

MAIN GALLEY
Subsistence of Persons in the Patient's Mess

Code	Category of persons authorized to be subsisted	Required to pay cash for subsistence only	Authority required	Necessary pertinent circumstances	Additional information or vouchers necessary
★CC	Hospital patients in any category of persons required to be charged	Yes	S. and A. Form 926	When patient is in a category of persons required to be charged	Reported on S. and A. Form 925 and DD Form 1348-1
R	Hospital patients in any category of persons not to be charged	No	S. and A. Form 926	When patient is in a category of persons not to be charged or when circumstances do not permit collection from the individual	Reported on S. and A. Form 925

TROOP GALLEY

Subsistence of Persons in the Troop Mess

Code	Category of persons authorized to be subsisted	Required to pay cash for subsistence only	Authority required	Necessary pertinent circumstances	Additional information or vouchers necessary
R	U. S. military enlisted passengers of the Navy, Army, Air Force, Marine Corps, or Coast Guard	No	S. and A. Form 926	When travel is performed on a space requirement basis	Reported on S. and A. Form 925
E	Destitute American seamen	No	S. and A. Form 926	Written authority of the master of the ship is required	Reported on S. and A. Form 925
R	Other authorized passengers sponsored by the Navy	No	S. and A. Form 926	When travel is on a space available basis	Reported on S. and A. Form 925; the established tariff, which includes the cost of subsistence, will be collected by the purser

R	Other authorized passengers sponsored by the Army or Air Force	No	S. and A. Form 926	When travel is on a space available basis	Reported on S. and A. Form 925; the established tariff, which includes the cost of subsistence, will be collected by the sponsoring activity
★CC	Guests	Yes	S. and A. Form 926	Subsistence will be furnished guests in accordance with par. 2301-2	Reported on S. and A. Form 925 and DD Form 1348-1

Section III: DETERMINATION OF NUMBER OF RATIONS ALLOWED

★ 2320 DAILY AND PERIODIC RATION MEMORANDA

1. **PREPARATION.** The ship's purser will prepare the Ration Memorandum (S. and A. Form 925) and the Daily Ration Memorandum (S. and A. Form 926) and will be responsible for their correctness, in accordance with par. 2206 and the Civilian Marine Personnel Instructions No. 593. The original S. and A. Form 926 will be furnished to the chief steward prior to the first meal served after leaving each port, each day the ship is in port, and on the day the ship passes through the Panama Canal. The S. and A. Form 926 will be the basis for the issuance of subsistence. A duplicate will be maintained by the purser (see Illustration 2). At the end of each accounting period and at any other time required, the ship's purser will total the number of rations authorized to be issued during the period as indicated on the S. and A. Forms 926 and will enter the totals in the appropriate columns of the S. and A. Form 925. The number of rations authorized to be issued in each mess operated aboard each ship will be shown on the S. and A. Form 926. An S. and A. Form 925 will be prepared for each mess operated aboard and will show the following in addition to the other required data:

1. the name of the mess in which personnel subsisted;
2. mode of payment for rations either "cash collected", "regular" (no cash collected), or "Panama Canal" (no cash collected) in "Description of category" space on the form; all categories will be listed on each S. and A. Form 925;
3. total rations for "cash collected", "regular", and "Panama Canal"; if no rations

were issued in a particular category the word "none" will be inserted;

4. grand total of rations issued in the mess.

The original and two copies of S. and A. Form 925 for each mess will be submitted to the chief steward by the fifth day of the accounting period for the preceding accounting period. The original and one copy will be forwarded with the subsistence returns and the other copy will be retained by the chief steward. The following information will be inserted on the face of the S. and A. Form 925 if sufficient space is available (see Illustrations 13 and 14). If space is not available, the following information will be placed on the reverse of the form:

1. number of rations sold to naval officers assigned to the ship,
2. number of rations sold to passengers including guests,
3. number of rations issued in kind to civilian officers and crew,
4. number of rations issued in kind to Navy enlisted men assigned permanently,
5. number of rations issued in kind to passengers.

2. **RATION CREDIT.** Credit for one ration will be allowed daily for each ship's civilian officer and crew member on board regardless of the number of meals taken. Credit for one ration will be allowed daily for each passenger on board with the following exceptions:

1. for children under six, credit for $\frac{1}{2}$ of a ration will be taken for each full day's subsistence furnished (Credit for fractional parts of a ration will be taken on the basis of $\frac{1}{6}$ of a ration for each meal served. All fractions under $\frac{1}{2}$ ration will be disregarded and $\frac{1}{2}$ ration or more will be credited as a full ration.);

2. On days of departure or arrival of the ship at port, credit for individual meals served to passengers will be taken on the basis of $\frac{1}{3}$ of a ration for each meal furnished (On the daily ration memorandum, fractional rations will be handled as in subpar. 1.);
3. in crossing the International Date Line, ration allowances will be adjusted to compensate for the change in the calendar day resulting from crossing the 180th meridian (When the time is set back one day in crossing from the West (China) to the East (United States), rations will be credited for the extra day. When the time

is advanced one day in crossing from the East (United States) to the West (China) rations will not be credited for the day lost.).

3. DIVISION OF RATION

CREDIT. Credit will be taken for the actual number of meals served to passengers. The basis for the division of ration credit will be $\frac{1}{3}$ of a ration for each meal served. Any three meals furnished will be regarded as one ration. For example: 600 persons are furnished breakfast only and 300 are furnished breakfast and dinner; therefore, 1200 meals are furnished and ration credit will be taken for $\frac{1}{3}$ of that number of meals, or 400 rations.

Section IV: DETERMINATION OF TOTAL RATION MONEY ALLOWANCE

2330 DAILY MONEY ALLOWANCE

The chief steward will establish the daily money allowance for each galley through the use of the General Mess Control Record (S. and A. Form 338) in order to maintain cost control records of issues to each galley operated on board. A separate S. and A. Form 338 will be maintained for recording the ration allowance and the value of subsistence issued to each galley in accordance with par. 2701. Daily money allowance for each galley will be computed by multiplying the number of rations credited by the established rate for each galley

(see Illustrations 3 and 4). Such main galley rate will be the daily subsistence rate established for the cabin mess of the applicable type ship (passenger or cargo); such troop galley rate will be the daily subsistence rate established for the troop mess. Credit for enlisted men who are authorized to subsist in the cabin mess will be taken at the main galley rate. The troop galley will not take ration credit for any enlisted personnel subsisted in the cabin mess. Two certified copies of each general mess control record will be forwarded with the subsistence returns.

PART E: DETERMINATION OF SUBSISTENCE REQUIREMENTS

Section I: RESPONSIBILITY FOR INVENTORY CONTROL

2500 AFLOAT

The master of the ship will be responsible for all subsistence

items carried on board. The actual handling and accounting work will be delegated to the chief steward.

Section II: METHOD OF INVENTORY CONTROL

2510 GENERAL

The chief steward periodically will review inventories, actual issues, and other records so that he may assure the continued availability of balanced stock and prevent the accumulation of excesses.

2511 HIGH AND LOW LIMITS

Subsistence stock should be rotated on a first-in first-out basis except when deterioration of material is noted in later shipment. A high and low limit for each item will be established to assist in maintaining proper stocks of subsistence. As subsistence items are to be loaded to capacity the high limit for a particular item will depend on the available storage space, on operating conditions, and on the estimated storage life of the particular item. A low limit cannot be established by a hard and fast rule and will vary from one ship to another. However, the low limit for a given item will be established on the basis of that quantity which is needed to fill the normal minimum voyage demands of the messes plus the replenishment time which is the number of days elapsing between the submission of a requisition and the receipt of the subsistence. High and low limits of items will be revised at regular intervals on the basis of actual issue experience.

