preferred" CASH/A La Carte. Five of the six were what could be considered "supervisors" (food service officer, leading MS, galley captain, or watch captain); and only one "supervisor" preferred the traditional system. Thus, unlike at Loring AFB where "supervisors" and "workers" equally preferred BAS/A La Carte, the NAS Alameda "supervisors", as a group, were in favor of CASH/A La Carte and the "workers", in general, were opposed.

Some of the answers to open-ended questions in the Post-Test interview provide some clues to the negative attitude of the workers. In answer to what was bad about CASH/A La Carte, the most frequent response concerned the number of hours which were spent on the job (60% of the workers responding). Two comments are appropriate concerning working hours. First, the workers themselves chose the on-off hours arrangement of their schedules. Secondly, whether justified or not, there was a strong feeling among the workers that shore duty is supposed, to some extent, to be a relatively easy tour to compensate

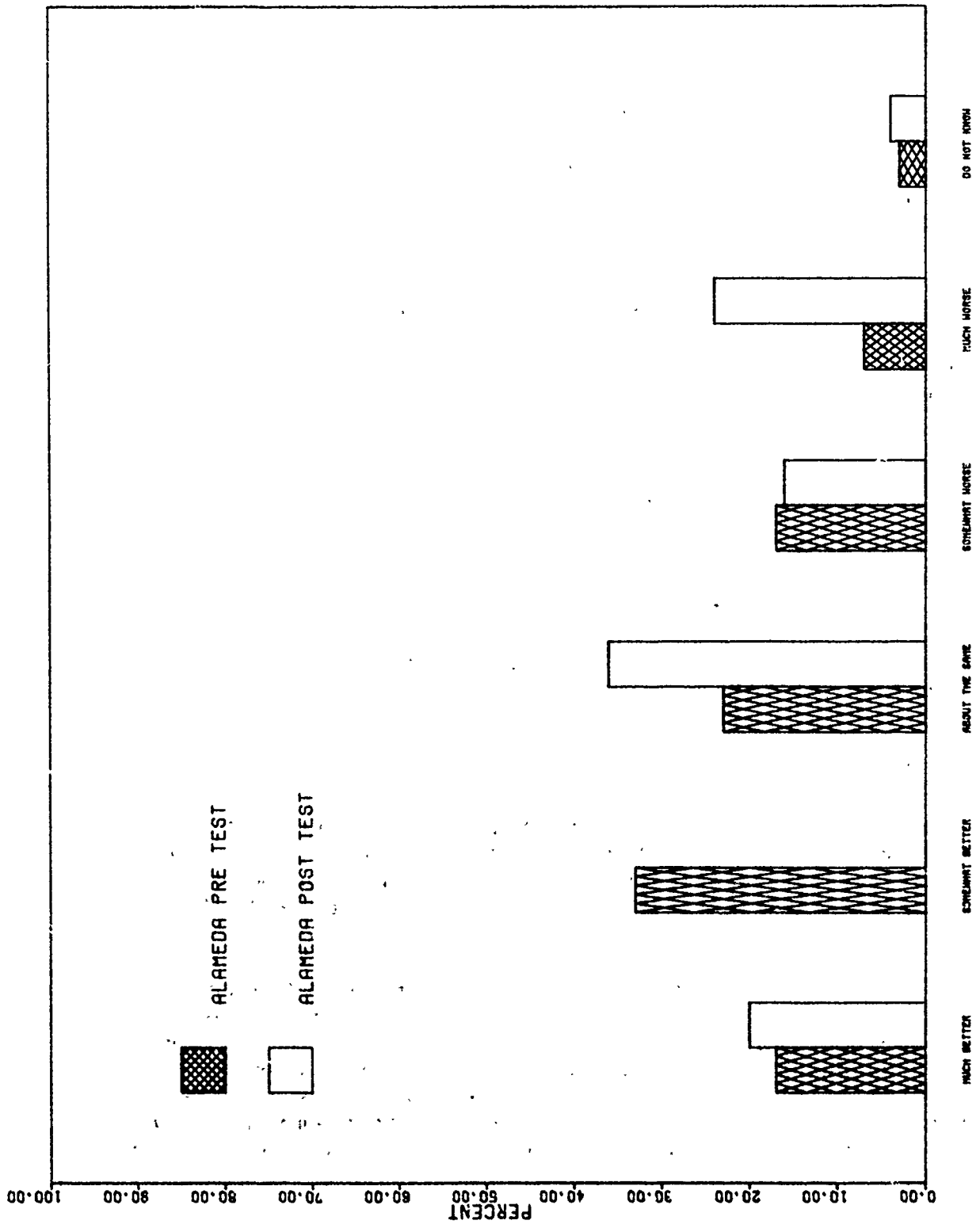


FIGURE 22: EVALUATION BY FOOD SERVICE WORKER OF JOB UNDER CASH/A LA CARTE

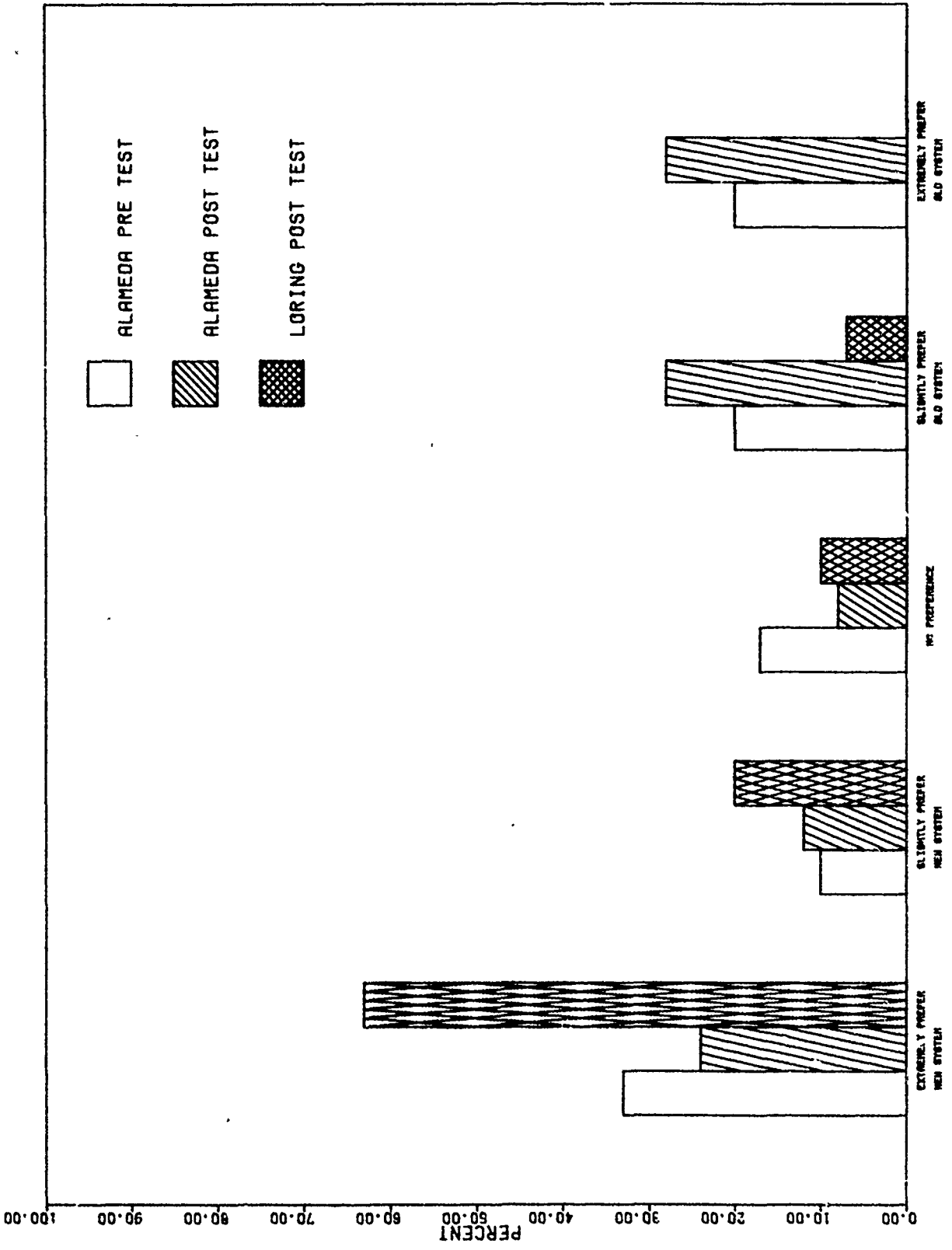


FIGURE 23: FOOD SERVICE WORKER PREFERENCE FOR NEW (CASH/A LA CARTE, BAS/A LA CARTE) SYSTEM VERSUS THE OLD (CONVENTIONAL RIK/COMRATS, RIK/BAS) SYSTEM

for the rigorous hours spent at sea by the MS rate. Whether this perception accurately reflects policy is irrelevant as long as the workers feel they are entitled to a "relaxed" tour. This perception partially explains the large number who objected to the hours and probably was a contributing factor to the second most frequent criticism of CASH/A La Carte, that there was too much work to do and/or not enough people to do it (56%).

Other categories being volunteered by at least three workers included not liking the special meals for seamen and their guests (16%), too much paperwork (16%), customer complaints about portion size (16%), and customer complaints about cost (12%). It should be recalled that these latter customer oriented responses were not reflected in the results of the consumer survey.

In response to a question asking what was good about CASH/A La Carte, the most common response concerned the variety offered the Customer (44%). Other positive comments included the perception that the food was better because of the smaller quantities and progressive cookery (28%), that there was less waste (24%), that there was better financial control (16%), and that the customer had to pay only for what he ate (12%).

The Pre-Test and Post-Test samples were also asked if their jobs would be (was) easier or harder in CASH/A La Carte. As can be seen in Figure 24, the responses followed a familiar pattern with Pre-Test responses balanced around neutral and Post-Test responses shifting toward the negative, although this indication that workers perceived their job as being harder in CASH/A La Carte was not statistically significant. When asked why the job was harder, the most common responses made by the Post-Test sample again concerned the hours and the workload. It is interesting to note that the Loring workers also felt their jobs were harder. However, they claimed not to mind since in the new system they were being used as cooks whereas in the traditional system many had been used in cleaning/serving tasks while civilian wage grade cooks did most of the cooking. At NAS Alameda, however, there were no civilian cooks; the Navy food service workers had also done the cooking in the traditional system. For the Alameda workers, then, the change to CASH/A La Carte had not "made them cooks" as it had reportedly done for many at Loring AFB. In fact due to a lack of additional funds to pay for the cashiering function certain serving functions were given to the cooks which had formerly been the responsibility of the KP contractor so that contract costs could be held constant. It is possible that the decreased job satisfaction and concern with harder work was related to this additional duty, an additional duty moreover associated with lower status connotations.

Recall that 28% of the Post-Test cooks volunteered improved food quality in answer to an open-ended question concerning what was good in CASH/A La Carte. Later in the interview this sample of workers was directly asked whether the food in the dining

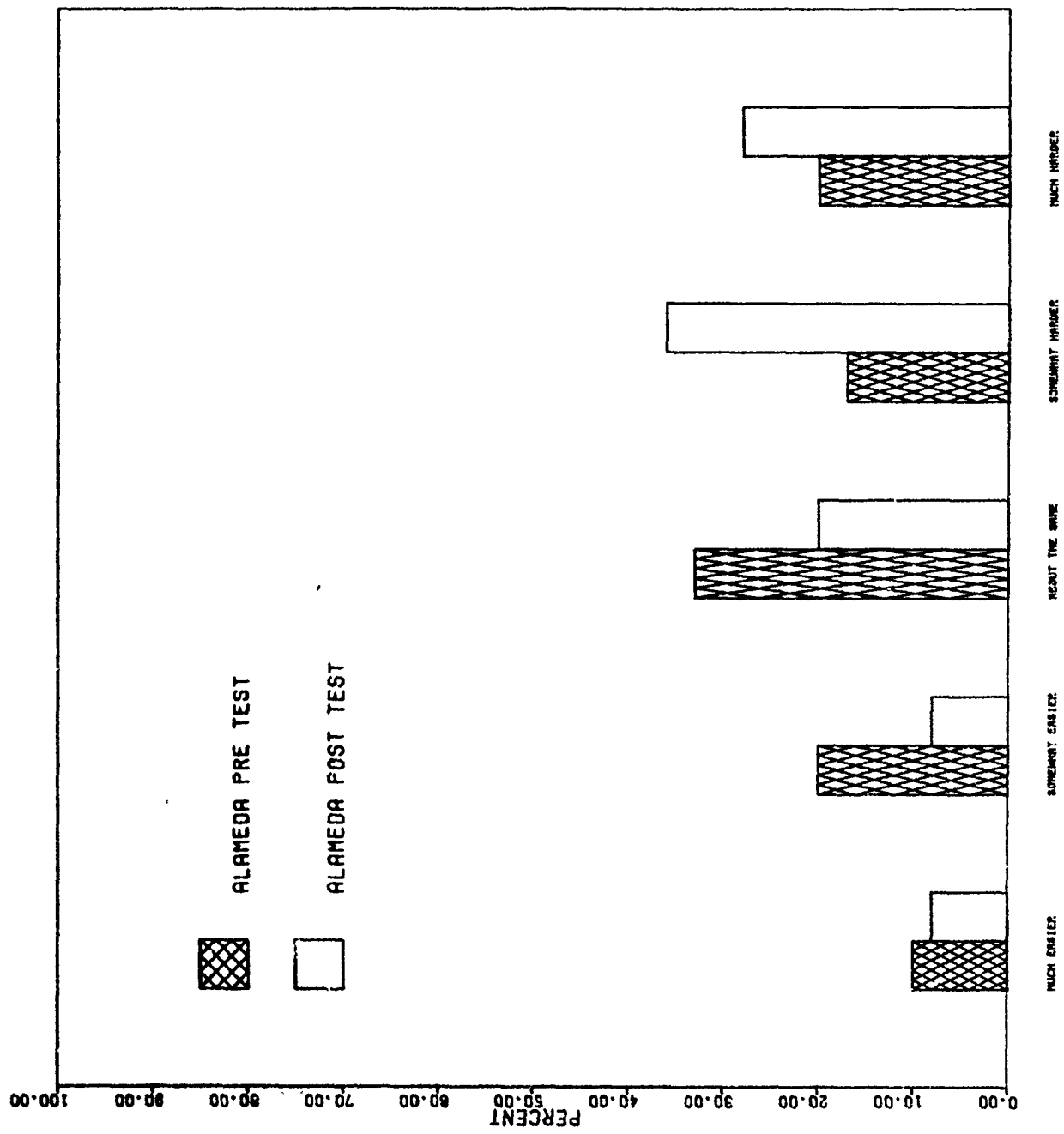


FIGURE 24: EVALUATION BY FOOD SERVICE WORKER OF EASE OF JOB UNDER CASH/A LA CARTE

facility was better or worse than before the change. One respondent (4%) said that it was worse, five (20%) said it was about the same, sixteen (64%) maintained the food was better, and three (12%) declined to give an opinion. When asked why it was better in an open-ended format, 12 of the 16 (75%) cited smaller quantity cooking with 3 of these also citing progressive cookery; thereby corroborating the data reported earlier.

Summary. The NAS Alameda military food service worker Pre-Test sample seemed to have a relatively neutral view of the imminent CASH/A La Carte system when asked to speculate about it. However, the Post-Test samples' views shifted toward the negative: their Job Description Index rating of their work was significantly lower than the Pre-Test samples' rating of their work; 40% rated their job in CASH/A La Carte as somewhat or much worse than their job in traditional system while only 20% rated it better; 56% preferred the traditional system to CASH/A La Carte while 36% preferred the latter; and 64% found their jobs to be harder under CASH/A La Carte while only 16% saw it as easier. These findings are in sharp contrast to the opinions of military food service workers experiencing BAS/A La Carte at Loring AFB who strongly preferred the new system.

Another difference between the Alameda and Loring data was the split between Alameda "supervisors" and "workers" with the former, in general, preferring CASH/A La Carte and the latter preferring the traditional system. At Loring the new system was generally preferred by both.

The main complaint of the Alameda Post-Test worker concerning CASH/A La Carte dealt with his perception of long working hours and a heavy workload. This seemed to be a particular burden, since the workers rightly or wrongly claimed to anticipate "easy" shore assignments in compensation for rigorous sea duty. While some Loring AFB workers claimed to like BAS/A La Carte because it gave them an opportunity to cook instead of clean/serve, this was not true for the NAS Alameda military workers who had also cooked in the traditional system and who had assumed a serving function not held under the traditional system. Some of the NAS Alameda workers also complained about the special meals, paperwork, and customer complaints about portion size and cost.

The Post-Test workers did however perceive some positive aspects of CASH/A La Carte, citing the variety offered the customer, improved food quality, and a decrease in plate waste.

5. LAROR REQUIREMENT ANALYSIS

The purpose of this work sampling analysis was to examine the performance of the food service personnel under the CASH/A La Carte concept. In particular, this study was performed to determine if the workload on the food service personnel at NAS Alameda was significantly different between the CASH/A La Carte system and the conventional food service system that exists at all other Naval installations.

The specific objectives of the work sampling study were to:

1. Determine how food service personnel allocate their time during working hours between productive and nonproductive activities.
2. Determine the percentage of time required for each of the different work functions that are performed in the dining hall.
3. Identify significant differences in productivity and work functions between the CASH/A La Carte concept and the conventional method of operation.
4. Identify significant differences in productivity among the hours of a workday.
5. Identify significant differences in productivity among the days of the week.

For simplicity, job classifications were limited to three categories coinciding with the following position descriptions:

1. Galley Supervisor (and assistant)
2. Cook
3. Messcook

Complete definitions for these job classifications are included in Appendix E Table E-1. The food service officer, the CPO's and the office clerks were not evaluated as the scope of this analysis was limited to the determination of any significant differences between the CASH/A La Carte concept and the conventional system regarding the preparation and serving of food.

Food service task definitions used in the study were based primarily on those used by the Air Force.¹³ For purposes of analysis, these activities were arranged in the groups and subgroups shown in Figure 25. Detailed definitions of the tasks are presented in Appendix Table E-2.

The food service system at NAS Alameda consisted of one enlisted dining facility within which the inflight kitchen also operated. However, this analysis did not include an evaluation of the inflight kitchen, only that an individual was working in that area and not in the main galley area. A food service officer (WO-3) was in charge of the dining facility. Reporting to the food service officer was the leading mess management chief (MSC) and galley supervisor (MSC). Two watches, each consisting of one galley watch supervisor, one watch captain, nine Navy cooks, three messcooks, one night baker, one night messcook, and a jack-of-the-dust (store keeper), reported to the galley supervisor.

¹³ USAF Management Engineering Study, "Efficiency Foods Test", MACMET, Det. 1, McGuire AFB, NJ, 1969.

I. Nonproductive

- A. Designated Rest Break
- B. Idle
- C. Absent
- D. Walking
- E. Conversing

II. Direct Work

- A. Food Preparation
 - 1. Prepares Meats and Vegetables for Cooking
 - 2. Cooks Food in Kitchen
 - 3. Prepares Soups or Gravies
 - 4. Prepares and Assembles Salads or Fruits
 - 5. Prepare Bakery Products or Desserts
 - 6. Prepares Cooking Utensils
 - 7. Prepares Flight Meals, Picnic Meals or Bag Lunches
- B. Serving Food
 - 1. Serves Food
 - 2. Sets up, Replenishes, and Tears Down Serving Line
 - 3. Prepares and Assembles Cold Sandwiches
 - 4. Cooks Food to Order on Serving Line
- C. Sanitation
 - 1. Cleans Utensils and Pots
 - 2. Cleans Equipment
 - 3. Cleans Kitchen
 - 4. Personal Hygiene

III. Indirect Work

- A. Supplies
 - 1. Receives Supplies
 - 2. Maintains Supplies
 - 3. Issues Supplies
- B. Administrative
 - 1. Prepares Correspondence, Records or Reports
 - 2. Telephone
 - 3. Maintains Menu Boards
- C. Supervisory
 - 1. Monitors Reports and OJT Program
 - 2. Inspects
 - 3. Receives or Gives Supervision
- D. Cash Transactions
- E. Miscellaneous
 - 1. OJT
 - 2. Maintenance and Repair

FIGURE 25

Worker Activities

Additional personnel included a dispersing clerk (DK1) to handle cash and two records keepers (SK2,AN) to prepare reports and maintain records. There was also a civilian contractor in the dining facility who was responsible for bussing tables, cleaning the mess deck, ware washing, cleaning pots and pans, cleaning the serving line after each meal, and cashiering. Figure 26 shows the organization chart for the food service personnel in the dining facility.

The duty watch was from 0500 to 1900, that is, individuals on duty for a given day would report at 0500 and continue through until 1900 in the evening. In the Navy, cooks on shore duty work a "five and two" schedule (one week they work five days with two days off and the next week they work two days, with five days off) with each working day being fourteen hours in length.

This "five and two" work schedule is a long standing tradition for cooks in the Navy. Its attractiveness to the cooks can be attributed to the fact that it provides 15 off-days a month, and therefore permits them more time for their family or for second jobs to supplement their income. The commitment by the cooks to this schedule and their resistance to alternatives was so strong that more effective work schedules were not imposed during this experiment on the assumption that worker resistance and noncooperation would have a greater adverse impact on the success of the test than retaining the "five and two" single shift schedule.

The dining facility was open for service during the hours shown below:

	Weekdays	Weekends
Breakfast	0600-0745	0630-0900
Lunch	1100-1230	1000-1230
Dinner	1630-1800	1630-1800

Survey Methodology

Work sampling consists of taking a large number of observations on individuals performing tasks in a work situation. The task being performed at each observation is recorded. From the ratio of the number of observations of workers performing a specific task to the total number of observations, one can infer the proportion of time that is actually spent on that particular activity. The larger the number of observations, the more accurate is the inference.

Observations are usually made on a random basis to obtain statistically valid results. However, in nonrepetitive situations, such as food service operations, observations can be

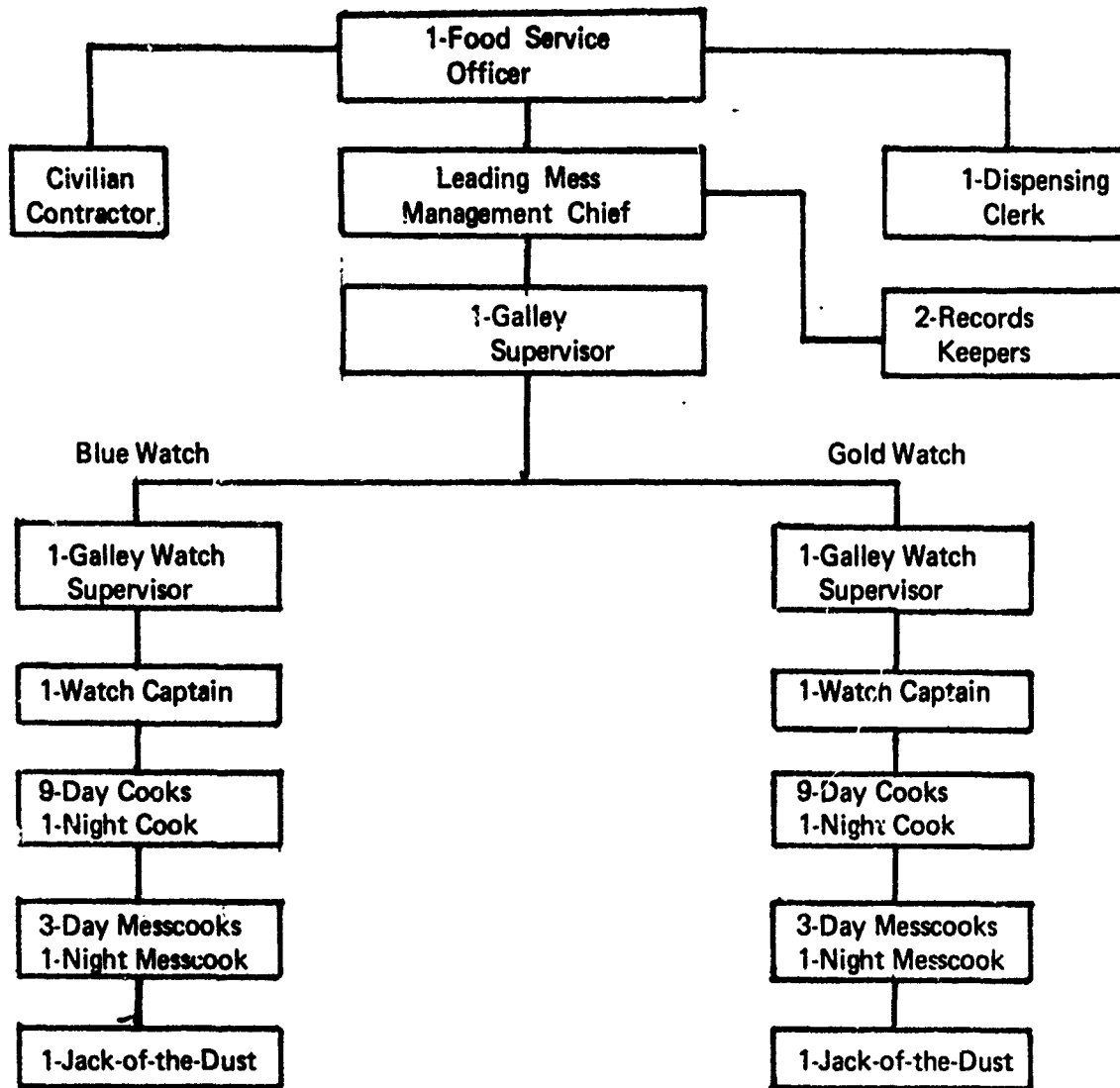


FIGURE 26
Organization Chart
of
Dining Facility Personnel

made on a systematic basis without introducing bias, provided the interval between observations is sufficiently small. This approach was used in this study to maximize the sample size in any given observation period.

The data collection was scheduled for the entire month of June 1976. The purpose of this was to guarantee that (a) a minimum number of observations were taken in any given job category to assure a specified level of accuracy ($\pm 2\%$), and (b) all hours of the workday were equally represented. Appendix E Table E-3, shows the schedule of observations for the study.

An initial shakedown period of two days was required to test and refine the data collection procedures, to provide training experience for the observers, and to permit the food service personnel to become accustomed to their presence.

Certain criteria were established for recording observations. Since this study was concerned with the major activities being performed, a worker slicing vegetables was recorded as "preparing food" and not "using knife", a person mopping the floor was "cleaning kitchen" and not "wringing mop" or "filling pail", and so forth.

If a worker was performing a function that required his presence at a specified location, whether or not he was actually productively engaged, he was recorded as actually performing the task, (e.g., a server on the food line was required to be there throughout the meal whether or not there was anyone to serve).

The walking function was recorded only when an individual was observed walking with no apparent reason. For example, a person walking with hot food for the serving line was recorded as, "refilling serving line". Observations were recorded on each person on duty every 10 minutes or 6 times an hour.

Results and Analysis

A. Overview of Dining Hall Personnel Activities

The graph in Figure 27 illustrates how the personnel in each of the different job categories allocated their time among the various work activities. The graph shows that 44% of the combined workforce's time was nonproductive, with messcooks demonstrating the largest percentage of nonproductive time (61%). Included in this figure were those times authorized for meals and rest periods. It should be noted however, that at least 3% of the nonproductivity figure resulted from extended absences because of the remote location of temporary refrigerated storage areas. It may also be noted that the majority of the food preparation and serving was performed by the cooks with some assistance from the supervisors, especially in the serving function. The cooks' time was allocated evenly between these two functions.

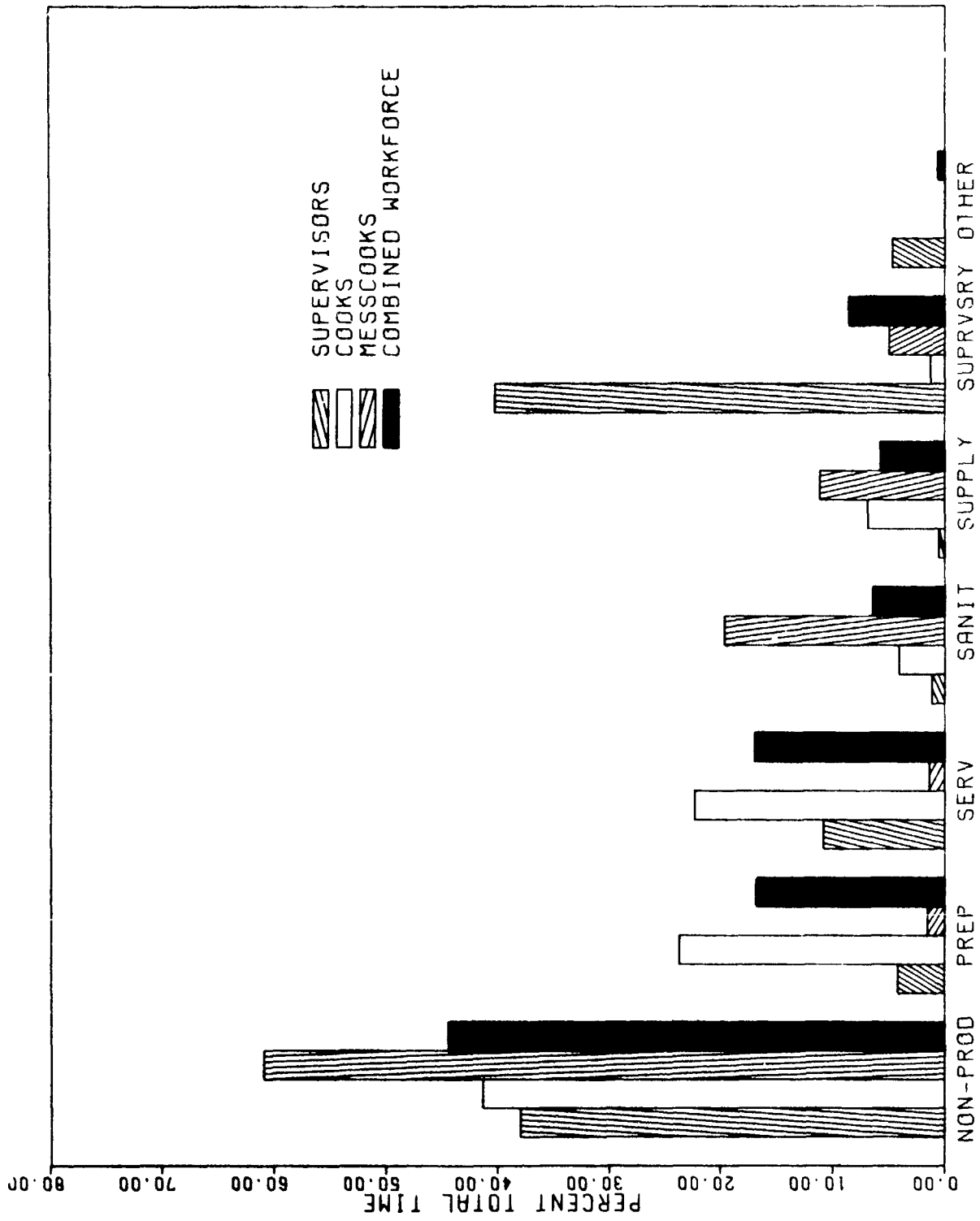


FIGURE 27: OVERALL PERSONNEL PERFORMANCE

Most of the sanitation function (other than that performed by the messman contractor) was performed by the messcooks. Finally, as is expected, the supervisors performed the vast majority of the supervisory type functions.

B. Analysis by Hour of the Day

Figure 28 presents profiles of the nonproductive time for each of the three job classifications during the workday and for all job classifications combined. From these graphs it may be noted that, for all job categories nonproductivity was higher between lunch and supper than it was between breakfast and lunch. Nonproductivity for messcooks, however, was extremely high throughout the entire day. During meals, which were usually the busiest times in the dining facility, messcooks still had at least a 40% nonproductivity rate. Finally, nonproductivity for all job categories was lowest during the noon meal, which normally had the highest attendance.

C. Analysis by Day of the Week

Nonproductivity for each day of the week is presented in Figure 29. It will be noted that nonproductivity was highest on the weekends (Saturday and Sunday). This was due to the decreased number of meals served on non-reserve weekends, as well as the fact that on reserve weekends, the workforce was augmented by reserve cooks. Secondly, differences in nonproductivity during weekdays does not seem to relate strongly to the number of meals served each day (See Table 20) since the daily variations in headcount were not large. The amount of nonproductivity seems therefore, to be a function of the menu; i.e., more labor intensive items are probably prepared on those days with lower nonproductivity. For example, Thursdays, which have the second lowest productivity rate (3.81 meals/man-hour), also have the lowest percentage of nonproductivity. This is attributed to the fact that on Thursdays both spaghetti with meat sauce and barbecued pork loin, both very labor-intensive items, are served.

D. Productivity

The average number of meals served are shown in Table 20.

TABLE 20

Average Headcounts by Day of Week

	S	M	T	W	T	F	S	TOTAL
B	182	196	204	217	194	196	190	1379
L	434	444	478	454	383	356	318	2867
D	355	315	308	325	264	262	263	2092
TOTAL	971	955	990	996	841	814	771	6338

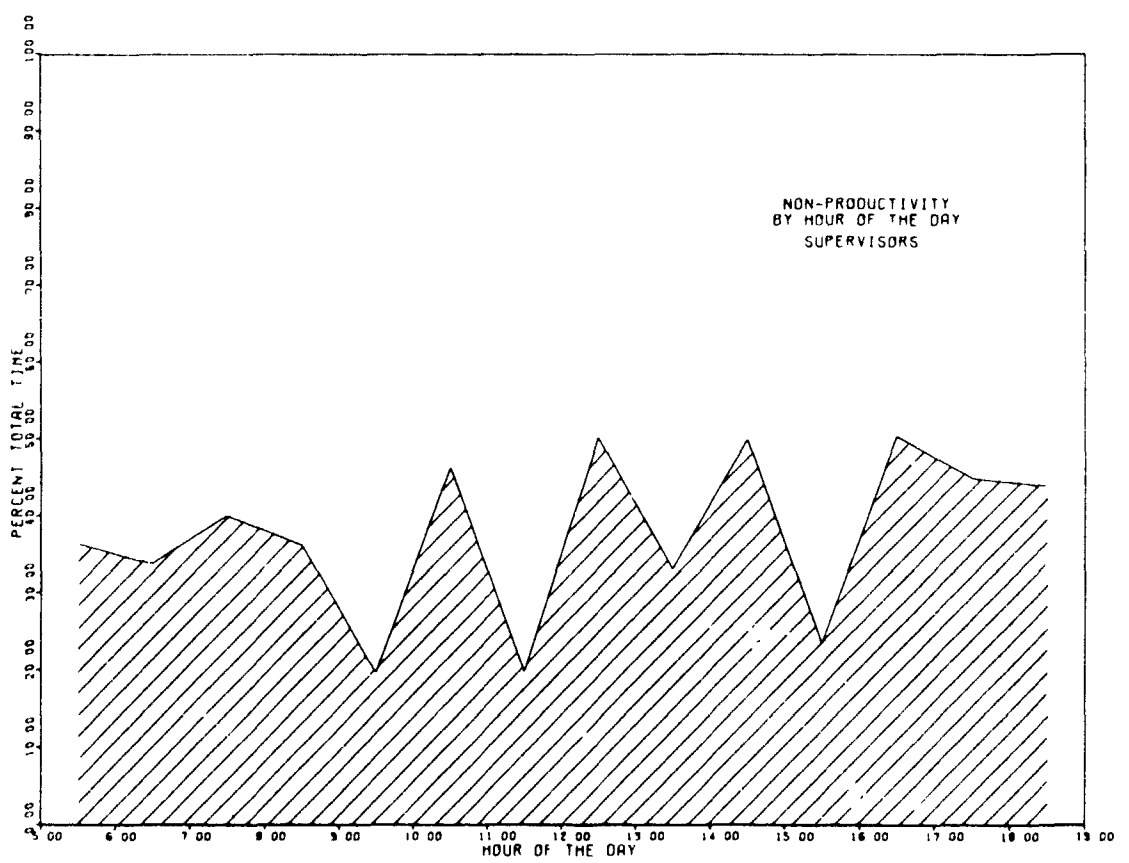
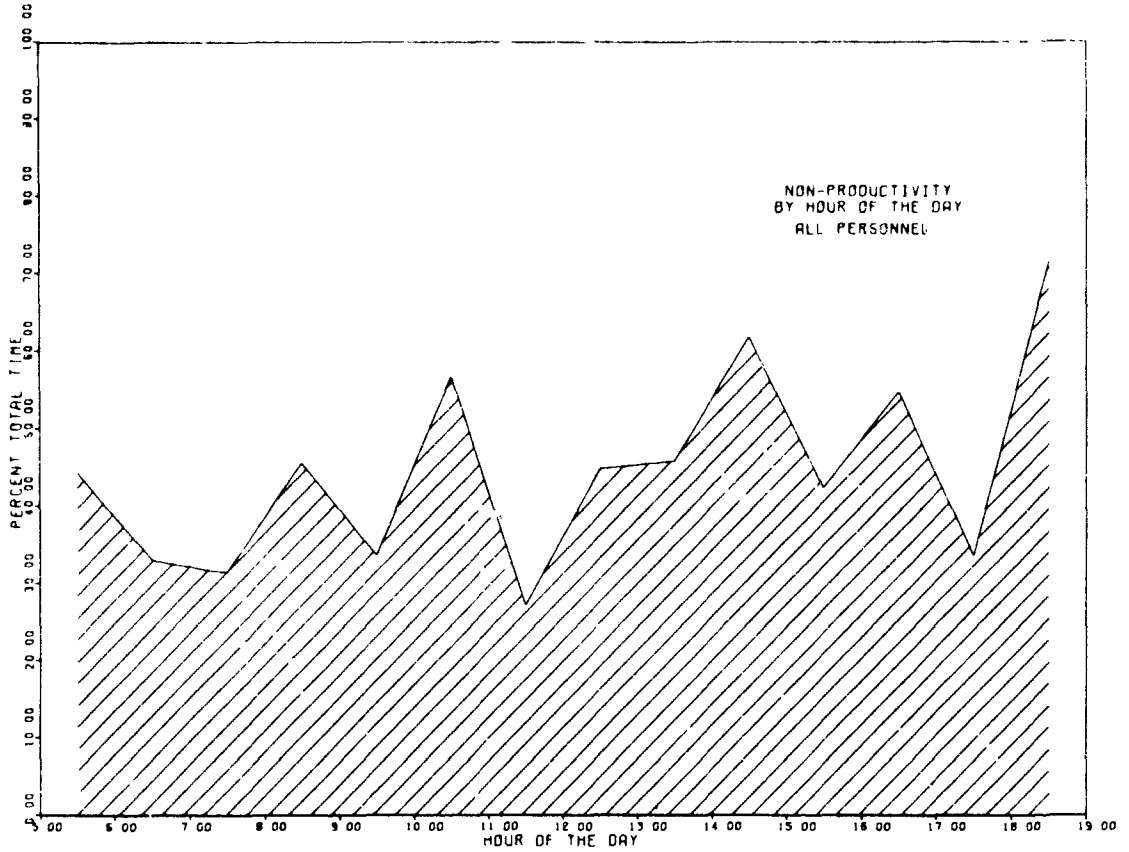


FIGURE 28. NON-PRODUCTIVITY BY HOUR OF THE DAY

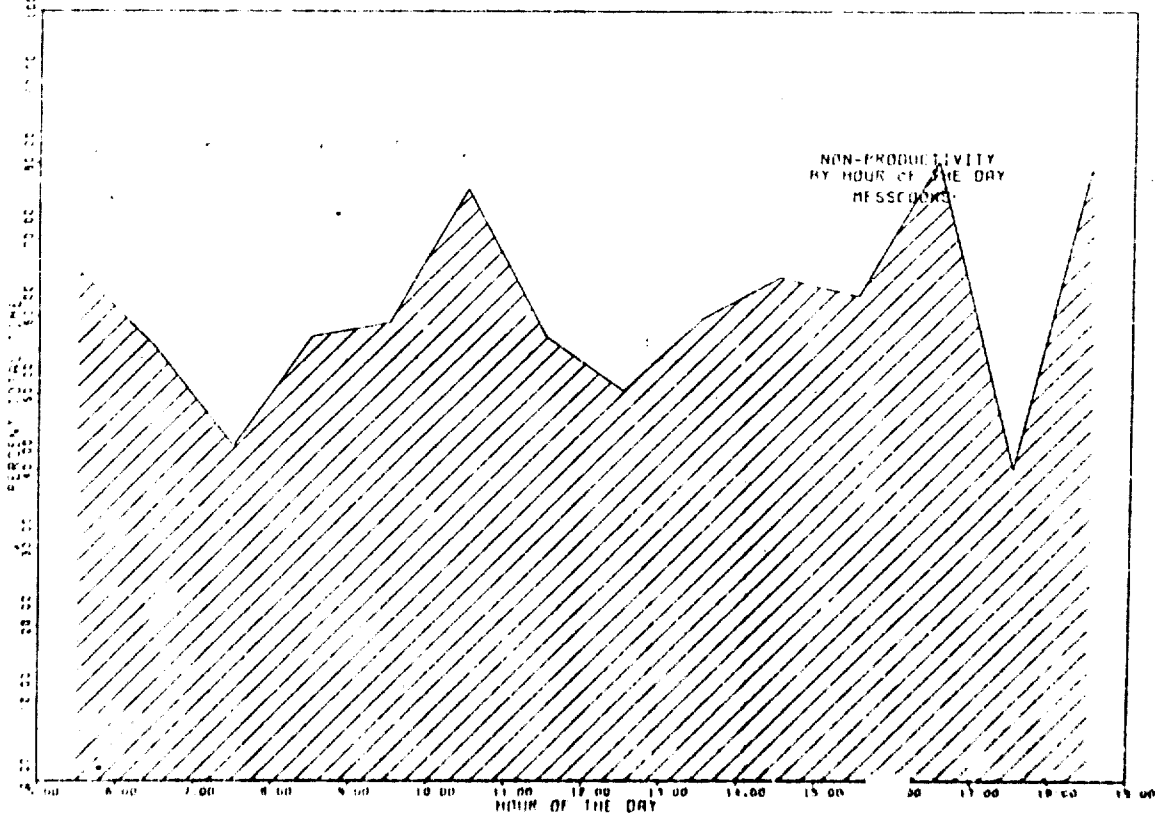
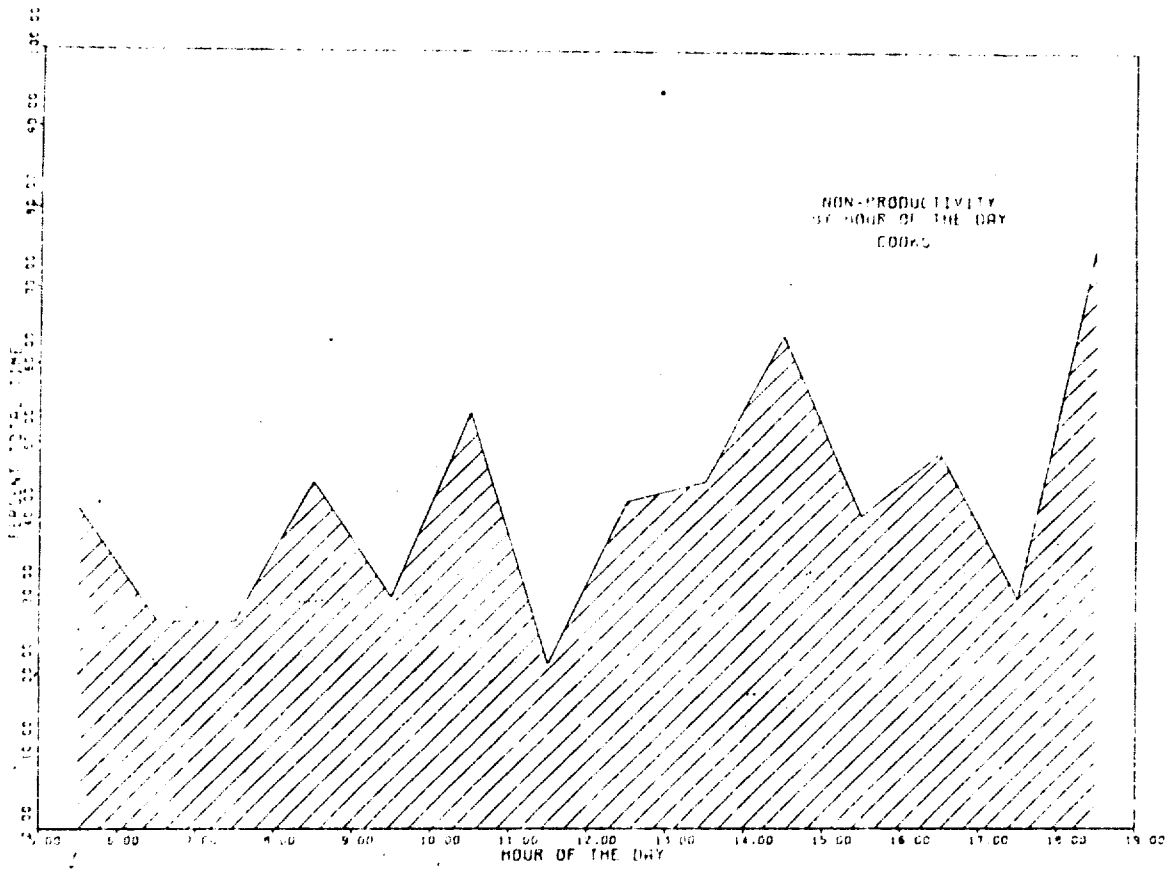


FIGURE 28. (Cont'd) NON-PRODUCTIVITY BY HOUR OF THE DAY

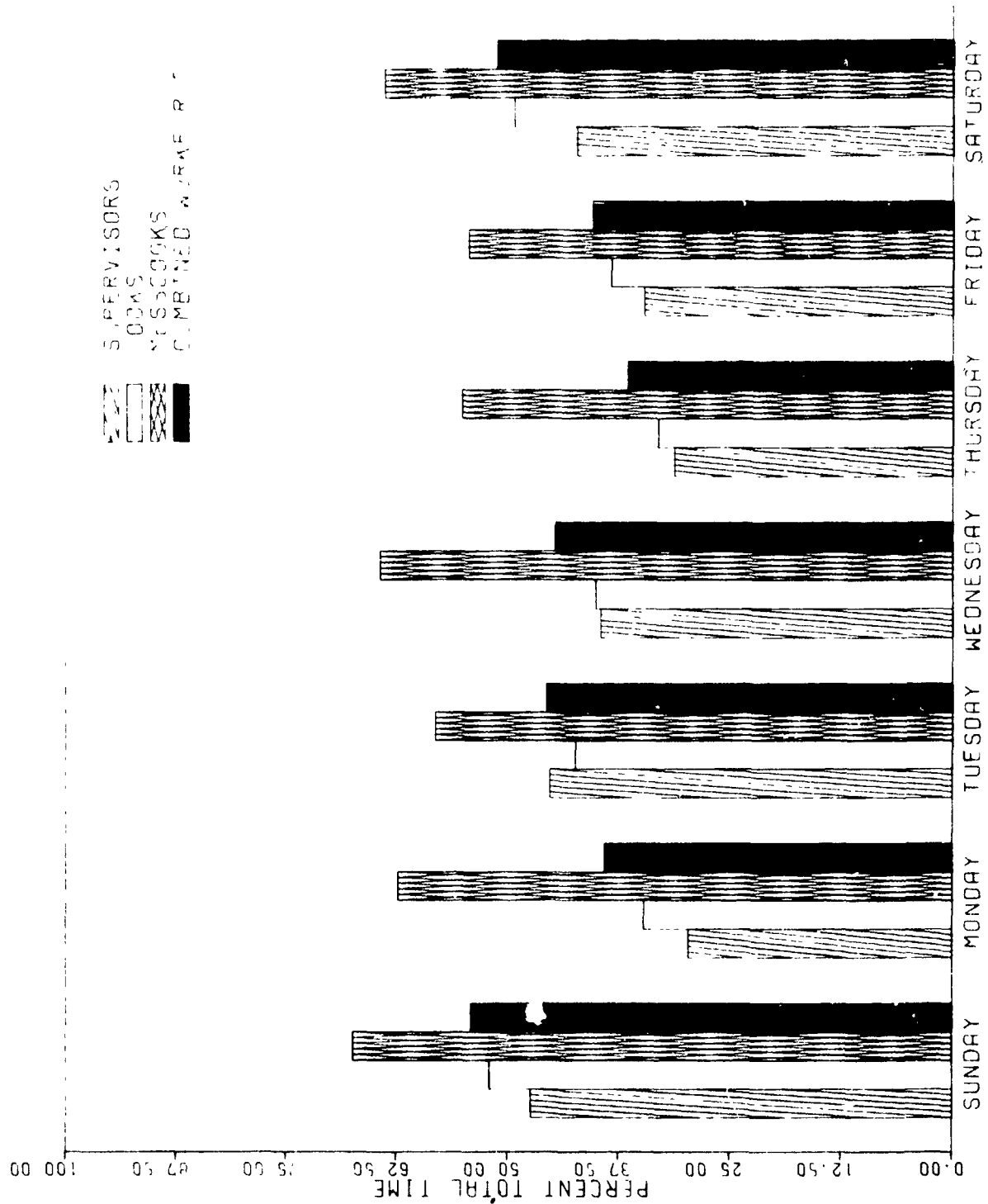


FIGURE 29: NON-PRODUCTIVITY BY DAY OF THE WEEK

Direct man-hours per day are calculated as follows:

17 men per watch (See Figure 26) X 13 hours per watch
= 221 man-hours per day.

(The watch is actually 14 hours long, so this allows one hour for meals and rest periods).

Dividing the total meals served each day by the number of direct man-hours worked yields the number of meals served per direct man-hour worked.

S	M	T	W	T	F	S	AVG.
4.39	4.32	4.48	4.51	3.81	3.68	3.49	4.10

The Food Service Officer, 2 MSC's, and three clerks should be included (all indirect) to calculate meals served per total man-hours worked, thus:

Direct hours per week: 221 man-hours/day X 7 days/week
= 1547

Indirect Hours per week: 6 men X 40 hours/week
= 240

Total man-hours per week = 1787

Meals per man-hour (direct and indirect) = $6338 \div 1787 = 3.55$.

As shown below in a comparison with the conventional system at NAS Alameda prior to the experiment, productivity was higher during the CASH/A La Carte phase.

PRODUCTIVITY

	Conventional*	CASH/A La Carte
Meals/Direct Man-hours	3.82	4.10
Meals/Total Man-hours	3.33	3.55

*From data collected during March, 1975 at NAS Alameda; i.e., 847 meals were served per week with 222 direct man-hours and 254 total man-hours worked weekly.

CONCLUSIONS AND RECOMMENDATIONS

1. Productive work time of 56% for all food service workers at NAS Alameda was somewhat lower than that of other military bases, 67.8% at Travis AFB¹⁴ and 63.4% at McGuire AFB,¹⁵ suggesting that the total staffing levels were more than sufficient.

2. Although a portion of the workers' nonproductive time could be attributed to their absences for extended periods at the temporary remote refrigerated storage areas, a more significant factor was the cooks "five and two" single shift work schedule which resulted in a constant work force present at all meals even though the work load varied due to changes in attendance among meals.

The low productivity (3.55 meals/man-hour) could be attributed to a combination of overstaffing and the "five and two" work schedule for cooks.

3. The fact that the Navy overstaffs ashore facilities seems to be predicated on the justification that the Navy desires to (a) provide ashore billets for cycling cooks on sea duty; and (b) make ashore duty easy to compensate for the long work hours at sea. If these justifications are valid it would seem reasonable to adjust the work schedules so that while the cooks are on duty they work and they are off duty when there is no work, rather than being on duty but idle.

For example, a two shift operation overlapping at the noon meal would reduce nonproductive time substantially. The first shift would work from 0500-1400 and the second from 1000-1900, still maintaining the "five and two" schedule. If a two shift operation was adopted, a larger portion of personnel should be on the first shift as justified by the greater amount of nonproductive time in the afternoon than in the morning. This would decrease the number of hours an individual worked and would make food service more attractive as a career field as well as compensate the cooks for their rigorous duty requirements aboard ship. The resulting decrease in man-hours actually put in at the dining facility would also increase productivity. Reducing the workday from 13 hours/day to 9 hours/day on a two shift operation would decrease direct man-hours to 1071 per week and total man-hours to 1311. This would result in increased productivity levels of 5.92 meals/direct man-hour and 4.83 meals/total man-hour. In addition, more individuals should be scheduled to work Monday through Friday with the weekend off, thereby providing a better balance between workforce and the workload.

¹⁴Davis, M. M., Wetmilier, J. R., "A Work Analysis of Food Service Personnel at Travis AFB", TR 74-35-OR/SA.

¹⁵USAF Management Engineering Study, "Efficiency Foods Test" MACMET, Det. 1, McGuire AFB, N.J., 1969.

4. The very high amount of nonproductive time for messcooks (61%) seems to indicate that either insufficient supervision was given to them, or that fewer were required.

6. Nutritional Intake Survey Findings

This section documents the results of the nutrient intake aspect of the March 1975 and June 1976 Nutritional Surveys conducted by Letterman Army Institute of Research (LAIR) at Naval Air Station, Alameda (NAS/Alameda), California. The purpose of this aspect of the survey was to evaluate the nutritional impact of conversion from the existing mixed ration-in-kind (RIK) commuted ration (COMRAT) standard feeding system to an experimental, all-COMRAT CASH/A La Carte System. This section is based upon original work jointly conducted and authored by Major D. D. Schnakenberg, Dr. T. M. Hill, COL J. E. Canham, and Mr. F. Consolazio.

This work is jointly sponsored by the Army and Navy and is being conducted under the DoD Food Research, Development, Testing and Engineering Program, Project No. 3A762760A822, Military Internal Medicine, Work Unit No. 086, Nutrition Studies in Support of DoD Food Program.

METHODS

A. Subject Selection

Men from each of three distinct customer groups were selected to participate in the dietary record and interview aspect of the March 1975 (before CASH/A La Carte) and June 1976 (after CASH/A La Carte) survey. The three groups studied were:

Description of Status

Customer Group	March 1975	June 1976
RIK	RIK-Issued Galley Pass	Converted to COMRAT between 1 Jan 1976 and 1 March 1976
COM-S	COMRAT-Single	COMRAT-Single
COM-M	COMRAT-Married	COMRAT-Married

RIK personnel were given cash in lieu of a galley pass and, therefore, were the group most directly affected by conversion to the CASH/A La Carte System. The COM-S and COM-M groups were studied to evaluate the effects of item pricing and dining hall renovation on dining hall attendance and nutrient intake. These groups also served as controls for the RIK group. It should be noted that all participants in the June 1976 survey were stationed at NAS/Alameda prior to 1 March 1976, and, therefore, received subsistence under the previous mixed RIK/COMRAT feeding system.

Unit personnel officers were requested to select from their rosters a specified number of participants from each customer group. Each participant was informed of the purpose of the survey and assigned to one of eight interviewers who were trained in dietetics and nutrition and were experienced in dietary interview techniques.

In the March 1975 study, 35 RIK, 50 COM-S, and 48 COM-M personnel completed the study. In June 1976, complete data were obtained from 41 RIK, 50 COM-S, and 63 COM-M personnel.

B. Dietary Record and Interview Techniques

Daily nutrient intake data for the 17-day (March 1975) or 14-day (June 1976) survey periods were obtained by meeting with each participant twice weekly for a 20-minute dietary interview. At the first meeting, each man was given an initial 24-hour recall interview to acquaint him with our needs and procedures. The information obtained was recorded on a pocket-sized food consumption diary card. This card was returned to the participant as a guide to assist him in recording his food intake for the next 3 to 4 days on identical diary cards (one card per day). Participants were urged to fill out their cards following each meal or snack. At the subsequent twice-weekly interviews, the cards were returned to the interviewer for review and clarification of any unusual food items consumed, estimations of portion size, time of day item was consumed, and source of item; i.e., home, NAS/Alameda dining hall, restaurant, vendor. The interviewer assigned each item consumed to one of six "time-consumed" periods i.e., breakfast period, between breakfast and lunch, lunch period, between lunch and supper, supper period, and between supper and breakfast. Our sources of items consumed are defined as follows:

1. Dining Hall: Refers only to the enlisted galley at NAS/Alameda.
2. Home: Foods prepared and consumed at home or items prepared at home and consumed elsewhere; e.g., bag lunch, picnic, etc.
3. Restaurant: Commercial food outlets which provide seating to consume food onsite.
4. Vendors: Vending machines and commercial outlets where seating is not provided.

By reviewing the individual's entire diary record, the interviewer categorized each item as a component of either a "meal" or a "snack". Therefore, a hamburger and a can of soda might constitute a meal in one case and be classified as an in-between-meal snack in another case.

To obtain nutrient intake data, each food item consumed was coded according to the LAIR Nutrient Factor File, which is a compilation of many food composition tables including USDA Handbook No. 8,¹⁶ and Bowes and Church Food Values.¹⁷ Recipes were estimated for complex food items (such as casseroles), and nutrients for that item were computed by using nutrient values for the individual components.

RESULTS AND DISCUSSION

A. Dining Hall Attendance

Dining hall attendance has been discussed in a previous section of this report. Data for this sample of enlisted consumers demonstrated similar results. That is, the RIK group's attendance dropped off markedly (65% decrease) while the attendance for COMRAT-Single personnel and COMRAT-Married personnel increased (30% and 400%, respectively).

B. Reliability of Interview Technique

The reliability of data obtained by the dietary interview technique is a factor which must be considered in the evaluation of these studies. During the March 1975 survey, an attempt was made to assess reliability by comparing the dining hall nutrient intake data obtained by the interview technique with data obtained by an observer technique. Dietitians stationed at the end of each serving line observed and recorded the food items on each individual's tray. The total amount of each food item served divided by the number of portions served minus each individual's plate waste was computed and these values were coded as the quantity of each food item consumed. The procedures used in the interview technique were described in the Methods section. The same table of nutrient values was used in the processing of both sets of data. The comparison of the two

¹⁶Watt, B. K. and A. L. Merrill, "Agriculture Handbook No. 8," USDA, Washington, D.C., 1963.

¹⁷Bowes, A. D. and C. F. Church, "Food Values of Portions Commonly Used," 11th Ed. J. P. Lippincott Co., Philadelphia, PA, 1970.

techniques (interview vs. observer) is shown in Table 21. Each value represents dining hall nutrient intake for those man-days when subjects recalled and were observed to have utilized the dining hall one or more times. With respect to the average of 534 man-day observations (1.48 dining hall meals/man-day), the interview technique provided a satisfactory estimate of observed intake. In general, the means were within 10% of one another, although the interview technique overestimated protein ($P = 0.005$), fat ($P = 0.0006$), and phosphorous ($P = 0.01$) intake and underestimated ascorbic acid ($P = 0.0001$) intake as compared to the observed values. The differences are attributable to a combination of discrepancies in food items taken and over- or underestimation of portion size by the two techniques.

If these dining hall comparisons are considered representative of a population's ability to recall what and how much they ate from all sources, the interview technique as used in this study was an acceptable estimator of the population's average daily total nutrient intake. This does not mean, however, that the interview technique will estimate the nutrient intake of each and every member of the population with the same degree of reliability. Preliminary regression analysis of observer vs. interview nutrient intakes (data not shown) indicates that the interview technique tended to overestimate the intake of those individuals observed to have lower than mean intakes and, conversely, tended to underestimate the intake of those individuals observed to have higher than the mean nutrient intakes. Accordingly, the interview technique is more likely to underestimate rather than overestimate the percentages of group populations with nutrient intakes below recommended daily allowances because individuals observed to consume small meals were more likely to overestimate their food consumption.

C. Daily Total Nutrient Intake

The average daily nutrient intakes from all sources (dining hall, home, vendor, and restaurant) for the RIK, COM-S and COM-M groups prior to and 3 months following conversion to the new feeding system are shown in Table 22. The Recommended Daily Dietary Allowances (RDA) as published by the National Research Council (NRC)¹⁸ and the Military¹⁹ were used as the standard for evaluation of nutritional adequacy (Table 23). Although the following discussion will focus on the average daily nutrient intake of our test population groups, it should be noted that even though the group average intakes may meet or exceed the RDAs, all individuals within the group may not have had adequate nutrient intakes.

¹⁸ National Research Council, Food and Nutrition Board, Recommended Dietary Allowances, 8th Ed., National Academy of Sciences, Washington, DC, 1974.

¹⁹ AR 40-25/BUMEDINST 10110.3D/AFT 160-5, Medical Services Nutritional Standards, 30 August 1976.

TABLE 21

Comparison Of Interview Vs. Observed Techniques
To Estimate Dining Hall Nutrient Intake At NAS Alameda
March 1975

Nutrient	Interview ^a	Observed ^a	Percent Difference ^b	P Value ^c
Quantity (g)	1343 ± 34 ^d	1291 ± 39	+ 4.0	NS
Water (g)	989 ± 25	950 ± 30	+ 4.1	NS
Energy (kcal)	1773 ± 45	1663 ± 49	+ 6.6	NS
Protein (g)	80.1 ± 2.0	71.6 ± 2.3	+ 11.9	.005
Fat (g)	86.8 ± 2.2	77.8 ± 2.4	+ 11.6	.006
Carbohydrate (g)	170 ± 5.0	173 ± 5.5	- 1.7	NS
Fiber (g)	2.53 ± 0.17	2.80 ± 0.14	- 9.6	NS
Ash (g)	14.3 ± 0.39	14.1 ± 0.46	+ 1.4	NS
Calcium (mg)	1040 ± 32	969 ± 34	+ 7.3	NS
Phosphorus (mg)	1371 ± 36	1237 ± 39	+ 10.8	.01
Iron (mg)	11.2 ± 0.30	10.6 ± 0.33	+ 5.7	NS
Vitamin A (IU)	4400 ± 283	4773 ± 384	- 7.8	NS
Thiamin (mg)	1.03 ± 0.03	0.98 ± 0.03	+ 5.1	NS
Riboflavin (mg)	2.06 ± 0.06	1.91 ± 0.07	+ 7.8	NS
Niacin (mg)	12.4 ± 0.36	11.4 ± 0.40	+ 8.8	NS
Ascorbic Acid (mg)	47.4 ± 2.1	61.8 ± 3.2	- 23.3	.0001

^aValues computed from those man-days (n = 534) when subjects recalled and were observed to have utilized the dining hall one or more times (mean = 1.48 dining hall meals/man-day).

^bPositive and negative values indicate percent over- and under estimation, respectively, of observed intake.

^cSignificance of F value with: df = 1, 1066.

^dMean ± SEM.

TABLE 22

Average Daily Total Nutrient Intake

Nutrient	Before CASH/A La Carte (March 1975)			After CASH/A La Carte (June 1976)		
	RIK	COM-S	COM-M	RIK	COM-S	COM-M
Quantity (g)	2804 ± 324*	2697 ± 137	2527 ± 149	2247 ± 138	2388 ± 125	2672 ± 151
Energy (kcal)	2945 ± 200	2693 ± 141	2391 ± 78	2375 ± 96	2449 ± 107	2540 ± 102
Protein (g)	106.1 ± 5.3	99.3 ± 4.8	95.4 ± 4.1	93.5 ± 3.8	96.5 ± 4.3	101.6 ± 4.4
Fat (g)	119 ± 5.4	114 ± 6.5	106 ± 4.1	107 ± 4.8	109 ± 5.3	114 ± 5.5
% Fat Calories	38.2 ± 1.25	38.3 ± 1.03	40.0 ± 0.94	40.8 ± 0.84	40.2 ± 0.77	40.4 ± 0.77
Carbohydrate (g)	299 ± 18	262 ± 13	238 ± 10	235 ± 12	231 ± 10	250 ± 10
Fiber (g)	3.44 ± 0.31	3.48 ± 0.25	3.51 ± 0.23	2.94 ± 0.22	2.78 ± 0.13	3.28 ± 0.22
Ash (g)	17.7 ± 1.00	16.7 ± 0.82	15.9 ± 0.63	14.7 ± 0.71	15.5 ± 0.76	16.2 ± 0.74
Calcium (mg)	1138 ± 80	996 ± 78	827 ± 43	852 ± 62	917 ± 66	763 ± 54
Phosphorus (mg)	1594 ± 89	1452 ± 86	1357 ± 53	1290 ± 69	1344 ± 71	1320 ± 64
C:A:P ratio	1:1.50 ± 0.07	1:1.59 ± 0.06	1:1.74 ± 0.08	1:1.75 ± 0.12	1:1.61 ± 0.07	1:1.93 ± 0.08
Iron (mg)	15.2 ± 0.78	16.0 ± 0.84	16.3 ± 0.97	13.8 ± 0.58	14.2 ± 0.62	15.7 ± 0.66
Sodium (mg)	3220 ± 177	2943 ± 159	1765 ± 130	2572 ± 121	2671 ± 130	2849 ± 139
Potassium (mg)	3124 ± 189	2820 ± 142	1738 ± 105	2385 ± 139	2526 ± 128	2677 ± 126
Vitamin A (IU)	4540 ± 526	4968 ± 452	5414 ± 584	4302 ± 543	4844 ± 538	4940 ± 350
Thiamin (mg)	1.34 ± 0.07	1.31 ± 0.08	1.28 ± 0.06	1.15 ± 0.05	1.16 ± 0.05	1.26 ± 0.05
(mg/1000 kcal)	0.47 ± 0.02	0.48 ± 0.02	0.53 ± 0.02	0.49 ± 0.01	0.49 ± 0.02	0.50 ± 0.02
Riboflavin (mg)	2.57 ± 0.15	2.26 ± 0.13	2.00 ± 0.09	1.94 ± 0.11	2.09 ± 0.11	1.94 ± 0.09
(mg/1000 kcal)	0.89 ± 0.03	0.84 ± 0.02	0.84 ± 0.03	0.82 ± 0.03	0.88 ± 0.04	0.76 ± 0.02
Niacin (mg)	21.0 ± 1.22	20.6 ± 0.87	21.1 ± 1.04	20.1 ± 0.84	20.3 ± 0.94	23.1 ± 0.94
(mg/1000 kcal)	7.29 ± 0.21	7.97 ± 0.27	8.96 ± 0.36	8.71 ± 0.34	8.44 ± 0.24	9.28 ± 0.25
Ascorbic Acid (mg)	62.2 ± 5.7	73.4 ± 7.3	74.8 ± 6.7	58.7 ± 5.6	64.1 ± 5.4	62.0 ± 4.2
No. of Subjects	35	50	48	41	50	63

*Mean ± SEM derived from 17 days of observation in March 1975 and 14 days of observation in June 1976.

TABLE 23
Recommended Daily Dietary Allowance

Nutrient	National Research Council (1974) ^a	Bumedinst 10110.3E ^b AR 40-25 (1976)
Energy (kcal)	3000	3000
Protein (g)	54	100
Calcium (mg)	800	800
Phosphorus (mg)	800	800
Iron (mg)	10	18
Vitamin A (IU)	5000	5000
Thiamin (mg)	1.5	1.5
(mg/1000 kcal)	0.5	0.5
Riboflavin (mg)	1.8	1.8
(mg/1000 kcal)	0.6	0.6
Niacin (mg)	20	20
(mg/1000 kcal)	6.6	6.6
Ascorbic Acid (mg)	45	45

^aMales, 19-22 years of age, weighing 67kg.

^bMale military personnel (17-25 years of age), moderately active, in a temperate climate.

Average energy intakes (Table 22) for all groups both Pre- and Post-CASH/A La Carte were below the military standard of 3000 kcal/day for male personnel (17 to 25 years of age), moderately active, living in a temperate climate such as Alameda, California. Energy intakes, with the exception of the 1975 RIK group (2945 kcal), were 307 to 625 kcal below the NRC allowance of 3000 kcal for men 19 to 22 years of age. The NRC allowance is decreased to 2700 kcal/day for men 23 to 50 years of age. The average age of our test population in March 1975 was approximately 26 years; thus, the 1975 RIK group exceeded the allowance for men of the latter age group while the 1975 COM-S group approached it. The relatively low caloric intakes may be attributable to one or more of the following: (1) the relatively stabilized personnel at NAS/Alameda are somewhat less active than those upon which the standards were derived; (2) the NRC-Military standards for energy may be too high; or (3) an interviewee more likely will forget to report an item that he has eaten than to report an item that he has not consumed. The third assumption was not supported from our validation procedure which indicated that our interview technique tended to overestimate dining hall nutrient intake by 6.6%.

The average protein intakes of all groups greatly exceeded the NRC allowance of 54 g/day and were near or slightly above the Military allowance of 100 g/day (Table 22). In the March 1975 survey, the average percent of energy intake attributable to fat was at or below the desirable proportion of less than 40% from fat sources, but was slightly above the level in the June 1976 survey.

Calcium and phosphorus intakes were above the allowances of 800 mg/day for these minerals, with the exception of the calcium intake of the COM-M group in June 1975, which averaged 763 mg/day. The calcium:phosphorus (Ca:P) ratios were adequate (range 1:1.5 to 1:1.9), but were near the upper limit of ranges recommended by the NRC (1:0.5 to 1:2). Average iron intakes (range 13.8 to 16.3 mg/day) were below the Military allowance (18 mg/day) for all groups in both studies, but did, however, exceed the NRC allowance of 10 mg/day. It should be pointed out that the military allowance is set at the requirement for the most vulnerable group, that is 17 and 18 year olds.

Average Vitamin A intakes were lower than the NRC and Military allowance of 5000 IU/day for all groups both Pre- and Post-CASH/A La Carte with the exception of the COM-M group in March 1975, which averaged 5414 IU/day. The 1975 COM-S and 1976 COM-M groups did, however, approach the allowances. Average thiamin intakes for all groups (range, 1.15 to 1.34 mg/day) were below the recommended allowances established by the Military and the NRC (1.5 mg/day). However, when thiamin intakes are expressed per 1000 kcal consumed, as proposed by the NRC, thiamin intakes ranged from a low of 0.47 mg/1000 kcal for the 1975 RIK group to a high of 0.53 mg/1000 kcal from the 1975 COM-M group. These values are close to the NRC recommendations of 0.5 mg thiamin/1000 kcal. Average riboflavin intakes for all groups were above the NRC

and Military allowances of 1.8 mg/day and 0.6 mg/1000 kcal. Average niacin intakes were above the 20 mg/day recommended by the NRC and Military. The NRC has recommended a niacin intake of 6.6 mg/1000 kcal consumed. This level of niacin intake was exceeded by all groups (range, 7.29 to 9.28 mg/1000 kcal). Average ascorbic acid intakes were greater than the Military and NRC allowances of 45 mg/day.

Examination of the data reveals that these data are not normally distributed but tend to be skewed to the right (towards higher intakes). For example, the median and robust estimate for Vitamin A intakes are considerably below the mean value. This indicates that a small proportion of the population is consuming extremely high amounts of Vitamin A per day and is elevating the mean value to a point where the mean does not adequately represent the Vitamin A intake of the population as a whole. Therefore, judgments and conclusions based solely upon the mean value of skewed data can be misleading and will tend to present a more favorable evaluation of the nutrient intakes than actually exists in the population.

D. Distribution of Nutrient Intakes

One approach useful in assessing the nutritional characteristics (adequacy) of a population's diet is to determine the percentage of the population having nutrient intakes less than recommended dietary allowances. These values are shown in Table 24.

Interpretation of this type of data presentation is limited by several assumptions. The ages and body weights of the participants were not recorded by the dietary interview team; therefore, the data points will be considered to be derived from moderately active young men, 19 to 22 years of age, weight 67 kg (147 lb), residing in a temperate climate. During the clinical examination aspect of phase 1 (March 1975), the average age at last birthday of the entire population studied was approximately 26 years, with 3 of the 133 subjects below 19 years of age. The average body weight was approximately 76.5 kg (R. A. Nelson, personal communication). All subjects that completed the study are represented in the distribution without regard to any subjective evaluation as to the validity and reliability of each subject's data. Therefore, interpretation of the percentages of each group having nutrient intakes below the NRC or Military recommended allowance should not be considered to be precise values, but rather should be taken as presumptive evidence. As previously mentioned, our reliability analyses suggest that the interview technique would tend to underestimate rather than overestimate the percentage below recommended allowances. Accordingly, our computed percentages (i.e., % below recommended allowances) may be conservative estimates of the actual values for the populations in question.

TABLE 24

Percentage Of Populations With
Total Daily Nutrient Intakes Below Recommended Allowances

Nutrient	Allowance	Before CASH/A La Carte (March 1975)				After CASH/A La Carte (June 1976)			
		RIK	COM-S	COM-M	ALL	RIK	COM-S	COM-M	ALL
Energy	3000 kcal	62.9	70.0	83.3	72.9	82.9 ^c	76.0	79.4	79.2
Protein	54 g ^a	5.7	2.0	2.1	3.0	4.9	8.0	4.8	5.8
	61 g ^e	5.7	8.0	6.3	6.8	4.9	8.0	6.3	6.5
	100 g ^b	42.9	58.0	68.8	57.9	65.9 ^c	58.0	47.6 ^c	55.8
% Fat Cal. > 40%		42.9	40.0	50.0	44.4	51.2	54.0	61.9	56.5
Calcium	800 mg ^{a,b}	31.4	42.0	56.3	44.4	46.3	52.0	61.9	54.5
Phosphorus	800 mg ^{a,b}	5.7	10.0	2.1	6.0	12.2	8.0	11.1	10.4
Ca:P ratio > 1:2		14.3	14.0	12.5	13.5	22.0	18.0	34.9 ^d	26.0 ^c
Iron	10 mg ^a	11.4	14.0	6.3	10.5	9.8	18.0	6.3	11.0
	18 mg ^b	82.9	72.0	75.0	75.9	87.8	84.0	77.8	82.5
Vitamin A	5000 IU ^{a,b}	68.6	60.0	58.3	61.7	75.6	72.0	61.9	68.8
Thiamin	1.5 mg ^{a,b}	71.4	74.0	75.0	73.7	85.4	78.0	77.8	79.9
	0.5 mg/1000 kcal ^{a,b}	57.1	62.0	41.7	53.4	56.1	60.0	49.2	54.5
	1.8 mg ^{a,b}	17.1	32.0	37.5	30.1	46.3 ^d	42.0	50.8	46.8 ^d
Riboflavin	0.6 mg/1000 kcal ^{a,b}	0	8.0	4.2	4.5	9.8	4.0	12.7	9.1
	20 mg ^{a,b}	54.3	54.0	54.2	54.1	51.2	46.0	33.3 ^c	42.2
Niacin	6.6 mg/1000 kcal ^{a,b}	31.4	22.0	10.4	20.3	7.3 ^d	16.0	4.8	9.1 ^c
Ascorbic Acid	45 mg ^{a,b}	28.6	36.0	22.9	29.3	43.9	40.0	39.7	40.9

432, a

^aNational Research Council (1974)

^bAR 40-24 - Bumedinst 10110.3E.

^cSignificantly different from before CASH/A La Carte (Chi Square Test), P < 0.05.

^dp < 0.01.

^eAdjustment of National Research Council allowance for men weighing 76.5 kg.

Daily energy requirements to maintain an "ideal" body weight are greatly affected by age, body weight, level of activity and climatic temperature. However, only 11.4% of the RIK group had energy intakes less than 2200 kcal/day in 1975, but 36.6% were below this level after conversion to COMRAT status. Furthermore, as shown in Table 24, a greater percentage (82.9%) of the RIKs had energy intakes below the NRC and Military allowance of 3000 kcal in 1976 than in 1975 (62.9%). Therefore, upon conversion to COMRAT status and less frequent dining hall attendance, the entire distribution curve for the RIKs was shifted toward lower calorie intakes. In contrast, the caloric intake distribution patterns remained relatively constant for the COM-S and COM-M groups. When data for all six groups (i.e., both Pre- and Post-CASH/A La Carte) were combined, approximately 76% of the population had caloric intakes below the NRC allowance of 3000 kcal/day for a 67 kg man. Therefore, the allowance of 3000 kcal/day may be excessive for garrison personnel living in a temperate climate, especially when it is noted that the average body weight of our test population in March 1975 was 76.5 kg.

Conversion from RIK to COMRAT status shifted the distribution toward lower protein intakes. As shown in Table 24 a lower percentage (42.9%) of the RIKs in March 1975 had protein intakes below the Military allowance of 100 g/day than in June 1976 (65.9%). In contrast, fewer of the COM-M group had protein intakes below 100 g/day in 1976 (47.6%) than in 1975 (68.8%). Only 3.0% and 5.8% of the combined populations in 1975 and 1976, respectively reported protein intakes below the NRC allowance of 54 g/day. However, because of the larger average body weight of our population (76.5 kg), the NRC protein allowance in g/day should be adjusted according to the reference of 0.8 g/kg body weight. When this is done, the percentages below the adjusted level of 61 g/day are increased to 6.8 and 6.3% for 1975 and 1976, respectively.

The Military and NRC have advocated that the percent fat calories in the total diet should not exceed 40%. In March 1975, 44.4% of the entire population had fat calorie intakes greater than 40% as compared to 56.5% in June 1976 (Table 24). This increase approached statistical significance.

The daily calcium and phosphorus allowances are each 800 mg/day. Although the average calcium intake met or exceeded the allowances for all groups except the COM-M group in 1976, 31.4% (1975 RIK) to 61.9% (1976 COM-M) of the studied populations had calcium intakes below 800 mg/day in 1976 (Table 24). The percentage of the RIK group below the daily allowance for calcium appeared to increase from 31.4% in 1975 to 46.3% in 1976; however, this difference was not statistically significant, although a trend is indicated. The high concentration of phosphorus in the American diet is reflected by the observation that only 6.0% in 1975 and 10.4% in 1976 of the combined populations had phosphorus intakes below the allowance of 800 mg/day (Table 24).

The NRC has also recommended that the Ca:P ratio be within the limits of 1 part calcium to 0.5 parts of phosphorus (1:0.5), and 1 part calcium to 2 parts phosphorus (1:2). As shown in Table 24, a greater percentage (34.9%) of the COM-M group exceeded this upper limit (1:2) in June 1976 than in March 1975 (12.5%). In addition, a greater percentage (26.0%) of the entire population in 1976 exceeded the 1:2 ratio than in 1975 (13.5%).

The Military allowance for iron is 18 mg/day compared to 10 mg/day for the NRC. This large difference exists because the Military Allowances are directed towards satisfying the needs of the most susceptible sub-group in the Military population. The NRC also recognizes that the iron allowance should be greater (18 mg iron/day) for 17 and 18 year olds. Only 3 of our 133 subjects in 1975 were less than 19 years of age. The percentages of the combined groups with iron intakes below 10 mg/day were 10.5% and 11.0% in 1975 and 1976, respectively, but 75.9% in 1975 and 82.% and 1976 had iron intakes below 18 mg/day (Table 24). These data confirm how difficult it is to obtain 18 mg/day of iron without supplementation.

An extremely high percentage (61.7% in 1975 and 68.8% in 1976) of the combined populations (both Pre- and Post-CASH/A La Carte) had Vitamin A intakes below the 5000 IU/day recommended allowance (Table 24). Vitamin A consumption for all groups studied is a matter of concern, especially when we note that 22.0% to 42.0% of the individuals within the various groups studied had Vitamin A intakes below 3000 IU/day, a level thought to be the minimum requirement to prevent all deficiency symptoms in adults.

Daily thiamin allowances have been established at 1.5 mg/day by the NRC and Military. Thiamin and other B vitamin intakes are often evaluated in reference to energy intake (0.5 mg thiamin/1000 kcal). As shown in Table 24, the percentage of the RIK population with thiamin intakes below the allowance of 1.5 mg/day tended to increase from 71.4% in 1975 to 85.4% in 1976. Thiamin intakes are also a matter of concern because 73.7% and 79.9% of the combined populations in 1975 and 1976, respectively, were below the allowance of 1.5 mg of thiamin per day. A further indication of the thiamin problem is the observation that approximately 54% of the entire population consumed less than 0.5 mg thiamin per 1000 kcal of energy (Table 24).

As shown in Table 24, a greater proportion of the RIK group had riboflavin intakes below the NRC and Military allowances of 1.8 mg/day in June 1976 (46.3%) than in March 1975 (17.1%). A significantly greater ($P < 0.01$) proportion of the combined population also had riboflavin intakes below the NRC allowance in 1976 (46.8%) than in 1975 (30.1%). However, when riboflavin intakes are evaluated on a mg/1000 kcal basis, only 4.5% in 1975 and 9.1% in 1976 of the combined groups had intakes below 0.6 mg riboflavin/1000 kcal of energy consumed.

In contrast of many other nutrients, the percentages of groups with niacin intakes below the recommended allowances (20 mg/day and 6.6 mg/1000 kcal) tended to decrease under the CASH/A La Carte System. A smaller percentage of the COM-M group and the combined groups had niacin intakes below the allowance of 20 mg/day in 1976 (Table 24). Despite the improvement, 54.1% of the combined population in 1975 and 42.2% in 1976 were below the 20 mg/day niacin allowance. The improvement in 1976 approached statistical significance. The percentage of RIKs with niacin intakes below 6.6 mg/1000 kcal decreased from 31.4% in 1975 to 7.3% in 1976, and the percentage of the combined population in 1975 (20.3%) decreased to 9.1% below 6.6 mg/1000 kcal in 1976.

Both the NRC and the Military have set the allowance for ascorbic acid (Vitamin C) at 45 mg/day. Although the group means (Table 24) ranged from 59 to 75 mg/day, a considerable percentage of the population had ascorbic acid intakes below the 45 mg/day (Table 24). The combined 1976 population showed a strong trend towards a greater percentage with intakes below the allowance.

The conversion of the RIK personnel to COMRAT status markedly increased the percentage of the population with nutrient intakes below recommended allowances. This effect was statistically significant for energy, protein, and riboflavin. There were also trends, which approached statistical significance, for the percentage of RIKs with calcium, thiamin, and ascorbic acid intakes below allowances to increase under the CASH/A La Carte System. These adverse effects occurred concomitantly with the marked decrease in dining hall utilization. No statistically significant effects of the CASH/A La Carte System on nutrient intake distributions of the COM-S group were detected, but it should be recalled that dining hall utilization of this group slightly increased after conversion to the A La Carte System. A significantly smaller percentage of the COM-M group had protein and niacin intakes below recommended allowances in 1976 relative to 1975. However, a significantly greater percentage of the COM-M group had a Ca:P ratio greater than 1:2 in 1976. The COM-M group increased their dining hall utilization in the 1976 survey as well.

The alarming percentage of this young, male American population with nutrient intakes below recommended allowance standards should be of concern to nutritionists, food policy planners, the military, and to the general public. When the 154 subjects surveyed in June 1976 were considered to be a representative sample of moderate-income, young American males it is alarming to note that 54.5% of population had calcium intakes below 800 mg/day, 11% had iron intakes below 10 mg/day, and 82.5% below 18 mg/day, 69% had vitamin A intakes below 5000 IU/day, and 29% had vitamin A intakes below 3000 IU/day. Percent of calories derived from fat sources were greater than 40% in 56% of the tested population. Thiamin intakes were below 1.5 mg/day in 80% of the population, and 47% had riboflavin intakes below 1.8 mg/day. Niacin intakes were below 20 mg/day in 42%, and ascorbic acid intakes were below 45 mg/day in 41% of the tested populations.

E. Source of Daily Nutrient Intake

The percentages of total daily nutrient intake consumed in the dining hall or at home, at restaurants, and at vendors are shown in Tables 25, 26, 27, and 28, respectively. These mean percentage values were computed from group rather than individual data. Statistical analyses of individual data are not presently available but will be included in a subsequent report. The values were influenced by the frequency of dining hall attendance discussed previously. Energy intake data indicate that the RIK group was consuming 38% of their daily caloric intake in the dining hall in 1975, and only 15% after conversion to COMRAT status in 1976. The COM-S group remained constant at approximately 12% of their caloric intake from the dining hall, whereas the COM-M group increased from 1% to 6% after conversion to the CASH/A La Carte System.

Caloric intake data derived from consumptions at home (Table 26), at restaurants (Table 27), and at vendors (Table 28) showed that the RIKs in June 1976, compensated for the decreased caloric intake at home (26.7% in 1975 vs. 46.5% in 1976). Conversion to the CASH/A La Carte System had little effect on the source of caloric consumption for the COM-S and COM-M groups. The COM-M group, as expected, consumed approximately 75% of their calories at home, and only 9% and 11% were derived from restaurants and vendors, respectively. The COM-S group consumed about 49% of their calories at home, 19% at restaurants, and 19% from vendors. It is noteworthy that after conversion to COMRAT status in 1976, the RIKs consumed about the same proportional amounts of calories from sources as those in COM-S status. The source of other nutrients followed, in general, the same trends as those for energy.

F. Nutrient Intake Per Dining Hall Meal

The effect of conversion to the CASH/A La Carte System on nutrient intake per dining hall meal is shown in Table 29. All breakfast, lunch, and supper meals consumed in the dining hall by the personnel involved in the dietary interviews were combined in these calculations. Therefore, these values indicate the average for all meals and are computed from group rather than individual data. The number of dining hall meals per group is also shown in Table 29.

During the March 1975 survey, the RIK and COM-S groups consumed similar amounts of nutrients per dining hall meal; however, with the exception of ascorbic acid, the COM-M group consumed less nutrients per meal than either of the other two groups. It should be noted that the COM-M values are based upon only 24 meals compared to 564 and 212 meals for the RIK and COM-S groups, respectively.

TABLE 25

Percent of Total Daily Nutrient Intake Consumed in Dining Hall

NUTRIENT	BEFORE CASH A LA CARTE			AFTER CASH A LA CARTE		
	RIK	COM-S	COM-M	RIK	COM-S	COM-M
Quantity	30.06*	9.22	0.98	12.11	9.13	4.34
Energy	38.12	12.08	1.35	15.20	11.51	6.38
Protein	47.66	14.28	1.05	17.20	13.40	7.84
Fat	45.37	14.16	1.89	16.82	13.76	7.02
Carbohydrate	36.63	11.54	1.26	14.47	10.82	6.00
Fiber	50.00	11.76	1.28	17.24	14.29	6.06
Ash	51.41	15.06	1.91	17.69	13.55	6.79
Calcium	57.29	18.64	2.05	18.08	13.74	7.08
Phosphorous	54.12	16.98	1.71	15.97	13.02	7.05
Iron	46.75	12.58	1.22	16.67	12.68	7.01
Sodium	48.56	14.03	1.46	17.07	13.03	6.70
Potassium	51.93	15.86	1.76	17.02	13.18	6.20
Vitamin A	59.51	17.24	1.29	18.54	16.26	6.28
Thiamin	49.26	13.74	1.56	15.65	13.04	6.35
Riboflavin	50.58	16.51	1.50	17.01	13.88	6.70
Niacin	38.21	10.95	0.95	14.93	12.32	6.49
Ascorbic Acid	46.88	12.16	1.35	16.95	10.94	4.84

*Mean values computed from group rather than individual data.

TABLE 26

Percent of Total Daily Nutrient Intake Consumed at Home

Nutrient	BEFORE CASH A LA CARTE		AFTER CASH A LA CARTE	
	RIK	COM-S	RIK	COM-S
Quantity	36.4 *	45.2	44.9	51.5
Energy	26.7	46.8	46.5	51.9
Protein	21.5	46.9	47.3	51.5
Fat	18.5	47.8	46.7	50.5
Carbohydrate	25.7	45.0	43.4	50.6
Fiber	22.2	52.9	48.3	53.6
Ash	18.6	48.7	45.6	53.5
Calcium	18.3	46.6	46.2	51.5
Phosphorus	17.8	48.6	47.8	52.8
Iron	18.8	46.5	45.7	52.1
Sodium	17.6	45.6	44.9	52.6
Potassium	20.6	48.5	46.8	53.0
Vitamin A	21.4	57.0	57.6	63.5
Thiamin	18.4	49.6	46.9	54.8
Riboflavin	21.6	45.5	45.4	51.2
Niacin	23.6	46.3	45.8	51.2
Ascorbic Acid	25.0	59.5	49.2	57.8

*Mean values computed from group rather than individual data.

TABLE 27

Percent of Total Daily Nutrient Intake Consumed at Restaurants

NUTRIENT	BEFORE CASH A LA CARTE		AFTER CASH A LA CARTE	
	RIK	COM-S	RIK	COM-S
Quantity	11.1*	13.9	16.0	16.5
Energy	15.5	18.1	19.9	20.0
Protein	15.9	19.4	21.5	22.7
Fat	18.5	19.5	21.5	22.0
Carbohydrate	14.5	17.7	18.7	18.6
Fiber	19.4	20.6	20.7	21.4
Ash	14.7	18.7	19.7	20.6
Calcium	10.1	15.0	16.9	18.9
Phosphorus	14.0	17.3	19.5	20.9
Iron	17.5	20.1	21.7	23.2
Sodium	15.9	21.1	21.2	21.0
Potassium	15.8	18.0	19.6	20.5
Vitamin A	11.5	16.1	14.9	13.6
Thiamin	14.7	16.8	20.9	19.1
Riboflavin	13.1	17.0	19.1	20.1
Niacin	19.3	19.4	21.1	21.7
Ascorbic Acid	15.6	16.2	18.6	20.3

*Mean values computed from group rather than individual data.

TABLE 28

Percent of Total Daily Nutrient Intake Consumed at Vendors

NUTRIENT	BEFORE CASH A LA CARTE			AFTER CASH A LA CARTE		
	RIK	COM-S	COM-M	RIK	COM-S	COM-M
Quantity	22.4	31.4	22.7	27.0	22.0	17.8
Energy	19.7	22.8	12.4	18.3	15.9	9.8
Protein	15.0	19.4	9.5	15.1	12.4	7.8
Fat	17.6	18.6	10.4	15.9	14.7	7.9
Carbohydrate	22.8	25.7	15.2	23.0	19.5	9.2
Fiber	11.1	11.8	8.6	13.8	10.7	6.1
Ash	15.3	16.9	9.6	15.6	12.3	8.6
Calcium	14.2	19.5	10.8	18.5	15.4	8.3
Phosphorus	14.1	17.1	9.5	16.6	13.1	7.9
Iron	13.6	10.5	11.0	16.7	12.0	8.9
Sodium	18.0	19.3	10.4	16.8	13.3	7.6
Potassium	11.6	17.2	11.0	16.5	12.8	9.1
Vitamin A	7.5	9.5	3.3	9.3	6.6	6.3
Thiamin	16.9	19.1	9.4	20.0	20.0	11.9
Riboflavin	14.7	21.0	12.0	18.0	14.8	10.8
Niacin	18.9	22.4	12.8	17.2	14.3	10.4
Ascorbic Acid	10.9	12.2	5.4	13.6	10.9	4.8

* Mean values computed from group rather than individual data.