★ 2512 SUBSISTENCE LEDGER

The person assigned by the chief steward will be responsible for maintaining the Subsistence Ledger (S. and A. Form 335) (see Illustration 1). A separate subsistence ledger sheet will be kept for each item of subsistence carried aboard. Each sheet will show the article, stock number, high and low limit, storeroom where located, unit of issue as shown in the Federal Supply Catalog, Federal Supply Classification Group 89, and unit price. If a physical inventory is taken on the last day of December, March, June, and September, the physical inventory figure will be the first receipt entry for the months of January, April, July, and October. The book inventory figure will be the first receipt entry for all months except those months when a physical inventory figure is available as a result of a physical inventory at the end of the previous month. All subsequent receipts and expenditures will be posted to the S. and A. Form 335 on the appropriate date line with the proper adjustment to the "On hand" column. At the end of each accounting period the value of the inventory for each item will be determined by multiplying the quantity on hand by the current average unit price. The value of inventory will be posted to the individual item sheet in ink. Under no circumstances will the value of the inventory be

changed after the subsistence returns have been forwarded.

2513 SUBMISSION OF REQUISITIONS

Replenishment requisitions normally will be submitted prior to the arrival of the ship at the home port in accordance with instructions of the commander, MSTS, at the home port. All ship requisitions for subsistence will be screened and edited by the port steward for adequacy and propriety prior to their transmittal to the supporting supply activity.

2514 SPECIAL INSTRUCTIONS TO ASSIST IN PROPER REPLENISHMENT

1. GENERAL. Prior to departure from the home port of the ship subsistence will be loaded to capacity consistent with storage facilities. Stocks of subsistence items will be maintained in quantities that will permit the furnishing of well-balanced meals to all persons who will be on board for the duration of the voyage. Subsistence items will be stowed in such a manner as will enable stocks of the oldest pack to be issued first.

2. PERISHABLE SUBSISTENCE. When loading the ship with perishable subsistence, consideration will be given to the efficiency of refrigerating plants, particularly in the tropics. When loading a ship to capacity, frozen meats will be procured if practicable and maximum use will be made of boneless and semiboneless cuts. When it is necessary to procure fresh chilled meats, prior arrangements will be made so that the meat will be received in installments in order not to overtax the refrigerating plant. In hot weather or in the tropics orders will specify that meats should be delivered in the early morning or after nightfall. In freezing weather, in the tropics, or in very hot weather care must be taken to prevent overstocking of fresh fruits and fresh vegetables.

3. NONPERISHABLE SUBSISTENCE. It is desirable that canned meats, canned fruits, and canned vegetables be stocked to supplement the fresh items in the ration. Nonperishable subsistence items will be stocked in sufficient quantities to provide a full ration in case of emergency when the storage life of the specific items and the storage capacity of the ship permit.

Section III: NORMAL SUBSISTENCE REQUIREMENTS

2520 DETERMINATION OF NORMAL SUBSISTENCE REQUIREMENTS

The list of Estimated Subsistence Requirements for subsisting 100 men daily according to the menu published monthly as a part of the Navy Food Service may be used as

a guide in the computation of the subsistence load, when the issue experience as portrayed by the Subsistence Ledger (S. and A. Form 335) is not considered to be sufficient information or does not adequately cover the type and scope of operation for which requirements are being computed.

PART F: PROCUREMENT OF SUBSISTENCE

★Section I: SOURCES OF SUPPLY

2600 GENERAL

The primary sources of supply of subsistence items for ships are the designated naval supporting supply activities which are adjacent to the home ports of the ships. Secondary sources include other naval supply activities, other government departments, foreign governments, Merchant Marine ships, and commercial dealers. Area and subarea commanders will issue appropriate instructions relating to the requisitioning and procurement of subsistence by the ships within each command to cover situations not within the scope of these instructions. The chief steward of each ship will obtain all subsistence requirements on requisitions submitted to the appropriate supporting supply activity via the cognizant commander. Procurement by the ship from secondary sources will be made only in cases of emergency. When ships based at activities located in Alaska and Hawaii and outside the United States, are dependent upon Army supply installations or other government department activities for supply of subsistence, procurement of subsistence will be made in accordance with the local instructions of the cognizant commander under the terms of any existing cross-servicing agreement.

2601 REQUISITIONING PROCEDURE

1. GENERAL. The chief steward of the ship will be responsible for the proper requisitioning of subsistence items. When requisitioning subsistence consideration will be given to such important factors as the expected length of the voyage,

the number of personnel planned to be subsisted, the subsistence on hand, and the seasonal supply of perishable foods in order that excessive stocks will not be requisitioned and thereby result in losses by survey.

2. REQUISITIONING AT HOME PORT. The general instructions prescribed in pars. 1203-1207 will be followed when requisitioning non-perishable subsistence. Requisitions for perishable subsistence will be submitted on Requisition and Invoice/Shipping Document (DD Form 1149). Overprinted local requisitioning forms may be used to requisition subsistence at the home port provided prior approval for the use of the local forms has been obtained from COMSTS. The use of local forms will be restricted to the home port of the ship and such forms will be prepared in accordance with instructions issued by the commander at the home port.

3. REQUISITIONING AT OTHER THAN HOME PORT. When subsistence items are procured from a Navy supply facility at other than the home port of the ship, requisitions will be submitted as prescribed in subpar. 2, except that one additional copy of each requisition will be forwarded to the port steward at the home port of the ship. When subsistence items are procured at a location other than the home port where Navy supply facilities are not available, they will be purchased from funds available to the ship. Items so procured must be of an emergency nature and must conform to the items listed as AM or N under the "Using service" column in the Federal Supply Catalog, Federal Supply Classification Group 89. Also, the pertinent purchase

regulations contained in Chapter 1 will be followed. The written approval of the master of the ship will be required prior to making a purchase of subsistence items with ship funds.

2602 ITEMS AUTHORIZED FOR USE ON BOARD

Subsistence items shown as AM or N under the column "Using service" in the Federal Supply Catalog, Federal Supply Classification Group 89, are authorized for procurement and issue to MSTs ships. Normally, items will be supplied in domestic pack; however, export

pack items will be furnished when specifically requested and when justification for their use is furnished. If the items listed as AM or N in the Federal Supply Catalog, Federal Supply Classification Group 89, are not considered adequate in range to meet desirable food service standards, administrative commanders may recommend to COMSTS the addition of new items. The procurement of any item not listed as AM or N under the column "Using service" in the Federal Supply Catalog, Federal Supply Classification Group 89, is prohibited without prior approval of COMSTS.

Section II: RECEIPT AND INSPECTION

2610 PREPARATION FOR RECEIPTS

★1. ANTICIPATING RECEIPT DATES. Normally, receipts of subsistence can be anticipated either through shipment notices, delivery dates requested on requisitions, loading plans, or other indications that delivery of subsistence items will be made on specified dates.

★2. PARTIES TO BE NOTIFIED. When actual physical receipt of subsistence items is expected, the chief steward and the senior medical officer, in ships with a medical department, will be notified so that inspections for quality and quantity may be coordinated simultaneously with the time of arrival of subsistence to the ship.

★3. SPACE AVAILABILITY. Adequate storage space will be made available prior to the receipt of subsistence items based on past issues, anticipated issues, bulk content of the receipt, etc. Any necessary rearrangement of stocks on hand will be made prior to receipt, in order to permit storing of new stock in a manner that will

facilitate the issue of the oldest stock first.