TABLE 29

Nutrient Intake Per Dining Hall Meal

Nutrient	Before CASH/A La Carte (March 1975)			After CASH/A La Carte (June 1976)					
	RIK	COM-S	COM-M	ALL	RIK	COM-S	COM-M	ALL	DDA/3
Quantity (g)	884*	959	756	900	759	639	713	699	
Energy (kcal)	1171	1254	1018	1188	1007	827	1002	932	1000
Protein (g)	53	57	43	54	46	39	47	43	33
Fat (g)	57	63	52	58	50	42	49	47	
% Fat Calories	43.8	45.2	46.0	43.9	44.7	45.7	44.0	45.3	40
Carbohydrate (g)	114	116	96	114	95	72	94	85	
Fiber (g)	1.8	1.6	1.4	1.7	1.3	1.0	1.2	1.2	
Ash (g)	9.5	9.9	8.2	9.6	7.3	6.1	7.0	6.7	
Calcium (mg)	690	732	553	697	428	370	335	382	267
Phosphorus (mg)	911	960	742	919	573	513	576	549	267
Ca:P ratio	1:1.32	1:1.31	1:1.34	1:1.32	1:1.34	1:1.39	1:1.72	1:1.44	
Iron (mg)	7.5	7.5	6.1	7.5	6.3	5.2	6.8	6.0	6.0
Sodium (mg)	1631	1609	1287	1615	1224	1018	1177	1129	
Potassium (mg)	1691	1717	1465	1691	1131	974	1021	1041	
Vitamin A (IU)	2845	3364	2091	2960	2213	2302	1914	2176	1667
Thiamin (mg)	0.69	0.70	0.62	0.69	0.54	0.43	0.51	0.49	0.50
(mg/1000 kcal)	0.59	0.56	0.61	0.58	0.54	0.52	0.51	0.52	0.50
Riboflavin (mg)	1.37	1.45	1.09	1.38	0.92	0.85	0.81	0.86	.6
(mg/1000 kcal)	1.17	1.16	1.07	1.16	0.91	1.03	0.81	0.92	.6
Niacin (mg)	8.3	8.4	6.5	8.3	8.2	7.3	9.4	8.14	6.67
(mg/1000 kcal)	7.1	6.7	6.4	7.0	8.1	8.8	9.4	8.73	6.6
Ascorbic Acid (mg)	30.6	34.6	35.5	31.8	27.5	21.7	19.7	23.2	15.0
Dining Hall Meals/Group	564	212	24	800	206	239	143	588	

*Mean values computed from group rather than individual data.

A number of changes in nutrient intakes per dining hall meal were observed, and these appear to be directly attributable to conversion to the item pricing. The RIK and COM-S groups decreased their energy intakes by 164 and 427 kcal/meal, respectively. The average protein intake per meal of the RIK and COM-S groups also decreased in June 1976. Item pricing appeared to have an adverse effect upon milk and milk-product consumption since marked decreases in calcium and riboflavin intakes per meal were observed in all three groups in June 1976. Iron, Vitamin A, thiamin, and ascorbic acid intakes per meal also declined markedly with the advent of the CASH/A La Carte system. In contrast, niacin intakes per meal remained relatively unchanged. The percentage of calories derived from fat sources ranged from a low of 43.8% for the 1975 RIK group to a high of 46.0% for the 1975 COM-M group. The CASH/A La Carte system did not improve the fat-calorie ratio of dining hall meals which remained higher than the desirable goal of less than 40% of calories derived from fat sources.

It was earlier stated that a significant proportion (> 40%) of the June 1976 combined population had calcium, Vitamin A, thiamin, riboflavin, and ascorbic acid intakes below the NRC recommended daily dietary allowances. Since the average per dining hall meal intakes of these nutrients markedly decreased in the June 1976 survey, the CASH/A La Carte System, as tested at NAS/Alameda, would appear to have adverse rather than beneficial effects upon the nutritional health of military personnel. It should be noted, however, that with the exception of the energy, iron and thiamine intakes of the COM-S population the nutrient intake per dining hall meal exceeds one third of the DDA's specified by the Surgeon General (Table 23).

G. Relative Contribution of Various Food Types to Daily Nutrient Intake

The quantities of various food types consumed per day during meals plus snacks from both inside and outside dining hall sources is shown in Table 30.

The average daily milk and milk-product intake of the RIK group markedly decreased from 524.6 g/day in 1975 to 331.4 g/day in 1976 (Table 30). As previously noted in Table 22, the average daily calcium intake of the RIK group decreased by 286 mg/day after conversion to commuted ration status. Food type analyses indicated that 252 mg of this decrease in calcium intake can be attributed to a reduction in milk and milk-products consumption during meals and snacks. Similarly, the decreased milk-product consumption of the RIK group in 1976 can account for 0.41 mg/day of the 0.63 mg/day observed decrease in riboflavin intake. These findings clearly indicate that with a decrease in dining hall attendance, average daily milk and milk-product and, concomitantly, calcium and riboflavin intakes decline markedly.

The effect of the CASH/A La Carte System on food type consumption per dining hall meal is shown in Table 31. The average milk and milk-product intake of the combined group in 1975 was 389.6 g/meal but markedly decreased to 200 g/meal in 1976. Milk

TABLE 30

Quantity (g/Day) of Food Types Consumed During Meals and Snacks

FOOD TYPE	BEFORE CASH A LA CARTE (MARCH 1975)			AFTER CASH A LA CARTE (JUNE 1976)				
	RIK	COM-S	COM-M	ALL	RIK	COM-S	COM-M	ALL
Beverages, Alcoholic	766.0	562.9	295.7	519.9	277.1	410.0	370.3	358.4
Beverages Non-alcoholic	626.1	808.7	979.6	822.4	773.3	714.5	1051.8	867.9
Milk and Milk Products	524.6	393.9	286.7	389.6	331.4	398.5	264.3	325.7
Desserts	60.5	58.8	56.1	58.3	56.6	49.4	54.3	53.4
Citrus Fruits and Juices	38.2	67.7	71.3	61.2	44.2	56.4	40.1	46.5
Entrees	507.2	502.3	519.7	509.9	481.7	483.5	555.6	512.6
Miscellaneous	281.4	302.9	317.8	302.6	283.1	275.6	335.7	302.3

TABLE 31

Quantity (g) of Food Types Consumed per Dining Hall Meal

FOOD TYPE	BEFORE CASH A LA CARTE (MARCH 1975)			AFTER CASH A LA CARTE (JUNE 1976)				
	RIK	COM-S	COM-M	ALL	RIK	COM-S	COM-M	ALL
Beverages, Non-alcoholic	69.9	82.6	48.1	72.4	95.1	88.2	134.6	101.9
Milk and Milk Products	391.4	396.7	286.1	389.6	228.5	205.9	149.1	200.0
Desserts	26.4	41.3	29.7	30.5	37.4	23.3	32.2	30.4
Citrus Fruits and Juices	13.7	23.8	46.5	17.4	15.5	8.0	4.6	9.8
Entrees	229.7	229.5	186.6	228.3	231.8	196.4	258.6	223.9
Miscellaneous	153.7	185.4	159.1	162.3	146.9	108.3	128.7	126.8
Dining Hall Meals/Group	564	212	24	800	206	239	143	588

and milk-products contributed 540 mg calcium and 0.79 mg riboflavin per meal in 1975, but only 247 mg calcium and 0.35 mg riboflavin per meal after implementation of the item-pricing system. Non-alcoholic beverage intake increased from 72.4 g/meal in 1975 to 101.9 g/meal in 1976. It was previously noted (Table 24) that 54% of the 1976 combined population had calcium intakes and 47% had riboflavin intakes below the recommended allowances. The 50% reduction in calcium and riboflavin intake per dining hall meal due to item-pricing of milk and milk-products must be corrected to prevent adverse effects on the nutritional health of the dining hall patron.

CONCLUSIONS

Conversion of RIK personnel to commuted ration status markedly reduced their dining hall utilization. The A La Carte system was not completely effective in stimulating a compensatory increase in dining hall utilization of COM-S and COM-M personnel. These conclusions can be projected to other installations that, like NAS/Alameda, offer many readily available alternative food outlets. Conversely, these conclusions may not apply to those military bases where alternative food outlets are not conveniently accessible to the potential dining hall patron.

Comparison of average daily total nutrient intakes of each group with recommended dietary allowances identified Vitamin A and thiamin as nutrients of concern. Evaluation of the percentages of the various group populations having nutrient intakes below recommended allowances revealed that conversion to commuted ration status had an adverse effect upon the total nutrient intake of personnel formerly on RIK status. Compared to the March 1975 RIK group, a significantly greater percentage of the former RIKs in the June 1976 survey had energy, protein, calcium, riboflavin, and ascorbic acid intakes below the recommended allowances, and a similar trend (although not statistically significant) was noted for phosphorus, iron, Vitamin A, and thiamin. Milk and milk-product consumption sharply decreased after conversion to COMRAT status and contributed greatly to the lower calcium and riboflavin intakes.

The adverse effects were largely influenced by the sharp decrease in dining hall attendance following removal from RIK status. However, it should be noted that the nutrient intakes of these former RIK personnel declined only to the levels of the single and married groups who were on commuted ration status during both the March 1975 and June 1976 surveys. Our analyses indicate that groups of personnel who consume a substantial number of their meals in the military dining hall have more satisfactory nutrient intakes than groups who only infrequently patronize the dining hall.

An alarming proportion (> 30%) of the combined (RIK, COMRAT-Single and COMRAT-Married) groups studied in the Pre- and Post-CASH/A La Carte survey had calcium, Vitamin A, thiamin, riboflavin, niacin, and ascorbic acid intakes below NRC

allowances. Analysis of nutrient intakes per dining hall meal indicated that average protein, calcium, phosphorus, iron, Vitamin A, thiamin, riboflavin, and ascorbic acid intakes per dining hall meal decreased under the CASH/A La Carte system. Therefore, conversion of personnel from RIK to COMRAT status and implementation of the CASH/A La Carte system as tested at NAS/Alameda will tend to accentuate rather than alleviate the nutritional problems. This latter situation can conceivably be overcome by adopting an appropriate pricing system which encourages sound nutrition.

RECOMMENDATIONS

Our recommendations based upon the nutritional impact of the CASH/A La Carte System as tested at NAS/Alameda are as follows:

1. Discontinue conversion of all rations-in-kind personnel to commuted rations status, especially at military installations with readily available alternative food outlets.
2. If the A La Carte System is continued, provide milk, particularly low fat or 2% Vitamin A fortified milk, item-priced sufficiently lower than cost (to be below soft drink prices), to stimulate milk consumption and thereby improved calcium, Vitamin A, and riboflavin intakes.
3. Give further consideration to modifying the item-pricing system so as to improve the nutritional health of military personnel. That is, to price items in such a fashion that nutritionally balanced meals become more cost attractive.

7. COST ANALYSIS

While previous sections have also focused on various measures of effectiveness of the CASH/A La Carte System as compared to the Conventional System, no one measure has as much impact on managerial decision making in the current fiscal environment as the comparative costs of the two systems. This section provides this vital comparison, as well as incorporating the projected costs for a third alternative, the RIK/A La Carte System.

Actual Costs

The actual food service systems costs incurred at NAS Alameda for both the existing system and the CASH/A La Carte system are presented in Table 32 along with the cost per ration and percent total analysis. The derivation of all the figures in the table are presented in Appendix F, Table F-1.

TABLE 32

Actual Operating Costs On An Annual Basis^a

Total Rations Fed	Conventional System ^b			CASH/A La Carte ^c		
	93,464			103,320		
	Total	Per Ration	% Total	Total	Per Ration	% Total
Direct Costs:						
Raw Food	\$255,622	\$2,735	26.5	\$225,774	\$2.185	23.4
Military Labor	304,515	3.258	31.5	328,509	3.180	34.1
Messmen Contract	<u>260,103</u>	<u>2.783</u>	<u>27.0</u>	<u>260,103</u>	<u>2.517</u>	<u>27.0</u>
Total Direct Costs:	\$820,240	\$8.776	85.0	\$814,386	\$7.882	84.5
Indirect Costs:						
Maintenance	\$ 44,739	\$0.479	4.6	\$ 44,739	\$0.433	4.7
Utilities	42,000	0.449	4.4	42,000	0.406	4.4
Supplies	58,048	0.621	6.0	58,048	0.562	6.0
Cash Register Rental	<u>—</u>	<u>—</u>	<u>—</u>	<u>3,900</u>	<u>0.038</u>	<u>0.4</u>
Total Indirect Costs:	\$144,787	\$1.549	15.0	\$148,687	\$1.439	15.5
Total	\$965,027	\$10.325	100.0	\$963,073	\$9.321	100.0

^aExcluding outlays for COMRAT allowances and receipts from COMRAT customers and guests.

^bBased on data collected from 7/1/75 to 2/29/76 and annualized for one year.

^cBased on data collected from 3/1/76 to 6/30/76 and annualized for one year.

During most of the test period the crew of the USS Oriskany was feeding at the dining facility because its life support systems were shut down. Therefore the actual labor costs during the CASH/A La Carte experiment were higher because the workforce was augmented by the addition of 2 MS3's and 1 MS2 from the USS Oriskany.

The actual messmen's contract did not increase under CASH/A La Carte. Due to budgeting constraints there were no funds available for the additional cost of cashiers. Thus military cooks assumed some of the contractor's duties, specifically the serving function, in exchange for the contractor performing the cashiering function. As there is no reason to believe this could not be repeated at other installations no increase in labor costs due to the necessity of performing the cashiering function is anticipated. This position is further justified by the fact that the cooks were still not overworked by assuming the serving function as indicated by the high percentage of non-productive time previously discussed. In addition, the confrontation between preparer and consumer at the serving line provides necessary feedback to the cook on the quality and acceptance of his work.

The Indirect Costs are for the entire fiscal year (FY 76). Inasmuch as these costs are not affected by the type of system in operation, they were held constant so as not to introduce any bias into the analysis.

The Direct Costs represent approximately 84.5% of the total costs in both systems while the Indirect Costs comprise only 15.5%.

Conventional vs. CASH/A La Carte: A Comparative Cost Analysis

In order to properly compare the two food service systems, several assumptions must be made. In this analysis, these are:

1. The time period is the same (one year).
2. The base population remains constant.
3. The BDFA is \$2.67.
4. The daily COMRATS rate is \$2.53.

The base population for this analysis is shown in Table 33. The population numbers are those that actually existed during the experiment (June 1976). The attendance rates are based on data collected during March 1975 for the before CASH/A La Carte picture and during June 1976 for the after CASH/A La Carte picture. From this table the number of meals served annually can be calculated for both systems given a constant population.

TABLE 33

Base Population and Attendance: Patterns

Type	Population Distribution		Attendance Patterns			
	Number	Total	Attendance Rate	Before No. of Rations/Day	Attendance Rate	After No. of Rations/Day
RIK	245	6.6	22.95	56.23	7.30	17.88
COMRATS-M	1313	35.2	1.02	13.39	2.72	35.71
COMRATS-S	419	11.2	5.82	24.39	7.59	31.80
Marines	278	7.4	18.30	56.87	11.80	32.80
Other*	<u>1475</u>	<u>39.6</u>	<u>11.72</u>	<u>172.87</u>	<u>11.72</u>	<u>172.87</u>
Total	3730	100.0	8.52	317.75	7.80	291.06
Total Rations Per Year				115,979		106,237

*Includes TAD, Transient, Carrier and other ship personnel, and Active Duty Reserves. The attendance rate for this group was held constant so that it would not affect the analysis.

Based on the population distribution and attendance rates presented above, the total annual system costs for the two systems are presented in Table 34. Detailed derivations for the figures in Table 34 are presented in Appendix F, Table F-2.

As the level of feeding in both systems are very comparable to the actual number of rations served, the costs for military labor and the messmen contract are those presented previously in Table 32. The indirect costs were held constant with the exception of the addition of the cash register rental charges in the CASH/A La Carte system, just as was done in calculating actual costs in Table 32.

The COMRAT allowance and Food Cost figures are calculated for base personnel only (including Marines).

TABLE 34

Total Annual System Costs

	Conventional		CASH/A La Carte
Number of Unweighted Rations (Base Personnel Including Marines)	52,881		43,139
Number of Other Unweighted Rations	<u>63,098</u>		<u>63,098</u>
Total Unweighted Rations Served	115,979		106,237
Direct Costs:			
COMRAT Allowance*	\$1,727,775		\$2,082,378
Food Costs* 141,192		94,259	
Less Receipts <u>37,212</u>		94,259	
	103,908		—
Military Labor	304,515		304,515
Messmen Contract	<u>260,103</u>		<u>260,103</u>
Total Direct	\$2,396,373		\$2,646,996
Indirect Costs:			
Maintenance	\$ 44,739		\$ 44,739
Utilities	42,000		42,000
Supplies	58,048		58,048
Cash Register Rental	<u>—</u>		<u>3,900</u>
Total Indirect	\$ 144,787		\$ 148,687
Total Costs	<u>\$2,541,160</u>		<u>\$2,795,683</u>
Additional Cost for CASH/ La Carte			\$ 254,523

*Calculated only for base personnel (including Marines).

A Third Alternative – RIK/A La Carte

A third alternative for consideration would be a combination of the two systems previously discussed. It would consist of keeping RIK personnel on RIK and charge item pricing for those individuals on COMRATS. The resulting attendance patterns would be as follows:

Population Distribution	Number	Attendance Rate	No. of Rations/Day
RIK	245	22.95 ^a	56.23
COMRATS-Married	1313	2.72 ^b	35.71
COMRATS-Single	419	7.59 ^b	31.80
Marines	278	23.11 ^c	64.24
Other	1475	11.72	<u>172.87</u>
			361.25

Total Unweighted Rations Per Year - 131,856

^aSame attendance rate as conventional system.

^bSame attendance rate as CASH/A La Carte System.

^cAssuming 50% of the Marines are on RIK and have an attendance rate 50% greater than Navy RIK's in a conventional system, and 50% of the Marines are on COMRATS with an attendance rate equal to the Marine A La Carte attendance rate, $22.95 \times 1.5 \times 0.5 + 11.80 \times 0.5 = 23.11$.

A comparative cost analysis of the system is presented in Table 35. Detailed derivation of costs are presented in Appendix F, Table F-3. This analysis shows that while CASH/A La Carte costs an additional \$254,523 annually, RIK/A La Carte costs only \$1,343 additional.

Total Navy Projected Costs

Based on the experience at NAS Alameda supplemented by data provided by the Navy Food Service Systems Office (NFSSO) and presented in Appendix F, Table F-4, projections were made as to the differential costs between the three alternative systems previously discussed should they be adopted Service-wide. Table 36 presents these projected differential costs for each of the three systems and Appendix F, Table F-5 provides the detailed derivation of the figures.

TABLE 35

Cost Comparison Between Conventional, CASH/A La Carte, and RIK/A La Carte

	Conventional	CASH/A La Carte	RIK/A La Carte
Number of Unweighted Rations-Base Personnel	52,881	43,139	68,758
Number of Unweighted Rations-Other	<u>63,098</u>	<u>63,098</u>	<u>63,098</u>
Total Unweighted Rations Served	115,979	106,237	131,856
Direct Costs:			
COMRATS Allowance*	\$1,727,775	\$2,082,378	\$1,727,775
Food Costs*	141,192	94,259	168,343
Less Receipts*	<u>37,212</u>	<u>94,259</u>	<u>66,920</u>
Military Labor	103,980	--	101,423
Messman Contract	304,515	304,515	304,515
	260,103	<u>260,103</u>	<u>260,103</u>
Total Direct	\$2,396,373	\$2,646,996	\$2,393,816
Indirect Costs:			
Maintenance, Utilities, & Supplies	144,787	144,787	144,787
Cash Register Rental	--	3,900	3,900
Total Indirect	<u>144,787</u>	<u>148,687</u>	<u>148,687</u>
Total Cost	\$2,541,160	\$2,795,683	\$2,542,503
Additional Cost Over Conventional System	--	\$ 254,523	\$ 1,343

* For Base personnel including Marines.

The present system is the most economical. However, the RIK/A La Carte system serves substantially more rations (28.0 million/year vs. 24.8 million/year – 12.5% increase). The CASH/A La Carte system is the most expensive and serves the least number of rations because all enlisted personnel receive COMRATS, which cuts the ties the current RIK patron has with the dining hall.

The differential costs per ration served (Civilian and Military labor including Cashiering are assumed to remain constant and are, therefore, omitted) shows the RIK/A La Carte system to be the lowest. This is attributed primarily to the fact that this system serves a larger number of rations without any increase in COMRATS allowances.

CONCLUSIONS

1. The incremental cost of the CASH/A La Carte system at NAS Alameda (\$254,523 or 10% of total systems costs) is due mainly to the increase of \$354,603 in COMRATS allowances offset by the reduction in net of food costs less receipts of \$103,980 under CASH/A La Carte.

2. Gross raw food costs are \$46,933 (33%) less in the CASH/A La Carte system for a 10% lower level of feeding.

3. If the COMRATS costs are ignored and one considers only the dining facility subsystem, the operating costs under CASH/A La Carte are \$100,080 or 12% less than under the Conventional System.

4. A combined RIK/A La Carte system would serve the largest number of unweighted rations annually (131,856, which is 15,877 or 14% more than the conventional system) and only costs an additional \$1,343 (or 0.05%) over the conventional system.

5. Even though RIK/A La Carte would serve the greatest number of rations of the three systems, its total food cost would be less than the Conventional System (\$101,423 vs. \$103,980). This is attributed to the A La Carte financial controls which allows credit only for the food taken (\$2.185 per ration per day) vs. the conventional system which allows the BDFR (\$2.53 per ration per day).

6. When projected to a service wide implementation CASH/A La Carte would cost the Navy over \$35 million more annually than the conventional system while serving 45% fewer rations resulting in a differential cost per ration 111% greater than the conventional system. A combined RIK/A La Carte system on the other hand would cost only \$95,000 more annually for the entire Navy than the conventional system, but would serve about 12.5% more rations resulting in a differential cost per ration 11% lower than the current system.

OPERATING CHARACTERISTICS

While analysis of consumer reactions and attendance indicates the relative success of the A La Carte concept from the consumer's viewpoint, an analysis of the financial operating statistics is necessary to assess the success of the internal controls and accounting system which supports the concept. As noted in the Introduction to this report, Appendix A contains the operating handbook for the CASH/A La Carte Experiment detailing all of the duties, internal controls and procedures, accounting reports and reviews required.

Figures 30 through 32 present a number of pertinent statistics which are indicators of the operation. Figure 30 presents a plot of cumulative Total Monetary Allowances and Net Storeroom Issues. Total Monetary Allowances are defined as the sum of Cash Food Sales and the product of RIK customer signatures times the Basic Daily Food Allowance (\$2.67 for the time period portrayed). As noted previously, reservists, some transients, and some newly arrived penniless sailors were still on an RIK status. Net Storeroom Issues is the monetary value of the raw food issued to the galley during that time period. The difference between these two quantities reflects the underissue or overissue status of the dining hall. It is, in fact, this quantity which the Navy uses as a single figure of merit for the overall management of the food service operation. In conventional systems the desired objective is a coincidence between Monetary Allowances and Issues at the end of the reporting period (one quarter). Generally speaking both underissue and overissue situations are to be avoided, with an overissue status being viewed more unfavorably. As can be seen from the previously mentioned Figure 30 the cumulative sum of Total Monetary Allowances always exceeded net storeroom issues, the final figures at the end of June differing by only 1.3%. That is, the enlisted dining facility was only 1.3% underissue after 4 months of operation.

As has been noted in a previous section, the cash value of meals taken by personnel on RIK status under CASH/A La Carte had been less than the BDFA would permit. This difference had resulted in the accrual of income by the Food Service Operation derived solely from the difference between the monetary allowances deriving from the sum of RIK patron's signatures times the BDFA and the sales value of the food they actually consumed. Figure 31 plots the cumulative sums of the total monetary allowances and actual total food sales. This latter figure represents the sum of Cash Food Sales to COMRATS customers and credit or discounted sales to RIK patrons. The difference between these 2 lines is the income derived from RIK patron signatures.

The general management objective in a military all cash collection/A La Carte operation would be to have a perfect balance between Total Food Sales and Net Storeroom Issues. As will be noted in Figure 32, a rather close balance was maintained between these 2 quantities at NAS Alameda. By the end of the first month of operation a minor 1.45% loss on sales had been experienced. By April this had been converted to a 1.48% gain. In May this gain was reduced to within 0.34% of perfect balance, but again on

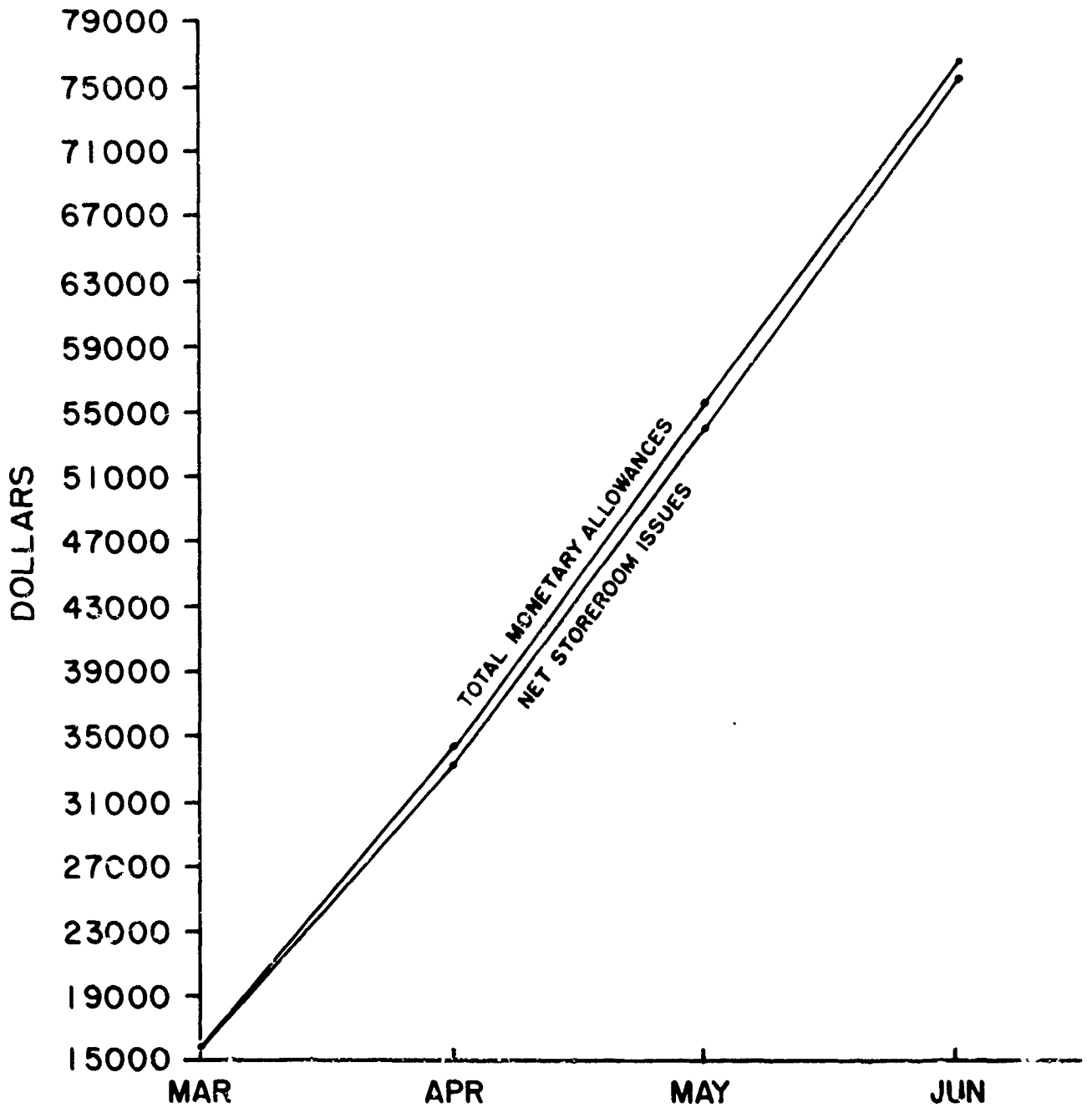


FIGURE 30

PLOT OF CUMULATIVE TOTAL MONETARY ALLOWANCES
AND NET STOREROOM ISSUES BY MONTH

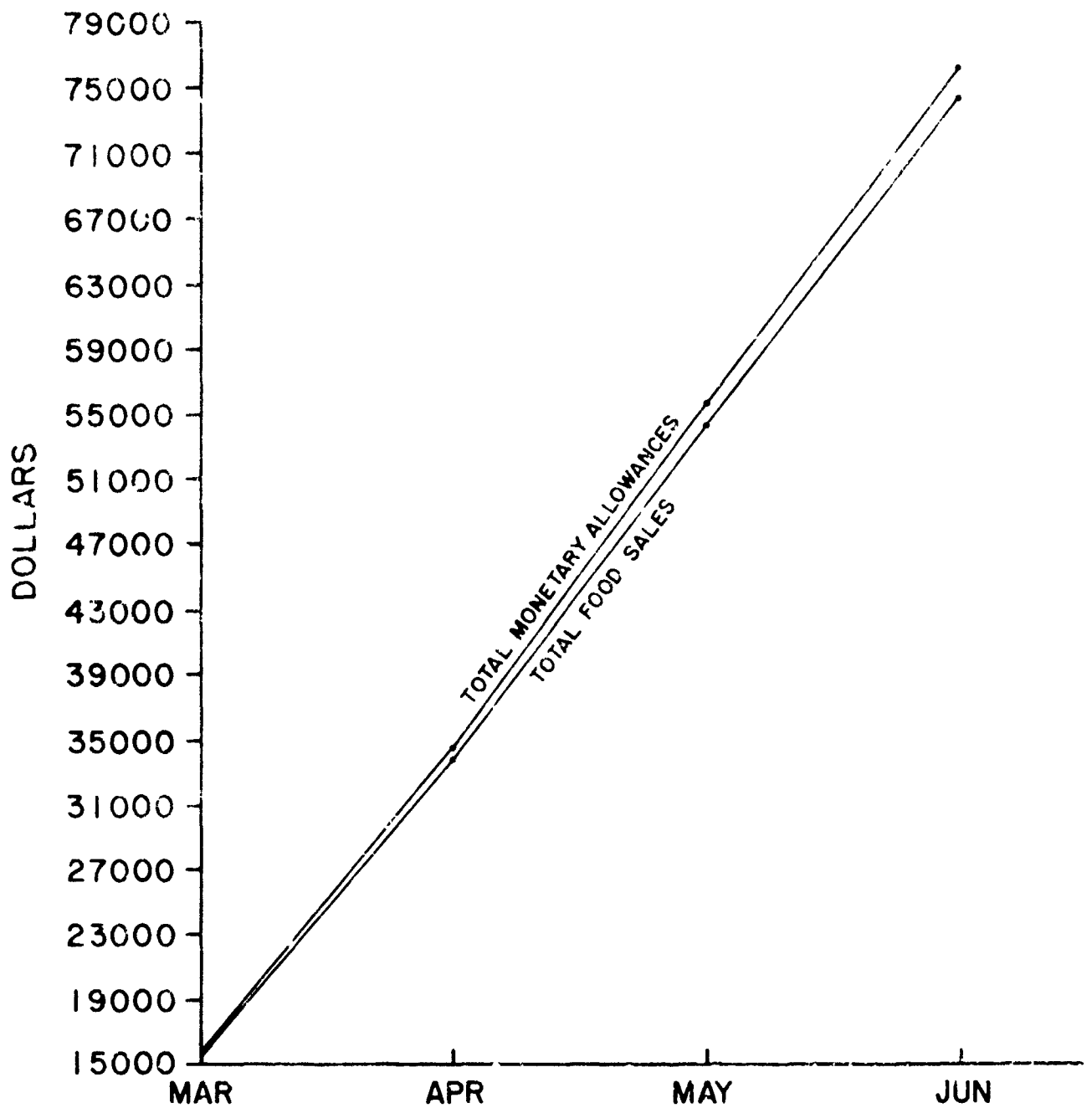


FIGURE 31

PLOT OF CUMULATIVE TOTAL MONETARY ALLOWANCES
AND TOTAL FOOD SALES BY MONTH

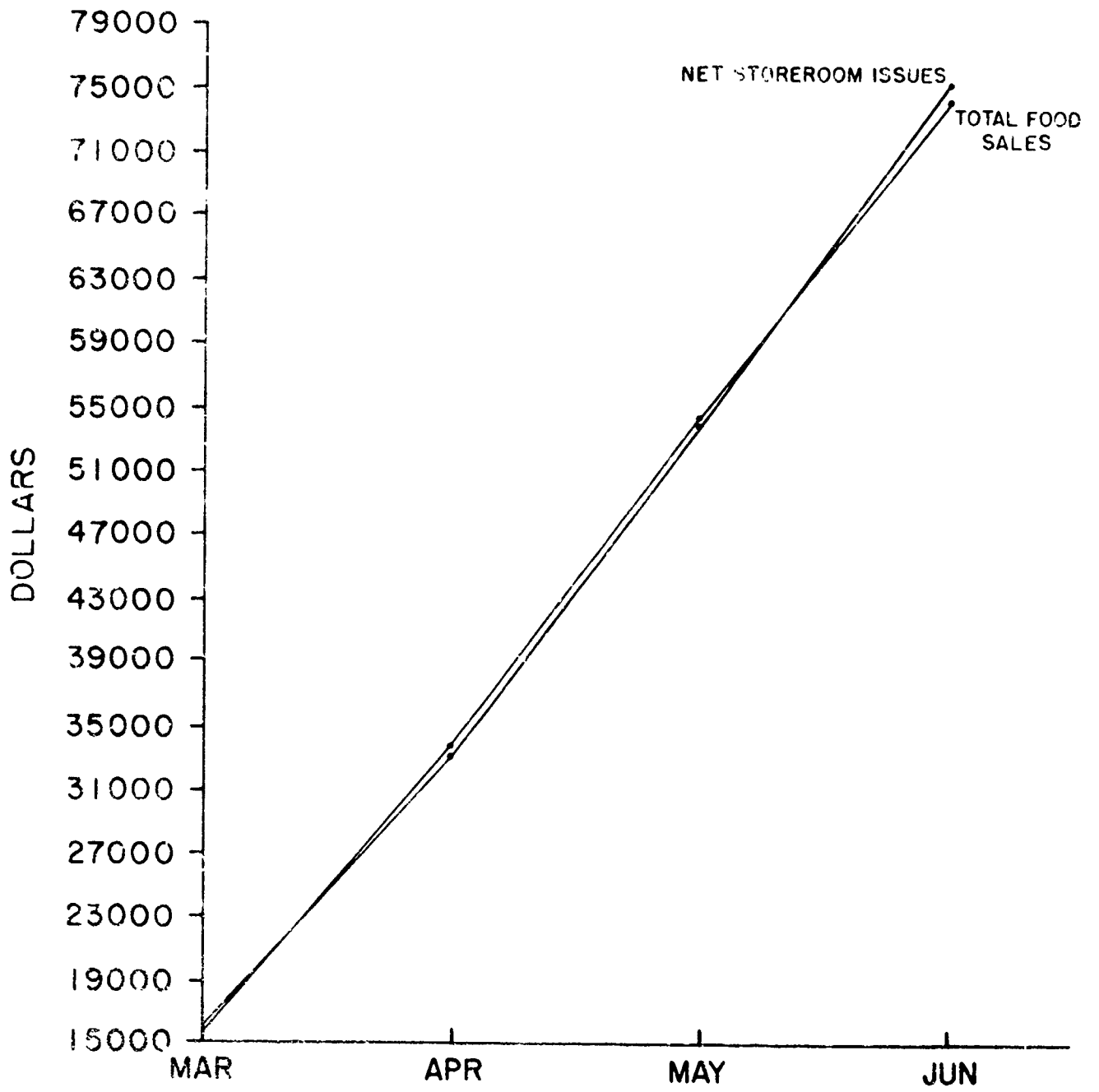


FIGURE 32
 PLOT OF CUMULATIVE NET STOREROOM ISSUES
 AND TOTAL FOOD SALES BY MONTH

the positive or gain side. By the end of June a net 1.17% loss on sales had occurred. This latter result was not due to a loss of control in the system but rather an organized effort to reduce the large underissue situation with respect to Total Monetary Allowances discussed previously. This effort included selling items, particularly beverages, at a loss in an attempt to use up this monetary income resulting from the difference between the allowance provided for the RIK patrons and the actual food sales to these customers. Since it was the balance between Total Monetary Allowances and Storeroom Issues and not between Total Food Sales and Storeroom Issues which was used as the primary Navy figure of merit, the fact that only a 1.17% loss was incurred is indicative of excellent management control, especially when one remembers that the underissue on Monetary Allowances was only 1.3%.

The high caliber performance indicated above is further corroborated by the statistics on the discards of prepared foods. By the end of the first month discards of prepared food were running 1.6% of sales, by the end of April the cumulative figure had been halved to 0.8%, and in May it dropped again to 0.6%, staying constant at this level through June. This indicates the high level of success of progressive cooking techniques coupled with some success in selling leftovers at full price. A mechanism was available whereby prices on leftovers could be reduced so as to encourage the sale of leftovers before they had to be discarded. This tool was not used to the fullest extent at NAS Alameda. Losses due to price reductions (equal to the reduction in price times the number of portions sold) were only 0.27% of Total Food Sales in March, they were halved to 0.13% in April; dropping to 0.08% in May and June. Even though discards of prepared foods were quite low, they could have been even lower had this tool been used more frequently. The superiority of the CASH/A La Carte System over the Conventional control system was apparent to the supervisory food service workers and to the Food Service Officer in particular. Complete control, individual accountability, and traceability was assured for all food from issue by the storekeeper through the sale to the customer. Careful safeguards for the control of monetary receipts were also provided for the accounting system and permitted the food service officer to assess his status regarding issues and receipts by 0800 the following morning and, if any irregularities or problems were indicated, to trace the root causes through the complete audit trail provided.

All in all the performance of the A La Carte System from a management control point of view was a credit to the food service staff and to the control system design presented in the Operating Handbook, attached as Appendix A.

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APPENDIX A
OPERATING HANDBOOK FOR CASH/A LA CARTE

ENLISTED DINING FACILITY HANDBOOK FOR CASH/A LA CARTE

CHAPTER

1. INTRODUCTION
2. INTERNAL PROCEDURES FOR CASH/A LA CARTE
3. DUTIES OF FOOD SERVICE PERSONNEL
4. INTERNAL CONTROLS FOR CASH/A LA CARTE
5. ISSUES AND SALES OF SUBSISTENCE ITEMS
6. REPORTS AND RETURNS
7. SUPPLY OFFICER REVIEW
8. AUDIT TECHNIQUES
9. TRAINING SYLLABUS

INDEX

APPENDICES

CHAPTER 1: INTRODUCTION

AUTHORITY	100
CONCEPT	101
POLICY	102
SCOPE	103
CONTROL	104
PUBLICITY	105
DURATION	106
RECORDS RETENTION	107

CHAPTER 1

INTRODUCTION

100 AUTHORITY

Naval Supply Systems Command letter 30/PA of 1 October 1975 establishes NAS Alameda as the Navy test site for the CASH/A La Carte system. The test is conducted under the auspices of the Navy Food Service Systems Office and in conjunction with the U.S. Army Natick Research & Development Command.

101 CONCEPT

The purpose of this manual is to establish specific procedures for the CASH/A La Carte Food Service Experiment during the test period, from 1 March 1976 to 31 August 1976, with a probable extension until 28 February 1977.

1. **METHODOLOGY.** During the experiment, all eligible enlisted personnel assigned to Alameda commands will receive commuted rations and the selling of all subsistence in the Enlisted Dining Facility will be on an item by item basis. Procedures will include an option for those enlisted personnel who are unable to manage to meet their dietary needs on commuted rations to revert to rations in kind (RIK) entitlements.

2. **DEVELOPMENT.** During the experimental period, simultaneous efforts will be devoted toward streamlining these procedures as much as possible and determining the feasibility of reducing CASH/A La Carte staffing requirements. During the test period, only minor changes are envisioned in personnel resources normally available to NAS Alameda for operation of the Enlisted Dining Facility.

102 POLICY

The NAS Alameda Notice establishing operating policy and general procedures for implementation of the CASH/A La Carte test is contained in Appendix 1 to this manual.

103 SCOPE

With the exception of the flight kitchen and bulk sales, all food service will be included in the CASH/A La Carte concept development.

104 CONTROL

Food Service operations will continue to follow the guidance of NAVSUP Pub 486 except where modified by this instruction. During the period of the test, NAS will strive to remain under issue; however, it is recognized that over issue situations may result in the initial stages of the test.

105 PUBLICITY

A series of articles will be published in the NAS "Carrier" and several meetings will be convened for the various elements in the chain of command in order to publicize the impact of the test on Alameda organizations and personnel.

1. TOPICS. Topics will include:

1. Commuted Rations Entitlement and Implementation Procedures.
2. Provisions for Reverting to RIK Entitlements.
3. Objectives of the CASH/A La Carte Food Service Concept.
4. Information for Transient RIK Personnel.
5. Duration of the Test.

2. **EMPHASIS OF PUBLICITY.** Particular emphasis should be placed on informing all enlisted personnel that they should plan their personal finances to allow for cash payments for food beginning 1 March 1976.

106 DURATION

The test will terminate and normal food service procedures for ashore activities, as outlined in NAVSUP Pub 486, will be reinstated on 1 September 1976, unless specifically exempted by the Navy Food Service Systems Office.

107 RECORDS RETENTION

All forms completed during the test period will be filed at the NAS Alameda Enlisted Dining Facility for a period of two years after completion of the test and then mailed to a repository designated by the Navy Food Service Systems Office.

CHAPTER 2: INTERNAL PROCEDURES FOR CASH/A LA CARTE

MENU PREPARATION	200
FOOD PREPARATION AND SERVICE	201
PORTION CONTROL	202
PRICING	203
MATERIAL/SANITATION INSPECTION	204
SECURITY OF SPACES	205
SALES ANALYSIS	206

CHAPTER 2

INTERNAL PROCEDURES FOR CASH/A LA CARTE

200 MENU PREPARATION

1. MENU DESIGN. When designing menus, consideration will be given to the following areas:

a. COLOR. People eat with their eyes as well as their tongues. Most food items combine well in color; however, care must be used to prevent a one-color menu. An example of poor planning for a special of the day would be sliced turkey, mashed potatoes, buttered cauliflower, potato soup and cole slaw because all are approximately the same color.

b. SHAPE. The shape of food items affects eye appeal. As with color, a variety of shapes on a menu is desired. A menu with all items of one or similar shapes should be avoided. An example of poor planning for a special of the day would be meatballs, buttered whole new potatoes, whole beets, and canned plums.

c. CONSISTENCY. The feel of food in the mouth also has an affect on appeal. Crisp, soft, hard and chewy are common food consistencies. The consistency should not be all the same. An example of poor planning for a special of the day would be chicken salad, mashed potatoes, stewed tomatoes and gelatin dessert.

d. FLAVOR. Food flavor consists of sweet, sour, salty and bitter. Strong and mild, spicy and bland are also characteristics of flavor. Variety, as with the other factors, is desired. As a rule of thumb, only one highly seasoned food should be incorporated into a meal.

e. ACCEPTABILITY. Whether or not patrons like a food item and will purchase it depends also on the final garnishes, price relative to the time elapsed since pay day, and previous experience with the quality of preparation. Historical records, preference surveys and sales data should be closely analyzed to assist in menu scheduling and the type of preparation.

f. TEMPERATURE. Both hot and cold food should be included on a menu. Cold food should be served at a reasonably cold temperature; likewise hot food should be served hot. To insure that hot foods are placed on the line at the correct temperature, the Watch Captain should check the serving line with a thermometer prior to opening the food line. Examples of items that may be used under cold food preparation are sandwiches and cold plates for the Speed Line.

g MULTIPLE ENTREES. Serving multiple entrees (meat items) requires forethought and planning. Main entrees will include a cross-section of low and high priced items. Under the CASH/A La Carte System items on the serving line will be those having a reasonable diner preference for the price. High cost items such as steak can be made available regularly at dinner and supper meals by preparing them to order through the combined use of the micro-wave oven and charcoal grills. Roast beef can also be available for a number of meals. At least two low cost entrees such as baked chicken, spaghetti and meat sauce, meat loaf, stuffed franks, fried fish, etc., should always be available during the dinner and supper meal. Within the variety of menu items prepared for each meal, a "Special Menu of the Day" will be identified as the medium cost meal, but will be priced by item so as to allow the individual to elect not to take parts of the special if personal taste so dictates. Care will be taken to insure that the planning of the "Special Menu of the Day" will allow the man who is striving to eat within the commuted ration rate a good daily variety with strong nutritional value.

h. CYCLE. A basic seven day cycle menu for the experiment is presented on the succeeding pages. In addition to the rotational seven day cycle for lunch and supper, an additional entree will be scheduled for each meal on a random basis by the Senior Mess Management Specialist from the list provided. High cost entrees such as solid meat cuts of beef or pork will be used infrequently on the main menu line but will be available on occasion to insure full menu variety. On alternate weeks the lunch rotation will be served for supper and vice versa.

MENU

BREAKFAST: (Fixed items except where noted)

Juices: Orange, Grape, Apple, Grapefruit, Pineapple, Tomato

Fresh Fruit: Half Grapefruit, Apples, Oranges, Bananas

Breakfast Meats. Bacon
Sausage Links
Ham
(Rotate) Creamed Beef, Scrapple, Corn Beef Hash
Roast Beef Hash, Minced Beef

Cereals: Assorted Hot Cereals (Individual packages)
Assorted Cold Cereals (Individual packages)

- Eggs, etc.:** Eggs to order
Omelettes; Cheese, Ham, Bacon
French Toast
Pancakes and Pancakes with fruit
Waffles and Waffles with fruit
- Starches:** (Rotate) Hashed Brown Potatoes, Potato Pancakes,
Shoestring Potatoes
- Pastry:** Danish, donuts
- Beverages:** White Milk, Chocolate Milk, Low-Fat Milk, Soft Drinks, Coffee, Tea

MAIN MENU – FIXED ITEMS

LUNCH AND SUPPER

- Starches:** Mashed Potato, French Fries, Steamed Rice, Fried Rice
- Vegetables:** (Rotate) Buttered Corn, Cream Style Corn,
Corn on the Cob
- Fresh Fruit:** Apples, Oranges, Bananas
- Salads:** Jello, Tossed, Cottage Cheese
- Desserts:** Ice Cream, Sundaes, Milk Shakes
- Beverages:** White Milk, Chocolate Milk, Low-Fat Milk, Soft Drinks, Coffee, Tea

ADDITIONAL ENTREES TO BE INTRODUCED INTO MAIN MENU (ONE PER MEAL)

Beef Stew
Stuffed Cabbage
Veal Parmesan
Hamburger Pie
Salmon Cakes
Round Beef Stroganoff
BBQ Beef Cubes on a Roll
BBQ Franks
Baked Macaroni and Cheese
Chicken/Turkey a la King
Hot Turkey/Pork/Roast Beef Sandwich
Egg Foo Young

High Priced Items

Beef Stroganoff
Shrimp Creole
Beef Pot Roast
Swiss Steak
Pork Chops/Slices
Fried Rabbit
Spanish Steak

Beef Sukiyaki
Teriyaki Beef Slices
Pork Adobo
Chicken/Turkey Chow Mein
Chili Rellenos
Coney Island Burger

SPEED (GRILL AND SHORT ORDER)LINE
(Fixed Items, Lunch and Supper, Except where noted)

Soups: Same as Main Menu

Sandwiches:

Cold: Bacon, Lettuce & Tomato
Ham
Ham & Cheese
Bologna

Hot: Hot Dogs
Hamburgers/Cheeseburgers
Grilled Cheese
Sloppy Joes
Chili Dog

Entrees: Grilled Sirloin Steak (8 oz.)
Fried Chicken
Fried Fish
Chili with Beans

Starches: Baked Beans
French Fries

Vegetables: Same as Main Menu plus onion rings, lettuce and tomato garnish for sandwiches

Fresh Fruit: Same as Main Menu

Salads: Same as Main Menu plus a cold meat platter, chef salad and fruit salad

Desserts: Same as Main Menu

Beverages: Same as Main Menu

Other: Pizza
Tacos
Burritos

MAIN MENU - ROTATIONAL ITEMS
LUNCH

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Soups	Chicken Rice Cream of Mushroom	Chicken Noodle Bean/Bacon	Vegetable Chicken Rice	Tomato Vegetable Beef	N Y Clam Chowder Beef Noodle	Minestrone Split Pea	Cream of Chicken Beef Barley
Entrees	Knockwurst Chicken Pot Pie	Salmon Loaf Corned Beef	Meat Loaf Chicken Cacciatore	Chicken Tetrazini Barbeque Pork Loin	Italian Sausage Tuna & Noodles	Chili Con Carne w/Beans Roast Pork	Baked Lasagna Seafood Platter
Starches	Baked Potato	Parsley Buttered Potatoes	Lyonnaise Potatoes	Potatoes Au Gratin	O'Brien Potatoes	Baked Potatoes	Lyonnaise Potatoes
Vegetables	Sauerkraut Spinach Green Beans	Cabbage Carrots	Peas Candied Sweet Potatoes	Broccoli Mixed Vegetables	Green Beans Brussel Sprouts	Peas Succotash	Peas & Carrots Waxed Beans
Canned Fruit		Assorted Mixed Fruit (Peaches, Pears, Fruit Cocktail, Apr'esauce)					
Salads		Assorted (Cole Slaw, Waldorf Salad, Potato Salad, Golden Glow, Tossed Salad, Cuke & Onion)					
Desserts.							
Pudding		Assorted (Chocolate Cream, Jello, Vanilla Cream, Butterscotch Cream, Banana Cream, Coconut Cream)					
Cake		Assorted (White, Chocolate, Devil's Food, Banana, Marble, Pineapple Upsidedown, Gingerbread, Strawberry Shortcake)					
Pies		Assorted (Apple Cr sp, Banana Cream, Chocolate Cream, Apple, Cherry, Lemon Meringue, Blueberry, Peach)					
Cookies		Assorted (Oatmeal Chocolate Chip, Sugar, Peanut Butter)					

**MAIN MENU – ROTATIONAL ITEMS
SUPPER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Soups:				SAME AS LUNCH			
Entrees	Swedish Meatballs Roast Turkey	Spaghetti & Meat Sauce Baked Chicken	Baked Ham Chilli Macaroni	Salisbury Steak Grilled Liver & Onions	Baked Fish Pork Chop Suey	Stuffed Peppers Glazed Ham Chunks	Barbeque Chicken Roast Beef
Starches.	Stuffing Noodles	Au Gratin Potatoes	Parsley Buttered Potatoes	Lyonnaise Potatoes	Fried Rice	O'Brien Potatoes	Baked Potato
Vegetables	Peas Brussel Sprouts	Green Beans Carrots	Candied Sweet Potatoes Peas	Succotash Green Beans	Waxed Beans Broccoli	Peas & Carrots Spinach	Green Beans Mixed Vegetables

Canned Fruit: SAME AS LUNCH

Salads: SAME AS LUNCH

Desserts: SAME AS LUNCH

2. MENU CHANGES. Any change anticipated in the basic menu will be identified for both the regular and short order line by the Senior Mess Management Specialist a minimum of 60 days in advance of the serving period. This lead time is required for ordering purposes. All menus will be approved by the Commanding Officer or his representative. Approved menus may be changed by the Food Service Officer as conditions dictate; i.e., use of leftovers, stock excesses, etc. A copy of the approved menu will be annotated to reflect what was actually offered on the serving line. Planned menus will be followed as closely as possible.

201 FOOD PREPARATION AND SERVICE

1. RECIPE CARDS. All food items will be prepared following approved Armed Forces Recipes. Any recipes not in the Armed Forces Recipe Service which are used and which have been tested with good results should be typed on a 5" X 8" card, approved by the Food Service Officer, filed with the recipe cards and added to the automated pricing program.

2. AUDIT OF PREPARATION. Food preparation procedures should be frequently checked by the Senior Mess Management Specialist using the recipe card for the item desired as a guide following the procedures listed on the recipe card as a checklist.

3. USE OF THERMOMETER. Oven thermometers should be used in all ovens. The most frequent cause of poor meat preparation is using oven temperatures in excess of the recipe specifications. Meat thermometers should be used in roasting meat and poultry items. An obvious result of not using these items is that the meat becomes overcooked.

4. MENU AVAILABILITY. All items on the menu at the start of a meal should be available at the end of the meal, unless an item is a leftover from a previous meal.

5. STEAM TABLES. Steam table space can be increased so that the variety of hot food items can be improved. The way to accomplish this is to use one-third and one-half size insert pans.

6. PROGRESSIVE COOKING. Hamburger patties and other short order items should be prepared progressively, not cooked in advance and held in steam table inserts, grease or hot water.

7. DEEP FAT FRYERS. Deep fat fryers should be drained and cleaned daily. The grease should be strained and refrigerated.

8. CONDIMENTS. A condiment cabinet should be used for storage of spices and condiments. An open shelf underneath a worktable is not the proper storage place.

9. **MENU BOARDS.** Felt-backed menu boards which used plastic letters will be placed at the beginning of each serving line and on the wall behind the service area. These boards will display food items and prices. Food prices will also be placed in front of each item on the line. The "Special Menu for the Day", which indicates how a RIK patron can stay within the allowance and still obtain a balanced diet will be separately identified on the menu boards.

10. **FOOD DISPENSERS.** Milk dispensers should be marked "white", "chocolate", and "low fat". Bread dispensers should be used for serving bread, and butter dispensers should be used for serving butter.

11. **MESSING GEAR.** Silverware dispensers should be marked as to "knives", "forks", and "spoons". An adequate supply of serving trays, chinaware, silverware, glasses, and cups will be on hand to serve a full meal. This is necessary in order to prevent the requirement for using wet, hot tableware.

202 PORTION CONTROL

The concept of portion control is essential to the success of the item pricing concept. Food costs must be recovered but there cannot be any overcharging either. Thus, it is imperative that the portion sizes served correspond exactly to those used to price the item.

1. **SERVING IMPLEMENTS.** Portion control utensils and dishes will be used. These will include scales for weighing sliced meat portions, scoops for items such as mashed potatoes, uniform serving spoons or monkey dishes for vegetables and salads, and casserole dishes for such items as chicken pot pie and beef stroganoff.

2. **WEIGHING.** To insure that proper portion control is being exercised, all foods with pound as the unit of measure will be weighed after being prepared, just prior to being brought out to the serving line. All leftovers on the line after the meal will also be weighed if the unit of measure for the item is pound. The number of portions will be recorded on the Cook's Worksheet (12ND NASA 4061/62). Instructions for preparation of the form are contained in paragraph 402.

203 PRICING

1. **PRICING POLICY.** The CASH/A La Carte system requires that a delicate cash balance be maintained between subsistence issued and actual receipts for meals sold. The first element necessary to insure the balance of intake versus outflow of funds is the establishment of suitable prices for the various items served. This involves pricing each raw food component in the recipe at its inventory cost, dividing by the number of portions yielded by the recipe and adding a suitable surcharge for condiments, wastage, spoilage,

etc. This tedious process of recipe pricing will be carried out in an automated fashion via computer, the only requirement being that raw food prices be updated as necessary. To simplify procedures as much as possible, the following pricing policies will hold:

a. **MARK UP.** The surcharge for condiments, spoilage and wastage will be a flat 10-15% (initially 15%) for all items.

b. **ROUNDING.** Prices will be rounded to the nearest nickel.

c. **CURRENCY OF PRICES.** Menu item prices will be updated at the beginning of each quarter using the Navy Fixed Price List, or latest receipt price for local purchase items, regardless of inventory levels

d. **INITIAL PRICES.** In order to avoid the necessity for rapid price changes at the beginning of the experiment, fourth quarter 1976 Navy Fixed Prices will be used for the period of 1 March through 30 June, both for pricing menu items for sale as well as for pricing the raw food components issued by the Jack-of-the-Dust

2. PRICING PROCEDURE

a. **AUTOMATED PRICING SYSTEM.** The Records Storekeeper will be designated as the pricing manager. As such, it will be the responsibility of the Records Storekeeper to continually update recipes in the automated menu item pricing program as directed by the Senior Mess Management Specialist to insure proper prices are charged and to update raw food prices so that price changes are made as required. Further, it will be the responsibility of the Records Storekeeper to provide the Galley Supervisor with these price changes so that the necessary price change settings can be accomplished on the cash register. All supervisors and cashiers will be informed of these price changes. An automated item cost calculation system has been developed which will provide pricing updates as required including the specified percentage surcharge.

b. **MANUAL PRICING SYSTEM.** In the event of malfunction or absence of automatic data equipment, a manual pricing technique for food items will be followed. First, the cost of the main ingredients (known as basic cost) will be determined. To the basic cost will be added a factor to allow for condiments, spoilage, and other miscellaneous cost. These two costs will be added together, rounded to the nearest nickel to become the sale price to be paid by diners

(1) **INGREDIENT COST.** Recipe Cost Calculation Cards (12ND NASA 4061/62C) will list all ingredients and the quantity necessary for the preparation of 100 servings. These ingredients will be priced at current fixed prices and summed together to determine total ingredient cost per 100 servings. This value will be divided by 100 and the ingredient cost per individual serving will thereby be established to three decimal points. If the fourth decimal is five or greater, the third decimal will be increased by one. If the fourth decimal is less than five, the third decimal will remain the same.

(2) **MARK-UP PERCENTAGE.** To the ingredient cost per serving will be added 10 percent of the ingredient cost (miscellaneous cost factor). This additional charge will be established to three decimal places. If the fourth decimal is five or more, the third decimal will be increased by one. If the fourth decimal is less than five, the third decimal will remain the same.

(3) **ROUNDING TO SALES PRICES.** The ingredient cost per serving added to the 10 percent additional charge will be established to two decimal places which, when rounded to the nearest nickel, becomes the selling price the diner will be charged.

(4) **HISTORICAL RECORDS.** The Recipe Cost Calculation Card will be established and filed with the pricing manager's recipe cards.

(5) **INGREDIENT PRICES.** Ingredient prices will be obtained from the current Navy Quarterly Fixed Price List and the local contract price list.

(6) **CHANGES TO THE CASH REGISTER.** Whenever sale prices change because of ingredient price changes, Register Management Report Number 6, Price Class Report, will be run by turning the manager key to the on position and punching 6, M. This report will be filed so that a history of price changes can be recreated.

c. **PRICE NOTIFICATION.** All items on the serving line will be identified with a price per serving which the diner will be charged.

d. **MARKDOWN POLICY.** A reduced selling price may be authorized by the Food Service Officer or his designated alternate on certain occasions as good judgment dictates. On occasions where a reduced price is authorized, Price Reduction Below Raw Food Cost (12ND NASA 4061/62E) must be completed and signed by the Food Service Officer.

(1) **MARKDOWN OF LEFTOVERS.** Leftover items where predicted sales at standard prices would not be expected to exhaust the inventory by the second day will result in a markdown. The reduced price on leftovers, as described herein, represents a judgment intended to avoid a larger loss should most of a certain leftover have to be discarded.

(2) **MARKDOWN OF STOCK EXCESSES.** Any excess raw food buildup due to poor sales of items containing this ingredient will result in markdowns. Offering these items on a special reduced price would be an appropriate means to preclude a larger loss by survey due to the discard of large amounts of the particular raw ingredient.

(3) CASH REGISTER OPERATIONS

(a) **INPUT OF PRICES** Prices for items will be programmed in the Master Cash Register Unit. This is done as specified in the Cash Register Operations Manual, i.e. by keying in 5, 5, M, item price, and the appropriate item key.

(b) **RECORDING SALES.** Prices are then electronically activated by the cashier depressing a key on the cash register which is coded to match the item being purchased. The process is repeated for each item the customer purchases as well as any surcharges. As a result, all items and surcharges are automatically imprinted on the customer receipt, and totaled for the correct charge. Also, purchases and surcharges are automatically entered into a memory bank. Summaries can be obtained by entering a predetermined manager's code. The requested summary will be imprinted and obtainable from any of the register units.

(4) **PRICE VERIFICATIONS.** Pricing verification will be accomplished on a continuing basis by the Food Service Officer or Senior Mess Management Specialist. Verification will include checking that the latest quarterly Navy fixed raw food prices that are recorded on the 335's are also used in the computerized item pricing program. Also, the verification process will include checking that prices listed in Cash Register Report 6, Price Class Report, agree with prices calculated by the computerized item pricing program.

204 MATERIAL/SANITATION INSPECTIONS

1 INSPECTION REQUIREMENTS. In order to insure that all spaces and equipment under the cognizance of the Food Service Officer are maintained at the highest levels of cleanliness and sanitation, as required by NAVMED, Para 5010 and in accordance with NAVSUP Pub 486, Para 1030-5f, inspections will be performed by the Food Service Officer or his designated representative in accordance with the schedule listed below.

INSPECTION SCHEDULE

FREQUENCY	AREA	INSPECTOR	REPORT SYMBOL
Daily Schedule			
0900, 1400 and 1830	Galley, Veg Prep Room, Butcher Shop, Flight Galley, Bake Shop, Cook's Chill Box	0900-Senior Mess Mgmt Special- ist Galley Supv 1400-Galley Supv. Watch Captain 1800 Watch Captain	Not Required

INSPECTION SCHEDULE (cont'd)

FREQUENCY	AREA	INSPECTOR	REPORT SYMBOL
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Daily Schedule (cont'd)

1400	Issue Room, Chill Boxes, Bulk Storerooms	Bulk Subsistence Supervisor	Not Required
0900, 1330	Entrances and grounds	0900-Senior Mess Mgmt Specialist 1330-Galley Supv.	Not Required
1400	Contractor areas of responsibility	Designated Senior Mess Mgmt Specialist Civilian Manager	5040-1
1500	Food Service Office	Petty Officer in charge	Not Required

Weekly Schedule

Wednesday 1400	Bulk Subsistence and Bldg. 153	Senior Mess Mgmt Specialist Bulk Subsistence Supv.	5040-2
Thursday 1400	Contractor area of responsibility	Food Service Officer Senior Mess Mgmt Specialist Contract Manager	5040-3
Friday 1300	Entrances and grounds	Food Service Officer Contract Manager Senior Mess Mgmt Specialist	5040-4
Friday 1330	All food preparation and Storage areas	Food Service Officer Senior Mess Mgmt Specialist	5040-5

2. DAILY INSPECTION REPORTS. Most daily inspections of facilities will be informal and will not require a written report. However, corrective action will be initiated as necessary. The daily inspection of spaces for which the contractor is responsible will require a written report to the Food Service Officer.

3. WEEKLY INSPECTION REPORTS. Weekly inspections will be formal and thorough. A copy of the discrepancy report will be furnished to the supervisor concerned for corrective action. The supervisor's copy will be returned to the Food Service Officer, annotated to show action taken to correct the problem.

4. REPORT FORMAT. Discrepancy reports will be prepared in writing where indicated by the inclusion of a "report symbol number" in the inspection schedule. The report symbol number will be inserted in the upper right hand corner of the form by the inspector. Reports will be submitted to the Food Service Officer by 0800 of the following day.

205 SECURITY OF FOOD SERVICE SPACES

1. GENERAL REGULATIONS. Security rules, in compliance with NAVSUP Pub 486, Para 1030-5 and NAVSUP Pub 486, Para 1056, apply to food service spaces:

1. Food service spaces will be kept locked when not in use.
2. Custody and responsibility for the security of spaces will rest with the person in charge of each space
3. Keys to food service space padlocks will not be taken from the dining facility.
4. All key padlocks will be the 1 1/2 inch pin tumbler type, with dead bolt, either brass or bronze. The locks will be keyed individually and furnished with two master keys for each group and two grand master keys for each set.

2. CUSTODY AND HANDLING OF KEYS

a. GRAND MASTER KEY. A grand master key to all food service spaces will be kept in the master key locker of the Supply Officer. The duplicate grand master key will be kept in the custody of the Food Service Office

b. KEYS TO FOOD SERVICE SPACES. The original key for storerooms and accountable refrigerated spaces will be drawn from the general key locker at the beginning of the day and will remain in possession of the person in charge of the space during working hours. At the end of the working day it will be placed in the general key locker in the Food Service Office. The original key to the galley, vegetable preparation room and butcher shop will be in the possession of the Watch Captain and will pass between Watch Captains as they relieve each other. The original key to office spaces will be in the possession of personnel working in those spaces.

c. **DUPLICATES OF ALL KEYS.** The Food Service Officer will have custody of one key to the duplicate key locker and the other key will be in the custody of the Supply Officer.

d. **MASTER KEYS.** One master key to each set will be in the custody of the Food Service Officer and the other in the custody of the Senior Mess Management Specialist.

3. ACCOUNTABILITY AND RIGHT OF ACCESS. As Department Head, the Supply Officer has overall accountability and right of access to all food service spaces. As Division Head, the Food Service Officer has accountability and right of access to food service spaces. The right of access of a superior does not compromise the accountability of a subordinate, nor does right of access of a subordinate compromise the accountability of a superior.

206 SALES ANALYSIS

Sales analysis in addition to providing input to menu planning, will be used to determine the best operating hours for the dining hall. Analysis of sales patterns will also be used to determine the best working shift schedules for all food service personnel. The collection of sales data will be simplified by the electronic cash registers which will automatically compile an item usage report (Management Report No. 2) and a 24-hour customer arrival report (Management Report No. 4).

CHAPTER 3: DUTIES OF FOOD SERVICE PERSONNEL

GENERAL INSTRUCTIONS FOR FOOD SERVICE PERSONNEL	300
GENERAL INSTRUCTIONS FOR SUPERVISORY PERSONNEL	301
INSTRUCTIONS TO THE SENIOR MESS MANAGEMENT SPECIALIST	302
INSTRUCTIONS TO THE GALLEY SUPERVISOR	303
INSTRUCTIONS TO THE WATCH CAPTAIN	304
INSTRUCTIONS FOR THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE VEGETABLE PREPARATION ROOM	305
INSTRUCTIONS FOR THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE MEAT CUTTING ROOM	306
INSTRUCTIONS FOR THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE SUBSISTENCE ISSUE ROOM AND REFRIGERATED STORAGE SPACES	307

CHAPTER 3

DUTIES OF FOOD SERVICE PERSONNEL

300 GENERAL INSTRUCTIONS FOR FOOD SERVICE PERSONNEL

All Food Service personnel are responsible for the cleanliness of food service sources, preparation of food items, the serving of meals to the crew, and adherence to instructions contained in NAVMED P-5010.1 and NAVSUP 421. Specific instructions will be prescribed by the Food Service Officer. The following general instructions are to be used and adhered to while performing required duties:

1. Report in a timely fashion for duties as required and for relief of watches.
2. Be properly groomed, clean and neat in appearance and have neatly trimmed fingernails. Beards will not exceed one inch in length and that will be covered by a face mask. A clean hat must be worn at all times in food preparation areas. Worn or hazardous shoes will not be worn.
3. The **no smoking** rule must be complied with at all times in food preparation areas.
4. Do not operate equipment until properly instructed in the operation of that equipment.
5. Trash and garbage will be accumulated, removed from food preparation areas, and placed in disposal receptacles on a timely basis.
6. All suggestions and orders given by the Galley or Watch Captains will be strictly adhered to.
7. All spaces will be maintained in an immaculate state at all times.
8. When preparing food items to be served to the crew, compliance with instructions on the Cook's Worksheet (12ND NASA 4061/62), the Armed Forces Recipe Service, and locally approved recipes is mandatory.
9. When serving entrees on the food serving line, a polite and friendly style is essential. Talking with persons to be served is not permitted unless it pertains to the meal. All portions served will be of a size prescribed by the Watch Captain.
10. No issues of food items will be permitted unless approved by proper authority.
11. All utensils will be properly sanitized before use, utilized only in the manner intended and properly stored between uses.
12. Knives, or sharp edged utensils will not be placed in sinks that are filled with water; after use knives or sharp-edged utensils will be properly cleaned and locked in knife lockers.
13. Instructions will be provided to civilian supervisors only by the Galley Captain or Watch Captain.
14. All Food Service Personnel, military and civilian, will be required to pay for subsistence of any kind obtained from the dining facility.
15. A copy of this manual will be available in all food service areas.

301 GENERAL INSTRUCTIONS FOR SUPERVISORY PERSONNEL

The Food Service Officer, the Civilian Manager, and the Senior Mess Specialist, in addition to their normal duties will give prime consideration to implementation of special internal controls that are required for the CASH/A La Carte test. Special attention will be given to supper and weekend meals, as these meals are often ignored by supervisory personnel under normal operations. The Food Service Officer and civilian manager will hold supervisory meetings at least once a week to inform key employees of any changes in policy and procedure that might occur. These might include changes in the menu, preparation techniques for food items, portion control and pricing, scheduling of work shifts, serving techniques. Also at the meetings, continued emphasis will be placed on the program objectives which include placing the Dining Facility on a competitive basis with other local food establishments. The new image will be promoted and Food Service personnel will be encouraged to sell the product, the Facility, and themselves to the customer.

302 INSTRUCTIONS TO THE SENIOR MESS MANAGEMENT SPECIALIST

The Senior Mess Management Specialist will be thoroughly familiar with all pertinent references and manuals on galley operation, financial processing, sanitation and the CASH/A La Carte test. The Senior Mess Management Specialist will neither have custody of, nor control over, the original records of food items received in the Enlisted Dining Facility. The Senior Mess Management Specialist will not prepare public vouchers or Enlisted Dining Facility returns. The Senior Mess Management Specialist should, however, have access to all these records for effective planning purposes. The Senior Mess Management Specialist will directly supervise the work of personnel assigned to the galley, bakery, and the dining hall. The Senior Mess Management Specialist will have the following duties:

1. In direct charge of the Enlisted Dining Facility.
2. Responsible for seeing that all equipment, fittings, and cooking utensils are kept clean, accessible and in good operating conditions.
3. In charge of all military personnel assigned to the Enlisted Dining Facility.
4. Coordinate the duties of the Master at Arms.
5. Nominate Mess Management Specialists to the Food Service Officer for assignment to Food Service watches.
6. Muster Food Service personnel at the change of the watch. Conduct an inspection of all personnel for cleanliness of person and clothing. Make a report of the muster and inspection findings to the Food Service Officer.
7. Supervise the issue and preparation of food. Train Food Service personnel to prepare food in the most economical, attractive, and appetizing manner possible, using Armed Forces Recipe Service recipes or locally approved recipes.

8. Insure that food is prepared or cooked just prior to actual usage on the serving line.
9. Insure that every precaution is taken to prevent contamination of food. Carefully inspect all food before it is prepared and served. If there is any doubt as to the quality of the food, report to the Food Service Officer and request a determination be made by the Medical Officer.
10. Insure that all Food Service Division orders and Station regulations are enforced.
11. Prepare and submit the Enlisted Dining Facility menu to the Food Service Officer.
12. Prepare and maintain applicable sections of the Cook's Worksheet (12ND NASA 4061/62) on a daily basis. (To be prepared a minimum of three days in advance and provided to the Jack-of-the-Dust to be used in selecting breakout items that must be thawed.)

303 INSTRUCTIONS TO THE GALLEY SUPERVISOR

Under the guidance of the Senior Mess Management Specialist, the Galley Supervisor is responsible to:

1. Plan and coordinate food preparation, serving, cash control and other related operations in the Galley and Food Service spaces.
2. Continually monitor the Cook's Reefer and modify the menu/breakouts to utilize all leftovers.
3. Continually monitor and inspect food preparation, service and clean-up before, during, and immediately after each meal.
4. Instruct Mess Management Specialists in means to improve procedures, prevent waste, and upgrade service.
5. Integrate the efforts of both watches, each of which is under the immediate supervision of its Watch Captain.
6. Prepare and update the recall bill and the watch board.
7. Serve as Cash Collection Supervisor for the evening meals and on weekends.
8. Safeguard governmental funds entrusted to him as the Cash Collection Supervisor, including providing change funds and closing out cashiers for each evening meal and all meals on weekends.
9. Review the menu item pricing program printout in coordination with the Jack-of-the-Dust to verify sale prices and to insure correct prices are entered in the cash registers.
10. Make all necessary entries to the cash register system to insure that all food items to be served are programmed on the keyboard and that all prices programmed in the register are correct.

304 INSTRUCTIONS TO THE WATCH CAPTAINS

The Senior Mess Management Specialist on watch, under the supervision of the Galley Supervisor and the Leading Mess Management Specialist is designated the Watch Captain and is in charge of food preparation and service during the period of the watch. The Watch Captain is directly responsible for all food service personnel assigned to the watch. The Watch Captain is responsible to:

1. Properly operate the galley and all equipment used.
2. Insure all provisions, supplies, and equipment in his custody are maintained in a neat, orderly and proper condition.
3. Insure that no food stores delivered for use in the preparation of Enlisted Dining Facility meals are diverted to other uses. No free issues will be made without the specific approval of the Food Service Officer.
4. Strictly adhere to the menu and insure that the preparation, cooking and serving of food is effected in a timely and appetizing manner.
5. Prepare the Watch Captain's Requisition (12ND NASA 4061/62B) in conjunction with the Jack-of-the-Dust using the quantities and instructions contained on the Cook's Worksheet. Progressive cooking instructions will be followed as outlined by the Senior Mess Management Specialist on the Cook's Worksheet.
6. Insure personnel do not smoke or use tobacco in any form in spaces utilized in the preparation of food.
7. Permit no unauthorized personnel to enter the galley spaces.
8. Insure personal clothing is not washed or hung to dry in the galley, and that no personal gear is stowed therein.
9. Train assigned personnel on care and operation of all cooking equipment, prescribed safety precautions, and sanitary requirements.
10. Use extreme caution to prevent the issue of spoiled or contaminated foods. Refer all doubtful food to the Senior Mess Management Specialist, Food Service Officer or Duty Supply Officer, and request a Medical determination before using such food in the preparation of meals.
11. Assign specific Mess Management Specialists on the Cook's Worksheet to prepare specific items on the menu.
12. Insure personnel on watch are scrupulously clean and neat with hair trimmed and combed, that fingernails are short and clean, and that prescribed uniforms are worn.
13. Maintain a complete set of the Armed Forces Recipe Service in the galley.
14. Monitor food preparation to ensure that recipes and instructions listed on the Cook's Worksheet are strictly followed.
15. Insure that cream-filled pastries, items containing mayonnaise, and hash are prepared immediately before serving.

16. Promptly and properly dispose of all waste and scraps.
17. Insure the galley is in proper condition prior to turning over to the relieving watch.
18. Personally supervise the serving line during the serving of meals, ensure that food is being served properly in correct portions, and that the items on the menu are consistently available.
19. Complete all forms prescribed.
20. Serve as the Cash Collection Supervisor in the absence of the Galley Supervisor.
21. Insure that steel wool is not used in any Enlisted Dining Facility space.

305 INSTRUCTIONS TO THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE VEGETABLE PREPARATION ROOM

The Mess Management Specialist in charge will be under the supervision of the Watch Captain and will require compliance with instructions by all personnel assigned to the Vegetable Preparation Room. The Mess Management Specialist in charge of the Vegetable Preparation will have the following duties:

1. Maintain security of the Vegetable Preparation Room at all times. Provisions must be properly handled, safeguarded, and expended.
2. The Vegetable Preparation Room and equipment installed therein must be maintained in a neat, orderly and operating condition. The salad cases on the serving line and the holding boxes are also part of the Vegetable Preparation Room equipment.
3. Prepare vegetables required for items on the menu in accordance with the Cook's Worksheet. Consult the Watch Captain as necessary to insert proper preparation.
4. Allow no unauthorized personnel to enter the Vegetable Preparation Room.
5. Permit no smoking or use of tobacco in any form in the Vegetable Preparation Room.
6. Maintain a proper state of cleanliness at all times; waste and scraps must be promptly disposed; measures for prevention of waste must be emphasized.
7. Insure that personnel thoroughly understand the operation of equipment before operating such equipment and that all applicable safety precautions are strictly followed.
8. Maintain prepared salads, fruits and juices at proper temperature on the serving line and in holding cabinets.
9. Keep salad cases on the serving line filled with items listed on the Cook's Worksheet until the end of each meal.
10. Sanitize all moving parts of the equipment after using as outlined in NAVMED P5010.1.
11. Report any operational difficulty or breakdown immediately to the Watch captain.
12. Exercise extreme caution to insure that only vegetables of good quality are prepared for issue to the galley and that doubtful vegetables are referred to the Watch Captain before being issued.

13. Ensure that steel wool is not used in the vegetable Preparation Room.
14. Maintain all prescribed records and render all required reports.
15. Control keys as outlined in Para 1056 of NAVSUP 486.
16. Insure that all assigned personnel read this instruction.
17. Post copies of all applicable safety precautions, sanitary instructions and operating instructions.

**306 INSTRUCTIONS TO THE MESS MANAGEMENT SPECIALIST IN CHARGE
OF THE CHARGE OF THE MEAT CUTTING ROOM**

The Mess Management Specialist assigned to this area will be under the supervision of the Watch Captain and will require compliance with instructions by all personnel assigned to the Meat Cutting Room. The Mess Management Specialist in charge of the Meat Cutting Room will be responsible to:

1. Maintain proper security at all times.
2. Thaw all meat products listed on the Cook's Worksheet at 36° F. or under alternative refrigerated conditions. (Thawing meats at room temperature results in an excessive loss of liquids thereby raising the cost of food, drying of the outside of the meat, losing flavor, and rendering the cooked product tough. When cooks receive meat in a frozen or partially frozen state, they usually do not have time to extend the normal cooking times in order to compensate; therefore, they must use improper preparation and cooking techniques in order to have the item prepared in time to serve.) Seventy-two hours is normally the required time to thaw meat items under refrigeration. Meat items will be taken out of packing boxes, unwrapped and covered for thawing. As an example of scheduling requirements to be met by Meat Cutting Room personnel, meat items to be cooked on Wednesday should be placed in thaw boxes early Sunday.
3. Prohibit smoking in the Meat Cutting Room.
4. Permit no unauthorized persons in these spaces.
5. Maintain spaces in a scrupulously clean condition. No trash, bone meal, and blood drippings will be allowed to accumulate in these spaces.
6. Indoctrinate all personnel in the operation of all equipment, both electrically operated and hand cutting utensils.
7. Properly sanitize all equipment as outlined in NAVMED 5010.1.
8. Insure that electrically driven equipment is not washed with water.
9. Report equipment failures to the Senior Mess Management Specialist as soon as they occur.
10. Prohibit the use of steel wool in the Meat Cutting Room.
11. Control keys in accordance with Para 1056 of NAVSUP 486.
12. Insure that after use, all knives are properly cleaned, sharpened and locked in the knife locker.
13. Indoctrinate all personnel working in the Meat Cutting Room on this instruction and all safety and sanitary requirements.
14. Post safety precautions, sanitation and operating instructions on or near all equipment.

307 INSTRUCTIONS TO THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE SUBSISTENCE ISSUE ROOM AND REFRIGERATED STORAGE SPACES

1. JACK-OF-THE-DUST DUTIES: The Mess Management Specialist in charge of the Subsistence Issue Room will be referred to as the Jack-of-the-Dust and will, under the supervision of the Senior Mess Management Specialist, have the following duties:

1. Personal accountability for provisions in the storeroom.
2. Insure that provisions are properly stowed, safeguarded, and expended.
3. Maintain the Issue Room in a neat, orderly manner. The stowage must be arranged to provide maximum safety, to provide for the oldest stock being used first, and to facilitate the taking of inventories.
4. Maintain proper security at all times. Business is transacted at the door when practicable. Unauthorized personnel will not be permitted to enter the Issue Room. Personnel will not smoke or use tobacco in any form in the Issue Room.
5. Maintain a file of Dining Facility Stock Record Cards (12ND NASA 4061/62A).
6. Assist the Watch Captain in the preparation of the Watch Captains's Requisition (12ND NASA 4061/62B).
7. Properly document all issues and receipts in a timely and accurate fashion.
8. Prepare and submit a Subsistence Report (NAVSUP 1059) summarizing all daily issues of food items.
9. Report evidence of rodents or insects immediately to the Senior Mess Management Specialist and the Food Service Officer.
10. Allow no personal gear to be stowed in the Issue Room.
11. Ensure that the Issue Room is clean and ready for inspection at all times.
12. Control keys in accordance with Para 1056 of NAVSUP 486.
13. Indoctrinate all personnel assigned in this instruction.
14. Post copies of all applicable safety precautions and operating instructions.

2. OPERATE REFRIGERATED SPACES. The Jack-of-the-Dust will observe the following rules for operation of refrigerated spaces:

1. Open cold storage boxes only for issue or receipt.
2. Conduct a thorough inspection of refrigerated spaces to ascertain the condition of all provisions each time the space is entered.
3. Maintain a temperature log and record temperature readings at 0800 and 1600 daily. The log is to be submitted to the Food Service Officer by 0900 on each working day for initialing; the Food Service Officer or Duty Supply Officer is to be notified immediately when the temperature exceeds the following:

Freeze Boxes	Over 0 degrees F.
Dairy Boxes	Over 35 degrees F. or under 32 degrees F.
Chill Boxes	Over 35 degrees F. or under 32 degrees F.

4. Stow provisions in a manner which permits circulation of air, taking inventories, and issuing the oldest stock first.

CHAPTER 4: INTERNAL CONTROLS FOR CASH/A LA CARTE

FOOD ORDERING	400
STOREROOM OPERATION	401
THE COOK'S WORKSHEET	402
THE WATCH CAPTAIN'S REQUISITION	403
SELLING PRICE REDUCTIONS	404
DISCARDS OF PREPARED FOOD	405
RATION CREDIT DETERMINATION	406
CASH REGISTER PROCEDURES	407
CASH CONTROL	408
CASH BALANCE SHEET	409
MEAL CASH BALANCE AND CUSTOMER ANALYSIS FORM	410
OPERATING WITHOUT CONSOLIDATED CASH REGISTERS	411
DAILY ACTIVITY REPORT	412
DINING HALL CONTROL SUMMARY	413
RATION CONTROL RECORD	414

400 FOOD ORDERING

1. **SOURCE OF FOOD STOCK.** All food will be ordered from DPSC or commercial contracts, as appropriate.

2. **REVIEW OF QUANTITIES ORDERED.** The Senior Mess Management Specialist will review usage data and analyze orders prepared by the Storekeeper to determine if projected changes in future menu patterns will alter the historical usage and change the order requirement.

3. **ADJUSTING FOR CHANGES IN EXPECTED USAGE.** Monthly, the Senior Mess Management Specialist will review high and low limits and adjust those for which past demand is not indicative of expected usage in future menus.

4. **USE OF NON-STANDARD ITEMS.** Items may be ordered which are not in the Federal Stock Catalog 8900 series, however, the Federal Stock Catalog must be utilized to the fullest extent possible. A listing of items to be procured on the commercial market will be provided to the Navy Food Service Systems Office with verification (Initial test plans include procuring the following non-standard items locally: sirloin steak, ground sirloin, veal patties, breaded Italian veal steaks.)

5. **USE OF EXCESS ITEMS.** The Senior Mess Management Specialist will develop menus which utilize on hand stocks above high limits.

401 STOREROOM OPERATIONS

1. **CONTROL OF ACCESS TO STOREROOM.** The Food Service Officer will designate, in writing, the persons responsible for security of subsistence supplies. This designation of personnel to be Jack-of-the-Dust will be by name. Access to the storage facilities will be limited to those persons designated as Jack-of-the-Dust. Issues from the storage facilities will be made only to the Watch Captain on duty.

2. **STOREROOM MANNING.** Storerooms should be manned seven days a week from the time breakfast preparation commences until the evening meal is complete. Issues for midnight meals will only be made while the Jack-of-the-Dust is on duty. To accomplish this type of coverage, one person on each Watch should be designated a Jack-of-the-Dust.

3. **THE DINING FACILITY STOCK RECORD.** The Jack-of-the-Dust will maintain the Dining Facility Stock Record (12ND NASA 4061/62A). Stock Record cards are normally kept in a file box in a place accessible only to the Jack-of-the-Dust. This Stock Record Card is prepared as follows:

1. Item. Enter the description contained in the nomenclature column of the NAVSUP 1059, or the receipt document for non-standard items not normally carried in stock.

2. Code. Enter the standard code from the NAVSUP 1059.
3. FSC. Enter the NSN from the 8900 class catalog or the receipt document, as applicable.
4. Limits. High and low limits are established by the Senior Mess Management Specialist based on usage. These high and low limits can be obtained from the applicable Subsistence Ledger (NAVSUP 335).
5. Unit. Enter the unit contained in the unit column of the NAVSUP 1059 or receipt document, as applicable.
6. Unit Price. Enter the price listed in the official Navy Fixed Price List in force for the period.
7. Last Receipt Price. Enter the price recorded in the receipt document.
8. Column A. Enter date of each entry.
9. Column B. Enter total amount of each item received. Obtain this information from the receipt document, as documented by a physical count, immediately upon receipt of stocks.
10. Column C. After each meal, enter the net amount issued to the Watch Captain as recorded in Column F of the Watch Captain's Requisition (12ND NASA 4061/62B). Issues to the Flight Galley or other authorized issues will also be entered in this column.
11. Column D. Generally left blank since issues are recorded in Column C as net of returns.
12. Column E. Enter balance on hand (Column B, minus Column C, plus Column D).
13. Make all entries on the Dining Facility Stock Record 12ND NASA 4061/62A (Trial) in ink or other permanent means. Erasures are not allowed. If corrections are necessary, line out the erroneous entry with a clean non-obliterating line, enter the correct value, and initial the entry.

4. STOCK TURN REQUIREMENTS. All subsistence must be used on a first-in/first-out basis. Packing and date codes should be checked to determine the age of all items.

5. PHYSICAL INVENTORY REQUIREMENTS. A physical inventory is needed to determine the actual value of subsistence on hand, the accuracy of records, and the effectiveness of internal controls. NAVSUP 1059's provide a record of a physical count on the day the inventory is taken, which is at the close of business on the last day of each fiscal quarter. The inventory includes all food items under the cognizance of the Jack-of-the-Dust. This excludes all food items held in the galley or on the mess deck.

a. RECONCILIATION OF THE PHYSICAL INVENTORY. The results of the physical inventory are to be reconciled with the Subsistence Ledger (NAVSUP 335). If there are differences, recount and reconciliation are necessary. When the physical count is the correct one, entries on the Dining Facility Stock Record must be made to reflect the correct count. Such entries will be labelled "Physical Inventory" and "Date". Closing the Subsistence Ledger and posting/reporting the inventory will be in accordance with NAVSUP Pub 436.

b. INVENTORY PRICING. Items are priced on the closing inventory at the last receipt price. Proper inventory procedures require that the closing inventory of one period must be the same as the opening inventory of the following period.

6. BREAKOUT AND RETURN OF PERISHABLE STORES. The Jack-of-the-Dust will accept back into the storeroom all uncooked perishable items and unopened packages of any food item which was issued to cooks and not used. These items will be recorded in Column E of the Watch Captain's Requisition (12ND NASA 4061/62B).

a. REPETITIVE USAGE OF BULK FROZEN ITEMS. All frozen items issued for a given meal (french fries, onion rings, chicken, etc.) will be placed in a freezer physically located next to the entrance to the storeroom. After the meal, unused items will be recorded as returned to the Jack-of-the-Dust on the Watch Captain's Requisition; however, these items will be physically relocated to the main freezer area only if the next meal does not call for the same item. If the item is to be used at the next meal, it will be reissued on the Watch Captain's Requisition. Bread items, which will be stored on a shelf unit next to the ready issue freezer, will be treated in a similar fashion.

b. ISSUE OF MILK. Breakouts of milk by the Jack-of-the-Dust in the morning will be in sufficient quantity to fill the refrigerated storage areas beneath the milk dispensers on the Beverage Line. In order to decrease the probability of spoilage, after lunch all milk previously broken out and stored on the Beverage Line will be utilized before further breakouts from the reefers are made. Furthermore, after the lunch meal, breakouts will be made only to replenish the dispensers, and not to replenish the *Beverage Line.

c. SPEED LINE FROZEN SELECTIONS. Low volume items used on the Speed Line Menu including sirloin steak, ham steak, and ground sirloin patties will be pre-expended in quantities of two dozen each at the initiation of the test. These items will be individually wrapped and maintained in a locked freezer on the Speed Line. The key will be provided to the Speed Line cook each day by the Galley Captain. Usage will be recorded by issuing replacement items on a daily basis. Care will be taken to insure the most recent breakouts are stored in the most inaccessible spaces for purposes of proper stock rotation.

d. MENU CHANGES TO USE PERISHABLE RETURNS. Each morning the Jack-of-the-Dust will review the perishable subsistence items listed in Column D of the Watch Captain's Requisition for the previous day with the Senior Mess Management Specialist. The purpose of this review will be to insure that all such returned items which are perishable are placed on the menu for immediate use.

*Refrigerated storage areas on the Beverage Line.

7. RECORDING WEIGHT OF ISSUE. All bulk subsistence received by, issued from, or returned to the storage facility will be weighed if the unit of issue is pounds and the markings on the package do not properly identify the exact weight.

402 THE COOK'S WORKSHEET (12ND NASA 4061/62)

The Cook's Worksheet is the single most important document relating to quality food preparation and portion control in the dining hall. The purpose of the worksheet is to identify all required preparation of food for a specific meal. The responsible individual, appropriate recipe, preparation time, batch cooking techniques and portion control are all planned and documented on the worksheet. The worksheet is prepared initially by the Senior Mess Management Specialist no later than three days prior to the applicable menu and updated immediately as changes in the menu occur. This form is also used for stock control of prepared items.

1. PREPARING THE COOK'S WORKSHEET. The following guidelines will be used in filling out the worksheet intended for use in menu preparation:

1. Column A – Menu Item. List all food items to be served at each meal. Enter all items to be served which are leftover and stored in the Cook's reefer from the previous meal/day in red. Specifically identify each item listed, e.g., "chilled orange juice", not "chilled juice". (Prepared by Senior Mess Management Specialist.)
2. Column B – Individual Responsible. Enter the name of the person responsible for preparing the listed menu item. (Prepared by Watch Captain and posted in advance of meal preparation.)
3. Column C – Recipe. Enter the appropriate recipe number of the recipe to be used. In the remarks section (Column M), also indicate any variations considered necessary. (Prepared by Senior Mess Management Specialist.)
4. Column D – Preparation Cooking Time. Enter the exact time the assigned cook is to start preparing the item. For example, if hot biscuits are on the menu, indicate the time to start mixing the ingredients. (Prepared by the Senior Mess Management Specialist.)
5. Column E – Batch Size. Utilizing data from Cash Register Reports 2 (Item Usage) and 4 (24-Hour Report), enter the appropriate batch size to be prepared in anticipation of projected customer demand. (Prepared by the Senior Mess Management Specialist.)
6. Column F – Batch Preparation Time. Obtained from the recipe card. This is the necessary elapsed time to prepare a single batch of the item. (Entered by the Senior Mess Management Specialist.)
7. Column G – Portion Size. Enter the size of the portion to be served the individual customer. For example, if the item is pork chops, give the number of chops; if peas, indicate the ounces; if milk, indicate liquid measures. The portion size must be cross-checked with the portion size in the Menu Item Pricing Program Listing to insure they are equal. (Entered by the Senior Mess Management Specialist.)