4. ARRANGEMENTS FOR LABOR FORCE. Arrangements for the physical handling of incoming subsistence will be coordinated and completed by the port steward of the staff of the area or the subarea commander, or by the commanding officer of the MSTs office.

★2611 RECEIPTS OF SUBSISTENCE

When subsistence items arrive, the chief steward and the senior member of the medical department will inspect for quantity and quality as prescribed in these regulations.

★2612 QUANTITY INSPECTION

1. RECEIPTS FROM THE NAVY OR OTHER GOVERNMENT AGENCIES. When subsistence items are received from the Navy or other government agencies, inspection will be made by the chief steward for quantity. The net weight or measurements marked on standard packages of subsistence

items received from the Navy or other government agencies will be accepted.

2. RECEIPTS FROM COMMERCIAL SOURCES. When subsistence items are received from commercial sources, a receipt will be rendered by the chief steward only for the net quantity received. The receipts and the unit counts or weights marked on containers will be checked and verified before a receipt is given.

★ 2613 QUALITY INSPECTION

1. BY WHOM CONDUCTED. In ships with a medical department, the senior member of the department will inspect all subsistence items to ascertain their quality and fitness for human consumption. When medical personnel are not permanently assigned to the ship, the quality inspection of subsistence items will be performed by the

chief steward. If, in the opinion of the chief steward, either the appearance of the items of subsistence or circumstances attending delivery indicates the need for further quality inspection, a request for such inspection will be made to the area commander, sub-area commander, or commanding officer MSTs office, as appropriate.

2. CERTIFICATION. A certification of the medical officer or chief steward, as appropriate, will be made on the ship's copy of the covering papers; that is, on dealers' bills, purchase orders, invoices, etc. The certificate will be made in the following form:

"I certify that the above articles received this date are of acceptable quality and are fit for human consumption.

(Date)

(Medical officer/
chief steward)"

Section III: ACCOUNTING FOR RECEIPTS

★ 2620 POSTING TO THE SUBSISTENCE LEDGER

A posting by quantity, in accordance with the standard unit of issue in the Federal Supply Catalog, Federal Supply Classification Group 89, will be made to the individual sheets of the Subsistence Ledger (S. and A. Form 335) which are maintained for each line item of subsistence carried aboard ship (see Illustration 1). Postings will be made from receipt documents and will be posted as of the date received. In the event a receipt document is not available a dummy DOD Single Line Item Release/Receipt Document (DD Form 1348-1) will be prepared. The unit price shown on the applicable S. and A. Form 335, or the unit price shown in the Federal Supply Catalog, Federal

Supply Classification Group 89, Subsistence, Volume 2, Supply Management Data and Price List, Nonperishable, will be utilized on the dummy invoice. Upon receipt of a priced document any necessary adjustments will be made. This procedure also will be used when subsistence items are received on an unpriced receipt document.

2621 AVERAGE UNIT PRICES

When subsistence items are received at a unit price other than the one shown on the current sheet of the Subsistence Ledger (S. and A. Form 335), it will be necessary to compute a new average unit price at which all subsequent issues of the item will be made. The average unit price will be computed by the method indicated. The

S. and A. Form 335 shows the following:

On hand 200 LBS at
 .28 value \$ 56.00
 Received 400 LBS at
 .30 value 120.00
 Total 600 LBS valued at. \$176.00

To obtain the new average unit price, the total money value of the material, \$176, will be divided by the total quantity on hand, 600 pounds. The new average price is .293 rounded off to .29 a pound. Unit prices will be rounded off to the nearest cent on all items of subsistence since unit prices to three or more decimal places are cumbersome and their use is not justified by any tangible gain. In rounding off prices to the nearest cent,

fractions of less than one-half will be dropped and a fraction of one-half cent or more will be raised to the next additional cent in the unit price in the manner indicated as follows.

Invoice price or average unit price	Rounded off to unit issue price
\$1.2379	\$1.24
.0135	.01

2622 GAINS OR LOSSES BE- CAUSE OF ROUNDING OFF UNIT PRICES

Gains or losses because of rounding off unit prices will be absorbed in the cost of operating the mess and no accounting will be required for such differences.

PART G: EXPENDITURES OF SUBSISTENCE**Section I: ISSUES****★2700 GENERAL**

Responsible persons who are designated by the chief steward may originate a subsistence issue slip. The chief steward will approve all subsistence issue slips prior to submitting them to the storekeeper. Blank lines will be ruled out to prevent additions. Each subsistence issue slip will be numbered serially and will indicate the galley in which the subsistence items will be used. The items requisitioned will be based on the menu and the number of persons which are expected to be subsisted (see Illustration 5). The subsistence issue slip will be prepared in duplicate. Both the original and the duplicate will be signed by the chief steward, whose signature will indicate approval, and thereafter will be presented to the storekeeper for issue. After issue the storekeeper will insert on the subsistence issue slip the actual quantities issued and will sign his name on the original and the duplicate. Also, the person who receives the subsistence will sign his name on the original and the duplicate to indicate receipt of the subsistence. The storekeeper will be responsible for the safe delivery to the chief steward of the original subsistence issue slip and the safe delivery of the duplicate to the person designated by the chief steward to maintain the Subsistence Ledger (S. and A. Form 335). The duplicate subsistence issue slip will be used as a basis for posting all issues daily by item and by quantity in the S. and A. Form 335 and by money value in the General Mess Control Record (S. and A. Form 338). To simplify record keeping the quantity of subsistence issue slips will be kept at a minimum.

2701 CONTROL OF COST OF ISSUES

The chief steward will maintain a separate cost control record of issues to each galley operated on board. This record will be kept on the General Mess Control Record (S. and A. Form 338) from data supplied by the Daily Ration Memorandum (S. and A. Form 926), by daily subsistence issue slips covering issues to the galley, and by the authorized ration value for the mess (see Illustrations 3 and 4). The number of rations authorized each day for the galley by the daily ration statement will be entered in column (2) of S. and A. Form 338. The cost of subsistence items issued each day will be entered in column (4). Columns (3) and (5) will be kept cumulative by adding the days entries in columns (2) and (4) to the previous days figures in columns (3) and (5). To obtain the entry for column (6), the entry in column (5) will be divided by the entry in column (3). This figure will be the average cost of each ration up to any given date during the accounting period. In column (7) the daily money allowance of the galley (column (2) times the authorized ration value) will be entered. Column (8) is the cumulative total allowance and is obtained by adding the figure in column (7) to the previous days entry in column (8), except for the first day of a new accounting period.

★2702 PREVENTION OF OVER-ISSUES TO GALLEYS

In actual practice, it is normally impractical and unnecessary to limit the daily issues of subsistence to the galley to the value of the money

allowance for that particular day. However, the chief steward will be cognizant of any significant unbalance between cumulative issues, and cumulative allowance as shown by the entries in columns (5) and (8) on the General Mess Control Record (S. and A. Form 338). The chief steward will be responsible for the operation of the galleys within the authorized money allowance. When it is necessary for the chief steward to requisition subsistence from the storerooms in quantities which will exceed the mess allowance for the accounting period, a detailed report of the necessity for the overissue will be prepared by the chief steward, approved by the master of the ship, and submitted with the subsistence return. A copy of the detailed report will be forwarded to COMSTS in accordance with pars. 2823-2 and 2907. Normally, the ration value as authorized for each mess (see par. 2301) is considered adequate by COMSTS and, in the absence of proper justification, overissues to the galley for an accounting period will be considered evidence of imprudent mess administration and will be a subject for disciplinary action. Any such overissue of subsistence will be investigated and examined informally by the supply officer at the home port or his designated representative. After such examination, COMSTS will be advised of conditions determined to have necessitated the overissue and of corrective action taken. Overissues will not be carried forward to succeeding accounting periods.