8. Column H – Anticipated Servings. Indicate the forecasted number of servings to be prepared and sold. Anticipated servings are developed from the Cash Register Report 2 (Item Usage), as adjusted for other factors. Servings to be satisfied using leftovers from previous meals (now stored in the Cook's reefer) will be entered in red. For example, if 10 servings are anticipated of which three are to be satisfied by leftovers, a red three and a black seven will be entered in this column. (Entered by the Senior Mess Management Specialist.)
9. Column I – Servings Issued. Indicate the actual number of servings prepared in the kitchen or on the grill in the course of the meal. There should be a one for one correspondence between servings issued and breakouts, as indicated in the "Used" column (Column F) of the Watch Captain's Requisition (12ND NASA 4061/62B). If all or some of the total number of servings issued are leftovers from previous meals and were stored in the Cook's reefer (not by the Jack-of-the-Dust) indicate the number of such leftover servings issued for this meal in red. (Entered by the Watch Captain.)
10. Column J – Total Servings Sold. Indicate the actual number of servings sold at that meal. This number is provided by the Cash Register Report #2 (Item Usage) when the machine is cleared at the end of the meal. (Entered by the Watch Captain.)
11. Column K – Servings Returned. Indicate in red the actual number of servings of food returned to the Cook's reefer for future issuance as leftovers. This entry is obtained by weighing all unused prepared food at the end of the meal. (Entry by the Watch Captain.) In determining the planned usage of leftovers, the Galley Supervisor will indicate, by parenthesis, items returned which are scheduled for usage as part of another recipe rather than to be issued in its original form as a leftover. For example, one serving of bacon from a breakfast to be incorporated into beans for lunch would be entered as "(1)". (Adjustment by the Galley Supervisor.)
12. Column L – Servings Over or Short. Enter the difference in servings between Servings Issued (Column I) and Servings Sold (Column J) that are not accounted for in Servings Returned (Column K). Positive numbers indicate overissues, negative numbers underissues. This entry is made by the Watch Captain but needs to be fully analyzed by the Senior Mess Management Specialist and the Food Service Officer to determine the adequacy of portion control techniques.
13. Column M – Remarks. Make any pertinent comments, such as variations in recipe preparation, reasons for shortages usage of leftovers, and determination that items should be discarded. The initial determination on the utilization of leftovers and the discard of food items will be made and recorded by the Senior Mess Management Specialist or the Galley Captain on duty at the close of the meal. In situations where portions leftover are to be discarded, this discard will be documented on Discards of Prepared Foods (12ND NASA 4061/62M).
14. Space at bottom of the form will be used to provide special instructions to cooks (change of preparation method, use of leftovers, etc.) and for continuation of Column M. (Prepared by the Senior Mess Management Specialist.)

2. APPROVAL AND REVIEW OF THE COOK'S WORKSHEET. The Senior Mess Management Specialist signs the form before it is posted for use by cooks. The Watch Captain signs the form after each meal. The Food Service Officer signs this form after the accounting day ends at which time the results are reviewed with the Senior Mess Management Specialist.

3. CONTROL OF LEFTOVERS. In order to insure the use of leftover items stored in the Cook's reefer, a Cook's Worksheet (12ND NASA 4061/62) will be posted on the door of the reefer for inventory control of leftovers. This procedure will be followed for all open boxes, cans, jars or bags of raw food items, all of which will be stored in the Cook's reefer regardless of perishability. As items are stored in the refrigerator, Column A will be filled out with the leftover menu item name and Column H with the number of servings stored. The Galley Captain or Senior Mess Management Specialist will then enter in Column B the name of the individual responsible for seeing that the item is served and the date and meal it is to be served in the Remarks Column M. The individual responsible for the issue of the leftovers will enter the number of servings issued in Column I when the leftovers are taken from the refrigerator. In the normal course of events, the entry in Column I should be the same as the entry in Column M. If for some reason the leftovers cannot be used as planned, then an asterisk will be placed on Column J and an explanation of the reason for discarding this item will be entered in the space under "Special Instructions to Cooks and Additional Remarks". If items are discarded, authority for this action will be obtained from the Watch Captain and the loss will be recorded on Discards of Prepared Food (12ND NASA 4061/62M).

403 THE WATCH CAPTAIN'S REQUISITION (12ND NASA 4061/62B)

1. RESPONSIBILITY FOR PREPARATION. The Watch Captain's Requisition will be completed jointly by the Jack-of-the-Dust and the Watch Captain. The form will be completed in duplicate with the original provided to the Jack-of-the-Dust and the Watch Captain maintaining the duplicate. The basic responsibility for making entries to this form will be split; the Jack-of-the-Dust will make all initial entries for perishables and the Watch Captain all initial entries for non-perishables. The original requisition will be adjusted as necessary to accommodate menu changes resulting from unused perishable foods having been returned to the Jack-of-the-Dust or stored in the Cook's reefer from previous meals.

2. INITIAL ENTRIES. Using the appropriate menu card and projected usage data indicated on the Cook's Worksheet (12ND NASA 4061/62), the Jack-of-the-Dust and the Watch Captain will make the following entries:

1. Column B - Item. List specific items required.
2. Column C - Unit. Enter size/weight/or unit of issue of item required.
3. Column D - Amount Drawn. Enter total amount required.

3. ISSUING AND RECORDING PERISHABLE STOCKS. The Senior Mess Management Specialist is responsible for providing the Cook's Worksheet (12ND NASA 4061/62) to the Jack-of-the-Dust three days prior to the meal. Using this worksheet and the appropriate recipe cards, the Jack-of-the-Dust will break out all necessary meats to thaw properly in chill spaces and simultaneously will fill out the Watch Captain's Requisition to reflect these breakouts. Each evening, the Jack-of-the-Dust will breakout all perishables for the next day's breakfast and insure the Watch Captain's Requisition reflects these breakouts. Items for use the next morning will be placed on mobile shelf units so they can be wheeled out of the reefers to the galley immediately the next morning. In addition, the Jack-of-the-Dust will set up all perishables for the Speed Line for a full day and make the associated entries to the Watch Captain's Requisition for that line.

4. ISSUING AND RECORDING NON-PERISHABLE STOCKS. The Watch Captain will take the Watch Captain's Requisition containing the entries for perishables made by the Jack-of-the-Dust for the meal to be served, and will make the appropriate entries for non-perishable items.

5. ADJUSTING FOR LEFTOVERS. The Watch Captain is responsible to see that necessary adjustments and corresponding entries are made to the perishable item usage to reflect the Galley Supervisor's directed use of leftovers.

6. SUBSTITUTES AND QUANTITY CHANGES. The Jack-of-the-Dust will insure that the required items are available in the quantity desired. If a substitute must be issued, the Jack-of-the-Dust and the Watch Captain will concur on the changes, line out the applicable entries, and enter the data on the substitute item issued on a new line. Changes in quantity issued will be lined out and initialed in Column D by the Jack-of-the-Dust and the Watch Captain.

7. RETURNS TO THE STOREROOM. Uncooked perishable items and all unopened packages of non-perishable items should be returned to the Jack-of-the-Dust at the close of each meal. Such items are listed in Column "E" (Returned) of the Watch Captain's Requisition by the Jack-of-the-Dust when returned items are received. All such returns will be weighed or measured in accordance with the applicable unit of issue in making this entry.

8. CERTIFICATION OF THE BREAKOUT. At the end of each meal, the Watch Captain and the Jack-of-the-Dust will both sign the original of the Watch Captain's Requisition, having jointly initialed all line outs and agreed on issued and returned quantities. A diagonal line from one side of the Requisition to the other side will be made after the last entry to prevent any further entries.

9. CLOSING AND TOTALING THE BREAKOUT. The Jack-of-the-Dust will process the completed Watch Captain's Requisition in the following manner:

1. Compute the quantity used for each item by subtracting Column E from Column D and entering the net usage in Column F. This amount will also be posted into Column C (Issued) of the Dining Facility Stock Record Card (12ND NASA 4061/62A).
2. Enter the fixed price from the current Navy Fixed Price List in Column G and calculate the value of the usage by multiplying Column F by Column G. The value of the usage goes in Column H.
3. Total the usage for the applicable meal on an adding machine tape and enter the total on the Watch Captain's Requisition. Attach the applicable tape to the Watch Captain's Requisition.
4. Using the Dining Facility Stock Record Card (12ND NASA 4061/62A), tally the total issues for the day for each item and record the sum of all issues for the current day by line item on a Subsistence Report (NAVSUP Form 1059). Multiply the fixed price printed on the Subsistence Report (NAVSUP 1059) by the item quantity used to obtain the extended value. Prepare an adding machine tape of all extended values for the day to obtain in a total value of issues on the Subsistence Report. Compare the total value of issues posted to the Subsistence Report (NAVSUP 1059) with the sum of the total values of the separate Watch Captain's Requisitions for the same day. Reconcile any and all differences by cross-checking the Watch Captain's Requisition, the Stock Record Cards and the Subsistence Report (NAVSUP 1059). Sign the adding machine tape, attach to the applicable Watch Captain's Requisitions and provide to the Records Storekeeper.
5. Enter the ending inventory after the final issue of each line item experiencing an issue that day in the margins of the NAVSUP 1059. This data is secured from the Balance column of the Dining Hall Stock Record Card (12ND NASA 4061/62A) for the item.

10. POSTING DAILY ISSUES. The Records Storekeeper will perform the following tasks using the breakout data provided by the Jack-of-the-Dust:

1. Indicate the date of receipt of the Watch Captain's Requisition in the Serial Number Control Log. Investigate the status of any missing serialized forms. Report any missing forms which cannot be located to the Food Service Officer.
2. Recheck the price extensions and addition on the Watch Captain's Requisitions and the Subsistence Requisition (NAVSUP 1059) provided by the Jack-of-the-Dust.
3. Post the total value of daily issues to Line 21 (Net Storeroom Issues) of the Daily Activity Report (12ND NASA 4061/62R).

4. Post all issues to the Subsistence Ledger (NAVSUP 335) in accordance with procedures specified in NAVSUP Pub 486.
5. After all posting entries for the previous day have been accomplished, compare the ending inventory on the Subsistence Ledger (NAVSUP 335) with that recorded on the margin of the Subsistence Report (NAVSUP 1059). Reconcile all differences, adjusting as necessary for the timing of recording transfers and receipts.
6. Provide the Watch Captain's Requisition to the Food Service Officer for his accountability file complete with the applicable Subsistence Report (NAVSUP 1059) and the appended adding machine tapes.

404 SELLING PRICE REDUCTIONS

1. AUTHORIZING AND RECORDING PRICE REDUCTIONS. A reduced selling price may be authorized on certain occasions. When a reduced price is authorized, Price Reduction Below Raw Food Cost (12ND NASA 4061/62E) must be completed, extended, and signed by the Galley Supervisor or the Watch Captain. The form will be totalled daily and signed by the Senior Mess Management Specialist indicating concurrence. The Food Service Officer will also sign indicating completion of review of the circumstances. The daily total will be posted to Column (19) of the Dining Hall Control Summary (12ND NASA 4061/62Q) by the Records Storekeeper.

2. REDUCING PRICE OF LEFTOVERS. The Watch Captain or Galley Supervisor is authorized to markdown leftover items where normal sales at standard prices would not be expected to eliminate the inventory on the second day. For instance, a poorly selling casserole should be marked down on the second day to insure sale. The policy of reducing prices on leftovers, as described herein, would be based on a judgment to avoid a larger loss should most of a certain leftover have to be discarded. The sanitation standards of NAVMED P5010.1 will always be utilized in determining whether leftovers can be used.

3. REDUCING PRICES OF EXCESSES. Any excess raw food buildup of poor selling items or items nearing shelf life constraints may be offered on a special reduced price in order to preclude a large loss by survey. Such items will be issued using standard procedures at fixed prices and then marked down on the Price Reduction Record. The Senior Mess Management Specialist will work closely with the Jack-of-the-Dust to insure that food items are used at marked down prices rather than surveyed. In this case, the Senior Mess Management Specialist will sign the Price Reduction Record (12ND NASA 4061/62E) as the authorizing manager for price reduction on that item.

405 DISCARDS OF PREPARED FOOD (12ND NASA 4061/62M)

1. CONTROLLING DISCARDS. This form, which is to be prepared by the Watch Captain, is used to document the discarding of prepared food items. A new tally form is to be prepared each month. The accumulated total value of discarded food should not exceed 2% of the total food issued for the month as recorded in Column 9 of Dining Hall Control Summary (12ND NASA 4061/62P).

2. RECORDING DISCARDS. The Discards of Prepared Food form (12ND NASA 4061/62M) is prepared as follows:

1. Period: Enter the first and last date of the month to which this form pertains.
2. Date: Enter the date the item is discarded.
3. Recipe Number: Enter the recipe number of the item discarded.
4. Item Name: Enter the recipe title of the item discarded.
5. Number of Portions: Enter the number of portions discarded.
6. Selling Price: Enter the cash register selling price per portion of the item discarded.
7. Total Value: Multiply the number of portions by the selling price and enter in this column. A subtotal will be computed each day and the value entered in line 17 of the Dining Hall Control Summary (12ND NASA 4061/62Q).
8. Reason for Loss: Brief explanation of reason for discard.
9. Food Service Officer signature.
10. Total Money Value: The sum of the entries in the Total Value Column should not exceed 2% of total food issues for the month (Column 9, 12ND NASA 4061/62P).

406 RATION CREDIT DETERMINATION

The procedure for controlling and recording issues of rations-in-kind will be in accordance with Part E, Chapter 2 of NAVSUP Pub 486.

1. CONTROL OF THE MEAL SIGNATURE RECORD. The Records Storekeeper will maintain serialized control of the Meal Signature Record (NAVSUP Form 1291).

2. LIMITATION ON RATIONS-IN-KIND PATRONS. Only personnel with authorized meal cards issued subsequent to 29 February 1976 or with orders endorsed to indicate messing available at government expense for the appropriate date may obtain subsistence in kind through the head count procedure.

3. COUNT FOR SECOND PORTIONS. Rations-in-kind personnel will only be permitted to sign the Meal Signature Record once for each meal period. If the diner passes through the line a second time, the cash register receipt from the first trip through the line will provide the basis for adjusting the meal cost and payments.

4. SUMMARIZING SIGNATURE ISSUES. At the close of each meal, the Records Storekeeper will summarize all Meal Signature Records and post the data to the Recapitulation of Meal Record (NAVSUP 1292). No cash sales or contract personnel entries will be made on this form. (All contract personnel and cooks will pay for their meals at the cash register.)

5. AUDIT FOR DUAL SIGNATURES. The Food Service Officer will audit the Meal Signature Record after each meal to determine if any diner is signing twice. All such entries will be deleted and the summary total adjusted accordingly. Consistent dual signatures by the same person or by personnel from the same command will be reported to the appropriate Commanding Officer.

6. DAILY RECAPITULATION OF MEAL RECORDS. The Records Storekeeper will record all substantiated issues to personnel not passing through the line on the Recapitulation of Meal Record (NAVSUP 1292) in accordance with NAVSUP Pub 486. The storekeeper will complete the ration credit and the total credit portion of the Recapitulation of Meal Record. The grand total of signatures for each meal, before the Food Service Officer reviews for duplicate signatures, will be entered on line 2a of the Meal Cash Balance and Customer Analysis (12ND NASA 4061/62N). The number of duplicates discovered by the Food Service Officer and the adjusted entry will be entered on line 2b and 2c of Form 4061/62N respectively by the Food Service Officer. The signature head count as adjusted for duplicate signatures, and recorded as the "Grand Total" on the Recapitulation of Meal Record (NAVSUP 1292), will also be recorded in Columns (A) - (C) of the Ration Control Record (12ND NASA 4061/62S - Incremental Record) for the appropriate date. The total credit for the day from the Recapitulation of Meal Record (Form 1292) will be entered in Column (D) of the Ration Control Record (12ND NASA 4061/62S), after the Food Service Officer has adjusted the entries for duplicate signatures. The Records Storekeeper signature will appear in the third signature block of the Recapitulation of Meal Record.

7. MONTHLY RECAPITULATION OF MEAL RECORD. The Monthly Recapitulation of Meal Record (NAVSUP 1292) will be prepared as a summary of the daily Meal Signature Record (NAVSUP Form 1291). The sections dealing with cash sales and contractor personnel will be left blank. This result will be checked with cumulative totals on the Ration Control Record (12ND NASA 4061/62S - Cumulative). The monthly total of columns (A) - (C) of the Ration Control Record (12ND NASA 4061/62S - Cumulative) should equal the Grand Total for all meals on the monthly Recapitulation of Meal Record (NAVSUP 1292). Ration credits will be computed in accordance with Para 2114 of NAVSUP 486.

407 CASH REGISTER PROCEDURES

1. **GENERAL REGISTER ENTRIES.** The general entries to the cash register include the following:

1. **Order Entry.** Sales are recorded by depressing the appropriate SHIFT and ITEM keys. If more than one of an item is ordered, either depress the proper ITEM key the required number of times or depress the appropriate number key to enter the quantity of the item and then depress the proper ITEM key. When the entire order has been entered, depress the **TOTAL 1** key. The printer will print sub-total, and total. The cashier is responsible for returning the correct change to the customer.
2. **Cancel.** If the wrong quantity has been entered on the number keys or the wrong item has been entered, the cancel (**CAN**) key can be used to cancel the information from the order entry provided no intervening entry has been made. Corrections can be made in this manner only to the last individual item and only prior to totalling.
3. **Subtract.** If an error has been made in any item regardless of location (that is, it can be an entry other than the last entry), it can be eliminated by depressing the **SUBTRACT** key followed by the **ITEM** to be subtracted.
4. **Void.** To void the entire receipt depress the **VOID** key prior to totalling and the entire order will be wiped out. The paper will feed out automatically for easy tear off.
5. **Delete.** To delete an entire order after totalling, turn the manager's key to the **ON** position. Enter the order to be deleted exactly as originally entered and depress the delete (**DEL**) key anytime prior to totalling. The paper will feed automatically for easy tear off. This will be done by the cashier only in the presence of the Cash Control Supervisor after the meal is over when the machine is being cleared.

2. **SPECIFIC CUSTOMER HANDLING PROCEDURES.**

a. **INDIVIDUAL CUSTOMER PROCESSING.** Every person on the line will be rung through the cash register as a separate customer. In no instance will a single receipt be prepared for more than one customer.

b. **COMRATS CUSTOMERS.** The most frequent customer the cashier will process is the COMRATS customer. The general procedure will be to ring up each food item on the tray by punching the appropriate shift and item keys, hitting a former status key (according to the CASH/A La Carte Experiment ID Card color) and then hitting the **TOTAL 1** key. Each COMRATS customer will be given a color coded card identifying his former status: that is, whether the customer was on (1) RIK or (2) COMRATS single or (3) COMRATS married status prior to the CASH/A La Carte test, (4) whether the customer

arrived on board after the test began, or (5) was assigned to the USS ORISKANY (CV-34). Five separate former status keys will be available for each of these five designations. A sixth key will be available for Marines. It will be the responsibility of the cashier to determine the customer's former status based on the color of the card the customer presents. To simplify this procedure, the keys on the register will be color coded to match the identification card colors.

c. OFFICERS AND CIVILIANS.

(1) **Adults Not on Per Diem.** For officers and civilians not on per diem, the procedure will be as follows:

1. Ring up all items on the tray.
2. Hit the alternate tax (ALT TAX) key.
3. Punch GUEST key.
4. Depress TOTAL 1 key.

This procedure will add the appropriate surcharge to the meal cost and also increment the number of guests (i.e., any customer other than enlisted COMRATS and RIK) for the meal.

(2) **Adults on Per Diem.** For officers and civilians on per diem, punch the SURCHARGE B key for breakfast or SURCHARGE D key for lunch and supper instead of hitting the alternate tax (ALT TAX) key. This will add an appropriate fixed surcharge to the meal cost.

(3) **Children.** If the civilian customer is a child, the SURCH CHILD key will be depressed instead of the alternate tax (ALT TAX) key. This will add the reduced surcharge for children to the bill.

(4) **Enlisted Guests Without Separate Trays.** Should an enlisted man choose to bring through a number of dependents or guests on a single tray, the following procedure will hold:

1. For each adult dependent or guest, depress the GUEST key, the ALT TAX key, and the SUBTOTAL key.
2. For each child, depress the GUEST key, the SURCH CHILD key, and the SUBTOTAL key.
3. Ring up all food items on the tray or trays.
4. Hit a customer former status identification key (color coded).
5. Depress the TOTAL 1 key.

This procedure will provide a single bill for payment while still enabling the register to keep accurate count of the total number of customers.

d. **RIK CUSTOMERS.** For the occasional RIK customer the procedure must be altered to account for his meal allowance. The customer will identify the RIK status by presenting to the cashier the serialized meal ticket received from the Master at Arms when the Meal Signature Record was signed. This procedure pertains to all enlisted personnel (including Reserves) with RIK status. After ringing in the item selections, the cashier will hit the **COUPON – BREAKFAST** or **COUPON – DINNER** key (depending on the meal purchased), and then depress the **TOTAL 1** key.

(1) **Collection of Meal Tickets.** The cashier will be responsible for collecting the customer meal ticket obtained when the diner signs the Meal Signature Record. These meal tickets will be tallied, the total number of tickets recorded on the top of the Cash Balance Sheet (12ND NASA 4061/62H), and the tickets provided to the Cash Collection Supervisor at the end of each meal. The total tickets should equal the RIK meals served and the number of signatures on the Meal Signature Record maintained by the Master at Arms.

(2) **Second Helpings.** If an RIK customer comes through the line a second time, the customer must present the original meal receipt to the cashier to indicate whether any entitlement is still due. If the sum of the original purchase was less than the meal allowance, the cashier will take the receipt, mark it for deletion and then have the customer sign it. The cashier will then repunch the purchases recorded on the receipt plus the new purchases, and follow standard procedures from this point on (i.e., depress a **COUPON** key and then **TOTAL 1**).

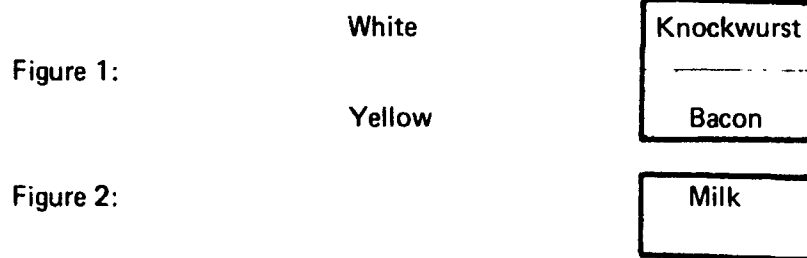
e. **SALES OF SECONDS.** By use of an **OVERRIDE** key, all second helpings can be tabulated separately, and not increase the customer count. It will be the responsibility of the cashier to determine whether a customer is taking a second helping.

(1) **Procedures for Customers Paying in Cash.** The following procedures apply to COMRATS customers, officers, all civilians, and RIK customers who have exceeded the allowed value for that meal.

1. Ring up all items.
2. Hit the **2ND** key.
3. Hit the **OVERRIDE** key.
4. Press **TOTAL 1**.

(2) **Procedures for RIK Customers with a Balance Due on the Meal Allowance.** See the procedures previously explained in subparagraph 407.2d(2) above.

(3) **Instructions for the Galley Supervisor on Programming the Registers.** It will be necessary that the Galley Supervisor check the register keyboard before each meal to insure that all items to be served have been programmed into the machine and that all items are appropriately priced. In the event that any item abbreviations or prices need to be added or changed, the procedures listed below will hold. It will be noted that each register key can accommodate two items by using the shift key capability, one item on the white shift and one item on the yellow shift. In the event that this is done, it is indicated on the keyboard by dividing the square tab into two parts and coloring the lower half yellow. Then the item on the white shift is printed on the upper (white) half of the keyboard tab and the item on the yellow shift on the lower (yellow) half of the tab (see Figure 1). It is also possible to program the same item on both shifts. In this case, the keyboard tab is left white and the item name is printed only once on the tab (see Figure 2). This is appropriate for those items that are served on both speed and main lines such as salads, deserts, beverages, etc. This minimizes the number of shifts the cashier must perform and reduces the changes for error. The item abbreviation and the item pricing procedure, however, must be carried out twice; once to enter the item on the white shift and once to enter it on the yellow shift. For example, if milk at \$.10 per serving was to be programmed in the cash register, it would be appropriate that it be available on both the white and yellow shifts. Therefore, an all white tab would be prepared as shown in Figure 2 and the programming sequence for enter [^]MILK _{^^} at \$.10 would be repeated twice. (See the example listed in the procedures below.)



(4) Item Abbreviation Change Procedure.

1. From the attached chart, choose the letters and blanks listed on the left of Columns 1 through 7 to form the desired abbreviation.
2. Add the sum of the associated number for each letter and blank chosen. This total is the numerical equivalent of the abbreviation.

Example 1:

Knockwurst abbreviated NOCKWST

Col 1:	N =	96
Col 2:	O =	7
Col 3:	C =	4,096
Col 4:	K =	1,280
Col 5:	W =	12,582,912
Col 6:	S =	655,360
Col 7:	T =	2,952,790,016
Total:		<hr/> 2,966,033,767

Example 2:

Bacon abbreviated BACEN^{^^}

Col 1:	B =	0
Col 2:	A =	0
Col 3:	C =	4,096
Col 4:	E =	512
Col 5:	N =	6,291,456
Col 6:	Blank=	983,040
Col 7:	Blank=	4,026,531,840
Total:		<hr/> 4,033,810,944

3. Once the numerical equivalent of the abbreviation has been determined, the procedure to enter the data is:

Insert manager's key into the keyhole and turn 1/4 turn to the right.

Punch the shift key for the shift color (white or yellow) to which the item is to be entered.

Punch 5, 6, M.

Depress the numerical equivalent of the abbreviation to be entered.

Punch the item key to be used to ring up the sale of that item.

Example 1:

To enter NOCKWST on the white shift, punch:

White shift, 5, 6, M, 2, 9, 6, 6, 0, 3, 3, 7, 6, 7, item key.

Example 2:

To enter BACEN_{AA} on the yellow shift, punch:

Yellow shift, 5, 6, M, 4, 0, 3, 3, 8, 1, 0, 9, 4, 4, item key.

If the same item is to be entered on both white and yellow shifts, Steps b through e must be repeated for both shifts.

Example 3:

To enter ^AMILK_{MM} on both the white and yellow shifts, punch:

White shift, 5, 6, M, 4, 0, 3, 2, 7, 8, 0, 0, 2, 2, item key, yellow shift, 5, 6, M, 4, 0, 3, 2, 7, 8, 0, 0, 2, 2, item key.

(5) Item Price Change Procedure.

1. Insert manager's key into the keyhole and turn 1/4 turn to the right.
2. Punch the shift key for the shift color (white or yellow) on which the price is to be entered.
3. Depress 5, 5, M.
4. Punch the price using a four digit entry.
For example: \$.10 = 0010
 \$ 1.20 = 0120
 \$.05 = 0005
 \$10.35 = 1035
5. Depress the appropriate item key to which this price is to be associated.

Example 1:

To enter a \$.25 price for Knockwurst on the white shift, the sequence is:

White shift, 5, 5, M, 0, 0, 2, 5, Knockwurst key.

6. If an item appears on both white and yellow shifts, its associated price must also be entered on both shifts; therefore, Steps 2 through 5 must be repeated for each shift.

Example 2:

To enter the \$.10 price for milk onto both white and yellow shifts, the sequence is:

White shift, 5, 5, M, 0, 0, 1, 0, milk key, yellow shift, 5, 5, M, 0, 0, 1, 0, milk key.

408 CASH CONTROL

1. MONITORING FOR THE CHANGE FUND. The change fund necessary to operate the CASH/A La Carte system will be established by Commanding Officer's letter of authority. This fund will be a continuous revolving fund, of a constant amount and having approximately the same denominational breakdown.

2. ESTABLISHING CASH COLLECTION PERSONNEL. The Cash Collection Supervisor (CCS) appointed by the Food Service Officer will initially draw the fund from disbursing and will be accountable for the fund. The Cash Collection Supervisor will then transfer a suitable change fund on a Receipt/Transfer of Cash Record (12MD NASA 4061/62G) to four bonded individuals designated in writing as the Cash Collection Agents (CCA) by the Food Service Officer in accordance with the NAVCOMPT Manual.

3. DUTIES OF THE CASH COLLECTION SUPERVISOR. The Cash Collection Supervisor will act as the primary collection agent and will collect all proceeds from sales on normal work days for the breakfast and lunch meals. The Cash Collection Supervisor will also prepare and issue the necessary change funds to the cashiers for the supper meals on normal work days. Change funds for breakfast, collections from the supper meals and change funds and collections from all weekend/holiday meals will be accomplished by the Cash Collection Agents. The Galley Supervisor will act as primary Cash Collection Agent with the Watch Captain as designated alternate. There will be a CCS/CCA on duty at all times during Enlisted Dining Facility operating hours.

4. SAFEKEEPING COLLECTIONS FROM SALES. The Cash Balance Sheet (12ND NASA 4061/62H) will be used to issue change funds to cashiers and as a deposit slip by the CCS/CCA to collect and turn in the sales receipts after each meal. A safe will be available containing a night deposit slot so that deposits can be made in the absence of the Cash Collection Supervisor. Likewise, separate secured storage space will be available in a safe so that each CCA can store the change fund for which the CCA is accountable.

5. RECORDING DEPOSIT OF SALES RECEIPTS.

a. DOCUMENTATION FOR CASH SALES RECEIPTS. The Cash Balance Sheet (12ND NASA 4061/62H) will be the primary record of cash accountability from sales and will indicate all cash transactions between the cashiers and the CCA/CCS.

(1) Collections by the Cash Collection Supervisor. When the CCS makes the collection, the following items will be obtained with the cash:

1. Cash Register Management Reports 2, 5 and 91.
2. Any signed deleted receipts.
3. The NAVSUP Form 1291 Signature Records.

4. Meal tickets collected.
5. The cash receipts.
6. The signed Cash Balance Sheet.

(2) Collections by the Cash Collection Agent. When the CCA makes the collection, the same supporting documentation will be obtained. The cash will be placed in a locked bag in the presence of the cashier. All documentation collected will be placed in the locked bag, also. The CCA will then place the locked bag in the night deposit safe. Until this is accomplished, the CCA will be accompanied by the register cashier.

(3) Checking the Night Depository. The CCS, in the presence of a witness, will remove the locked bag(s) from the night depository, open the bag(s) and verify the Cash Balance Sheet "ending cash" recorded for each cash register for each meal. The CCS will then sign, in the presence of the witness, at the bottom of Column D of the form acknowledging the accuracy of the Cash Balance Sheet. Any disparity will be reported to the Food Service Officer immediately.

(4) Depositing Sales Receipts. The CCS will deposit proceeds from sales every normal working day in accordance with Navy Regulations. The procedures for deposit and reconciliation of all cash will be in accordance with NAVSUP Pub. 486.

(5) CCA's Receipts for Cash. The Receipt/Transfer Cash Record will be prepared in duplicate so that the person relinquishing the cash can retain a copy of the record.

(6) Preparing the Receipt/Transfer Cash Record. The Receipt/Transfer Cash Record (12ND NASA 4061/62G) will be prepared as follows:

1. Line 1 – Total Fund. The person relinquishing the cash will enter the total amount of funds to be transferred.
2. Line 2–18. The person relinquishing cash enters the number and total value by denomination of funds being transferred.
3. Line 19 – Total. The person relinquishing cash enters the sum of all entries in the Amount Column. Note Line 19 must equal Line 1.
4. Acknowledgement and Signature Block. The recipient of the funds will enter the amount of money received, and sign the "Received By" signature block. The witness will sign on the same line. The relinquisher will sign the "Received From" signature block and the witness will sign on the same line.
5. In the event that there is a disagreement as to the total amount between the relinquisher and the recipient, it should be reported immediately to the Food Service Officer for resolution.

409 THE CASH BALANCE SHEET (12ND NASA 4061/62H)

1. ISSUING CHANGE FUNDS TO CASHIERS. The CCS/CCA on duty will disperse change funds to cashiers. Issuing change funds will be accomplished in the following manner:

1. The CCS/CCA prepares the beginning change fund section (Column A) of the Cash Balance Sheet, indicating the total amount and showing denominational breakdown. A separate form is prepared for each cashier.
2. The CCS/CCA issues the change fund to cashiers.
3. Each cashier counts the currency and coin and signs the receipt line in Column A for the beginning change fund. The CCS/CCA will witness and initial the receipt of cash.
4. If additional change should be required at any time during the operating period, the CCS/CCA will issue the required change in return for equal currency.

2. BALANCING AND AUDITING CASHIERS' FUNDS.

a. RESPONSIBILITY FOR BALANCING. The person responsible for balancing the cash register as each cashier completes the meal shift will be the CCS/CCA. The CCS/CCA will be the individual controlling the manager's keys to the cash registers. Before clearing the machine and extracting the management reports, the CCS/CCA will witness the cashier entering all deleted receipts in accordance with specified procedures. After all deletions have been completed, the CCS/CCA will run the management reports by turning the cash register manager's key to the ON position and entering 2, M then 5, M. This will provide Report 5 (Special Revenue Report) and Report 2 (Item Usage Report).

b. DETAILED BALANCING PROCEDURES. The detailed balancing procedures are as follows:

1. CCS and cashier will count ending cash and enter on Line 1 (Column B) of Cash Balance Sheet (12ND NASA 4061/62H). Ending cash will be listed by denomination on Lines 2-18.
2. Total Lines 2 through 18 of the Cash Balance Sheet (12ND NASA 4061/62H) and enter total on Line 19 (Column B). The cashier will sign and the CCS/CCA will initial Block 20 (Column B).
3. Column C will be left blank.

c. PRELIMINARY AUDIT PROCEDURES. The preliminary auditing procedure is as follows (to be completed by CCS/CCA):

1. Enter net register sales (STA TLS) from register report 5 onto Line 8 (Column D).

2. Enter ending cash (Column D Line 13) from Line 19 Column B.
3. Enter change fund (Column D Line 14) from Line 19 Column A.
4. Subtract Line 14 Column D, from Line 13 Column D and enter as Cash Taken In (Line 15 Column D).
5. Enter the difference between this subtotal (Line 15 Column D) and net register sales (Line 8 Column D) in either Line 16 or 17, Column D, according to the nature of the difference. That is, if Line 8 is greater than Line 15, enter the difference in Line 17. If Line 15 is greater than Line 8, enter the difference in Line 16. A record will be kept of these overages and shortages by cashier in accordance with NAVSUP Pub. 486.
6. Enter the sum or difference of Line 15 Column D and either Line 16 or 17 Column D (whichever has an entry) into Line 18 Column D.
7. The CCS/CCA will then sign, receipting for the amount of cash taken in, as entered on Line 15 Column C. The CCS will also record the number of RIK tickets collected by the cashier. The number of tickets will be the bottom item in Column D of the Cash Balance Sheet.
8. Excessive shortages or overages will be investigated by the Food Service Officer.

d. **CLOSING THE CASH REGISTER.** The CCS/CCA will then enter 9, 1, M on the cash register which will then print management report 91 and clear the machine for the next meal. The keyboard will be secured by entering 3, 2, M for the "master" unit and 3, 4, M for the "Slave" unit.

e. **TRANSMITTAL OF CLOSING MEAL REPORTS.** The Cash Balance Sheets, a copy of the Receipt/Transfer Cash Record, Cash Register Reports 2, 5 and 91, the signed deleted register receipts, all meal tickets, and all Meal Signature Records (NAVSUP 1291) form a complete paperwork package for the meal and are provided to the CCS.

410 MEAL CASH BALANCE AND CUSTOMER ANALYSIS FORM (12ND NASA 4061/62N)

The purpose of this form is to account for the cash handled by the cashier and to record the associated headcounts. The form is designed for dual usage: (1) To record separately the experience at each cash register and (2) To summarize the individual register data and to supplement the individual register data with consolidated data.

1. **ASSEMBLING REQUIRED DATA.** The signed deleted register receipts, all meal tickets, all Meal Signature Records, the Cash Balance Sheets, and cash register Station Clear Report (No. 91) will be provided for each meal by the CCS to the Records Storekeeper. The Records Storekeeper will prepare the Meal Cash Balance and Customer Analysis form, with the exception of Lines 2b, 2c, 4 and 5 which will be completed by the Food Service Officer. All data necessary to complete this form can be found in the second section of the Station Clear Report 91, the Special Revenue Report section. This section is identical to Report 5 and the two may be used interchangeably.

2. COMPONENTS OF THE REPORT. It should be noted that this form is divided into three sections:

1. Customer Headcount Analysis of Meal.
2. Surcharge Analysis.
3. Meal Summary of Cash Sales.

Each section is in turn divided into two sections:

1. For each individual cash register.
2. A consolidated total for the whole system.

3. ITEMS POSTED FOR EACH CASH REGISTER.

a. CUSTOMER HEADCOUNT ANALYSIS OF MEAL SECTION. The only item in the Customer Head Count Analysis of Meal to be completed for each register in the appropriate columns is Item 1, Total Meals Served. This entry is obtained from the entry for (STA CNT) for the applicable register from the Special Revenue Report Section of the report 91.

b. SURCHARGE ANALYSIS SECTION. No entries are made for individual cash registers in the Surcharge Analysis section.

c. MEAL SUMMARY OF CASH SALES SECTION. The following items in the Meal Summary of Cash Sales are to be completed as noted for each register in the appropriate column:

1. Line 8 – Net Register Sales. Record the total sales for each register (STA TLS) from the Special Revenue Report section of Report 91. Check that this amount agrees with the entry in Line 8 Column D of the Cash Balance Sheet for this register.
2. Line 13 – Ending Cash. Record the total from Line 19 Column B of the Cash Balance Sheet for the register. Check that this amount agrees with Line 13 Column D of the Cash Balance Sheet.
3. Line 14 – Change Fund. Record the total from Line 19 Column A of the Cash Balance Sheet for the register. Check that this amount agrees with the entry on Line 14 Column D of the Cash Balance Sheet.
4. Line 15 – Cash Taken In. Subtract Change Fund (Line 14) from the Ending Cash (Line 13). Check that this agrees with the entry on Line 15 Column D of the Cash Balance Sheet.
5. Line 16 – Cash Over. If Cash Taken In exceeds Net Register Sales, record the difference (Line 17 – Line 8). Check that this agrees with the entry on Line 16 Column D of the Cash Balance Sheet.

6. Line 17 – Cash Short. If Net Register Sales exceeds Cash Taken In, record the difference (Line 8 – Line 15). Check that this agrees with the entry on Line 17 Column D of the Cash Balance Sheet.
7. Line 18 – Recorded Cash Income. If Cash Taken In exceeds Net Register Sales, subtract Cash Over from Net Register Sales and record the difference. If Net Register Sales exceeds Cash Taken In, add Cash Short to Cash Taken In and record the sum. Check that this agrees with the entry on Line 18 Column D of the Cash Balance Sheet.

4. ITEMS POSTED FOR THE CONSOLIDATED CASH REGISTER SYSTEM.

a. **CUSTOMER HEAD COUNT ANALYSIS OF MEAL SECTION.** Each item in the Total column of Customer Head Count Analysis of Meal is to be completed as follows:

1. Line 1 – Total Meals Served. Record consolidated total meals for all registers by entering the entry for (TRANS) from the Special Revenue Report section of Report 91. The consolidated total should equal the sum of the totals posted previously for individual registers.
2. Line 2a – Total Signatures. Record the entry in the Grand Total block for the appropriate meal from the Recapitulation of Meal Record (NAVSUP Form 1292) before the Food Service Officer reviews the 1291's for duplicate signatures. (The total of RIK tickets collected as noted in Column D of the Cash Balance Sheet for the meal should equal the sum of the CPN CNT entries for the two registers from the Special Revenue Report section of Report 91. This total is also noted in this section under COOP B or COOP D depending on the meal that was served. This value, in turn, should equal the entry on Line 2a of the Total column.)
3. Line 2b – Duplicate Signatures. This entry is to be made by the Food Service Officer after reviewing the Meal Signature Records (NAVSUP Form 1291).
4. Line 2c – RIK Total. To be completed by Food Service Officer. Subtract Duplicate Signatures (2b) from Total Signatures (2c) and enter the difference.
5. Line 3 – Guests. Record this figure (GEST) from Special Revenue Report section of Report 91.
6. Line 4 – COMRATS Meals. To be completed by Food Service Officer. Subtract the RIK Total (Line 2c) and the number of Guests (Line 3) from the Total Meals Served (Line 1).
7. Line 5 – Total Cash Meals. To be completed by Food Service Officer. Subtract RIK Total (Line 2c) from Total Meals Served (Line 1).
8. Line 6 – Second Servings. Record this figure, SECND, from the Special Revenue Report section of Report 91.

b. SURCHARGE ANALYSIS SECTION. Each item in the Total column of the Surcharge Analysis Section will be completed as follows:

1. Line 7a – Surcharge Regular. Record this figure (88 ALT T) from the Special Revenue Report section of Report 91.
2. Line 7b – Surcharge Children. Record this figure (S CHC) from the Special Revenue Report section of Report 91.
3. Line 7c – Per Diem Surcharge B. Record this figure (S CH B) from the Special Revenue Report section of Report 91.
4. Line 7d – Per Diem Surcharge D. Record this figure (S CH D) from the Special Revenue Report section of Report 91.

c. MEAL SUMMARY OF CASH SALES SECTION. Each item in the Total column of the Meal Summary of Cash Sales section is to be completed as follows.

1. Line 8 – Net Register Sales. Record the total consolidated sales for all registers (GRSS) from the Special Revenue Report section of Report 91.
2. Line 9 – Total Surcharges. Record the sum of all surcharge entries, Lines 7a through 7d. This total can be also found as the entry for 4 CLASS on the Special Revenue Report section of Report 91.
3. Line 10 – Cash Food Sales. Subtract Total Surcharges (Line 9) from Net Register Sales (Line 8) and record the difference.
4. Line 11a – RIK Sales – Discounts. Record this figure (DIS AMT), if printed, from the Special Revenue Report section of Report 91.
5. Line 11b – RIK Sales – Coupon. Record this figure (6 CLASS) from Special Revenue Report section of Report 91. This figure also equals the sum of the CPN AMT entries for the two cash registers also recorded on the Special Revenue Report section of Report 91.
6. Line 11c – Total RIK Credit Sales. Add Lines 11a and 11b and record the sum.
7. Line 12 – Total Food Sales. Add Lines 10 and 11c and record the sum.
8. Line 13 – Ending Cash. Add the figures from register columns Line 13 on the left side of the form and record the sum.
9. Line 14 – Change Fund. Add the figures from register columns Line 14 on the left side of the form and record the sum.
10. Line 15 – Cash Taken In. Subtract Line 14 from Line 13 and record the difference. Check that the sum of all entries for register columns Line 15 on the left side of the form equals this entry.
11. Line 16 – Cash Over. If Cash Taken In (Line 15) exceeds Net Register Sales (Line 8) enter the difference (Line 15 – Line 8) here.
12. Line 17 – Cash Short. If Cash Taken In (Line 15) is less than Net Register Sales (Line 8) enter the difference (Line 8 – Line 15) here.
13. Line 18 – Recorded Cash Income. If a cash over situation exists, then subtract Cash Over (Line 16) from Cash Taken In (Line 15) and record the difference here. If a cash short situation exists, then add Cash Short (Line 17) to Cash Taken In (Line 15) and record the sum here.

5. VERIFICATION OF THE MEAL CASH BALANCE/CUSTOMER ANALYSIS FORM. The Meal Cash Balance/Customer Analysis (12ND NASA 4061/62N) will be signed by the Records Storekeeper and the Food Service Officer when each finishes assigned entries and reviews.

411 OPERATING WITHOUT CONSOLIDATED CASH REGISTERS

In the interim period, the standard system with one "master" and one "slave" unit, NAS Alameda will be using a two "master" cash register system. As a result, a single consolidated report for both registers cannot be run. Therefore, a special temporary Meal Cash Balance and Customer Analysis Form (12ND NASA 4061/62NT) will be used until the standard system is delivered. The difference between this form and the standard form is that all entries normally made for the consolidated total must be made for each register in this interim period. The purpose of this form (12ND NASA 4061/62NT) is still to account for the cash handled by the cashier and to note the associated head counts. Again, the form is designed for dual usage: (1) To record separately the experience at each cash register and (2) To consolidate the individual register data into a grand total.

1. ASSEMBLING REQUIRED DATA. The cash register reports, the signed deleted register receipts, any meal tickets, all Meal Signature Records, and the Cash Balance Sheets will be provided to the Records Storekeeper by the CCS. The Records Storekeeper will prepare the Meal Cash Balance and Customer Analysis form, with the exception of Lines 2b, 2c, 4 and 5 in the Total column which will be filled in by the Food Service Officer.

2. COMPONENTS OF THE REPORT. It should be noted that this form is also divided into three sections:

1. Customer Head Count Analysis of Meal.
2. Surcharge Analysis.
3. Meal Summary of Cash Sales.

Each section is again in turn divided into two sections:

1. For each individual cash register.
2. A consolidated total for the whole system.

3. ITEMS POSTED FOR EACH CASH REGISTER.

a. CUSTOMER HEAD COUNT ANALYSIS OF MEAL SECTION. Each item in the Customer Head Count Analysis of Meal is to be completed for each register in the appropriate column as follows:

1. Line 1 – Total Meals Served. Record the sum of the entries for **STA CNT** and **DIS CNT** from the Revenue Report section of the Report 91 for that register.