Section II: TRANSFERS

2710 DEFINITION

Transfers, as distinguished from issues, are those expenditures in which the custody of subsistence,

2703 TURN IN OF SUBSISTENCE DRAWN IN EXCESS

The chief steward may return to the storeroom for credit any quantity of subsistence on hand in the galleys fit for human consumption when he considers such quantity is in excess of the normal needs. When possible, he will turn in excess subsistence in standard packages or standard issue units. Subsistence turned in by a galley as in excess will be covered by a subsistence issue slip plainly marked "Credit". The chief steward will reflect the value of the items turned in by proper credit adjustment on the applicable sheets of the Subsistence Ledger (S. and A. Form 335) and on the daily entries on the General Mess Control Record (S. and A. Form 338).

2704 ACCOUNTING FOR ISSUES

The chief steward will be responsible for maintaining the necessary daily records of issues to the individual galleys operated on the ship. The following records will be maintained:

1. Subsistence Ledger (S. and A. Form 335) for each separate item of subsistence carried on board (see Illustration 1),
- ★ 2. separate subsistence issue slips reflecting each days issues or credits to separate galleys (see Illustration 5),
3. General Mess Control Record (S. and A. Form 338) for each galley operated on board (see Illustrations 3 and 4).

fit for human consumption, passes from one MSTS activity to another MSTS activity, except commissioned ships.

★2711 PROCEDURE FOR TRANSFERS

Prior to transferring any subsistence items, the approval of the master of the ship will be obtained. All transfers will be accomplished on DOD Single Line Item Release/Receipt Document (DD Form 1348-1) to which the master's signature will be affixed denoting approval (see Illustration 6). Appropriate entries will be made in the Subsist-

ence Ledger (S. and A. Form 335) when transfers are made. The receiving chief steward will sign the original and one copy of the document. The original will be retained by the transferring chief steward and the receipted copy will be forwarded to the commander at the home port with the subsistence returns. The receiving activity also will report the receipt to the commander at the home port.

Section III: SURVEYS

2720 DEFINITION AND PURPOSE

1. DEFINITION. A survey is the procedure required by Arts. 1947-1953, N. R., when property must be:

1. condemned as a result of damage, obsolescence, or deterioration;
2. appraised as the result of loss of utility;
3. acknowledged as nonexistent as a result of loss or theft, necessitating the expenditure of the accountable material from the records of the holding activity.

2. PURPOSE. The purpose of the survey is to provide a record for:

1. an administrative review of the conditions under which material has been lost or otherwise expended,
2. an authorization to expend the material from the records on which it is carried.

2721 PROCEDURE FOR CONDUCTING SURVEYS

1. GENERAL. The general instructions concerning surveys as contained in Chapter 1 will be followed.

2. WHEN REQUIRED. The chief steward will request a survey of

any item of subsistence when, in his opinion, action as prescribed in par. 2720-1 is necessary to expend the item from his accounting records.

★3. APPOINTMENT OF SURVEYING OFFICERS. Survey of subsistence items will be made by a board of three officers appointed by the master of the ship. The medical officer, if one is on board, always will be included as a member of the board. The following officers will not be appointed as surveying officers:

1. the master of the ship,
2. the officer on whose records the material being surveyed is carried,
3. the officer charged with custody of the material being surveyed.

★4. PREPARATION OF THE SURVEY FORM. The chief steward will prepare at least an original and three copies of the Survey Request, Report and Expenditure (S. and A. Form 154) and any additional copies as may be needed locally. The signatures of the requesting officer, the master of the ship, surveying officers, and the chief steward's expenditure certification will be affixed (see Illustration 7).

★5. SURVEYS DURING ACCOUNTING PERIOD. The chief steward will prepare an S. and A. Form 154

at any time during an accounting period when:

1. a chief steward is relieved during an accounting period and items of subsistence require survey action;
2. any losses occur due to theft or negligence and recommendations for disciplinary action or the placement of responsibility is required.

★ 6. DISTRIBUTION OF THE SURVEY FORM. The original and copies of S. and A. Form 154 will be distributed as follows:

1. the original, properly signed by all officers concerned, will be submitted with the returns to substantiate the General Mess Operating Statement (S. and A. Form 45);
2. one copy will be retained by the chief steward with his copies of the returns;
3. one copy will be retained by the survey board;
4. one copy will be forwarded to the supply officer at the home port for review as prescribed in par. 2722.

2722 ACTION BY SUPPLY OFFICER OF THE AREA OR SUBAREA COMMANDER

The supply officer of the area or subarea commander, MSTs, at the home port of the ship will review

all surveys of subsistence. He may recommend that the commander at the home port investigate the survey further or take such other action as is considered appropriate to investigate and fix the responsibility for losses of subsistence.

2723 EMERGENCY DISPOSAL

The master of the ship may direct immediate disposal of subsistence items surveyed, as recommended by the surveying officer or the survey board, if this action is considered necessary to safeguard the health or safety of persons on board.

★ 2724 ACCOUNTING FOR SURVEYED SUBSISTENCE ITEMS

Upon receipt of the properly approved Survey Request, Report and Expenditure (S. and A. Form 154), the chief steward will complete the expenditure section. This form then becomes an expenditure document in his subsistence returns and will be assigned a number from the expenditure invoice number series as prescribed in par. 1309. Proper entry will be made on the appropriate sheet of the Subsistence Ledger (S. and A. Form 335) under the "Other" column as an inserted caption "Survey" (see Illustration 1).

★ Section IV: SALES

2730 DEFINITION

The term "sale" as used in this section refers to the sale of subsistence items carried on board as distinguished from the sale of prepared rations. The term "sale" applies to all expenditures of subsistence items, except issues to the galleys and transfers to MSTs ships, other than commissioned ships. It includes expenditures to

other government agencies, commissioned ships, American Red Cross, merchant ships, foreign naval ships, and foreign governments.

2731 PROCEDURE

1. GENERAL. Sales will not be made without prior approval of the commander at the home port except in case of emergency when time and circumstances will not permit the

delay required for such approval. Subsequent to effecting an emergency sale without the approval of the commander at the home port, a full report by letter will be furnished setting forth the justification for and applicable details concerning the emergency sale.

2. SALES TO OTHER GOVERNMENT AGENCIES INCLUDING SUPPLY SUPPORT ACTIVITIES. When subsistence items are sold to commissioned ships of the United States Navy, merchant ships of the Maritime Administration, naval activities other than MSTs, other government agencies, including supply support activities, a DOD Single Line Item Release/Receipt Document (DD Form 1348-1) will be prepared and the approval of the master of the ship will be indicated thereon. A receipted copy of the DD Form 1348-1 will be forwarded to the commander at the home port of the ship.

3. SALES TO AMERICAN NATIONAL RED CROSS. Subsistence may be sold to the American National Red Cross at naval activities located in Alaska and Hawaii and outside the United States, for use in the local Red Cross canteens for enlisted personnel of the United States. A statement that such subsistence may be used only for food service and will not be transferred or resold in any manner will be placed on the DD Form 1348-1.

4. SALES TO MERCHANT SHIPS. Items of subsistence which can be spared may be sold to merchant ships in distress or needing subsistence items and not having any other emergency source. If the ship is a Maritime Administration ship, the transaction will be treated as a transfer and a DD Form 1348-1 will be prepared as prescribed in subpar. 2. Otherwise, the transaction will be treated as a sale and invoiced to the master of the receiving ship.

5. SALES TO FOREIGN GOVERNMENTS AND FOREIGN VESSELS OF WAR. Sales to foreign governments and foreign vessels of war will be accomplished in accordance with the procedures in par. 1310-2.

6. SALE PRICES. The sale price of items of subsistence sold to commissioned ships of the United States Navy, merchant ships of the Maritime Administration, naval activities other than MSTs, other government agencies, including supply support activities, will be the current unit price shown in the Subsistence Ledger (S. and A. Form 335). The sale price of items of subsistence sold to all other activities will be promulgated by the commander at the home port at the time the authorization prescribed in subpar. 1 is granted.

PART H: ACCOUNTS AND RETURNS

Section I: GENERAL INSTRUCTIONS

2800 ACCOUNTING PERIOD

A calendar month constitutes an accounting period and subsistence returns will cover that period. Physical inventories of subsistence will be taken on a specific day during the last two weeks of the months of March, June, September, and December. The day selected for the inventory will be the day when it is estimated the stocks will be at their lowest levels for the particular month and as near to the end of the month as possible. Book inventories will be used for all months except those months when a physical inventory is taken after the last issue of subsistence has been made for the month. In these instances

the physical inventory will be used.

2801 ACCOUNTING RECORDS

The chief steward of the ship will be responsible for maintaining the following accounting records necessary for the preparation of the subsistence returns covering each accounting period:

1. Subsistence Ledger (S. and A. Form 335),
2. General Mess Control Record (S. and A. Form 338).

The chief steward will maintain a file of the supporting documents substantiating the records in items 1 and 2, including receipted issue requests, invoices, etc., for inspection by authorized personnel.

Section II: INVENTORY OF SUBSISTENCE

2810 PROCEDURE

1. **BOOK INVENTORIES.** After the last issue of subsistence has been made each month in the months of January, February, April, May, July, August, October, November, and any other month when the physical inventory is not taken after the last issue of subsistence has been made for the month, the quantity balance shown on the individual item sheet of the Subsistence Ledger (S. and A. Form 335) will be multiplied by the current average unit price of the item and the resultant total value will be inserted in ink on each corresponding item sheet. Under no circumstances will this total be altered after it has been inserted. If an error has been made the error will be corrected by an adjustment in the succeeding month. Subsequent to posting the monetary value of each item, a

grand total of all the items will be obtained. The grand total will be used as the "Balance on hand" figure on the General Mess Operating Statement (S. and A. Form 45) for the current month. The grand total figure also will be used as the "Balance brought forward" figure on the S. and A. Form 45 for the succeeding month.

2. **PHYSICAL INVENTORIES.** A complete physical inventory of all subsistence items will be taken on a specific day during the last two weeks of the months of March, June, September, and December. The day selected for the inventory will be the day when it is estimated the stocks will be at their lowest levels for the particular month. The physical inventory will be taken separately by the chief steward and by a disinterested officer. The disinterested officer appointed by the

master of the ship will be a commissioned officer, if available, or a civilian officer.

★2811 PREPARATION AND CERTIFICATION OF INVENTORY

1. GENERAL. As prescribed in par. 2810-2, a complete and accurate physical inventory will be taken in rough form in accordance with subpar. 2. This rough form will be utilized in preparing the Certified Inventory (S. and A. Form 143), Subsistence Requisition or Certified Inventory (MSTSLANT Form 10110/1), or such local form as designated by the commander at the home port, in the smooth form for inclusion in the subsistence returns (see subpar. 3).

2. PHYSICAL INVENTORY IN ROUGH FORM. Physical inventory in the rough form will be taken separately by the chief steward and a disinterested officer utilizing an S. and A. Form 143 or such local form as designated by the commander at the home port. Upon completion of the separate physical inventories, the quantities recorded will be reconciled. The disinterested officer will hold his copy of the reconciled inventory in personal custody until the certified inventory has been prepared as indicated in subpar. 3.

3. CERTIFIED INVENTORY IN SMOOTH FORM. The certified inventory will be prepared in sufficient copies to provide the original and one copy for submission with the subsistence returns and one copy to be retained for shipboard use. The heading and all columns of the certified inventory will be carefully and accurately completed and extensions, subtotals, and totals will be double checked. After the certified inventory has been prepared, the disinterested officer will compare the quantities of articles shown on hand with those shown on

his copy of the reconciled physical inventory. After final reconciliation, the disinterested officer will acknowledge the accuracy of quantities shown by signing the following certificate on the original and the chief steward's copy of the certified inventory:

"I certify that this inventory is correct as to the quantities listed on hand. The articles listed hereon were inventoried by me personally on _____

(Date or dates of inventory)

(Signature and title of disinterested officer)

The chief steward will indicate the actual date of his inventory on the final page of the certified inventory, and will certify by signature in the space provided that the inventory as shown is true (see Illustration 8 or 9).

★2812 TRANSFER OF ACCOUNTABILITY

1. UNDER NORMAL CONDITIONS

a. Inventory. When the chief steward is relieved, a physical inventory will be taken as prescribed in par. 2811 on the effective date of the transfer except that the relieving chief steward and not the disinterested officer will physically inventory the items of subsistence. In lieu of the disinterested officer's certificate, the following certificate will be shown on all copies of the certified inventory:

"I hereby acknowledge receipt of subsistence on board as covered by the above inventory and I hold myself accountable for them.

(Signature of relieving chief steward)

b. Subsistence Returns. If relieved on the last day of an accounting period, the relieved chief steward will be responsible for the complete and proper submission of the subsistence returns. If relieved on other than the last day of an accounting period, the relieved chief steward will submit complete subsistence returns covering the current accounting period through the effective day of his transfer. In the preparation of the subsistence returns, pars. 2821 - 2823 will apply as appropriate. The original and copy of the certified inventory submitted with the subsistence returns will serve to substantiate the expenditure of subsistence to the relieving chief steward. In the expenditure section of the General Mess Operating Statement (S. and A. Form 45) such expenditure will be listed separately under "Other" opposite the inserted caption "Transferred to relief"; the caption "Balance on hand" will be shown as zero. One copy of the certified inventory will be retained in the personal custody of the relieved chief steward. The copy of such certified inventory retained aboard ship will serve the relieving chief steward as substantiation for subsistence received from the relieved chief steward and will not be submitted with his subsistence returns for the fractional portion remaining of the current accounting period. The amount of subsistence received from the relieved chief steward will be shown on the S. and A. Form 45 as a separate receipt opposite the inserted caption "Received from chief steward relieved"; the caption "Balance brought forward" will be shown as zero. When relief is accomplished on the last day of the accounting period, subsistence transferred and received also will be entered on the appropriate S. and A. Form 45 as described herein.

2. UNDER EMERGENCY OR ABNORMAL CONDITIONS. If it is determined aboard ship that conditions of subpar. 1 cannot be fulfilled, the master of the ship will notify the commander at the home port of the pertinent circumstances and will await specific instructions. The commander at the home port will specify on an individual case basis the procedures to be utilized. Such procedures may allow variation of inventory procedure, subsistence returns covering less than an accounting period, or subsistence returns which merge portions of an accounting period. Procedures allowed, however, will assure proper accountability and that all portions of an accounting period are ultimately and adequately covered by subsistence returns.