2. Line 2a – Total Signatures. Record the sum of the entries for **DIS CNT** in the Revenue Report section and **COOP CNT** in the Item Usage Report section of the Report 91 for that register.
3. Line 2b – Duplicate Signatures. Leave blank.
4. Line 2c – RIK Total. Record the sum of the entries for **DIS CNT** in the Revenue Report section and **COOP CNT** in the Item Usage Report section of the Report 91 for that register.
5. Line 3 – Guests. Record this figure (**GEST**) from the Item Usage Report section of the Report 91 for that register.
6. Line 4 – COMRATS Meals. Subtract the RIK Total (Line 2c) and the number of Guests (Line 3) from the Total Meals Served (Line 1).
7. Line 5 – Total Cash Meals. Subtract RIK Total (Line 2c) from Total Meals Served (Line 1).
8. Line 6 – Second Servings. Record this figure (**SECND**) from the Item Usage Report section of the Report 91 for that register.

b. SURCHARGE ANALYSIS SECTION. Each item in the Surcharge Analysis section will be completed as follows:

1. Line 7a – Surcharge Regular. Record this figure (**9 CLS CNT**) from the Class Report section of the Report 91 for that register.
2. Line 7b – Surcharge Children. Record this figure (**S CHC**) from the Item Usage Report section of the Report 91 for that register.
3. Line 7c – Per Diem Surcharge B. Record this figure (**S CH B**) from the Item Usage Report section of the Report 91 for that register.
4. Line 7d – Per Diem Surcharge D. Record this figure (**S CH D**) from the Item Usage Report section of the Report 91 for that register.

c. MEAL SUMMARY OF CASH SALES SECTION. Each item in the Meal Summary of Cash Sales is to be completed as follows:

1. Line 8 – Net Register Sales. Record the sales (**STATLS**) from the Revenue Report section of the Report 91 for that register. Check that this amount agrees with the entry in Line 8 Column D of the Cash Balance Sheet for that register.
2. Line 9 – Total Surcharges. Record the sum of all surcharge entries, Line 7a through 7d.
3. Line 10 – Cash Food Sales. Subtract Total Surcharges (Line 9) from Net Register Sales (Line 8) and record the difference.
4. Line 11a – RIK Sales – Discounts. Record this figure (**DIS AMT**) from the Revenue Report section of the Report 91 for that register.
5. Line 11b – RIK Sales – Coupon. Record this figure (**COOP B or D**) from the Item Usage Report section of Report 91 for that register.
6. Line 11c – Total RIK Credit Sales. Add Lines 11a and 11b and record the sum.

7. Line 12 – Total Food Sales. Add Lines 10 and 11c and record the sum.
8. Line 13 – Ending Cash. Record the total from Line 19 of Column B of the Cash Balance Sheet for that register. Check that this amount with Line 13 Column D of the Cash Balance Sheet.
9. Line 14 – Change Fund. Record the total from Line 19 Column A of the Cash Balance Sheet for that register. Check that this amount agrees with the entry on Line 14 Column D of the Cash Balance Sheet.
10. Line 15 – Cash Taken In. Subtract Change Fund (Line 14) from the Ending Cash (Line 13). Check that this agrees with the entry on Line 15 Column D of the Cash Balance Sheet.
11. Line 16 – Cash Over. If Cash Taken In exceeds Net Register Sales, record the difference (Line 15 – Line 8). Check that this agrees with the entry on Line 16 Column D of the Cash Balance Sheet.
12. Line 17 – Cash Short. If Net Register Sales exceeds Cash Taken In, record the difference (Line 8 – Line 15). Check that this agrees with the entry on Line 17 Column D of the Cash Balance Sheet.
13. Line 18 – Recorded Cash Income. If Cash Taken In exceeds Net Register Sales, subtract Cash Over from Net Register Sales and record the difference. If Net Register Sales exceeds Cash Taken In, add Cash Short to Cash Taken In and record the sum. Check that this agrees with the entry on Line 18 Column D of the Cash Balance Sheet.

4. ITEMS POSTED FOR THE CONSOLIDATED SYSTEM

a. **CUSTOMER HEAD COUNT ANALYSIS OF MEAL SECTION.** Each item in the Total column of the Customer Head Count Analysis of Meal is to be completed as follows:

1. Line 1 – Total Meals Served. Add the figures from the register columns Line 1 on the left side of the form and record the sum.
2. Line 2a – Total Signatures. Record the entry in the Grand Total block for the appropriate meal from the Recapitulation of Meal Record (NAVSUP Form 1292) before the Food Service Officer reviews the 1291's duplicate signatures.
3. Line 2b – Duplicate Signatures. This entry is to be made by the Food Service Officer after reviewing the Meal Signature Records (NAVSUP Form 1291).
4. Line 2c – RIK Total. To be completed by the Food Service Officer. Subtract Duplicate Signatures (Line 2b) from Total Signatures (Line 2a) and enter the difference.
5. Line 3 – Guests. Add the figures from the register columns Line 3 on the left side of the form and record the sum.
6. Line 4 – COMRATS Meals. To be completed by the Food Service Officer. Subtract the RIK Total (Line 2c) and the number of Guests (Line 3) from Total Meals Served (Line 1).

7. Line 5 – Total Cash Meals. To be completed by the Food Service Officer. Subtract RIK Total (Line 2c) from Total Meals Served (Line 1).
8. Line 6 – 15¢ Sales and Seconds. Add the figures from the register columns Line 6 on the left side of the form and record the sum.

b. **SURCHARGE ANALYSIS SECTION.** Each item in the Surcharge Analysis Section, Total Column, will be completed by adding the figures from the register columns line entries on the left side of the form and recording the sum.

c. **MEAL SUMMARY OF CASH SALES SECTION.** Each item in the Meal Summary of Cash Sales will be completed by adding the figures from the register columns line entries on the left side of the form and recording the sum.

5. VERIFICATION OF THE MEAL CASH BALANCE/CUSTOMER ANALYSIS FORM. The Meal Cash Balance/Customer Analysis Form (12ND NASA 4061/62NT) will be signed by the Records Storekeeper and the Food Service Officer when each finishes the assigned entries and reviews.

412 DAILY ACTIVITY REPORT (12ND NASA 4061/62R (TRIAL))

1. REPORT CONTENT. This report will be prepared each day by the Records Storekeeper with the intent of providing a summary of the previous day to the Food Service Officer. The form is divided into three sections:

1. Customer Head Count Analysis.
2. Accounting Analysis.
3. Operations Analysis.

The first two sections are further subdivided into five column subsections, one for each meal and the last for a total. The primary inputs to this form are the Meal Cash Balance/Customer Analysis Form (12ND NASA 4061/62N), the Recapitulation of Meal Record (NAVSUP Form 1292) and the Subsistence Report (NAVSUP Form 1059), all for the previous day.

2. REPORT PREPARATION. The Daily Activity Report is to be prepared as follows:

1. With the exception of Line 2d, all entries to the Breakfast, Lunch, Supper and Midrats columns for Lines 1 through 18 on this form are made from the corresponding entries on lines with the same number in the Total column of the Breakfast, Lunch, Supper and Midrats copies of the Meal Cash Balance/Customer Analysis Form (12ND NASA 4061/62N). After the entries by meal have been made in the first four columns for Lines 1 – 18 (except 2d as noted), the entries on each line are added together and the sum is recorded in the total column.

2. The entries for "Weighted Rations Served at Government Expense", Line 2d, are taken from the Ration Credit block of the NAVSUP Form 1292 for the day in question after the Food Service Officer has adjusted the figures for duplicate signatures.
3. Line 19 – Average Sales Per Meal. By column, divide the entry for Total Food Sales (Line 12) by the entry for Total Meals Served (Line 1) and enter the quotient here. That is, divide the breakfast column entry on Line 12 by the breakfast column entry on Line 1 and enter the answer in the breakfast column of Line 19, and so on. The entry in the Total column will be the sum of the entries in the first four columns.
4. Line 20 – Total Food Sales. Recopy the entry in the Total column of Line 12 onto this line.
5. Line 21 – Net Storeroom Issues. Enter the net of storeroom issues to the galley after returns from the daily Subsistence Report (NAVSUP 1059) for the date in question.
6. Line 22 – Daily Monetary Gain/Loss. Subtract Net Storeroom Issues (Line 21) from Total Food Sales (Line 20) and enter the difference here. If the difference is negative, that is, if Net Storeroom Issues (Line 21) are greater than Total Food Sales (Line 20) enter the difference in red ink.
7. Line 23 – Cash Food Sales. Copy the entry in the total column of Line 10 on this line.
8. Line 24 – Ration Credit. Multiply the entry in the total column of Weighted Rations Served at Government Expense (Line 2d) by the BDFAs supplied by NFSSO and enter the product here.
9. Line 25 – Total Income Allowances. Add Total Cash Sales (Line 23) to Ration Credits (Line 24) and enter the sum.
10. Line 26 – Overissue/Underissue. Subtract Net Storeroom Issues (Line 21) from Total Income Allowances (Line 25) and record the difference.
11. Line 27 – Gains or Losses Due to Signatures. Subtract the entry in the Total Column of Total RIK Credit Sales (Line 11c) from Ration Credits (Line 24) and record the difference. If Total RIK Credit Sales (Line 11c) are greater than Ration Credits (Line 24) make the entry in red.

413 DINING HALL CONTROL SUMMARY

1. **DATA SOURCES.** The cumulative operating statistics for the Enlisted Dining Facility will be posted incrementally from the Daily Activity Report (12ND NASA 4061/62R) and the Cash Balance/Customer Analysis Report (12ND NASA 4061/62N). This data will provide the basic management information for the Food Service Officer and the Supply Officer on both financial performance and customer participation.

2. MANAGEMENT REVIEW OF THE REPORT. The Dining Hall Control Summary (12ND NASA 4061/62P and Q) will be completed daily by the Records Storekeeper and reviewed by the Food Service Officer and the Senior Mess Management Specialist. The fact that the Food Service Officer and the Senior Mess Management Specialist have reviewed the operating statistics will be evidenced by the initials of those persons in Columns B and C of Section I of the form. The Supply Officer will review the Dining Hall Control Summary no less frequently than weekly and initial in Column A of Section I of the report at that time.

3. REPORT CONTENT. The form is composed of Section I dealing with the cumulative Financial Status and Section II providing an Operating Analysis. Section II identifies the cumulative impact of gains from RIK personnel not fully utilizing their authorization and the daily loss in income from RIK personnel invalidly signing the meal record twice. It also identifies losses due to price reduction or discards of prepared foods and the cumulative record of cash register overages and underages. Lastly, the daily total food sales (as opposed to allowances earned) is compared to issues for a daily monetary gain/loss which differs from the over/under issue calculation by the amount of unearned allowances for RIK personnel.

4. PREPARATION OF THE REPORT

a. DATA OBTAINED DIRECTLY FROM SOURCE REPORTS. Data in the Dining Hall Control Summary obtained directly from the Daily Management Reports follows:

Item	Column	Source: Daily Activity Report
RIK Monetary Allowance	2	Line 24
Cash Food Sales	4	Line 23
Total Income Allowance	6	Line 25
Net Storeroom Issues	8	Line 21
RIK Food Sales	13	Line 11c (Total Column)
Cash Overages	21	Line 16 (Total Column)
Cash Underages	23	Line 17 (Total Column)
Total Food Sales	25	Line 20
Monetary Gain/Loss	27	Line 22

b. COMPUTATIONS OF CUMULATIVE VALUES. Daily entries will be added to the appropriate cumulative value from the previous day to attain the cumulative total through the day posted. (The cumulative value of the RIK Monetary Allowance will be entered in Columns 3 and 12.)

c. OVER/UNDER ISSUES. The cumulative value of over/under issue in Column 10 is obtained by subtracting Column 9, Net Storeroom Issues, from Column 7, Total Income Allowance. At the end of the fiscal quarter, the cumulative value of the over/under issue in Column 10 should closely approximate the over/under issue reported in the Financial Statement section of the Enlisted Dining Facility Operating Statement (NAVSUP 1358). (A small difference due to rounding in computing the RIK daily monetary allowances may occur.)

d. UNEARNED INCOME. The cumulative unearned income from RIK issues in Column 15 will be obtained by deducting Column 14, RIK Food Sales, from Column 12, RIK Monetary Allowances and subtracting the value in Column 16 for that day. This is unearned income resultant of the difference between the proportionate part of the BDFA credit taken for an RIK customer and the lesser food value issues to those customers.

e. LOSSES DUE TO DUPLICATE SIGNATURES. The Food Service Officer will record number of duplicate signatures crossed-off the Meal Signature Record (NAVSUP 1291) during his audit. The number will be entered on Line 2b and the RIK total computed and entered on Line 2c of the Meal Cash Balance/Customer Analysis (12ND NASA 4061/62N) at the time of the audit. (This net RIK total will be the value entered on the Daily Activity Report (Line 2c)). The number of duplicate signatures in Line 2b of the Meal Cash Balance/Customer Analysis will be multiplied by the BDFA rate for that meal, totalled for all meals on the applicable day, and the monetary amount of all such losses for that day entered in Column 16 of the Dining Hall Control Summary (12ND NASA 4061/62Q).

f. DISCARDS OF PREPARED FOODS/PRICE REDUCTIONS BELOW RAW FOOD COST. The Discards of Prepared Food and the Price Reduction Below Raw Food Cost (Columns 17 and 19) are obtained from the daily entries on reports of the same name. These represent losses of value on food items issued for use in the Enlisted Dining Facility. The loss must be absorbed in the selling price markup.

g. FINANCIAL IMPACT OF DAILY SALES OF FOOD. Total food sales (Column 25) includes only the sales value of items sold and excludes the added earning of allowances on RIK customers who did not choose to utilize the entire BDFA amount. When the total food sales is compared with net storeroom issues (Column 8), the result is a daily gain or loss due only to sale of raw food items (Column 27). The cumulative comparison is provided by deducting Column 9 from Column 26 for cumulative losses/gains in Column 28. The monetary gain/loss provides a picture of how the operation would be running without RIK personnel.

5. IMPORTANCE OF THE REPORT. Section I of the Dining Hall Control Summary provides management with the most comprehensive daily status of the financial management. Section II identifies unplanned losses and unearned gains which are part of the over/under issue status reported in Section I. Close control must be kept on these costs and on the portion control system to insure financial viability.

414 RATION CONTROL RECORD

The Ration Control Record (12ND NASA 4061/62S) is maintained in both an incremental and cumulative format. It is a subsidiary record for the purpose of maintaining a summary record of the categories of RIK personnel fed for ration credits, the weighted value of rations earned, the meals served in the dining area and the average sale value of individual meals. In general, daily values will be posted by the Records Storekeeper to the incremental record and then added to the cumulative value for the previous day to obtain the new cumulative total on the cumulative record.

1. RIK MEALS FED. From the Recapitulation of Meal Record (NAVSUP 1292), the "Grand Total" of rations fed by category for all three meals for a given day will be separated into Navy and Marine, Regular and Reserve, and a combined category of "Other" and posted to Columns A - C of the Ration Control Record. At the end of an accounting period, these totals should equal the totals reported on the Ration Breakdown section of the Ration and Sales Report (NAVSUP 1357).

2. RIK TOTAL CREDITS. RIK ration credits in Column D is the weighted rations earned for the day, taken from the total Line 2D of the Daily Activity Report (12ND NASA 4061/62R).

3. TOTAL MEALS SERVED IN GALLEY. This is the total of the meals served in the dining hall after adjustments for personnel not passing through the mess line and contractor personnel. The totals in this section are used for customer counts in administering the Food Service Contract.

4. AVERAGE SALE FOR MEALS SERVED. The daily values are obtained from Line 19 of the Daily Activity Report (12ND NASA 4061/62R). The cumulative value is calculated by multiplying the value to date by the number of days posted heretofore in the accounting period, and adding the average for the current day to that total. The combined total is then divided by the total days in the accounting period, including the current date. The result should be compared with COMRATS or BDFA values, as applicable, for the specified meal to determine the meals on which added merchandising is required.

CHAPTER 5: ISSUES AND SALES OF SUBSISTENCE ITEMS

ISSUES OF BULK SUBSISTENCE ITEMS	500
ISSUES TO THE FLIGHT GALLEY	501
SALES OF SUBSISTENCE ITEMS TO PRIVATE MESSES AND CLUBS	502
MISCELLANEOUS SALES	503

500 ISSUES OF BULK SUBSISTENCE ITEMS

The purpose of this section is to establish local procedures for the expenditure and movement of subsistence items held in issue or bulk storerooms in accordance with NAVSUP Pub. 486, Para 1030-5d. In order to insure the accountability and control over the expenditure of subsistence items held in bulk in accordance with NAVSUP Pub. 486, Para 6095 through Para 6223, the responsible custodian will comply with these procedures.

501 ISSUES TO THE FLIGHT GALLEY

All issues to the Flight Galley will be recorded on the Subsistence Item Request/Issue Document (NAVSUP Form 1282) prepared in an original and two copies by the Flight Galley Supervisor.

1. APPROVAL OF ISSUES. NAVSUP Form 1282's will be submitted to the Food Service Officer or his designated representative for approval prior to issue.

2. DUTIES OF THE JACK-OF-THE-DUST. After approval, NAVSUP 1282's will be forwarded to the Issue Room Custodian, who will break out items requested and insert the quantities issued in the "Issued Column" of the NAVSUP 1282.

3. RECEIPT FOR FLIGHT GALLEY ISSUES. The Issue Room Custodian will arrange for delivery or pick up of items requested and obtain a receipt from the Flight Galley Supervisor by completion of NAVSUP 1282.

4. PRICING AND RECORDING ISSUES. The issue document will be priced and extended at the time of issue, using fixed prices. The original issue document will be retained by the Food Service Officer.

502 SALE OF SUBSISTENCE ITEMS TO PRIVATE MESSES AND CLUBS

1. AUTHORIZED ACTIVITIES. The procedures contained herein are applicable to all sales from the issue room to the following activities, currently authorized to purchase subsistence items from the Enlisted Dining Facility:

1. Commissioned Officer Mess (Open), NAS Alameda
2. Commissioned Officers Mess (Closed), NAS Alameda
3. CPO Club, NAS Alameda
4. Authorized Coffee Messes

2 PROCEDURES FOR SALES.

a. **FORMS FOR RECORDING SALES.** All sales to the above activities will be recorded on the Subsistence Item Request/Issue Document (NAVSUP Form 1282) prepared in duplicate by authorized representatives of the requesting activities. Dry provisions and perishable provisions will be listed on separate NAVSUP 1282's.

b. **APPROVAL OF SALES.** NAVSUP 1282's will be delivered to the Food Service Office where they will be screened against stock records for availability; have last receipt prices inserted; and be approved for sale by the Food Service Officer or his designated representative.

c. **DUTIES OF THE JACK-OF-THE-DUST.** Upon approval, all copies of the NAVSUP 1282's will be forwarded to the Issue Room Custodian who will breakout requested items; annotate the quantities to be delivered in the "Issued Column"; unit price and value column will be posted by the Provisions Recordkeeper. One copy will be retained for posting as an expenditure to Dining Facility Stock Record maintained by the custodian.

d. **RECEIPTS FOR SALES.** The custodian will arrange for pick up of the items requested and obtain a receipt for all items from an authorized representative of the club or mess. One copy will be retained by the club or mess and the completed original returned to the Food Service Officer for substantiating monthly billings in accordance with procedures contained in NAVSUP Pub. 486, Para 6095 through Para 6223.

503 MISCELLANEOUS SALES

The Food Service Officer will insure all sales to organizations not specifically authorized to buy from the Enlisted Dining Facility in this section, are personally reviewed and approved prior to issue. The provisions of NAVSUP Pub. 486 apply.

CHAPTER 6: REPORTS AND RETURNS

GENERAL REQUIREMENTS

600

600 GENERAL REQUIREMENTS

Reports and Returns will be prepared in accordance with NAVSUP Pub. 486 unless exceptions are specifically enumerated herein.

1. RATION AND SALES REPORT (NAVSUP 1357).

a. **RATION BREAKDOWN.** The ration breakdown will exclude any entry on Line 2 – rations sold for cash.

b. **CASH STATEMENT.** The sales of Enlisted Dining Facility meals on Line 2a of the Cash Statement will be obtained from Column 5, Cash Food Sales, of the Dining Hall Control Summary Section 1 (12ND NASA 4061/62P).

2. ENLISTED DINING FACILITY OPERATING STATEMENT (NAVSUP 1358).

a. **RATION STATEMENT.** In the Ration Statement section, the rations fed will be obtained from the three monthly Ration and Sales Reports (NAVSUP 1357), which will have excluded the rations sold for cash during those months.

b. **COMPUTATION OF ALLOWANCE/FINANCIAL STATEMENT.** In the Computation of Allowance/Financial Statement, the Basic Allowance will be computed by multiplying the rations fed from the Ration Statement portion of the NAVSUP 1358 by the Basic Daily Food Allowance rate promulgated by the NAVFSSO Note 7330 series. The next line will be labelled "CASH/A La Carte Sales" and will be equal to Line 2a of the Cash Statement section of the Ration and Sales Report (NAVSUP 1357) for the previous three months. No entry will appear in the "ration" or "rate" columns on this line.

CHAPTER 7: SUPPLY OFFICER REVIEW

WEEKLY ANALYSIS	700
MONTHLY MANAGEMENT STATISTICS	701
MONTHLY REPORTS	702
QUARTERLY REPORTS	703

700 WEEKLY ANALYSIS

The Supply Officer will review the Dining Hall Control Summary (12ND NASA 4061/62P and Q) no less frequently than weekly. He will be informed on a situational basis of all significant operating problems, policies being questioned, or projected financial difficulties.

701 MONTHLY MANAGEMENT STATISTICS

At the end of each month, the following statistics will be provided to the Management Analysis Branch, Planning and Administrative Division of the Supply Department for charting and presentation at the monthly Officer/Supervisor Meeting:

1. Customer Analysis:
 - RIK Meals Served
 - CASH/A La Carte Meals Served (Guests)
 - CASH/A La Carte Meals Served (Enlisted)
 - Customers Buying Second Servings
2. Sales Analysis:
 - Total Income Allowance
 - Over/Under Issue
3. Average Sale Per Meal
4. Total Surcharges
5. Civilian Contract Labor Costs

702 MONTHLY REPORTS

At the end of each month, the Food Service Officer will hand carry completed copies of the following forms to the Supply Officer and discuss the status of messing operations in conjunction with reviewing the reports:

1. Dining Hall Control Summary Sections I and II (12ND NASA 4061/62P and Q.)
2. Ration and Sales Report (NAVSUP 1357)

703 QUARTERLY REPORTS

The monthly meeting between the Supply Officer and the Food Service Officer at the end of each quarter will also consider the results identified on the completed Enlisted Dining Facility Operating Statement (NAVSUP 1358).

CHAPTER 8: AUDIT TECHNIQUES

PURPOSE AND SCOPE OF AUDIT TECHNIQUES	800
VERIFICATION OF SALES PRICES	801
VERIFICATION OF SERVINGS SOLD	802
VERIFICATION OF BULK FOOD BREAKOUTS	803
VERIFICATION OF CASH COLLECTION SUPERVISOR'S FUNDS	804

800 PURPOSE AND SCOPE OF AUDIT TECHNIQUES

This section provides the basis for performing audits of the cash and food handling procedures which are unique to the CASH/A La Carte Food Service Equipment. Procedures which are common to normal operating Enlisted Dining Facilities such as quarterly inventory and verification, key security, and maintenance and verification of the Subsistence Ledger (NAVSUP 335) are contained in NAVSUP Pub. 486, and will not be repeated in this section. The daily, monthly, and quarterly checks which are a part of the CASH/A La Carte system provide the Food Service Officer and Supply Officer a more exact and timely assessment of the efficiency of the Enlisted Dining Facility (EDF), as compared to a standard Navy EDF.

801 VERIFICATION OF SALES PRICES

The sales prices of items sold in the EDF must be accurate in order that the customers are not overcharged for food purchases and conversely to insure that the dining facility receives adequate cash/ration in kind return for the value of food sold in order to prevent an overissue situation.

1. QUARTERLY PRICE CHECKS. Prior to the first day of each fiscal quarter, the EDF will be provided an updated Navy fixed raw food price listing (NAVSUP Form 1059-1A), and an updated Federal Supply Catalog price list (C8900-PL) for FSC Group 89 dry subsistence items (from Navy Subsistence Office, Washington, D.C. and DPSC, respectively).

1. Using the C8900-PL for dry subsistence items and the 1059-1A for frozen and chill items, the Senior Mess Management Specialist (SMMS) will manually check item prices on a pound basis comparing the new price lists against the existing computer printout of raw food prices (GUSHG1-ASR066).
2. The SMMS will annotate new item prices on the computer printout for applicable item price changes.
3. Using the annotated computer printout, the SMMS will list the items with price changes on the Test Data Input form (12ND NASA 5230/24A) as follows:
 - Federal Stock Number is entered in Columns 7 thru 19.
 - New price per pound is entered in Columns 69 thru 72. (Example: 0166 is \$1.66 per pound.)
 - Columns 76 thru 80 are filled in with the characters "ALL*C".
4. After the above steps are complete, the Test Data Input form is forwarded to Supply Planning (Code 1913-D) with a request for new computer printout listings (GUSHG1-ASR-066).
5. When the new computer listings are received, the SMMS will verify the raw food prices listed for accuracy against the annotated old listing.

6. The SMMS and Galley Supervisor will check the Standard Breakfast and Speed Line items for possible price changes. Those items with changes will be annotated on the computer printout.
7. The SMMS will provide the Galley Supervisor with a listing of the item price changes for the Standard Breakfast and Speed Line items. These changes will be entered in the cash register by the Galley Supervisor after close out of the present quarter's last meal and before start of the first meal of the new quarter.
8. Within the first week of the new quarter, the SMMS will check each item price on the new computer printout against the old computer printout. Changes will be annotated on the new listing.
9. The SMMS will verify accuracy of the price changes on the new listing and will then have the copies of the new printout held by the Jack-of-the-Dust and the Records Storekeeper annotated to agree with the SMMS computer printout listing.

2. WEEKLY PRICE CHECKS. The SMMS will verify all entree prices of the week's menu (12ND NASA 4061/17) prior to submission to the Food Service Officer. These price checks will be performed in the same fashion as in Steps 6 and 7 of Section 801 above.

3. DAILY PRICE CHECKS. The Galley Supervisor will prepare daily lunch and dinner cash register price sheets (two each) for the guidance of the cash register operators. The prices for all entrees will be noted on the sheets. Prices are verified as follows before entry on the cash register price sheets:

1. Check item price of the entree against both the new computer printout and the old computer printout. If no change is noted, enter the existing price.
2. If the item price on the new listing is different, check with the SMMS and verify price to enter on the cash register price sheet.
3. The Galley Supervisor will enter applicable price changes in the cash registers before the start of the noon meal.

802 VERIFICATION OF SERVINGS SOLD

A verification of servings sold against servings issued will be performed for each meal by the Watch Captain in order to account for all food broken out of the issue storerooms. This verification will be made daily by the SMMS and the Food Service Officer.

1. Report 2 will be obtained from the automatic cash register by the Watch Captain after the finish of each meal.
2. From Report 2, the Watch Captain will obtain the number of servings sold and tallied on the cash register for each meal entress. (This check also helps spot cash register operator mistakes when inputting entree items.)

3. The number of servings sold (from Report 2) will be entered in Column J (Total Servings Sold) of the Cook's Worksheet (12ND NASA 4061/62).
4. A physical count of the servings returned will be verified by the Watch Captain, and this amount will be entered in Column K of the Cook's Worksheet.
5. The Servings Issued (Column I) Minus the Total Servings Sold (Column J) on the Cook's Worksheet should equal the Servings Returned (Column K). If overages/shortages exist, the amount will be entered in Column L of the Cook's Worksheet and will be explained in the Remarks Column (M).
6. Servings returned from one meal will be served as seconds on a subsequent meal or disposed of.
 - If served as an entree on a subsequent meal, this item will be annotated on a separate Cook's Worksheet by the SMMS and hand delivered to the Watch Captain.
 - If the leftover portion is to be disposed of, the Galley Supervisor will enter the monetary amount to be disposed of on Discards of Prepared Food (12ND NASA 4061/62M), as per Section 405. This form will be reviewed daily by the SMMS and initialed by the Food Service Officer.
7. The completed Cook's Worksheet will be reviewed and initialed daily by both the SMMS and the Food Service Officer.

803 VERIFICATION OF BULK FOOD BREAKOUTS

This verification serves to check the amount of food broken out against the amount recorded on the Subsistence Ledger, and also serves to verify the sales value of food issued against value recorded.

1. The SMMS will prepare the Cook's Worksheet (12ND NASA 4061/62) and have it ready for the Jack-of-the-Dust at least three days prior to the applicable menu (see Section 402).
2. Using the Cook's Worksheet and the appropriate recipe cards, the Jack-of-the-Dust will transfer applicable frozen items from the freeze box to the chill box three days in advance of the meal to allow for proper thawing. The Watch Captain's Requisition will be filled out to record these breakouts.
3. Prior to the breakfast meal the Watch Captain, with the aid of the Jack-of-the-Dust, will prepare the Watch Captain's Requisition (12ND NASA 4061/62B) for the day's meals. This form will be prepared in duplicate, as per Section 403.
4. During the course of each meal, the Watch Captain and Jack-of-the-Dust will make entries on the Watch Captain's Requisition for issues and returns (Section 403 - paragraphs 3 thru 7).

5. At the end of the meal, the Watch Captain and Jack-of-the-Dust will both sign the Watch Captain's Requisition verifying quantities issued from and returned to the storerooms (Section 403 – paragraph 8).
6. The Jack-of-the-Dust will then close out and total the Watch Captain's Requisition (Section 403 – paragraph 9).
7. During the close out of the Watch Captain's Requisition, the Jack-of-the-Dust will post issues to the Dining Facility Stock Record Cards (12ND NASA 4061/62A) as per Section 403, paragraph 9.1.
8. After all issues have been posted to the Dining Facility Stock Record Cards for the day, the Jack-of-the-Dust will tally the total issues for the day from the Stock Record Cards onto the Subsistence Report (NAVSUP Form 1059) as per Section 403, paragraph 9.4.
9. The value of the completed Subsistence Report (NAVSUP 1059) should equal the sum of the total values of the separate Watch Captain's Requisitions for the same day; differences, if any, will be reconciled as per Section 403, paragraph 9.4.
10. The Records Storekeeper will check the Watch Captain's Requisitions and the Subsistence Report and will post to the Daily Activity Report (12ND NASA 4061/62R) and the Subsistence Ledger (NAVSUP 335) as per Section 403, paragraph 10.
11. The Daily Activity Report will be prepared each day by the Records Storekeeper as per Section 412. This report gives the Customer Head Count Analysis, Accounting Analysis, and Operations Analysis on a daily basis to the Food Service Officer. It is the key management report which provides the Food Service Officer timely and meaningful data on the operation of the Enlisted Dining Facility.
12. Cumulative statistics will be entered on the Dining Hall Control Summary (12ND NASA 4051/62P and Q) daily by the Records Storekeeper as per Section 413. Data is obtained from the Daily Activity Report and the Cash Balance/Customer Analysis Report (12ND NASA 4061/62N). The Control Summary will provide the basic management information for the Food Service Officer and Supply Officer.

804 VERIFICATION OF CASH COLLECTION SUPERVISOR'S FUNDS

Each month the Food Service Officer will conduct a cash verification of the money in the custody of the Cash Collection Supervisor. This verification will be accomplished on an **unannounced**, surprise basis at different times each month. The procedures are as follows:

1. The Food Service Officer will advise the Cash Collection Supervisor (CCS) of the verification and will count all cash.
2. An adding machine tape will be run by the Food Service Officer on the entries in the Meals Cash Receipt Book (4065). This tape will include all entries made after the previous cash verification. (The entries in this book were posted from the "Subtotal (Cash Taken In)" amounts on the Cash Balance Sheets (12ND NASA 4061/62H). The "Subtotal (Cash Taken In)" amounts were obtained from the Register Report 91. (See Section 409, paragraph 2.c.)

3. The Food Service Officer will run adding machine tapes on entries in the Flight Galley Cash Receipt Book (4065) and on entries in the Bulk Sales Cash Receipt Book (4065). These tapes will include all entries made after the previous cash verification. (The entries in these two Cash Receipt Books were posted from the NAVSUP Forms 1282. These forms were prepared in accordance with Chapter 5 of the Operating Handbook for the EDF).
4. The Food Service Officer will run an adding machine tape on the cash deposits made after the previous cash verification. (The cash deposits were entered in a daily log book and were posted from the individual Deposit Tickets (Standard Form 215) made for each daily cash deposit.) Each of the Deposit Tickets was reviewed and initialed by the Food Service Officer.
5. A summary of all tapes accumulated since the last audit (or since the last submission of a Form 1357/1358) whichever occurred last will be made on the Ration and Sales Report (NAVSUP Form 1357) as follows:
 - In Line 1, "Undeposited Sales Beginning of Month", enter the amount shown on Line 5 of the previous cash verification sales report.
 - In Line 2.a., "Sale of Enlisted Dining Facility Meals", enter the amount from the tape run on the Meals Cash Receipt Book (paragraph 2 above).
 - In Lines 2.a. and 2.b., "Sale of Special Meals" and "Sale of Bulk Food Items", enter the amounts from the tapes run on the Flight Galley and Bulk Sales Cash Receipt Books respectively.
 - In Line 2.d., add the total sales (Lines 2.a., b. and c.).
 - In Line 2.f., enter the same amount which was entered in Line 2.d.
 - In Line 3, enter the amount of cash deposited with Disbursing Officer (total of tape in paragraph 4 above).
 - In Line 5, enter the amount of Undeposited Sales End of Month. This amount is obtained by adding Lines 1 and 2.f. and subtracting Line 3.

The amount in Line 5 should equal the sum of the cash on hand (counted in paragraph 1 above) minus the amount of the change fund (\$1200). If the amounts balance, the Food Service Officer will sign the Ration and Sales Report.
6. An original and one copy of the Ration and Sales Report will be prepared in accordance with NAVSUP 486. paragraph 6255.2. The original will be forwarded to the Supply Officer with a covering memorandum (see Step 7 below) and the copy will be retained by the Food Service Officer in the retained returns file.
7. A memorandum report of the cash verification will be made to the Supply Officer noting the amount of cash on hand, the amount of the permanent change fund, and the amount of undeposited sales.

CHAPTER 9: TRAINING SYLLABUS

PURPOSE AND SCOPE OF TRAINING	900
TRAINING REQUIREMENTS	901
TRAINING SESSIONS	902

900 PURPOSE AND SCOPE OF TRAINING

These instructions outline training requirement to be accomplished before and during the CASH/A La Carte test. It is not the intent of these instructions to eliminate the formal on-the-job training (OJT) presently required by regulations for upgrading Food Service personnel. It is rather the intent to greatly strengthen OJT procedures and effectiveness.

901 TRAINING REQUIREMENTS

1. EMPHASIS IN "ON-THE-JOB" TRAINING. During the CASH/A La Carte Test, formal OJT for the Mess Management Specialists will receive increased emphasis. Training supervisors who will both motivate trainees and provide informative training will be appointed. Assistance in preparing personnel for promotion examinations will also be given added emphasis and attention. Training supervisors must be indoctrinated on the objectives, methods and importance of the OJT program. OJT supervisors must be given a clear understanding of their responsibilities. The Food Service Officer will hold weekly sessions with training supervisors to obtain progress reports and to ascertain the progress of each individual's training. Also, the Food Service Officer will periodically meet with trainees and determine the trainee's personal view of progress, problems and areas of interest.

2. BUILDING POSITIVE ATTITUDES. Most personnel want and need to feel that they are doing an important job. Attitudes, of course, are formed and maintained by many factors. It is up to those responsible for OJT to reinforce the positive factors of Food Service, those brought out in proper formal classroom training, the new environment, and the new overall coordinated Food Service Improvement Program pointing towards a career field that is strictly professional.

3. ROTATION OF PERSONNEL. The OJT effort should be scheduled so as to cycle a young trainee through both the more interesting jobs in the dining hall and the less opportune areas. A young trainee should never be left in an uninteresting work area over a sustained period of time. Effective planned work rotation for OJT, reinforced by the imaginative supervisory effort, can stimulate high learning resulting in happy, motivated, and effective Food Service personnel.

4. RECORD OF TRAINING. A program control record on trainees should be posted on a bulletin board in the Enlisted Dining Facility. The record should contain blocks under each work area which will be colored in as the trainee progresses through each category (10%, 20%, etc.). All formal OJT records will be kept in accordance with current Navy instructions.

5. CLASSROOM EMPHASIS ON CASH/A LA CARTE. In addition to the requirement for effective emphasis on OJT, special training on the new Food Service program must be implemented. Personnel, both military and civilian, must be trained in the new operating concepts and procedures to be used during the developmental test. This training will consist primarily of the following:

1. Selling and marketing aspects.
2. Progressive cooking and menu planning – initial and follow-up leftover planning.
3. Speed line operation consistent with customer flow and on-line equipment.
4. Speed line augmentation procedures.
5. The worksheet; planning and execution.
6. Portion control and serving line performance.
7. Food appearance and presentation.
8. Pricing and price control procedures.
9. Cash flow and control procedures.
10. Food control procedures.
11. Cashier training/customer identification and control.
12. Cleaning and sanitation procedures required for new equipment.

902 TRAINING SESSIONS

The outline for a formal classroom training schedule includes the entire spectrum of new ideas associated with the CASH/A La Carte Test.

1. SELLING AND MARKETING FOOD SERVICE. A thorough indoctrination in this area will establish the proper attitude and approach required by the planned improvement program. The following areas will be emphasized:

1. Change in dining hall responsibility from providing nutritious food to feed those personnel electing to eat in the dining hall at any particular meal, to a responsibility for increasing participation for all meals and maintaining a high participation rate in a competitive environment.
2. Selling the dining hall environment and developing a pride among using personnel in their dining facility – the responsibility of all personnel to help keep it first rate for the benefit of all personnel.
3. Selling the dining hall food quality, food appearance, and variety.
4. Selling the advantages of the new A La Carte system and the extremely favorable cost of dining hall food items.
5. Selling the Mess Management Specialists a new professional approach to a Food Service career field.
6. Selling the new clean and comfortable environment, a place to get away from the job environment.

2. PROGRESSIVE COOKING AND MENU PLANNING. This subject will deal with both initial menu planning and follow-up leftover planning.

a. PROGRESSIVE COOKING. This means cooking in small amounts to achieve a continual flow of freshly cooked items to the serving line, fully consistent with the customer demand. Normally, large amounts of individual subsistence items will not be cooked ahead of time and left in a holding area until required on the serving line. Cooking in continuous small amounts, appropriate in quantity to the type of item, assures the diner of fresh, palatable and appealing products from which to choose. Progressive cooking will also insure that diners coming in at the end of the meal period have essentially the same choice of freshly prepared items as were on the serving line at the beginning of the meal period.

b. MENU PLANNING. Under the CASH/A La Carte system, proper planning of the menu to be served will depend primarily on diner acceptance and price. The menu for the Lunch and Supper meals will have to be a combination of high, middle and low cost items. At least one low cost entree will be on the serving line each meal. A thorough analysis of past sales data will enable the Senior Mess Management Specialist to properly estimate the amounts of individual entrees to prepare for each meal.

c. LEFTOVER PLANNING. Training will be directed toward the fact that proper use of "leftovers" will be the prime "make or break" part of cost control. Personnel will be indoctrinated in the proper use of imagination and initiative necessary for use of leftovers. Where possible, leftovers will be reworked in order to present an acceptable item at a later meal. For example, leftover turkey and roast beef can be used for hot or cold sandwiches at a later meal. At other times, it may be more desirable to convert leftovers into ingredients of an attractive casserole dish. Finally, the most important guideline in menu planning and leftover follow-up is the fact that reworked leftover entrees must have a high appeal in appearance, taste, and cost in order that customers will purchase such items. The Enlisted Dining Facility will not be able to serve reworked leftovers to a captive meal card group that must eat them or spend their own money at some other eating establishment. Under the CASH/A La Carte freedom of choice program, leftovers will only move if they appeal to the customer.

d. LESSON SCENARIO. An example of a scenario which would be useful in training for progressive cookery follows. Historical data may indicate that on the 5th weekday after payday 35% of the customers will take fried chicken for the evening meal. Chicken requires approximately eight minutes to fry in a pressure deep fat fryer. Data also may indicate that 10% of the customers will come through the line the first eight to ten minutes the cafeteria line is open. Therefore, 10% of the total projected number of customers for the evening meal on the 5th weekday after payday multiplied by 35% will be the amount of fried chicken that must come off the pressure cooker just prior to opening. The follow-on cooking can be calculated similarly. The source for this data are cash register management reports 2 and 4. The trainees should use this data and the applicable menu card to develop a Cook's Worksheet for training purposes.

3. SPEED LINE OPERATING PROCEDURES. The subject will focus on customer flow and optimization of on-line cooking equipment.

a. **PROGRESSIVE COOKING OF SHORT ORDER ITEMS.** Short-order items are not to be completely prepared in advance of customer flow:

1. The hot dog roller is to be used to prepare hot dogs at the approximate rate of customer requests.
2. Hamburgers and cheeseburgers are to be charcoal grilled at a rate approximating customer flow and passed from charcoal grill to regular grill where cheese may be added for cheeseburgers.
3. Hamburgers are not to be mashed during cooking as this causes a dried out finished product.
4. All items are to be garnished with pickles and parsley.
5. All sandwich preparations must be neat in appearance.
6. Sandwiches are to be offered toasted as well as plain.
7. Personnel must experience setting up the line using different locations of equipment and food items to identify the most rapid and effective means of service on the speed line.

4. SPEED LINE AUGMENTATION METHODS.

a. **LESSON CONTENT.** The subject will deal with optimizing use of manpower by expanding speed line menu rather than running a full main line and a separate speed line operation during minimum customer participation periods. A related idea to be explored is improving service to the customer by offering a "cook-to-order" service during slow operational periods should time permit the extra effort. The lesson will also develop using frozen foods, the microwave oven and other rapid cooking speed line equipment:

1. Precooked fried chicken, packaged in individual servings can be brought to serving temperature via on-line deep fat fryer at the time the customer places an order.
2. Frozen steaks can be placed in the microwave oven for partial cooking and finished off on the charcoal grill for added taste — all to be accomplished at the time the customer places an order.

b. **ON-THE-JOB EXPERIENCE.** Short-order augmentation procedures will be fully demonstrated and the proper use of equipment practiced until proficiency is demonstrated by all personnel.

5. USE OF THE WORKSHEET.

- a. **LESSON TOPICS.** The following topics should be covered:
1. Emphasize the importance of this form as a production control document.
 2. Provide instructions as to how each column of this form will be filled out.
 3. Stress the importance of accuracy of figures and instructions placed in each column.
 4. Describe the use of the form for planning use of leftovers.
 5. Explain the proper use of the "Special Instructions to Cooks and Additional Remarks" part of this form.
 6. Show how the accuracy of the form can be checked, e.g., the amount of food drawn, minus amount of food used will give the amount of leftovers.
- b. **PRACTICE IN USING THE WORKSHEET.** Personnel will be given blank forms to be filled out using information given by the instructor.
- c. **REVIEW OF ACTUAL WORKSHEETS.** In addition to formal classroom training, Galley Supervisors and Watch Captains will show and explain actual entries made on the Worksheets on record in the Enlisted Dining Facility.

6. PORTION CONTROL AND SERVING LINE PERFORMANCE.

- a. **SERVING LINE DEMEANOR.** All personnel must be impressed with the fact portion control and serving line performance are the keys to successful financial operation of the dining hall. All personnel are part of a service organization; a pleasant helpful attitude must be shown on the serving line at all times.
- b. **PORTION CONTROL UTENSILS.** Watch Captains must insure they have the proper utensils for implementing portion control. These will include the proper size solid and slotted serving spoons, ladles, ice cream type scoops for serving mashed potatoes, sharp meat slicing knives, and tongs for serving bread, toast and rolls.
- c. **PORTION CONTROL OF MEATS.** Special training will be given on meat items that are sliced by hand, scales will be used in training exercises to show the proper size of servings. Carving of hotel rounds and whole turkeys will be the most difficult items, requiring much care in the training techniques and sustained follow-up performance closely supervised by knowledgeable personnel.
- d. **THE CUSTOMER IS ALWAYS RIGHT.** Neatness and a pleasant attitude will be stressed and servers will be instructed not to argue with diners. In case of any dispute, the Galley Supervisor or the Watch Captain will be called to explain the policy.

7. FOOD APPEARANCE AND PRESENTATION.

a. **MENU PLANNING FOR APPEARANCE.** Menu planning consideration for combining proper color, shape, consistency, flavor, acceptability and temperature will be explained in order to show how an attractive serving line presentation will impress the diners and improve the selling of the end product.

b. **FACILITIES FOR SERVING.** The training should include an understanding of the importance of locating food items, working utensils, and tableware in the proper sequence to facilitate both serving and appearance objectives. The rudiments of sandwich slicing styles and approaches to serving face up, face sideways in accordance with the type sandwich served should be covered.

c. **SERVING CONTAINERS.** Demonstrations in the dining hall on the use of alternative dishes and trays will be used to illustrate the choices available to sell the product.

8. PRICING AND PRICE CONTROL PROCEDURES.

a. **LESSON TOPICS.** Personnel will be taken through the operating procedures dealing with pricing menu items, the use of the 10% markup and the importance of proper pricing. Demonstration of how to complete actual forms used in this manual will be given to all personnel. The computer program which performs pricing calculations routinely will be fully elaborated.

b. **PRACTICAL EXPERIENCE.** Personnel will be given examples and required to compute selling prices.