2813 POSTING INVENTORIES TO THE SUBSISTENCE LEDGER

1. PHYSICAL INVENTORY TAKEN ON LAST DAY OF QUARTER. When the physical inventory is taken on the last day of the quarter the physical inventory quantities for all items will be posted to the Subsistence Ledger (S. and A. Form 335) as the last entry for the month in which the inventory was taken and the first entry for the new accounting period. Any discrepancy noted between the last balances for the period and the actual physical inventory figure for an item which cannot be reconciled will be made the subject of review and, if necessary, survey action by the chief steward.

2. PHYSICAL INVENTORY TAKEN ON DAYS OTHER THAN THE LAST DAY OF THE QUARTER. When the physical inventory is taken on any day other than the last day of the third month of the quarter the physical inventory quantities for all items will be posted

to the S. and A. Form 335 as of the day the inventory was taken. Any discrepancy noted between the balance on hand figure and the inven-

tory figure for an item which cannot be reconciled will be made the subject of review and, if necessary, survey action by the chief steward.

Section III: SUBSISTENCE RETURN

2820 PURPOSE

The General Mess Operating Statement (S. and A. Form 45) serves as a balance sheet and shows the value of subsistence on hand at the beginning of the accounting period, all receipts and expenditures during the period, and the value of all subsistence on hand at the end of the accounting period. The mess statement portion of the S. and A. Form 45 provides a record of the operation of the messes on board in relation to the money allowance established. It is a justification for the expenditure of subsistence to the value of the stores consumed during the period and also it provides necessary accounting data to enable the comptroller to report expenditures of funds under the proper accounts.

★2821 PREPARATION OF THE GENERAL MESS OPERATING STATEMENT

1. GENERAL. An original and two copies of the General Mess Operating Statement (S. and A. Form 45) will be prepared by the chief steward. The original and one copy of S. and A. Form 45 will be forwarded with the subsistence returns, and one copy will be retained. The following supporting documents will be submitted to substantiate the S. and A. Form 45:

1. copies of all expenditure documents;
2. original and one copy of each ration memorandum prepared for the accounting period;
3. certified original and a copy of the certified inventory for

the accounting periods ending on the last day of March, June, September, and December, and upon relief of the chief steward (subject to permitted deviations specified in par. 2813-2) (When the physical inventory is taken after the last issue of subsistence in the four accounting periods specified, the certified inventory will support the S. and A. Form 45; when the physical inventory is taken at any other permissible time, the original and one copy of the certified inventory will accompany but not support the general mess operating statement.);

4. copies of all receipt papers with adding machine tapes attached, properly identified as to the ship and the month, and in agreement with the value of receipts reported on the S. and A. Form 45.

2. RECEIPTS. After the book or the physical inventory, as applicable, has been made and the receipt and expenditure vouchers have been sorted, the balance sheet section of the S. and A. Form 45 will be prepared. In the receipt section of the balance sheet the value of the book or the physical inventory, as applicable, at the close of the preceding accounting period will be entered opposite the caption "Balance brought forward". The total amount of receipts obtained from the adding machine tapes attached to the receipt documents, will be entered opposite the caption "Receipts". If receipts were improperly reported in a previous month because of lack

of correct pricing information, correction will be made with a debit or credit figure, as appropriate. Such figure will be shown as an inserted caption "Receipt correction" and will be explained in adequate detail on the reverse of the S. and A. Form 45. The total of the receipts and balance brought forward will be entered opposite the caption "Total" (see Illustration 10).

3. EXPENDITURES. In the expenditure section of the balance sheet the only captions that normally will be used are "Stores consumed", "Surveys", "Other", and "Balance on hand". The total value of all subsistence surveyed will be entered opposite the caption "Surveys". When subsistence, which is not prepared rations, has been transferred to other MSTs civil service manned ships, the total of such transfers will be entered under the caption "Other" with an inserted caption "MSTs (civilian manned)". If subsistence, which is not prepared rations, is sold during the accounting period, the caption "Sales" will be inserted under the caption "Other". The total, except stores consumed, will be obtained from the adding machine tapes attached to each set of documents. The value of the book or physical inventory as applicable, at the close of the current accounting period will be entered opposite the caption "Balance on hand". Opposite the caption "Stores consumed" will be entered the value of subsistence actually consumed during the accounting period. The value of subsistence consumed will be computed by subtracting the total of the expenditure section (surveys, transfers, sales, balance on hand) from the total of the receipt section. The difference, which may be termed a "forced" figure, is the value of subsistence consumed. The total of the expenditure section will be entered opposite the caption "Total". The total must agree with

the total of the receipt section. Adjustments (price, inventory, etc.) will not be utilized or shown in the expenditures section of the balance sheet.

4. COMPUTATION OF THE MESS STATEMENT. The "Analysis of rations" section of the mess statement will not be used. The total number of rations issued during an accounting period in each mess operated on board at the applicable mess rate will be shown in the "Computation of allowances" section. A consolidated figure will be shown for the number of rations issued, the authorized money value of each ration, and the extended money total at each mess rate during the accounting period (see Illustration 10). The caption "Over/under, previous period" will not be used. The entry opposite the caption "Stores consumed" will be the total value of issues and will be the same figure as that which appears opposite the caption "Stores consumed" in the expenditure section of the balance sheet. The entry opposite the caption "Over/under issue" will be obtained by subtracting the value of stores consumed from the total ration allowance for all messes. The amount of the resulting difference will indicate an overissue or an underissue to the messes. If this amount is an overissue, a complete report of justification will be made in accordance with par. 2702. The value of the underissue or overissue will not be carried forward to the next accounting period. The entry "See reverse" will be made at the bottom of the S. and A. Form 45. The reverse of the balance sheet will contain a statement of the total number of rations issued in each galley, by mess, during the accounting period; the total number of rations credited and furnished in each mess at the applicable ration value; and the extended money value. The recapitulation will

indicate for the troop and main galley: the value of stores consumed as obtained from column 5 of the applicable General Mess Control Record (S. and A. Form 338); the total number of rations issued; the average cost per ration; and the difference between the value of stores actually consumed, as taken from the front of the balance sheet, and the total of stores shown as consumed on the S. and A. Form 338 for each galley (see Illustration 10).

7. all receipt documents with adding machine tapes attached;
8. all Receipts for Cash--Sub-voucher (Standard Form 1165) covering sales of guest meals with guest meal authorizations attached, when applicable.

★2823 FORWARDING SUBSISTENCE RETURNS

★2822 ARRANGEMENT OF SUBSISTENCE RETURNS FOR SUBMITTAL

Subsistence returns will be assembled and submitted to the commander at the home port in the following order:

1. original and one copy of General Mess Operating Statement (S. and A. Form 45);
2. original and one copy of each Survey Request, Report and Expenditure (S. and A. Form 154);
3. two copies of each expenditure document, one of which is receipted;
4. certified original and a copy of the certified inventory showing the inventory of subsistence items at the end of the quarter (March, June, September, and December) or as of a specific day in the third month of each quarter and on detachment of the chief steward (subject to permitted deviations specified in par. 2813-2);
5. original and one copy of each Ration Memorandum (S. and A. Form 925) properly certified, covering the accounting period;
6. two certified copies of the General Mess Control Record (S. and A. Form 338) for each galley;

1. COMPTROLLER AT THE HOME PORT. Subsistence returns will be forwarded in time to reach the comptroller at the home port no later than the tenth calendar day following the end of the accounting period covered by the returns. When because of ship operating conditions it is impossible to meet the date herein specified a message which contains the following information will be sent by the ship to the commander at the home port.

1. number of cabin mess rations furnished civilian crew ALFA _____
2. number of cabin mess rations furnished military department officer personnel BRAVO _____
3. number of cabin mess rations furnished military department enlisted personnel CHARLIE _____
4. number of cabin mess rations furnished passengers and guests DELTA _____
5. number of cabin mess rations furnished non-crew personnel on project and special mission ships ECHO _____

6. number of troop mess rations furnished passengers FOXTROT__
7. value of rations issued cabin mess GOLF \$__
8. value of rations issued troop mess HOTEL \$__
9. value of subsistence on hand at end of month INDIA \$__

When it is impossible to transmit the itemized information in items 1 through 9 by message the subsistence returns will be forwarded as soon as practicable and will include a detailed explanation of the delay. The comptroller at the home port will review the returns for completeness and will forward the following documents to the supply officer at the home port:

1. one copy of each Survey Request, Report and Expenditure (S. and A. Form 154);
2. one certified copy of each General Mess Control Record (S. and A. Form 338) for each galley;

3. one copy of each certified inventory for the period ending during the months of March, June, September, December, and when the chief steward is relieved;
4. one copy of the General Mess Operating Statement (S. and A. Form 45);
5. one copy of any detailed report from the master of the ship concerning the overissue of subsistence.
2. COMSTS. One copy of any detailed report concerning an overissue of subsistence will be forwarded to COMSTS.

2824 REVIEW OF SUBSISTENCE RECORDS

Periodically, a representative of the comptroller at the home port will visit each ship berthed at the home port for the purpose of reviewing records and checking the accuracy of issue and inventory data reported monthly. The review will cover those items enumerated in the Navy Industrial Fund Handbook for Military Sea Transportation Service (NAVEXOS P-1280).

PART I: SUBSISTENCE OF SMALL SHIPS

2900 GENERAL

The instructions in this part are applicable to small ships being operated under area or subarea commanders, MSTs, and commanding officers, MSTs offices.

2901 DEFINITIONS

★ 1. **SHIP TYPES.** The instructions in this part are applicable to small ships without chief stewards assigned to area or subarea commanders, MSTs, and to commanding officers, MSTs offices.

2. **ACCOUNTING PERIOD.** One quarter of a fiscal year as indicated in the following list will constitute the accounting period for small ships:

1. July, August, September;
2. October, November, December;
3. January, February, March;
4. April, May, June.

2902 RATION RATES AND ALLOWANCES

1. **GENERAL.** The daily monetary allowance for the subsistence of personnel assigned to small ships will be the authorized rate (see par. 2301) multiplied by the number of persons on board. Not more than one mess will be established in each small ship. The total value of subsistence issued during the accounting period will not exceed the total money allowance.

2. PROCEDURES FOR GUESTS

a. **Procedure.** The procedures outlined in par. 2301 will be followed for meals furnished to guests. When no purser is assigned, or the purser assigned is not a special disbursing agent or is not an American citizen, the master of the ship will be responsible for designating, in writing, an American citizen to collect cash for meals sold.

b. **Duties of the Collection Officer.** The collection officer will be responsible for the following duties:

- ★ 1. to notify the steward of the number of persons expected two hours prior to each meal;
2. to collect cash for meals at the prescribed rate prior to the time meals are furnished;
3. to prepare a Receipt for Cash--Subvoucher (Standard Form 1165), in duplicate, for each cash collection (The original will be furnished to the person making payment, for later presentation in the mess. Official receipts will be numbered serially by fiscal year starting with number 1.) (See Illustration 11.);
4. to prepare monthly, a transmittal letter, including a certification, for cash received in original and six copies (see Illustration 12), to account for all cash received in payment for meals served during the monthly accounting period (The original and five copies of the letter, properly certified, with the cash collected, will be forwarded by registered mail at the end of the month to the disbursing officer at the home port. The disbursing officer will receipt and return a duplicate copy to the collection officer.).

3. **COMPUTING THE RATION ALLOWANCE.** The cost of subsistence furnished on board small ships will be maintained within the total money allowance established for the accounting period. The total money allowance for the accounting period will be computed by multiplying the number of authorized persons on board by the established

daily ration rate times the number of days of the voyage during which the persons were subsisted. When an accounting period covers two or more voyages made by the ship, the total ration allowances will be computed on the basis of the number of men actually subsisted on board the ship during each day of the accounting period.

4. RATION MEMORANDUM. At the end of each month, the master of the ship will furnish to the supply officer at the home port a signed Ration Memorandum (S. and A. Form 925) indicating thereon the rations furnished to each category of persons.

★ 2903 RESPONSIBILITY FOR PREPARATION AND ISSUE OF SUBSISTENCE

The master of the ship will be responsible for food service on board small ships. He will be responsible to the supply officer of the area or subarea commander, MSTs, or to the commanding officer, MSTs office, to which the ship is assigned, for the proper utilization and disposition of subsistence furnished. He will be responsible for the implementation of such directives concerning the preparation of adequate, nutritious, and well-balanced meals on board the ship as are promulgated by the supply officer of the area or subarea commander, MSTs, or by the commanding officer, MSTs office.

2904 PROCUREMENT OF SUBSISTENCE

1. REQUISITIONING AT HOME PORT. Subsistence for small ships will be requisitioned and accounted for by the supply officer at the home port. Subsistence will be procured from the usual sources of

supply. Normally, the sources of procurement will be from local Navy supply activities, from Army quartermaster activities, and by local purchase from commercial sources. Periodically, a representative of the supply officer at the home port will visit each small ship and will prepare a rough form requisition covering the subsistence needs of the ship. The rough requisition will be submitted to the supply office for typing, screening, signature, and forwarding for action. Each time physical inventories are taken on board each ship, the disposition of items of excess subsistence will be made as necessary with proper credit notation being made in the subsistence account of the ship. The supply officer at the home port will secure from the master of the ship receipted copies of invoices covering all subsistence received on board.

2. REQUISITIONING AT OTHER THAN HOME PORT

a. Requisitioning at a Port Where an MSTs Office is Located.

When a ship is at a port where an MSTs office is located and requires subsistence items, a representative of that office will prepare and process requisitions for the subsistence needs of the ship.

★ b. Requisitioning at the Port Where There is no MSTs Office.

Ships requiring subsistence, at ports where there is no MSTs office, will prepare and submit requisitions in accordance with the procedures in par. 2601-2. Two priced copies of each bill or invoice will be delivered to the master of the ship upon delivery of the subsistence. One priced copy of each bill or invoice will be receipted by the master of the ship or his authorized representative, and forwarded to the commander at the home port.

2905 INVENTORY OF SUBSISTENCE

1. GENERAL. Quarterly physical inventories will be taken and subsistence returns will be prepared for each accounting period. When possible, the quarterly physical inventory will be taken by representatives of the supply office of the home port. In all instances, the subsistence returns will be prepared by the supply officer at the home port. The quarterly physical inventory will be taken on the last day of March, June, September, and December. In addition to the quarterly physical inventories, a physical inventory will be taken upon relief of the head of the stewards department (par. 2813-2 applies as appropriate).

2. QUARTERLY PHYSICAL INVENTORY TAKEN BY REPRESENTATIVES OF THE SUPPLY OFFICE AT THE HOME PORT

a. Physical Inventories. When the ship is at the home port on the last day of a quarter, representatives of the supply office of the home port will inventory all items of subsistence. When possible, the quarterly inventory will be taken prior to resupplying the ship and the inventory figures will be used as a basis for the preparation of requisitions, redistribution of excess stores, and the surveying of subsistence which are unfit for human consumption.

b. Preparation of Certified Inventory. At the time the physical inventory is taken, the required information, including the date the inventory was taken will be placed on the certified inventory. The certified inventory will be prepared in sufficient number to provide the original and three copies for the use of the supply officer at the home port, one copy for the person taking the inventory, and one copy retained for shipboard use. The

person taking the inventory will place the following certificate on all copies of the certified inventory:

"I certify that this inventory is correct. It was taken by me, personally.