9. CASH FLOW AND CONTROL PROCEDURES.

a. **PROCEDURAL REQUIREMENTS.** A step-by-step review of the applicable sections of this manual and the appropriate sections of the NAVSUP and NAVCOMPT manuals will be the basis of instruction. Explanation and demonstration of forms used and audit procedures will be completely covered. Loss or misuse of government appropriated funds will be given special emphasis. The consequences involved in any breakdown of cash control procedures will also be stressed.

b. **USE OF LOCAL FORMS.** Personnel will be shown all procedures actually in use for cash flow and control procedures. They will be shown how the change funds are receipted for and transferred and also how the actual cash control is implemented from the time the change fund is originally issued until the time cash received for sale of meals is turned into the Navy Finance Center.

10. FOOD CONTROL PROCEDURES.

a. **TYING THE SYSTEM TOGETHER.** Training will start with ordering and proceed step-by-step through all procedures required for accounting and reconciliation of usage. Proper use of all forms will be shown and the importance of the Worksheet as a production control document again emphasized. Also, the proper use of leftovers will again be stressed as one of the highly important parts of food control procedures.

b. **REVIEW OF ACTUAL FORMS.** Using historical data, personnel will be shown how all forms are actually used and how food flow can be checked from the time of actual receipt from DPSC or vendors, through sales, up to and including the physical inventory taken at the end of each quarter.

11. **CASHIER TRAINING.** The training sessions will include cash register operation plus customer identification and control.

a. **CASH REGISTER OPERATIONS.** Formal training of cashiers will be given by representatives of the firm leasing the cash registers. New cashiers will receive their training from supervisors and other cashiers that have completed the original training course.

b. **CUSTOMER CONTROL.** Cashiers will also be trained in customer identification and control in accordance with procedures outlined in the NAS Operating Instruction on the Enlisted Dining Facility and in Chapter 4 of this manual.

**INDEX TO ENLISTED DINING FACILITY
HANDBOOK**

CHAPTER 1: INTRODUCTION

AUTHORITY	100
CONCEPT	101
POLICY	102
SCOPE	103
CONTROL	104
PUBLICITY	105
DURATION	106
RECORDS RETENTION	107

CHAPTER 2: INTERNAL PROCEDURES FOR CASH/A LA CARTE

MENU PREPARATION	200
FOOD PREPARATION AND SERVICE	201
PORTION CONTROL	202
PRICING	203
MATERIAL/SANITATION INSPECTION	204
SECURITY OF SPACES	205
SALES ANALYSIS	206

CHAPTER 3: DUTIES OF FOOD SERVICE PERSONNEL

GENERAL INSTRUCTIONS FOR FOOD SERVICE PERSONNEL	300
GENERAL INSTRUCTIONS FOR SUPERVISORY PERSONNEL	301
INSTRUCTIONS TO THE SENIOR MESS MANAGEMENT SPECIALIST	302
INSTRUCTIONS TO THE GALLEY SUPERVISOR	303

INSTRUCTIONS TO THE WATCH CAPTAIN	304
INSTRUCTIONS FOR THE MESS MANGAEMENT SPECIALIST IN CHARGE OF THE VEGETABLE PREPARATION ROOM	305
INSTRUCTIONS FOR THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE MEAT CUTTING ROOM	306
INSTRUCTIONS FOR THE MESS MANAGEMENT SPECIALIST IN CHARGE OF THE SUBSISTENCE ISSUE ROOM AND REFRIGERATED STORAGE SPACES	307
CHAPTER 4: INTERNAL CONTROLS FOR CASH/A LA CARTE	
FOOD ORDERING	400
STOREROOM OPERATION	401
THE COOK'S WORKSHEET	402
THE WATCH CAPTAIN'S REQUISITION	403
SELLING PRICE REDUCTIONS	404
DISCARD OF PREPARED FOOD	405
RATION CREDIT DETERMINATION	406
CASH REGISTER PROCEDURES	407
CASH CONTROL	408
CASH BALANCE SHEET	409
MEAL CASH BALANCE AND CUSTOMER ANALYSIS FORM	410
OPERATING WITHOUT CONSOLIDATED CASH REGISTERS	411
DAILY ACTIVITY REPORT	412
DINING HALL CONTROL SUMMARY	413
RATION CONTROL RECORD	414

CHAPTER 5: ISSUES AND SALES OF SUBSISTENCE ITEMS	
ISSUES OF BULK SUBSISTENCE ITEMS	500
ISSUES TO THE FLIGHT GALLEY	501
SALES OF SUBSISTENCE ITEMS TO PRIVATE MESSES AND CLUBS	502
MISCELLANEOUS SALES	503
CHAPTER 6: REPORTS AND RETURNS	
GENERAL REQUIREMENTS	600
CHAPTER 7: SUPPLY OFFICER REVIEW	
WEEKLY ANALYSIS	700
MONTHLY MANAGEMENT STATISTICS	701
MONTHLY REPORTS	702
QUARTERLY REPORTS	703
CHAPTER 8: AUDIT TECHNIQUES	
PURPOSE AND SCOPE OF AUDIT TECHNIQUES	800
VERIFICATION OF SALES PRICES	801
VERIFICATION OF SERVINGS SOLD	802
VERIFICATION OF BULK FOOD BREAKOUTS	803
VERIFICATION OF CASH COLLECTION SUPERVISOR'S FUNDS	804
CHAPTER 9: TRAINING SYLLABUS	
PURPOSE AND SCOPE OF TRAINING	900
TRAINING REQUIREMENTS	901
TRAINING SESSIONS	902

**APPENDIX 1 TO ENLISTED DINING
DINING FACILITY HANDBOOK**

**NAS Alameda Notice 4061 of 20 August 1976
Subj: Operation of the Enlisted Dining Facility**

DEPARTMENT OF THE NAVY
NAVAL AIR STATION
Alameda, California 94501

Canc: Feb 77

NASALAMEDANOTE 4061
19
20 Aug 1976

NAS ALAMEDA NOTICE 4061

From: Commanding Officer, Naval Air Station, Alameda

Subj: Operation of the Enlisted Dining Facility

Ref: (a) NAVSUP 1tr 30/PA of 1 Oct 1975
(b) NAVSUP 1tr 30/PA of 12 Jul 1976
(c) NAVSUPINST 4061.9H
(d) NAVSUP Pub 486
(e) Manual of Naval Preventive Medicine (NAVMED P5010)
(f) COMNAVAIRPACINST 6240.4

1. **Purpose.** To provide procedures for operation of the NAS Alameda Enlisted Dining Facility. This notice establishes the second portion of the test of the CASH/A La Carte feeding system.

2. **Cancellation.** NAS Alameda Instructions 4061.3E, 4061.6C and 7220.6D are held in abeyance during the test period and are superseded by this notice.

3. **Information**

a. Reference (a) announced that NAS Alameda had been selected as the Navy test site for testing the CASH/A La Carte concept in the Enlisted Dining Facility. Reference (b) extended the test until 28 February 1977. This system provides individual discretion on what and where to eat to each enlisted man permanently assigned to the base. Each permanently assigned enlisted member in a duty status will be provided commuted rations and required to pay for all food items obtained from the Enlisted Dining Facility. The Enlisted Dining Facility will price individually each item on the menu and sell all such items for cash.

b. For personnel who are ineligible for commuted rations, a modified meal pass system will permit drawing rations in kind within specified financial limits for each meal.

c. Meals will be priced at the total cost of individual items selected plus any surcharge specified in paragraph 5(e) of this notice. Reference (c) pertains. Pricing of individual items will be based on the total cost of ingredients for the applicable portion size, rounded to the nearest nickel and marked up a small percentage to cover the costs of condiments, waste, and losses in preparation.

d. The procedures specified in reference (d) for special meals (flight and boat meals and box lunches) remain unchanged by this test.

e. The test at Alameda is being conducted by the U.S. Navy Food Service Systems Office in cooperation with the U.S. Army Natick Research and Development Command. In order to study enlisted dining preferences, all enlisted personnel on the base were issued a color coded COMRATS Ashore/A La Carte Experiment Identification Card which was used in cash register processing throughout the initial testing period. In addition, selected enlisted personnel were interviewed at infrequent intervals during the initial testing period to determine attitudes towards the CASH/A La Carte system. During the remainder of the test (1 September 1976 to 28 February 1977), the COMRATS Ashore/A La Carte Experiment Identification Card will not be required. The testing will involve only financial management of operations in the period between 1 September 1976 and 28 February 1977.

4. Navy Policy

a. Authority to Subsist in the Enlisted Dining Facility

(1) The following types of personnel are authorized to purchase meals:

- (a) Enlisted personnel.
- (b) Officers.
- (c) Dependents of enlisted personnel and officers.
- (d) Personal guests of enlisted personnel and officers.
- (e) Foreign government personnel.

(2) Authorization for the following personnel to purchase meals will be requested by letter on a situational basis from the Commanding Officer and approved in advance in writing:

- (a) Civilian employees.
- (b) Members of organized youth groups such as Sea Cadets, Cadets, NJROTC, etc.

(c) Other authorized visitors to NAS Alameda.

(3) Survivors of disasters, officer candidates of the Armed Services, and National Guard personnel will be provided services authorized by reference (d).

(4) All groups of personnel requiring the Commanding Officer's approval to utilize the Enlisted Dining Facility and guests of military personnel in groups larger than six people should make advance arrangements with the Food Service Officer. A minimum of four days notice is required for large groups.

b. Application of Commuted Rations. All enlisted personnel in a duty status who are eligible for commuted rations in accordance with NAVCOMPT directives and permanently assigned to Alameda commands and offices will be placed on commuted rations for the duration of the test. Enlisted personnel on commuted rations will pay for all food items obtained from the Enlisted Dining Facility. Any food item selected but not paid for will be turned over to the MAA at the cash register.

(1) Enlisted personnel may revert to RIK (ration in kind) status upon their expressed choice. It is the responsibility of the individual member to maintain a level of nutrition which will insure fitness for duty. Accordingly, the command should not opt to force specific personnel to RIK status in order to control nutritional intake or monetary management. Personnel Officers must keep accurate records of which enlisted personnel are placed on RIK and notify the Disbursing Officer of the Naval Finance Office immediately when a change in entitlement occurs.

(2) Enlisted personnel who are on leave are receiving leave rations or commuted rations and are expected to procure all items obtained from the Enlisted Dining Facility with cash.

(3) Personnel in a TAD or ACDUTRA status, with or without per diem, will be placed on commuted rations while at NAS Alameda. Alternatively, based on a personal request, rations in kind will be issued.

(4) Enlisted Navy and Marine Corps reservists assigned to Alameda units and in a drill status with pay will be furnished rations in kind based on issuance of a Meal Pass (NAVSUP 1105).

c. Charges for Personnel Obtaining Rations in Kind. The U.S. Navy obtains a pro rata share of the basic daily food allowance for each meal served to RIK personnel. A Meal Pass (NAVSUP 1105) will buy the bearer an amount of subsistence items, not to exceed the pro rata share of the basic daily food allowance earned by the Navy for that meal. All food chosen in excess of this amount will be paid for in cash by the RIK personnel or returned to the MAA at the cash register.

d. Picnics and Recreational Events

(1) Food items will be provided for organizational picnics and recreational events based on the sale for cash of an agreed upon number of portions. The pricing will be totally consistent with that for like items of equal portion size served in the Enlisted Dining Facility.

(2) RIK personnel for whom picnic or recreational issues are made will be provided the applicable proportionate value of the basic daily food allowance in issue without charge based on the certification that they will not attend the dining hall for that meal.

e. Coffee Messes. No free issues of coffee, tea, sugar, cream or substitutes will be made to any coffee messes. Sales of these items will be made to authorized coffee messes on the basis of cost plus the applicable surcharge.

f. Sales to Food Service Personnel. Any person eating food items during the preparation and serving of a meal will be considered as having eaten a meal; however, testing of food as necessary to insure palatability is authorized. If Food Service personnel do not eat a meal served during their duty hours, they will sign a log to certify the meal was not eaten. All Food Service personnel whether military or contractor employed, will pay for all food and beverage items consumed at the time the item is selected for consumption.

g. Sampling and Inspection

(1) Reference (d) requires that each meal served in the Enlisted Dining Facility be sampled by an officer detailed by the Commanding Officer for that purpose. The NAS OOD will sample and report on all meals. Tenant commands may detail their duty officers to sample and report on meals, also. The NAS Duty Officer will sign the applicable Meal Signature Record (NAVSUP 1291) for regular Navy personnel and will be issued a serialized meal ticket for use in paying for the meal selected. All other duty officers assigned by their respective commands to sample food will pay for their own meals. No surcharge will be applicable to purchases by assigned duty officers.

(2) Reference (d) requires that perishable subsistence items for the Enlisted Dining Facility and any food items purchased on the local market or under contract which require inspection at destination, shall be inspected by a designated representative of the Medical Facility or by such other qualified and responsible persons as the Commanding Officer may designate for that purpose. References (e) and (f) require health and sanitation inspections to be performed by both the Medical Representative and the Food Service Officer on a scheduled basis. All required inspections will be conducted and the results reported to the Commanding Officer via the Supply Officer.

h. Menu

(1) Separate menus will be prepared for the short order or "speed" line and for the full menu line. The speed line will include a variety of hot and cold sandwiches, dinner salads, and prepared-to-order meats. The full menu line will include at least three entrees. An appropriate variety of salads, vegetables, breads, desserts, and beverages will be available on both menus.

(2) A fixed menu with a good variety of choices will be used for the short order or speed line. The main menu line will be based on a seven day cycle with two entrees specified for each meal. The third entree for each meal on the main menu line will be rotated from among several dozen medium cost and a small variety of high cost alternatives.

5. Action

a. Implementation Procedures

(1) **Entitlement to Commuted Rations.** All personnel serving at Alameda in a full duty status and who are eligible for commuted rations should be placed on commuted rations. Unit commanders will submit a Military Pay Order (NAVCOMPT OCR-3060 (Single), OCR-3061 (Multiple Listing)) to the Navy Finance Office authorizing commuted rations for newly eligible personnel. Reporting personnel will be authorized BAS - separate rations upon arrival. The Reporting (arrival) Endorsement to Orders (Officer/Enlisted) (NAVCOMPT OCR-3068) should be used for this purpose. The appropriate Military Pay Order will state "AUTH RATS SEP" and cite DODPM Chap 1, Para 30101 as authority. All other personnel (hospitalized, AWOL, desertion, civil confinement, military confinement, or other not present for duty status) should not be placed on BAS-separate rations until they return to a duty status. Upon return of members to duty status, they should be converted to commuted rations using the appropriate Military Pay Order.

(2) **Reversion to RIK Entitlements.** All enlisted members should be encouraged to maintain BAS-separate rations entitlements. In the event a member does desire to subsequently revert to RIK status, Meal Pass (NAVSUP 1105) will be issued and a Military Pay Order will be submitted concurrently to stop the commuted rations.

(3) **Meal Pass Control.** The Enlisted Dining Facility will only recognize NAS Alameda meal cards issued on or after 1 March 1976.

(4) **CASH/A La Carte Experiment Identification Cards.** CASH/A La Carte Identification Cards issued for use in the initial portion of the test will no longer be required after 1 September 1976. No further reports on card distribution should be submitted. Remaining stocks of cards may be destroyed.

b. **Meals for Transient Enlisted Personnel.** All transients will be charged for meals unless they possess a valid Alameda Meal Pass or a pertinent set of original orders which can be endorsed to indicate rations were provided in kind.

(1) Personnel on leave will not be furnished rations in kind but will be required to pay cash for all food obtained. Alameda personnel normally receiving rations in kind may use the Leave Authorization as a meal pass, except during actual leave status, if the authorization is endorsed, "Entitled to Enlisted Dining Facility Meals Except During Period of Leave. Meal Pass No. _____."

(2) Personnel reporting to Alameda for temporary duty, whether on per diem or otherwise, will have their orders annotated, "NAS Alameda is the Navy test site for the CASH/A La Carte System. General Mess available for cash procurement of meals Commence COMRATS _____ and terminate _____." The appropriate Alameda personnel office will prepare and issue a Military Pay Order to authorize the COMRATS and provide the form to the enlisted member upon completion of duty.

(3) Personnel reporting to Alameda in a temporary duty or active duty for training status, whether on per diem or otherwise, who are not authorized to be paid commuted rations or who have insufficient funds to procure meals while at Alameda, may be issued a Meal Pass. If a Meal Pass is issued, the orders will be endorsed, "Government Messing utilized from _____ to _____." The Meal Pass must be reverted to the issuing activity when the tour of duty at Alameda is completed.

(4) Personnel without a Meal Pass and with a valid set of orders verifying transient status will be provided rations in kind and their original orders endorsed by the MAA for each meal issued, "Rations in kind provided at the NAS Alameda Enlisted Dining Facility for the _____ meal on _____." No more than four such endorsements will be entered on any set of orders. Personnel requiring RIK status for longer periods of time will obtain a Meal Pass from an Alameda personnel office.

(5) Enlisted personnel from other bases engaged in flight operations, either as crew members or passengers, may obtain meals at the Enlisted Dining Facility during stays of short duration. Meals without charge (constrained by the appropriate pro rata share of the basic daily food allowance) will be served at the Enlisted Dining Facility to transient enlisted personnel of the Armed Forces not receiving a commuted ration or a subsistence allowance. All other personnel will be charged for meals.

(a) The Air Terminal Duty Officer, Squadron Duty Officer, or an authorized representative will notify the Watch Captain (extension 4341) of the number of such personnel to be fed. The authorizing officer will also provide the Enlisted Dining Facility with a memorandum identifying personnel not in a travel status and who are in an RIK status on their home station. This will authorize continuance of RIK status at NAS Alameda for short durations.

(b) Transient flight personnel in a travel status will be required to present transient orders for endorsement if RIK are desired.

c. Meal Schedules

(1) The dining facility will be open seven days a week serving meals during the following hours:

Weekdays	Main Menu	Speed Line
Breakfast	0600-0745	None
Lunch	1100-1230	1100-1230
Supper	1630-1800	1630-1800
Holidays & Weekends	Main Menu	Speed Line
Breakfast	0630-0900	None
Lunch	1000-1230	1000-1230
Supper	(Reserve weekend only) 1630-1800	1630-1800
	(Reserve weekend only)	

(2) Tenant Commands and all station departments will arrange duties, watches, and meal hours of enlisted personnel to provide an even balance throughout the extended hours of service established by the schedule for the dining hall.

(3) Midnight meals will be available between 2230-2330 for enlisted members who stand night watches or perform other duties between 2000 and 0800 and are unable to attend a regularly scheduled meal at the Enlisted Dining Facility.

(a) Each tenant command or station department having personnel requiring midnight rations will submit a typewritten list of names on the Midnight Meal Request (12ND NASA 4061/50). This list must reach the Food Services Office (Building 3) no later than 1600 on the day on which rations are to be provided. These lists must be signed by the appropriate Administrative Office or Duty Officer.

(b) If it is necessary to add names to the original request, a memo listing the additional personnel and signed by the appropriate officer, will be provided to the duty mess management specialist prior to 2100.

(c) All requests must indicate the specific day for which midnight rations are being requested.

(d) Midnight rations will be a fixed menu at fixed prices. Charges for midnight rations will be equal to the charges for the regularly scheduled meal for which the midnight ration is a substitute. The policy will be to serve the same menu served for the previous dinner meal or an alternative breakfast menu if insufficient quantities of the dinner menu item are available.

(4) The Enlisted Dining Facility will be manned 24 hours a day. After the evening meal, the Watch Captain will be relieved by a single watch stander who will be responsible for Midnight Rations and Special Meals until relieved by the oncoming Watch Captain the following morning. The telephone number of the night watch is extension 2810.

d. Sales Verification Procedures

(1) The Food Service Officer is responsible for ensuring that only authorized personnel utilize the Enlisted Dining Facility, that proper verification of entitlements is accomplished, that a signature heat count is conducted and monitored for personnel eligible for RIK, and that all sales are properly recorded on the cash register. All Food Service personnel will be trained in appropriate control techniques.

(2) The Master-at-Arms is responsible for:

(a) Determining the eligibility of personnel passing through the serving line to eat in the Enlisted Dining Facility. The MAA will insure that patrons provide the cashier with the following identification:

1. **All personnel.** Military identification card or written authorization to eat in the general mess. (Guests will be accompanied by military sponsors and will be accommodated if the military sponsor is eligible.)

2. **RIK personnel.** A valid meal pass or a set of valid original orders which will be endorsed to indicate issue of rations in kind; or a leave authorization, providing a meal card number and indicating the member is not currently in a leave status. The names on the meal pass and on the military identification card must be the same.

(b) Obtaining all food items from personnel without sufficient funds to pay and returning those items to the Watch Captain.

(c) Obtaining a personal signature and legible meal pass number on the Meal Signature Record (NAVSUP 1291) for each RIK person passing through the mess line. Signatures will be recorded on categorized signature sheets. Exceptions to the policy on personal signatures are:

1. A person in charge of a draft or group of men will sign his name on the signature sheet and indicate in the margin the number in the group who are to be subsisted at the meal.

2. Personnel not passing through the mess line (i.e. picnic rations) will not sign the signature sheets.

(d) Providing a serialized meal ticket to each valid meal pass holder who signs the Meal Signature Record (NAVSUP 1291). The serialized meal ticket will be presented to the cashier at the time the price of the meal is tallied.

(e) Rendering all completed Meal Signature Records (NAVSUP 1291) to the Cash Collection Agent at the end of each meal.

(f) Maintaining order throughout the Enlisted Dining Facility, insuring the protection of government property and controlling the personal behavior of patrons.

(3) **The cash register operator** will tally all items selected by each member. In exchange for cash in the proper amount, the original receipt will be provided to the member. For meal card customers with serialized meal tickets, the total will be reduced by the amount of the pro rata share of the basic daily food allowance applicable to that meal. If there is an unpaid balance, the member will pay the difference. If there is no unpaid balance, no funds will be required of the RIK customer.

(a) Incorrect total charges will be signed on the original register tape receipt by the customer. The cash register operator will keep the signed incorrect receipt tape and repunch the tally of charges correctly. The original of the correct tape receipt will be given to the member.

(b) RIK personnel are permitted to sign the Meal Record for credit only once in any meal period. If such personnel traverse the meal line again, the copy of the original receipt from the first trip through the meal line will be provided to the cash register operator. If no unapplied balance in the pro rata share of basic daily food allowance applicable to that meal exists, the cash register operator will treat the sale as a normal cash sale. If an unapplied balance does exist, the register operator will void the original tape as incorrect and provide a new tally of charges. The member will have to pay the difference if the new total exceeds the pro rata share of the basic daily food allowance for that meal.

e. **Applicable Surcharge Rates.** The following surcharges will apply to all meals served at the Enlisted Dining Facility:

(1) **Standard Surcharges**

Meal	Officers & Civilian with Per Diem	Officers & Civilians without Per Diem	Children under 12
Breakfast	.80	.25	.20
Lunch	1.60	.25	.20
Dinner	1.60	.25	.20
Night Meal	.80 or 1.60*	.25	.20
Holiday Meal	2.40	.90	.50

*Depending on whether a breakfast or dinner menu is served.

(2) Surcharges do not apply to meals sold to members of organized non-profit youth groups. Authorized duty officers are also exempt from surcharges.

f. **Basic Daily Food Allowance.** Personnel not on commuted rations will be allowed to receive the amount of food equal in cost to the applicable pro rata share of the current authorization. Any cost over that earned by the Navy for serving the meal will be borne by the member. The following is the pro rata delineation of the current Basic Daily Food Allowance:

\$.55	Breakfast
\$1.10	Lunch
\$1.10	Dinner

(Midnight rations will be equal to either breakfast or dinner, depending on the menu provided.)

For example, if the member selects \$1.20 worth of food for lunch \$.10 will have to be paid out of the member's own pocket. However, if the member selects less than the authorized rate, the member will not be reimbursed for the difference.

g. Menu

(1) The menu will be submitted to the Commanding Officer for approval 10 days prior to the start of the applicable menu cycle.

(2) The menu will be published a minimum of six days prior to the start of the applicable menu cycle and distributed to all activities on the base. The daily menu is also available by dialing "CHOW".

(3) The Food Service Officer is authorized to make changes in the menu in order to insure that all leftovers are used and in order to minimize waste.

h. Picnic and Party Rations. The Food Service Officer is authorized to issue such rations deemed appropriate for picnics and other recreational events in lieu of a meal. A copy of the Party or Picnic Request (12ND NASA 1710/17) as required by the Recreation Division (Code 212) will be used to request these rations.

(1) An original and two copies of the 12ND NASA 1710/17 signed by the department head or Commanding Officer/Officer-in-Charge of the tenant command or office will be forwarded to the Recreation Division (Code 212) for approval. One copy will be retained by Code 212 and the approved original and one copy will be sent on to the Food Service Office. The Party or Picnic Request (12ND NASA 1710/17) must be submitted to Code 212 ten (10) days before the date the rations are required since the Food Service Division requires at least seven (7) days advance notice.

(2) As required by reference (d), the following procedures will be strictly followed:

(a) Rations will be requested only for organized picnics and recreational events and not for recreation trips such as hunting, fishing, and hiking.

(b) Because of the constraints of the Enlisted Dining Facility, the total number of picnics on a single day will be limited to an aggregate number of 300 people. All requests will be handled on a first-come basis.

(c) All items requested for the party or picnic will be sold at the current price of the item. Applicable surcharges will be included in the price. Requirements for personnel on commuted rations must be separately identified.

(d) Cash payments will be turned into the Food Service Office the work day prior to picking up rations. Total cost may be obtained in advance from the Food Service Office. A signed Recapitulation of Meal Record (NAVSUP 1292) will be provided by the responsible officer to document issues to personnel on RIK.

(e) Department/office heads and commanding officers/officers-in-charge of tenants or commands, or their designated representatives, shall insure that these rations are not sold or consumed by other than authorized personnel.

i Coffee Sales

(1) **Sales of liquid coffee.** The Enlisted Dining Facility will make bulk issues of liquid coffee to authorized personnel in accordance with the following instructions:

(a) Prices will be based on the number of portions sold at the selling price per portion used in all cash sales in the dining hall. Appropriate amounts of cream and sugar will be included in the price.

(b) Sales will be made to the above personnel on presentation of a sanitary thermos or coffee container furnished by the activity receiving the coffee. Three hours advance notification is required.

(2) **Sales to coffee messes.** Coffee, tea, sugar, and cream, or substitutes may be issued to authorized coffee messes. Sales will be recorded at last receipt price and a surcharge of 5% will apply. The provisions of paragraph 6221 of reference (d) pertain. Sales will be made from 0900-1100 on the first working day of each week.

j. Obtaining Special Meals

(1) Flight and intransit meals

(a) Flight meals are aircraft flight rations which may be furnished to members of the Naval service, dependents and to civilian employees of the Department of the Navy while in travel status or actually engaged in flight operation.

(b) Intransit meals are box meals furnished for consumption by enlisted personnel of the military services in a group travel status, including air travel.

(c) The Food Service Officer will issue special meals only on authenticated Special Meal Request/Receipt (NAVSUP Form 340) and only in the number requested. The applicable basic charges and surcharges will be collected from the officer in control of the flight.

(d) The Air Terminal Officer, Squadron Duty Officer, or officers exercising operational control of the flight are responsible for:

1. Determining eligibility of each person requesting special meals, whether sold for cash or issued in kind.

2. Preparation, in triplicate, of the NAVSUP Form 340. One signed copy of the NAVSUP Form 340 will be forwarded to the Food Service Office at least three hours prior to the time the special meals will be picked up from Food Service. If detailed information about the categories of personnel requiring special meals is not immediately available, the copy may show only the total number of meals requested. Special meals will never be issued prior to receipt of a signed request document.

3. Collection of charges and surcharges from individuals required to buy special meals sold for cash.

4. Endorsing orders for special meals made available to enlisted men receiving per diem.

5. Completion of the original Special Meal Request/Receipt (NAVSUP Form 340), showing the breakdown of special meals requested and obtaining signatures of foreign personnel on the reverse.

(e) When a flight or operation is cancelled or other valid circumstances preclude the use of special meals requested and prepared, they will be returned to the Food Service Office. Special Meals will not be returned for credit if more than three hours have elapsed since they were issued.

(2) **Bag Lunches.** Bag lunches are authorized for issue to eligible personnel when assigned to duty that prevents them from returning to the Enlisted Dining Facility for a regular meal. Requests for bag lunches will be submitted to the Food Service Officer on the Special Rations Issue Request (12ND NASA 4061/34) three hours prior to time of pick-up or 1600 daily, whichever is earlier. It is the responsibility of the requesting officer to determine who is eligible for bag lunches. Accepting conditions of return are the same as those for flight and intransit meals.

k. **Inspection of the Enlisted Dining Facility.** The Senior Medical Officer, NAVREGMEDCEN, Alameda Branch Clinic or his designated representative and the Food Service Officer, Supply Department, will establish and maintain a program for the inspection of the Enlisted Dining Facility in compliance with references (e) and (f). Frequently, such inspections shall be conducted on an unannounced basis. Reports of the results of these inspections shall be submitted to the Commanding Officer via the Supply Officer.

(1) The Medical Representative, designated by the Senior Medical Officer to inspect subsistence items and spaces in the Enlisted Dining Facility shall:

(a) Inspect for quality all perishable subsistence items obtained for the Enlisted Dining Facility. When required, inspect other food items and report to the Food Service Officer any that are unfit for use or likely to cause illness.

(b) Inspect for lack of care or cleanliness in the preparation of food which may be injurious to health, and any lack of purity of cooking or drinking water.

(c) Inspect weekly the sanitary condition of spaces where food is prepared and served and all subsistence storerooms.

(d) Furnish the Commanding Officer a letter report via the Supply Officer, on the sanitary condition in the Enlisted Dining Facility. The Medical Representative's Sanitation Inspection Record is assigned Report Symbol NASA 6240-1.

(2) The Food Service Officer will schedule daily and weekly inspections of personnel and spaces and insure discrepancies are corrected in a timely fashion.

l. Sampling of Meals in the Enlisted Dining Facility

(1) Reference (d), paragraph 1030-1, requires that each meal served in the Enlisted Dining Facility will be sampled by an officer designated by the Commanding Officer for that purpose.

(2) The Naval Air Station, Alameda, Officer-of-the-Day is hereby designated to sample meals in the Enlisted Dining Facility, as follows:

(a) Be present at the serving of all meals.

(b) Take his/her meals in the Enlisted Dining Facility during regular hours.

(c) Prepare the Daily Enlisted Dining Facility Inspection Report (12ND NASA 4061/51) to cover the quantity, quality, and service of the food and any complaints received.

(d) Sign and submit the original of the form to the Supply Officer, via the Food Service Officer. The Supply Officer will forward all reports to the Executive Officer not less than once every ten days for his review.

(3) Duty Officers from tenant commands are invited to sample meals at the Enlisted Dining Facility and to report results using the Daily Enlisted Dining Facility Inspection Report (12ND NASA 4061/51).

m. **Operations.** Tenant commands whose personnel utilize the NAS Alameda Enlisted Dining Facility are enjoined to comply with the provisions of this directive.

n. **Audit of Head Count.**

Monthly, all signature sheets and Recapitulation of Meal Records will be submitted to an audit board for verification. Verified records will be retained by the Food Service Officer and will substantiate the Ration and Sales Report (NAVSUP 1357) which must be prepared and submitted monthly to the Navy Food Service Systems Office.

o. **Financial Management.** In accordance with reference (d), monthly reports of sales and rations will be provided on the Ration and Sales Report (NAVSUP Form 1357) and the quarterly operating statement will be reported on the Enlisted Dining Facility Operating Statement (NAVSUP 1358). Both reports will be developed by the Food Service Officer and rendered to the Navy Food Service Systems Office.

6. Forms and Reports

a. **Forms**

(1) The following forms are stocked in the Military Personnel Division, Building 2:

(a) Meal Pass (NAVSUP Form 1105).

(b) Military Pay Order (Single) (NAVCOMPT OCR-3060).

(c) Military Pay Order (Multiple Listing) (NAVCOMPT OCR-3061).

(d) Reporting (Arrival) Endorsement to Orders (Officer/Enlisted) (NAVCOMPT OCR-3068).

(2) The following forms are stocked in Food Service Division, Building 3:

- (a) Meal Signature Record (NAVSUP 1291).
- (b) Recapitulation of Meal Record (NAVSUP 1292).
- (c) Daily Enlisted Dining Facility Inspection (12ND NASA 4061/51).
- (d) Ration and Sales Report (NAVSUP 1357).
- (e) Enlisted Dining Facility Operating Statement (NAVSUP 1358).

(3) The following forms are stocked in Supply Department, Office Supplies and Forms Issue Store, Building 8-1:

- (a) Midnight Meal Request (12ND NASA 4061/50).
- (b) Party or Picnic Request (12ND NASA 1710/17).
- (c) Special Meal Request/Receipt (NAVSUP Form 340).
- (d) Special Rations Issue Request (12ND NASA 4061/34).

b. Reports

(1) Report Symbol NAS Alameda 6240-1 applies to the Medical Representative Sanitation Inspection Record.

(2) Report Symbol NAVSUP 7330-47 applies to the Ration and Sales Report (NAVSUP 1357).

(3) Report Symbol NAVSUP 7330-8 applies to the Enlisted Dining Facility Operating Statement (NAVSUP 1358).

Distribution:

List I: B
List II: B
List III: B

H. F. SIGMON
By direction

APPENDIX 2

to

ENLISTED DINING FACILITY HANDBOOK

A. Dining Facility Stock Record	12ND NASA 4061/62A
B. Cook's Worksheet	12ND NASA 4061/62
C. Receipt Cost Calculation	12ND NASA 4061/62C
D. Watch Captain's Requisition	12ND NASA 4061/62B
E. Price Reduction Record	12ND NASA 4061/62E
F. Discards of Prepared Food	12ND NASA 4061/62M
G. Meal Signature Record	NAVSUP 1291
H. Recapitulation of Meal Record	NAVSUP 1292
I. Receipt/Transfer Cash Record	12ND NASA 4061/62G
J. Cash Balance Sheet	12ND NASA 4061/62H
K. Meal Cash Balance/Customer Analysis	12ND NASA 4061/62N
L. Meal Cash Balance/Customer Analysis	12ND NASA 4061/62NT
M. Daily Activity Report	12ND NASA 4061/62R
N. Dining Hall Control Summary, Section I, Financial Status	12ND NASA 4061/62P
O. Dining Hall Control Summary, Section II, Operating Analysis	12ND NASA 4061/62Q
P. Ration and Sales Report	NAVSUP 1357
Q. Enlisted Dining Facility Operating Statement	NAVSUP 1358
R. Ration Control Record	12ND NASA 4061/62S

SDINST 11103.1
14 June 1976

INGREDIENTS	QUAN/HD	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST	UNIT PRICE	COST
TOTAL COST HD PORTIONS									
COST INDIVIDUAL PORTION									
PERCENTAGE COST									
UNIT PRICE INDIV. PORTION									
TOTAL INITIALS									

RECIPE COST CALCULATION 12ND NASA 4001/82C TRIAL (12-75)

a2-C

SDINST 11103,1
14 June 1976

WATCH CAPTAIN'S REQUISITION
12ND NASA 4061/628 TRIAL (REV. 2-76)

MIA.						SERIAL		
DATE								
END OF INVENTORY A	ITEM B	UNIT C	AMOUNT DRAWN D	RETURNED E	USED F	UNIT PRICE G	TOTAL H	
I CERTIFY THAT I HAVE RECEIVED THE ITEMS LISTED IN COLUMN D, AND RETURNED THE ITEMS LISTED IN COLUMN E IN THE QUANTITIES INDICATED. I CERTIFY THAT I HAVE ISSUED THE ITEMS LISTED IN COLUMN D AND RECEIVED BACK THE ITEMS LISTED IN COLUMN E IN THE QUANTITIES INDICATED. SIGNATURE OF JO/D _____ SIGNATURE OF WATCH CAPTAIN _____						TOTAL		

SDINST 11103.1
14 June 1976

PRICE REDUCTION RECORD
12ND NASA 4061/82E TRIAL (12-75)

PRICE REDUCTION BELOW NET RAW FOOD COST			DATE
ITEM	CORRECT PRICE	REDUCED PRICE	REMARKS

SIGNATURE OF MESS MANAGEMENT SPECIALIST MAKING PRICE CHANGE

SIGNATURE OF FOOD SERVICE OFFICER

SDINST 11103.1
 14 June 1976

DISCARDS OF PREPARED FOOD
 12ND MASD 4061/62M (REV. 2-76) TRIAL

PERIOD

THROUGH

DATE	RECIPE NUMBER	ITEM NAME	NO. OF PORTIONS	SELLING PRICE	TOTAL VALUE	REASON FOR LOSS	FOOD SERVICE OFFICER (Signature)
TOTAL MONEY VALUE							

SDINST 11103.1
14 June 1976

MEAL SIGNATURE RECORD (NOB1)
NAVSUP FORM 1201 (REV. 2-72)

DATE

SHEET NO

MESS LINE (See 2nd etc.)	CATEGORY OF PERSONNEL (Check applicable block)	<input type="checkbox"/> NAVY REGULAR <input type="checkbox"/> NAVY CADETS <input type="checkbox"/> ARMY REGULAR <input type="checkbox"/> COAST GUARD <input type="checkbox"/> AIR FORCE NATIONAL GUARD <input type="checkbox"/> NAVY RESERVE <input type="checkbox"/> MARCORPS REGULAR <input type="checkbox"/> ARMY RESERVE <input type="checkbox"/> CIVILIAN APPLICANTS <input type="checkbox"/> FOREIGN <input type="checkbox"/> NAVY ROTC <input type="checkbox"/> MARCORPS RESERVE <input type="checkbox"/> ARMY NAT L GUARD <input type="checkbox"/> AIR FORCE REGULAR <input type="checkbox"/> OTHER (Specify)									
		SIGNATURE (First initial and last name)	MEAL PASS NUMBER	COMMAND/UNIT	SIGNATURE (First initial and last name)	MEAL PASS NUMBER	COMMAND/UNIT				
1					26						
2					27						
3					28						
4					29						
5					30						
6					31						
7					32						
8					33						
9					34						
10					35						
11					36						
12					37						
13					38						
14					39						
15					40						
16					41						
17					42						
18					43						
19					44						
20					45						
21					46						
22					47						
23					48						
24					49						
25					50						

SDINST 11103.1
14 June 1976

RECAPITULATION OF MEAL RECORD (4061)

NAVJUP FORM 1282 (REV. 8-73)

PERIOD OR DATE

CATEGORY OF PERSONNEL		BREAKFAST	LUNCH	DINNER
NAVY	REGULAR			
	RESERVE			
	ROTC			
	CADETS			
MARINE CORPS	REGULAR			
	RESERVE			
ARMY	REGULAR			
	RESERVE			
	NATIONAL GUARD			
COAST GUARD				
CIVILIAN APPLICANTS				
AIR FORCE	REGULAR			
	NATIONAL GUARD			
FOREIGN				
OTHER (Specify)				
1ST SUBTOTAL				
CASH SALES				
2ND SUBTOTAL				
CONTRACT PERSONNEL AND PERSONNEL NOT PASSING THROUGH MESS LINE				
GRAND TOTAL				
CONVERSION FACTOR		20%	40%	40%
RATION CREDIT				
REMARKS				TOTAL CREDIT

STATION AUDIT BOARD

The undersigned certify the above to be, for the period specified, an accurate recapitulation of general mess meals received for.

SIGNATURE AND RANK, RATE, OR GRADE

SIGNATURE AND RANK, RATE, OR GRADE

SIGNATURE AND RANK, RATE, OR GRADE

SDINST 11103.1
14 June 1976

RECEIPT TRANSFER CASH RECORD
12ND NASA 4061/626 TRIAL (REV. 2-76)

1. TOTAL FUND		§
DENOMINATIONS	NUMBER	AMOUNT
2. BILLS	§ 20	§
3.	10	
4.	5	
5.	2	
6.	1	
7. SILVER (LOOSE)	§ 1.00	
8.	.50	
9.	.25	
10.	.10	
11.	.05	
12.	.01	
13. SILVER (ROLLS)	§ 1.00	
14.	.50	
15.	.25	
16.	.10	
17.	.05	
18.	.01	
19. TOTAL (line 19 must equal line 1)		§

I acknowledge receipt of \$ _____ of U.S. Government funds for
which I hold myself accountable

RECEIVED FROM _____ WITNESS _____

RECEIVED BY _____ WITNESS _____

a2-I

SDINST 11103.1
14 June 1976

CASH BALANCE SHEET
12ND NASA SQM/62M TRIAL (12-75)

COLUMN A		COLUMN B		COLUMN C		COLUMN D
TOTAL BEGINNING	CHANGE FUND	CHANGE FUND	CHANGE FUND	CHANGE FUND	CHANGE FUND	
1. CHANGE FUND	1. CHANGE FUND	1. CHANGE FUND	1. CHANGE FUND	1. CHANGE FUND	1. CHANGE FUND	
DENOMINATION NO	AMOUNT	DENOMINATION NO	AMOUNT	DENOMINATION NO	AMOUNT	
2. 1¢		1¢		1¢		-VOIDS
3. 5¢		5¢		5¢		NET REGISTEP SALES
4. 10¢		10¢		10¢		
5. 25¢		25¢		25¢		
6. 50¢		50¢		50¢		
7. \$1		\$1		\$1		
8. \$2		\$2		\$2		
9. \$5		\$5		\$5		
10. \$10		\$10		\$10		ENDING CASH
11. \$20		\$20		\$20		-FUNDS TRANSFERRED (CHANGE FUND)
12. SUBTOTAL		SUBTOTAL		SUBTOTAL		SUBTOTAL (CASH TAKEN IN)
TYPE POLL NO		TYPE POLL NO		TYPE POLL NO		+ CREDIT FOR MEAL CARD SIG.
13. 1¢		1¢		1¢		TOTAL
14. 5¢		5¢		5¢		-CASH OVER
15. 10¢		10¢		10¢		+CASH SHORT
16. 25¢		25¢		25¢		TOTAL CASH SETTLEMENT
17. 50¢		50¢		50¢		
18. \$1		\$1		\$1		
19. TOTAL		TOTAL		TOTAL		
20. 12ND NASA 4081/62I RECEIPT		CASHIER'S SIGNATURE		12ND NASA 4081/62I TURNED IN		CCS SIGNATURE RECEIPTING OF CASH TAKEN IN PICK-UP
CASHIER'S SIGNATURE		CCS SIGNATURE		CASHIER'S SIGNATURE		RECORDANT'S SIGNATURE
REMARKS						

SDINST 11103.1
14 June 1976

MEAL CASH BALANCE/CUSTOMER ANALYSIS
L2ND NASH 5081/620 TRIAL (2-76) TEMPORARY
DATE

MEAL

CUSTOMER HEADCOUNT ANALYSIS OF MEAL

	1. TOTAL MEALS SERVED	2A. TOTAL SIGNATURES	2B. DUPLICATE SIGNATURES	2C. RIK TOTAL (2A-2B)	3. GUESTS	4. COMBATS MEALS (1-2C-3)	5. TOTAL CASH MEAL (1-2C)	6. 15¢ SALES & SECONDS
1. TOTAL MEALS SERVED								
2A. TOTAL SIGNATURES								
2B. DUPLICATE SIGNATURES								
2C. RIK TOTAL (2A-2B)								
3. GUESTS								
4. COMBATS MEALS (1-2C-3)								
5. TOTAL CASH MEAL (1-2C)								
6. 15¢ SALES & SECONDS								
SURCHARGE ANALYSIS								
7A. SURCHARGE REGULAR								
7B. SURCHARGE CHILDREN								
7C. PER DIEM SURCHARGE B								
7D. PER DIEM SURCHARGE D								

MEAL SUMMARY OF CASH SALES

	REG 1	REG 2	REG 3	REG 4	TOTAL	
8. NET REGISTER SALES	\$	\$	\$	\$	\$	8. NET REGISTER SALES
9. TOTAL SURCHARGES (7A+7B+7C+7D)						9. TOTAL SURCHARGES (7A+7B+7C+7D)
10. CASH FOOD SALES (8-9)						10. CASH FOOD SALES (8-9)
11A. RIK SALES - DISCOUNTS						11A. RIK SALES - DISCOUNTS
11B. RIK SALES - COUPON						11B. RIK SALES - COUPON
11C. TOTAL RIK CREDIT SALES (11A+11B)						11C. TOTAL RIK CREDIT SALES (11A+11B)
12. TOTAL FOOD SALES (10+11C)						12. TOTAL FOOD SALES (10+11C)
13. ENDING CASH						13. ENDING CASH
14. CHANGE FUND						14. CHANGE FUND
15. CASH TAKEN IN (13-14)						15. CASH TAKEN IN (13-14)
16. CASH OVER (-)						16. CASH OVER (-)
17. CASH SHORT (+)						17. CASH SHORT (+)
18. RECORDED CASH INCOME						18. RECORDED CASH INCOME

VERIFIED BY

SDINST 11103.1
14 June 1976

DAILY ACTIVITY REPORT
12ND NASA 4061/62R (TRIAL) (2-76)

REPORT NO.	DINING HALL NO.
------------	-----------------

CUSTOMER HEADCOUNT ANALYSIS

	B 20%	L 40%	S 40%	M 40%	TOTAL
1. TOTAL MEALS SERVED					
2. BIRTHDAY					
3. WEDDING RA (EXCEPTED AT GOV'T EXPENSE)					
4. KIDS					
5. MILITARY					
6. OTHER SPECIALS					
7. TOTAL SPECIAL AT MEALS					

ACCOUNTING ANALYSIS

8. NET REGISTER SALES					
9. TOTAL RECHARGES					
10. ASH FOOD SALES					
11. TOTAL RATION CREDIT SALES					
12. TOTAL FOOD SALES					
13. CASH TAKEN IN					
14. ASH OVER					
15. ASH SHORT					
16. RECORDED CASH INCOME					
19. AVERAGE SALES PER MEAL (12 ÷ 1)					

OPERATIONS ANALYSIS

20. TOTAL FOOD SALES (12)					
21. NET STOREROOM ISSUES					
22. DAILY MONETARY GAIN/LOSS (20-21)					
23. TOTAL FOOD SALES (10)					
24. RATION CREDITS (20 x BDFA)					
25. TOTAL INCOME ALLOWANCES (23 + 24)					
26. OVERISSUE/UNDERISSUE (25-21)					
27. GAINS OR LOSSES DUE TO SIGNATURES (24-11C)					

28. REMARKS

DATE

BY

SDINST 11103.1
14 June 1976

DINING HALL CONTR'L Summary, Sect 00
12ND NASA 0081/620 (TRIAL) REV 4-76

NAS ALAMEDA, CA

00236

SECTION II: OPERATING ANALYSIS													
DAY	RTR	ADJ	SALES	EXP	REVENUE	NET	PROFIT	CONTR	AMT	STAFF	AMT	STAFF	AMT
NO	ALLOWANCES	DE	TRAVEL	MATERIALS	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
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21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
TOTAL													

SOINST 11103.1
14 June 1976

RATION AND SALES REPORT
NAVSUP FORM 1357 (SPT) (REV. 8-74) S/N 019&LF-501-3570

NAVSUP REPORT 7330-47

PERIOD

THRU

FACILITY
OPERATED
(Or. of ship)

UIC

CASH STATEMENT

RECEIPTS / WITH CHARGE	AMOUNT (Nearest dollar)	TYPE OF PERSONNEL AND CODE	RATION'S FED
RATION BREAKDOWN			
NAVY REGULAR <input checked="" type="checkbox"/>	1		
OTHER			
Reserve sold for cash	2		
Reserve	3		
ROTC <input checked="" type="checkbox"/>	4		
Midshipman (Naval Academy)	5		
Regular	6		
Reserve	7		
Regular	8		
Reserve	9		
National Guard <input checked="" type="checkbox"/>	10		
Regular	11		
National Guard <input checked="" type="checkbox"/>	10		
Coast Guard <input checked="" type="checkbox"/>	12		
F or eqs <input checked="" type="checkbox"/>	13		
	14		
TOTAL OTHERS PERSONNEL <input checked="" type="checkbox"/>	15		
GRAND TOTAL <input checked="" type="checkbox"/>	16		

1 Underreported sales beginning of month/patrol cycle (Line 5 previous month brought forward) \$

2 Breakdown of sales

a Sale of enlisted dining facility meals (Excluding surcharges) \$

b Sale of special meals (NAVSUP FORM 1340) \$

c Sale of bulk food items \$

d Total sales (Sum of a, b, and c) \$

e Surcharges on enlisted dining facility meals \$

f TOTAL (Sum of d and e) \$

3 Cash deposited with disbursing officer \$

4 Other sales of meals (Collection on STD FORM 1090, DD FORMS 114 & 1131) \$

5 Underreported sales end of month/patrol cycle (1 + 2f - 3 - 4) \$

NOTE: ALL VALUES ROUNDED TO NEAREST DOLLAR

DISBURSING OFFICER (Typed name) _____ DATE _____ (Rank) _____

of \$ _____ representing deposits described above, which will be included in my statement of accountability for the period of _____

COUNTRY CODE _____ ACCOUNTING CLASSIFICATION _____

HEAD LAST MONTH CURRENT FY	APPRO PRIATION	SUB HEAD	CLASS	ORJ	SURTAU	SUB	AUT/INM	TRAIL	PROP	COST CODE	AMOUNT
SALES (Item 3 2a)	1453	2241	7				00031	3C			\$
SURCHARGES (Item 2a)	1453	2202	7				00022	3C			\$

FOOD SERVICE OFFICER (Signature) _____ DATE _____

1/ Total entries on this form for three months of quarter must agree with the NAVSUP Form 1338 for the same period

2/ Prepare certification in accordance with Food Service Management NAVSUP Publication 88a, Chapter 11

ORIGINAL

SDINST 11103.1
14 June 1976

ENLISTED DINING FACILITY OPERATING STATEMENT (7330)
NAVSUP FORM 1358 (REV. 8-76) 5 MAR 1976

NAVSUP REPORT 7330-8

Activity Area and routing address

NOTE: ROUND ALL VALUES TO NEAREST DOLLAR

BALANCE SHEET		RATION STATEMENT	
RECEIPTS	AS IS	TYPE OF PERSONNEL	RATIONS ALLOWED
BALANCE BROUGHT FORWARD	\$	NAVE (Enlisted)	2
RECEIPTS WITH CHARGE		TOTAL OTHER PERSONNEL	2
RECEIPTS WITHOUT CHARGE		TOTAL RATIONS	2/
TOTAL	\$	COMPUTATION OF ALLOWANCES-FINANCIAL STATEMENT	
EXPENDITURES	VALUE	BASIC ALLOWANCE	RATIONS
STORES CONSUMED	\$		1
SPECIAL MEALS			
SURVEY & LOSS WITHOUT SURVEY			
SALE OF MILK FOOD ITEMS			
TRANSFERS WITH REIMBURSEMENT			
TRANSFERS WITHOUT REIMBURSEMENT			
BALANCE ON HAND			
PRICE ADJUSTMENT			
TOTAL	\$	SPECIAL/SUPPLEMENTAL ALLOWANCES	
		SUMMARINES	
		TOTAL ALLOWANCES	
		STORES CONSUMED (from "EXPENDITURES")	
		OVER/UNDER ISSUE	
			\$

NOTES

- Balance on hand previous report
- Equals the sum of the 3 monthly - Part on and Sales Reports
- Part - TOTAL RATIONS - figure from the - RATIONS FED - column

Any remarks should be placed on the reverse side of this form

The figures contained in the "RATIONS ALLOWED" column are correct to the best of my knowledge and belief

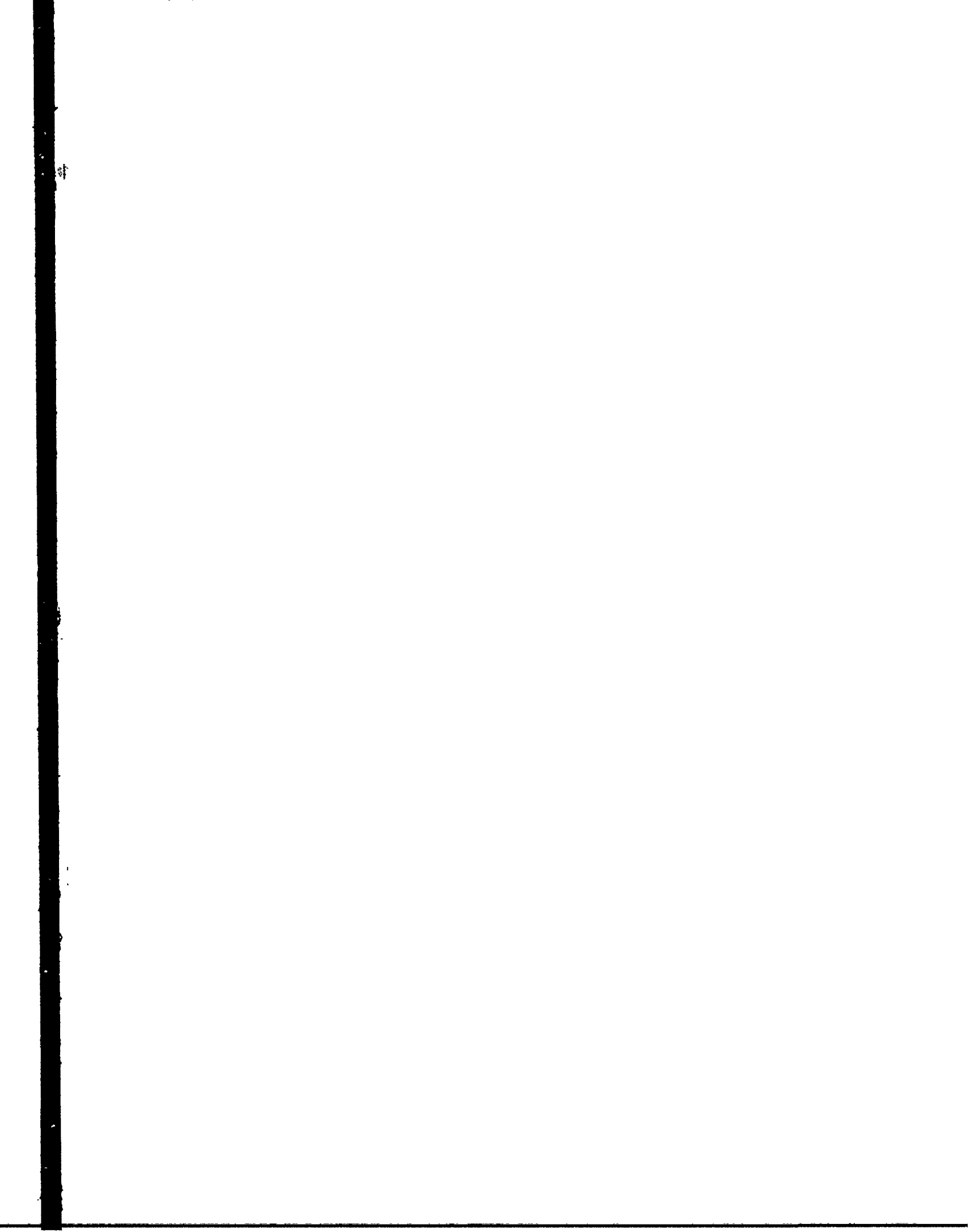
EXECUTIVE/MANAGEMENT OFFICER (Signature) (Date)

I CERTIFY that the above information is correct to the best of my knowledge and belief

CERTIFIED BY (Signature) (Rank and Title) (Date)

SDINST 11103.1
14 June 1976

DATE	A NAVY		B MARINES		C MISC	D RIK TOTAL PATIIONS	E BASIS OF DINING HALL HAS ALAMEDA, CA				TOTAL	F TYPE OF RECORD				
	REG	RES	REG	RES			BREAKFAST	LUNCH	DINNER	W/D BATS		BREAKFAST	LUNCH	DINNER	DAILY	INCREMENTAL
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
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26																
27																
28																
29																
30																
31																
TOTAL																



APPENDIX B

ALAMEDA INTERVIEW PROTOCOLS: PRE- AND POST-A LA CARTE

INTERVIEW PROTOCOL FOR PRE-TEST II AT NAS ALAMEDA

1. Are you currently receiving COMRATS? (no=0; yes=1)
2. Unit
3. Age (to the nearest year)
4. Time in service (to the nearest year)
5. Are you planning to make a career of the military?
(no=0; yes=1; uncertain=0)
6. Are you married and currently living with your spouse? (no=0; yes=1)
7. How many meals do you eat during a typical week, Monday through Sunday, regardless of where you eat them?
8. During a typical week, where do you eat most of these meals?
9. Are there any other places where you typically eat more than one meal a week?
(If not, enter a Z.)
10. How many meals do you eat in the dining hall during a typical week?
11. How many meals have you eaten in the dining hall during the last two weeks?
- * 12. How many of these have been short order-type meals?
- * 13. How much money do you typically pay for a noon day meal?
- * 14. How long do you typically have to wait from the time that you enter the dining hall to the time that you sit down at a table? (in minutes)
15. Do you eat any more or less often toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2)
16. Is the amount of money you pay for a meal any more or less toward the end of a pay period than at the beginning of the period? (no=0; less=1, more=2)

*Ask only of those who have eaten in the dining hall during the last two weeks. Emphasize that their answers should be based only on these two weeks.

17. Do you eat in the dining hall any more or less often toward the end of a pay period than at the beginning of the period? (no=0; less=1; more=2)
18. Are there any other food habits which change over the pay period?
(If not, enter a Z.)
19. When you came in the Navy, you made a contract with the government in which they agreed to provide you with subsistence. How satisfied are you with their effort to fulfill this agreement? Please use this chart to answer.
20. If you could change any one thing in how the Navy runs its food system, what would it be?
21. What is the main reason you don't eat in the dining hall more often?
22. If this were changed, would you eat in the dining hall more often?
(no=0; yes=1)
 23. Are there any other things which could be done to get you to eat more meals in the dining hall? (no=0; yes=1)
 24. What is that?
 25. Is there anything which could be done to get you to eat in the dining hall more often? (no=0; yes=1)
 26. What is that?
- *27. How would you rate this dining hall in comparison to other ones you've seen? Please use this chart to answer.
- *28. How would you rate the preparation of food in this dining hall in comparison to other dining halls you've eaten in? Please use this chart to answer.
- *29. How would you rate the number of different foods available at a given meal in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer.
- *30. How would you rate the variety of foods offered day after day in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer.

31. Do you know what the current daily COMRATS rate is? (n=0; yes=1)
32. What is it?
33. Is \$2.53 per day enough for you to eat adequately on a typical day? Please use this chart to answer.
34. According to your present eating habits, how much money would you need to eat adequately on a typical day?
34. Have you heard about any changes in the food system here at Alameda which are planned for the near future? (no=0; yes=1)
36. What have you heard?
37. Would you prefer to remain on (go on to) COMRATS or to go on to (remain on) RIK, where you are authorized to eat in the dining hall for free? (COMRATS=0; RIK=1)
38. Why?
39. Would you support a policy which would place all seamen on COMRATS?
40. Why not?
- RIK's 41. If you were on COMRATS, would you eat in the dining hall any more or less often than you do now? (no=0; less=1, more=2)
42. Would you prefer the present system in the dining hall where you pay a flat single price for the entire meal or a system where you would pay for the things you took? You can assume that a "normal" meal would cost the same under both systems. (item=0; meal=1; no preference=2)
43. Why?
44. (Assuming you were on COMRATS) Would you eat in the dining hall any more or less often than you do now if pricing was by the item rather than by the meal? Again you may assume that a "normal" meal would cost the same under both systems. (n=0; less=1; more=2)

45. Do you think you would eat in the dining hall any differently than you do now if pricing was by the item rather than by the meal? (no=0; yes=1; don't know=2)

46. What do you think would change?

Note: An X should be entered any time a question is not asked. If a question is asked and, for whatever reason, not answered, a Z should be entered.

INTERVIEW PROTOCOL FOR POST-TEST AT NAS ALAMEDA

1. Unit
2. How long have you been stationed at NAS Alameda? (Pre-CASH/A La Carte, 1 March 78-0; Post CASH/A La Carte-1)
3. Have we talked to you before or have you previously taken our written survey about the dining hall? (no-0, interview-1, survey-2, both-3)
4. Were you receiving separate rations before coming to Alameda? (...before they instituted the new CASH/A La Carte system?) (no-0, yes-1)
5. How old are you? (Round to the nearest year.)
6. How long have you been in the Navy? (Round to the nearest year.)
7. are you planning to make a career of the military? (no-0, yes-1, uncertain-2)
8. Are you married and currently living with your spouse? (no-0, yes-1)
9. During a typical week, where do you eat most of your meals?
10. Are there any other places where you typically eat at least one meal a week? (If not, enter a Z.)
 - * 11. Do you eat any meals in the dining hall during a typical week? (no-0, yes-1)
 - * 12. Have you eaten in the dining hall since 1 March when they started this new CASH/A La Carte system? (no-0, yes-1)
13. Concerning the dining hall, are you eating there any more or less often since they went to this new CASH/A La Carte system? Please use this chart to answer.
 - 14. That means there must be someplace where you're eating less (more) often than before. Where is that?
 - 15. What is it about the new system that caused you to go less (more) often?

*These should be asked only when the information has not been provided in response to a previous question. If it has, enter the appropriate information automatically.

16. Would you prefer to remain on COMRATS or to have a meal pass where you could get in the dining hall for free? (COMRATS-0, RIK-1)
17. Why?
- *RIK 18. Has being on COMRATS caused you to eat in the dining hall any more or less often than before? (no-0, less-1, more-2)
- RIK 19. If you were taken off COMRATS, would you be any more or less likely to reenlist than you are now? (no-0, less-1, more-2)
20. Do you support, oppose, or don't care about this policy of having everyone on COMRATS? (oppose-0, support-1, don't care-2)
21. Why?
22. Would you prefer to keep this new item-pricing system where you pay for the foods you take or to go back to the meal-pricing system where you paid a flat price for the whole meal, or don't you care? (item-0, meal-1, don't care-2)
23. Why?
- * 24. Has this item-pricing system caused you to eat in the dining hall any more or less often than before? (no-0, less-1, more-2)
25. If they reverted to meal-pricing, would you be any more or less likely to reenlist than you are now? (no-0, less-1, more-2)
26. Do you eat any differently in the dining hall now in comparison to before item-pricing began, e.g., has the amount of food you eat changed or have the types of foods you eat changed? (no-0, yes-1)
27. What has changed?
28. When you came in the Navy, you made a contract with the government in which they agreed to provide you with subsistence. How satisfied are you with their effort to fulfill this agreement? Please use this chart to answer.
29. What is the main reason you don't eat in the dining hall more often?
30. If this were changed, would you eat in the dining hall more often? (no-0, yes-1)

*As before (see previous page)

31. Are there any other things which could be done to get you to eat more meals in the dining hall? (no--0, yes--1)

32. What is that?

33. Is there anything which could be done to get you to eat in the dining hall more often? (no--0, yes--1)

34. What is that?

35. If they had a number of dining halls spread over the station, instead of one main one, would you eat in a dining hall more often than you do now? (no--0, yes--1)

**36. How would you rate this dining hall in comparison to other ones you've seen? Please use this chart to answer.

**37. Is it any better or worse now than before CASH/A La Carte? (no--0, worse--1, better--2)

38. What is better (worse) about it?

**39. How would you rate the preparation of food in this dining hall in comparison to other dining halls you've eaten in? Please use this chart to answer.

***40. Is it any better or worse now than before CASH/A La Carte? (no--0, worse--1, better--2)

**41. How would you rate the number of different foods available at a given meal in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer.

***42. Is it any better or worse now than before CASH/A La Carte? (no--0, worse--1, better--2)

**43. How would you rate the variety of foods offered day after day in this dining hall in comparison to other dining halls in which you've eaten? Please use this chart to answer.

**44. Is it any better or worse now than before CASH/A La Carte? (no--0, worse--1, better--2)

**Ask only of those persons who have eaten in dining hall since 1 March.

***Ask only of those who have been at Alameda prior to 1 March and also have eaten in dining hall.

****50.** How much do you spend for a typical noon meal in the dining hall?

COMRATS 51. Generally speaking, are you paying any more or less for meals in the dining hall now than before CASH/A La Carte?
(no-0, more-1, less-2)

52. Do you know what the current daily or monthly COMRATS rate is?

53. Is \$2.53 per day enough for you to eat adequately on a typical day?
Please use this chart to answer.

54. According to your present eating habits, how much money would you need to eat adequately on a typical day?

55. Do you eat any more or less often toward the end of the pay period than at the beginning of the period? (no-0, less-1, more-2)

56. Is the amount of money you pay for meal any more or less toward the end of a pay period than at the beginning of the period? (no-0, less-1, more-2)

57. Do you eat in the dining hall any more or less often toward the end of a pay period than at the beginning of the period? (no-0, less-1, more-2)

58. Are there any other food habits which change over the pay period? (If not, enter a Z)

Note: An X should be entered any time a question is not asked. If a question is asked and, for whatever reason, not answered, a Z should be entered.

****As before (see previous page)**

APPENDIX C

CONSUMER ATTITUDE STATISTICAL ANALYSES

1. $F(2, 496) = 52.81, p < .001$
2. $F(2, 520) = 66.83, p < .001$
3. $F(2, 519) = 101.55, p < .001$
4. $F(1, 519) = 8.94, p < .01$
5. $F(1, 471) = 6.87, p < .01$
6. $F(2, 471) = 19.82, p < .001$
7. $F(2, 561) = 8.02, p < .01$
8. $F(3, 3760) = 1018.18, p < .001$
9. $F(1, 3760) = 1724.42, p < .001$
10. $F(3, 3760) = 247.57, p < .001$
11. $F(6, 2691) = 4.53, p < .001$
12. $F(2, 2691) = 46.00, p < .001$
13. $F(2, 219) = 3.17, p < .05$
14. $F(1, 408) = 23.35, p < .001$
15. $F(2, 437) = 5.15, p < .01$
16. $F(2, 387) = 6.35, p < .01$
17. $F(1, 372) = 12.63, p < .001$
18. $X^2(2) = 22.10, p < .005$
19. $X^2(2) = 11.43, p < .005$
20. $F(1, 339) = 22.95, p < .001$
21. $F(1, 380) = 23.88, p < .001$
22. $F(1, 380) = 16.19, p < .001$
23. $F(1, 352) = 41.58, p < .001$
24. $X^2(3) = 10.95, p < .012$
25. $X^2(3) = 8.24, p < .05$
26. $X^2(3) = 8.75, p < .05$
27. $X^2(3) = 8.19, p < .05$
28. $X^2(3) = 8.73, p < .05$
29. $X^2(3) = 12.25, p < .01$
30. $X^2(3) = 13.15, p < .005$
31. $F(1, 129) = 22.55, p < .001$

APPENDIX D

FOOD SERVICE WORKER INTERVIEW PROTOCOLS

PRECEDING PAGE BLANK - NOT FILMED

FOOD SERVICE PERSONNEL SURVEY
(Before CASH/A La Carte)

The purpose of this survey is to find out how you feel about some of the conditions of your job. Please answer every question CAREFULLY and HONESTLY. We will talk to each of you individually in the next few days, and you will be able to make any comments which do not fit into the answers on this survey at that time. NO INDIVIDUAL SURVEY WILL EVER BE SEEN BY ANYONE AT THIS BASE OR IN THE NAVY. If you answer all of the questions honestly, we will be able to present your opinions, as a group, to the organization working on the Food Service System for the Navy.

1. Rank _____
2. Age _____ years
3. How long have you worked in food service at this base? _____ yrs _____ mos
4. How long have you worked in food service in your Navy career?
_____ yrs _____ mos
5. What do you do in your present job?
6. Circle the letter showing how much you like military service.
 - a. Dislike very much
 - b. Dislike moderately
 - c. Dislike a little
 - d. Neither like nor dislike
 - e. Like a little
 - f. Like moderately
 - g. Like very much

**Description of the Work, People, Pay, Promotions
and Supervision on Your Present Job**

Below are five groupings of items. Each group represents some aspect of your present job. We'd like you to indicate your feelings about these aspects by circling "Y" (yes) if the item is descriptive of your present job. "N" (no) if it is not descriptive and "?" if you cannot decide.

Again, we appreciate your cooperation.

WORK			PEOPLE		
Fascinating	Y	N ?	Stimulating	Y	N ?
Routine	Y	N ?	Boring	Y	N ?
Satisfying	Y	N ?	Slow	Y	N ?
Boring	Y	N ?	Ambitious	Y	N ?
Good	Y	N ?	Stupid	Y	N ?
Creative	Y	N ?	Responsible	Y	N ?
Respected	Y	N ?	Fast	Y	N ?
Hot	Y	N ?	Intelligent	Y	N ?
Pleasant	Y	N ?	Easy to Make Enemies	Y	N ?
Useful	Y	N ?	Talk to much	Y	N ?
Tiresome	Y	N ?	Smart	Y	N ?
Healthful	Y	N ?	Lazy	Y	N ?
Challenging	Y	N ?	Unpleasant	Y	N ?
On Your Feet	Y	N ?	No Privacy	Y	N ?
Frustrating	Y	N ?	Active	Y	N ?
Simple	Y	N ?	Narrow Interests	Y	N ?
Endless	Y	N ?	Loyal	Y	N ?
Gives sense of accomplishment	Y	N ?	Hard to meet	Y	N ?
SUPERVISION			PAY		
Asks my advice	Y	N ?	Income adequate for normal expenses	Y	N ?
Hard to Please	Y	N ?	Satisfactory profit sharing	Y	N ?
Impolite	Y	N ?	Barely live on income	Y	N ?
Praises Good Work	Y	N ?	Bad	Y	N ?
Tactful	Y	N ?	Income provides luxuries	Y	N ?
Influential	Y	N ?	Insecure	Y	N ?
Up-to-date	Y	N ?	Less than I deserve	Y	N ?
Doesn't supervise enough	Y	N ?	Highly paid	Y	N ?
Quick-tempered	Y	N ?	Underpaid	Y	N ?
Tells me where I stand	Y	N ?	PROMOTIONS		
Annoying	Y	N ?	Good opportunity for advancement	Y	N ?
Stubborn	Y	N ?	Opportunity somewhat limited	Y	N ?
Knows job well	Y	N ?	Promotion on ability	Y	N ?
Bad	Y	N ?	Dead-end-job	Y	N ?
Intelligent	Y	N ?	Good chance for promotion	Y	N ?
Leaves me on my own	Y	N ?	Unfair promotion policy	Y	N ?
Around when needed	Y	N ?	Infrequent promotions	Y	N ?
Lazy	Y	N ?	Regular promotions	Y	N ?
			Fairly good chance for promotion	Y	N ?

1. What do you think about the new system they are planning for this dining facility?
2. Anything good?
3. Anything bad?
4. Will it make your job any easier or harder?
5. Why do you think it will?
6. Will it make your job any better or worse?
7. Why do you think it will?
8. Of what you have heard of the new system and what you know about the old system which system do you think you would prefer?
9. Have you worked at any other military dining facilities besides this one?
10. How many?
11. How does this dining facility compare with others in which you have worked?

FOOD SERVICE PERSONNEL SURVEY
(After CASH/A La Carte)

The purpose of this survey is to find out how you feel about some of the conditions of your job. Please answer every question CAREFULLY and HONESTLY. We will talk to each of you individually in the next few days, and you will be able to make any comments which do not fit into the answers on this survey at that time. NO INDIVIDUAL SURVEY WILL EVER BE SEEN BY ANYONE AT THIS BASE OR IN THE NAVY. If you answer all of the questions honestly, we will be able to present your opinions, as a group, to the organization working on the Food Service System for the Navy.

1. Rate _____
2. Age _____ years
3. How long have you worked in food service at this base? _____ yrs _____ mos
4. How long have you worked in food service in your Navy career?
_____ yrs _____ mos
5. What do you do in your present job?
6. Circle the letter showing how much you like military service.
 - a. Dislike very much
 - b. Dislike moderately
 - c. Dislike a little
 - d. Neither like nor dislike
 - e. Like a little
 - f. Like moderately
 - g. Like very much

**Description of the Work, People, Pay, Promotions
and Supervision on Your Present Job**

Below are five groupings of items. Each group represents some aspect of your present job. We'd like you to indicate your feelings about these aspects by circling "Y" (yes) if the item is descriptive of your present job. "N" (no) if it is not descriptive and "?" if you cannot decide.

Again, we appreciate your cooperation.

WORK

Fascinating	Y	N	?
Routine	Y	N	?
Satisfying	Y	N	?
Boring	Y	N	?
Good	Y	N	?
Creative	Y	N	?
Respected	Y	N	?
Hot	Y	N	?
Pleasant	Y	N	?
Useful	Y	N	?
Tiresome	Y	N	?
Healthful	Y	N	?
Challenging	Y	N	?
On Your Feet	Y	N	?
Frustrating	Y	N	?
Simple	Y	N	?
Endless	Y	N	?
Gives sense of accomplishment	Y	N	?

SUPERVISION

Asks my advice	Y	N	?
Hard to Please	Y	N	?
Impolite	Y	N	?
Praises Good Work	Y	N	?
Tactful	Y	N	?
Influential	Y	N	?
Up-to-date	Y	N	?
Doesn't supervise enough	Y	N	?
Quick-tempered	Y	N	?
Tells me where I stand	Y	N	?
Annoying	Y	N	?
Stubborn	Y	N	?
Knows job well	Y	N	?
Bad	Y	N	?
Intelligent	Y	N	?
Leaves me on my own	Y	N	?
Around when needed	Y	N	?
Lazy	Y	N	?

PEOPLE

Stimulating	Y	N	?
Boring	Y	N	?
Slow	Y	N	?
Ambitious	Y	N	?
Stupid	Y	N	?
Responsible	Y	N	?
Fast	Y	N	?
Intelligent	Y	N	?
Easy to Make Enemies	Y	N	?
Talk to much	Y	N	?
Smart	Y	N	?
Lazy	Y	N	?
Unpleasant	Y	N	?
No Privacy	Y	N	?
Active	Y	N	?
Narrow Interests	Y	N	?
Loyal	Y	N	?
Hard to meet	Y	N	?

PAY

Income adequate for normal expenses	Y	N	?
Satisfactory profit sharing	Y	N	?
Barely live on income	Y	N	?
Bad	Y	N	?
Income provides luxuries	Y	N	?
Insecure	Y	N	?
Less than I deserve	Y	N	?
Highly paid	Y	N	?
Underpaid	Y	N	?

PROMOTIONS

Good opportunity for advancement	Y	N	?
Opportunity somewhat limited	Y	N	?
Promotion on ability	Y	N	?
Dead-end-job	Y	N	?
Good chance for promotion	Y	N	?
Unfair promotion policy	Y	N	?
Infrequent promotions	Y	N	?
Regular promotions	Y	N	?
Fairly good chance for promotion	Y	N	?

1. How long have you worked here at Alameda?

2. Have we talked to you before?

NEW MILITARY
ONLY

3. How much do you like the military? Please use this card

4. Did you request assignment to food service?

5. Would you like to get out of food service?

6. Why?

7. I would like to know, in general, about this new CASH/A La Carte system. First, let me ask you to compare it to the old, meal card system, using this card.

8. What's good about the CASH/A La Carte system?

9. What's bad about the CASH/A La Carte system?

10. Has the new system made your job easier or harder or has it stayed the same?

11. Why?

12. Has the new system made your job better or worse or has it stayed the same?

13. Why?

14. In general, is there anything the Navy can do to increase people's attendance in the dining halls?

15. What is that?

16. Would you as a food service worker prefer the customers to remain on separate rations, or go back to rations-in-kind, where they are authorized to eat in the dining hall for free? Please use this chart.

17. Why?

18. Do you think the customers would prefer the present system in the dining hall where they pay item by item for the things they take or the previous system where they paid a flat price for an entire meal? Please use this card to answer.

19. Which system would you as a food service worker prefer? Use the same card.
20. Why?
21. Do the customers who eat in this facility eat any differently now under the CASH/A La Carte system than customers under the traditional system?
22. If yes, in what way?
23. Do you feel that the customers tend to eat any differently toward the end of the pay period than at the beginning of the pay period?
24. If yes, in what way?
25. Is the amount of food the average customer eats at a meal in the dining hall any more or less under the CASH/A La Carte system?
26. Are the kinds of foods any different?
27. If yes, what is different?

<p>OLD TIMERS ONLY</p>	<p>28. Is the wait in line any shorter or longer since the changes were made?</p> <p>29. Is the food in the dining hall any better or worse now before the changes were made?</p> <p>30. Why is it better/worse?</p>
<p>NEW MILITARY ONLY</p>	<p>29. Is the food under CASH/A La Carte any better or worse than the food under the traditional meal card system?</p> <p>30. Why is it better/worse?</p>
31. Up until now I've been asking you to compare CASH/A La Carte and the traditional meal card system. The next question deals with CASH/A La Carte only. Since CASH/A La Carte started is there anything at all that's gotten better or worse?

perhaps in the attendance
or the food quality
or maybe customer attitude

APPENDIX E
WORK SAMPLING ANALYSIS

DEFINITIONS
WORK SCHEDULES
AND
DATA

TABLE E-1

Job Definitions

1. Dining Hall Supervisors – A MS-1 military supervisor in charge of some phase of dining hall operations (Galley supervisor or Watch Captain).
2. Military Cook – A rated military person who performs cooking, baking, or storeroom functions.
3. Military Mess Cook – A nonrated military person who performs clean up and utility functions.

TABLE E-2

TASK DEFINITIONS

A. NONPRODUCTIVE:

- 01 Designated Rest Break: Consists of those times that are for employee coffee breaks or other assigned rest periods.
- 02 Idle: Consists of all nonproductive activities not defined elsewhere.
- 03 Absent: Employee is not to be found on premises.
- 04 Walking: Employee is walking from one area to another, or within an area, without any apparent purpose.
- 05 Conversing: Conversation between cooks on subjects of undetermined nature.

B. FOOD PREPARATION:

- 11 Prepares Meats and Vegetables for Cooking: Obtains ingredients. Open food cans, boxes, and/or bags. Places raw or precooked items into appropriate cooking, heating, or serving containers. Cuts meats and vegetables. Mixes ingredients as required.
- 12 Cooks Food in Kitchen: Selects proper temperature settings, monitors food being cooked or reconstituted, and seasons food as required. Includes preparing eggs, hot cakes, french toast, meats, and other items on the serving line grill. Removes ready food from cooking utensils and places in serving or replenishing containers.

Prepares Soups and Gravies, Salads and Fruits, Desserts and Bakery Products: Includes all productive time required to prepare soups and gravies, salads and fruits, desserts and bakery products and to transport to serving line or tables.
- 13 Prepares Soups and Gravies: Obtains ingredients, opens soup containers and mixes ingredients for soups. Cooks, seasons, and pours into serving containers or individual portions.

- 14 Prepares and Assembles Salads and Fruits: Obtains ingredients. Cuts and cleans lettuce, cabbage, tomatoes, onions, and other salad ingredients. Mixes all salads and/or places salads in bulk or individual portions.
- 15 Prepare Bakery Products or Desserts: Obtains ingredients. Slices serving portions of cakes, pies, or other desserts. Includes preparing bulk or individual portions of puddings, custards.
- 16 Prepares Cooking Utensils: Includes all productive time required for obtaining and prelocating pots, pans, spatulas, and other cooking implements in preparation for cooking.
- 17 Prepares Flight Meals, Picnic Meals or Bag Lunches: Includes all functions performed in the Flight Galley.

C. SERVING FOOD:

- 21 Serves Food: Cuts individual portions of meat on serving line. Serves patrons in line. Serves eggs, hot cakes, french toast, steaks, hamburgers, hot dogs, and other items directly from the serving line grill.
- 22 Sets Up, Replenishes, and Tears Down Serving Line: Includes all time required to place, replenish, and remove food from the serving line. Prepares utensils for serving line. Makes beverages. Refills milk coolers and beverage dispensers.
- 23 Prepares and Assembles Cold Sandwiches: Prepares cold sandwiches to order for customers.
- 24 Cooks Food to Order on Serving Line: Cooks items such as eggs, hamburgers, hot dogs, to customer order. (Note: when items are prepared on the line grill and placed in a serving container prior to being given to the customer, the task will be recorded in the preparation category.)

D. SANITATION:

- 31 Cleans Utensils and Pots: Washes pots, pans, and other cooking utensils. Returns pots, pans, and utensils to proper locations or receptacles.
- 32 Cleans Equipment: Cleans ranges, preparation tables, steam kettles, grills, mixers, deep fryers, ovens, vegetable and meat cutting machines, and other equipment.

- 33 Cleans Kitchen: Sweeps and mops kitchen floor. Cleans refrigerator, freezer, and dry goods storage room. Empties garbage, cleans garbage cans, and garbage area.
- 34 Personal Hygiene: Engaging in any activity that would comprise good sanitation practice, such as washing hands after preparing raw meat, fish, poultry.

E. SUPPLIES:

- 51 Receives Supplies: Unloads all incoming supplies at the dock. Transports supplies to storage area. Uncrates, unpacks, and stores supplies in appropriate location. (nonperishable/condiments in storeroom, and perishable items in refrigerator/chill room). Maintains inventories and receipts for incoming food and expendable supplies.
- 52 Maintains Supplies: Repositions stored supplies to insure that longest stored items are used first. Inventories supplies after each meal, daily, and when directed by food service supervisory personnel. Maintains supply records.
- 53 Issues Supplies: Issues food supplies to senior cooks and records issues. Receives returned unused issues not used by cooks and annotates records indicating return. Buys out-of-stock items from other dining halls for immediate use.

F. ADMINISTRATIVE:

- 61 Prepares Correspondence, Records or Reports: Drafts and types correspondence. Prepares various food control records. Maintains civilian employees personnel and pay records.
- 62 Telephone: Answers telephone and pages personnel.
- 63 Menu Boards: Changes menu boards for upcoming meals.

G. SUPERVISORY:

- 71 Monitors Reports and OJT Program: Monitors the preparation of required forms by senior cooks and shift leaders. Gives and monitors OJT.
- 72 Inspects: Inspects dining hall to assure cleanliness and maintenance of good sanitation practices.
- 73 Receives or Gives Supervision: A Dining Hall Supervisor or Civilian Shift Leader gives instructions to another Dining Hall employee (other than OJT) or an employee receives instructions from a Dining Hall Supervisor or Civilian Shift Leader.

H. CASH TRANSACTIONS:

81 Cash Transactions: Issues change funds to civilian cashiers and receives monies collected during meal.

I. MISCELLANEOUS:

91 OJT: Receives OJT.

92 Maintenance and Repair: Performs minor maintenance on facility and equipment.

TABLE E-3

Observation Schedule

June 1976

Observation Period	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
0500-0600	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
0600-0800	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
0800-0900	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
0900-1100	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1100-1300	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1300-1500	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1500-1600	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1600-1800	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
1800-1900	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TABLE E-4

Number of Observations Recorded and Degree of Accuracy

	No. of Observations	Degree of Accuracy (+%)*
Supervisors	2,755	1.8
Cooks	12,798	0.9
Mess Cooks	<u>3,404</u>	1.7
TOTAL	18,957	0.7

*With 95% confidence, calculated from the following formula:

$$S = \sqrt{\frac{4P(1-P)}{N}} \times 100$$

S = degree of accuracy (%)

N = sample size

P = largest % time spent on 1 category

APPENDIX F
COST ANALYSIS

CASH/A La Carte System:

1. COMRATS: (Base Personnel Only)

2255 personnel x \$2.53 (BDFA) x 365 days = \$2,082,378

2. Raw Food Costs: (Base Personnel Only)

43,139	Unweighted rations
X <u>\$2.185</u>	Cost per day (based on actual data, Table 35)
<u>\$94,259</u>	

3. Other Costs:

All other costs remain unchanged from those presented in Table 35 (Actual Operating Costs).

TABLE F-3

Detailed Derivation of Annual System Costs -- RIK/A La Carte

1. COMRATS -- Same as Conventional Systems

2. Raw Food Costs:

RIK: 245 + 139 (50% Marines) = 384

Base Personnel 245 x 22.95% (attendance rate) = Rations/Day
56.23

50% Marines 139 x 34.42 = 47.84

TOTAL 104.07

104.07 x 365 days/year = 37,986 rations/year

37,986 x \$2.67 = \$101,423

COMRATS:

	Rations/Day
COMRATS-Married	35.71
COMRATS-Single	31.80
COMRATS-Marine (139 x 11.8%)	<u>16.40</u>
	83.91

83.91 rations/day x 365 days/year x \$2.185/ration

= \$66,920

Total Food Cost = \$101,423 (RIK) + 66,920 (COMRATS) = \$168,343.

3. Other Costs:

Other costs remain the same as for the CASH/A La Carte System.

TABLE F-1

Derivation of Actual Costs

I.

A. Rations Fed:

Month	Rations Fed	Month	Rations Fed
7/75	8,395	11/75	6,878
8/75	7,705	12/75	8,305
9/75	7,416	1/76	7,988
10/75	8,108	2/76	7,514
		TOTAL	62,309

62,309 x 3/2 = 93,464 Rations Per Year

B. Raw Food Costs:

1Q FY76	\$ 60,600
2Q FY76	66,275
Jan & Feb 76	43,540
TOTAL	\$170,415

170,415 x 3/2 = \$255,622 Per Year

C. Military Labor:

The staffing levels did not change for the CASH/A La Carte experiment. Therefore the Military Labor is the actual total costs from 10/75 to 6/76 prorated on an annual basis.

Month	Amount	Month	Amount
10/75	\$26,298	3/76	\$28,275
11/75	25,334	4/76	24,747
12/75	23,677	5/76	21,552
1/76	29,157	6/76	25,994
2/76	23,358		
		TOTAL	\$228,392

228,392 x 4/3 = \$304,515

D. Messmen Contract:

The Messmen Contract remained the same for the two systems except for the addition of the cashiering function. Because of a lack of funds other work, i.e., serving meals, was assumed by the military cooks so that the contractor would provide cashiers at no additional cost.
Actual Contractor Costs for FY 76 were \$260,103.

E. Indirect Costs:

Maintenance and Utilities expenses, as estimated by Public Works Dept., NAS Alameda, remain the same for both systems. The cost of supplies also remains unchanged.

II. CASH/A La Carte System:

A. Rations Fed:

Date	Rations Fed
3/76	7,150
4/76	8,071
5/76	9,391
6/76	<u>9,828</u>
TOTAL	34,440

$34,440 \times 3 = 103,320$ Rations/Year

B. Raw Food Costs:

Net Storeroom Issues \$75,258 for 3/76 to 6/76

$75,258 \times 3 = \$225,774$ Per Year.

C. Military Labor:

The Conventional System augmented by three cooks from the USS Oriskany.

Cooks	Cost
2-MS3	\$15,090
1-MS2	<u>8,904</u>
Total	\$23,994
Conventional System	<u>304,515</u>
Total Cost	\$328,509

D. Contractor Costs:

Under the CASH/A La Carte concept no additional funds are required for cashiers as a trade-off is made exchanging serving for cashiering. The serving function is assumed by the military.

E. Indirect Costs:

The rental costs of the cash registers must be added to the other indirect expenses in the conventional system.

Monthly System Rental (1 Master and 1 Slave) - \$325
325 x 12 = \$3900.

TABLE F-2

Detailed Derivation of Annual System Costs -- CASH/A La Carte

Existing System:

1. **COMRATS:** \$1,599,415 (1732 men x \$2.53/day x 365 days/year for Navy)
plus \$128,360 (50% of Marines 139 x \$2.53 x 365 days/ year)

TOTAL \$1,727,775

2. **Raw Food Costs:** (Base Personnel Only)

52,881 rations x \$2.67 BDFA = 141,192

3. **Receipts:** (Base Personnel Only)

	Number	Attendance Rate	Rations/Day
COMRATS-Married	1313	1.02	13.59
COMRATS-Single	419	5.82	24.39
Marines-BAS	139	2.16	3.00
			40.78

40.78 x \$2.50 x 365 = \$37,212

4. **Other Costs:**

All other costs remain unchanged from those presented in Table 35 (Actual Operating Costs).

TABLE F-4**Total Navy Data**

	CONUS	O/SEAS	TOTAL
Stores Consumed (Including Price Adjustment)	54,099,920	14,773,972	68,873,892
Cash Receipts	5,833,510	3,489,395	9,322,905
Enlisted Strength Ashore	229,457	45,747	275,209
Total Enlisted on COMRATS Ashore	146,179	29,940	176,119
Total Percentage Attendance Rates Ashore	52%	63%	54%
Attendance Rates for COMRATS Personnel	4%	13%	6%
Attendance Rates for RIK Ashore	58%	58%	58%
Number of Enlisted Dining Facilities Ashore	89	54	143
Cost of Raw Food Lost by Surveys	121,657	240,723	362,380

Figures cover period 1 April 1975 – 31 March 1976, provided by NFSSO.

TABLE F-5

Detailed Derivation of Total Navy Projected Costs

1. COMRATS Allowance:

Present & RIK/A La Carte: 176,119 Enlisted on COMRATS x \$2.53/day
x 365 days/yr = \$162,637,090

CASH/A La Carte: 275,209 Total Enlisted Ashore x \$2.53/day
x 365 days/yr = \$254,141,751

2. Attendance Rates:

	Current System	CASH/A La Carte	RIK/A La Carte
RIK	58%	18.6% ^a	58%
COMRAT	6%	10.8% ^b	10.8% ^b

^aAssuming 68% decrease as indicated in Table 5.

^bAssuming 80% increase as indicated in Table 5.

3. Net Food Costs:

Present System:

Costs:

99,090 RIK's x 58% attendance x \$2.67/day x 365 days/yr	=	\$56,009,532
176,119 COMRATS x 6% attendance x \$2.67 day x 365 days/yr	=	<u>10,298,206</u>
TOTAL		\$66,307,738

Receipts:

176,119 COMRATS x 6% x \$2.55/day x 365 days/yr = \$9,835,365

CASH/A La Carte System:

Costs:

99,090 RIK's x 18.6% attendance x \$2.185/day x 365 days/yr =	\$14,698,976
176,119 COMRATS x 10.8% attendance x \$2.185/day x 365 days/yr =	<u>15,169,605</u>
TOTAL	\$29,868,581

Receipts: Pricing System designed so that receipts equal costs.

RIK/A La Carte System:

Costs:

99,090 RIK's x 58% attendance x \$2.67/day x 365 days/yr =	\$56,009,533
176,119 COMRATS x 10.0% attendance x \$2.185/day x 365 days/yr =	<u>15,169,605</u>
TOTAL	\$71,179,138

Receipts:

176,119 COMRATS x 10.0% attendance x \$2.185/day x 365 days/yr =	\$15,169,605
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4. **Cashiers:** Assumes that the serving function is traded for cashiering at no increase in KP contract costs.

5. **Cash Register Rentals:** Assumes two registers per location (one master and one slave)

$$\$3,900/\text{location} \times 143 \text{ locations} = \$557,700$$

6. **Rations Served:**

Total Enlisted Strength Ashore	275,209
Total Enlisted on COMRATS Ashore	<u>176,119</u>
Total Enlisted on RIK Ashore	99,090

Current System

$$365 (99,090 \times 0.58 + 176,119 \times 0.06) = 24,834,359$$

CASH/L La Carte

$$365 (99,090 \times 0.186 + 176,119 \times 0.108) = 13,669,831$$

RIK/A La Carte

$$365 (99,090 \times 0.58 + 176,119 \times 0.108) = 27,919,563$$