(Name, grade, and title of individual)

3. QUARTERLY PHYSICAL INVENTORY TAKEN BY SHIPBOARD PERSONNEL. When a ship is not at the home port on the last day of a quarter, the master of the ship will have a physical inventory of subsistence taken and he will forward the certified original and three certified copies of the inventory to the supply officer at the home port. The master of the ship will bear the ultimate responsibility for the correctness of such inventories.

4. PHYSICAL INVENTORIES REQUIRED IN ADDITION TO QUARTERLY

a. On Relief of Department Head

(1) Inventory. When the department head is relieved, a physical inventory will be taken, as prescribed in this part, on the effective date of relief. The relieved and the relieving department head will accompany the representatives of the supply officer of the home port, if such representatives are taking the physical inventory. When a department head is relieved, the following certificate will be placed on all copies of the certified inventory, in addition to the certificate required by subpar. 2b:

"I hereby acknowledge receipt of subsistence on board as covered by the above inventory.

(Relieving department head)
Normally, the department head will be relieved only at the end of an accounting period when the ship

is at the home port. However, when it is necessary to relieve the department head prior to the arrival of the ship at the home port, the master of the ship may designate another member of his staff as acting department head. The acting department head will inventory the subsistence immediately upon his assignment. The certified original and three certified copies of each inventory will be provided for the home port.

(2) General Mess Control Record. When a department head is detached during a quarter, a General Mess Control Record (S. and A. Form 338) will be prepared by him, in duplicate, up to and including the effective date of detachment. All copies of the S. and A. Form 338 will be certified by the department head being relieved and he will retain a copy. The original of the S. and A. Form 338 will be given to the relieving department head. One S. and A. Form 338 covering each month of the quarter will be submitted by the master of the ship to the supply officer at the home port.

b. Responsibility of Taking Physical Inventories

(1) Ship at the Home Port. When a ship is at the home port, representatives of the supply officer will take the physical inventory.

(2) Ship Not at the Home Port. When a ship is not at the home port, the master of the ship will be responsible for seeing that a complete and correct physical inventory is taken.

in par. 2701, and Stock Tally (S. and A. Form 209), as prescribed in par. 1401. The subsistence issue slip will be utilized to substantiate issues to the galley and may be originated by commissary personnel designated by the master of the ship. Each subsistence issue slip will be numbered serially, priced, and extended. The items requisitioned will be based on the menu and number of personnel expected to be subsisted. The subsistence issue slip will be prepared in duplicate and both copies will be signed by the master of the ship to indicate approval. The original subsistence issue slip will be held on-board ship and used in maintaining the S. and A. Forms 209 and 338. The duplicate subsistence issue slips will be forwarded monthly or more often when possible and practicable to the supply officer at the home port. The original and one copy of the S. and A. Form 338 with a signed Ration Memorandum (S. and A. Form 925) (see par. 2902-4) will be forwarded monthly to the supply officer at the home port. When considered necessary and appropriate, surveys of subsistence items will be requested by the master of the ship and will be made at the discretion of the supply officer at the home port.

2. ACCOUNTING PROCEDURES

a. General. All requisitions for subsistence items will be prepared in accordance with the general instructions contained in par. 2904. The master of the ship will forward a DOD Single Line Item Release/Receipt Document (DD Form 1348-1) or dealer's bills to the supply officer at the home port. One copy of each document will be transmitted by the supply officer at the home port to the comptroller for posting to the applicable general ledger account.

b. Supply Officer at the Home Port. The supply officer at the

★ 2906 ACCOUNTABILITY

1. GENERAL. In small ships the master of the ship will be accountable for all subsistence items used and will be responsible for assuring the proper maintenance of the General Mess Control Record (S. and A. Form 338), as prescribed

home port will maintain for each ship the Subsistence Ledger (S. and A. Form 335), as prescribed by pars. 2620-2731.

2907 SUBSISTENCE RETURNS

At the end of each accounting period, subsistence returns for small ships will be prepared and submitted by the supply officer of

the area or subarea commander to which the ship is assigned; pars. 2820 through 2823 will apply as appropriate. The comptroller will audit such returns and will retain the originals and copies of documentation, as are necessary and specified. Any overissue of subsistence will be investigated and reported as prescribed in par. 2702.

PART J: SANITARY REQUIREMENTS OF FOOD STORAGE AND PREPARATION

Section I: STORAGE AND CARE OF FRESH SUBSISTENCE ITEMS

2925 FRESH FRUITS AND VEGETABLES

1. GENERAL. Storage of fresh fruits and vegetables at temperatures which are too high or too low, under unfavorable conditions of humidity and in the absence of proper air circulation in unsanitary storerooms, will result in rapid spoilage and eventual loss of the product. Conversely, the storage life of these commodities can be doubled or tripled by storing them under optimum conditions.

2. ROTATION OF SUBSISTENCE ITEMS. Frequent inspection of all fruits and vegetables, followed by sorting and removal of decayed items or portions, is of basic importance in maintaining those products in top condition and in keeping surveys at a minimum. All receipts will be marked in such a manner as will insure that the oldest lots are issued first. Old lots of fruits and vegetables will not be allowed to accumulate but will be issued as soon as possible or surveyed, if found unfit for human consumption.

3. CLEANLINESS. Cleanliness of storerooms helps to prevent the growth of mold and other causes of decay. Decks will be scrubbed, and bulkheads will be cleaned as often as practicable.

4. AIR CIRCULATION. Air circulation is an important factor in the storage of fruits and vegetables. Containers will be raised off the deck by the use of dunnage or gratings and individual lots will be stowed in such a manner as to permit free circulation of air. The use of a fan or duct system may be desirable in some cases to maintain proper air circulation in all parts

of the room. Because of the lack of oxygen, personnel will not work in tight compartments where the temperature is 40° F. or higher. While this condition is not harmful to most products, personnel will not work in these compartments until a supply of fresh air has been introduced.

5. RELATIVE HUMIDITY. The relative humidity of a storage room is an important factor in the length of the storage life of fresh fruit and fresh vegetables. A relative humidity of 85% to 90% is recommended.

6. AGE OF SUBSISTENCE ITEMS. The expected storage life of any fruit and vegetable shipment varies inversely with the length of time it has been in transit or in storage prior to delivery. It is likewise decidedly influenced by the manner in which the product was handled during storage and shipment.

7. TEMPERATURE REGULATION. The temperature of storage rooms must be strictly regulated since most fresh fruits and fresh vegetables freeze at temperatures ranging from 28° to 31° F. Moreover, undesirable changes occur in some fruits and vegetables if they are stored at temperatures lower than those recommended.

8. DIVISION OF SUBSISTENCE ITEMS. Citrus fruits, onions, tomatoes, cabbages, cantaloupes, and celery will not be stored with eggs or butter or in rooms where it is possible for their odors to penetrate into egg or butter storage rooms.

2926 QUICK-FROZEN FRUITS AND VEGETABLES

Quick-frozen fruits and vegetables are highly perishable unless they are stored properly. When storage is for relatively short periods, the 10° F.

freezer room is satisfactory. When foods are to be stored for more than 90 days, the 0° F. temperature will be used. When it is impossible to maintain a 0° F. temperature the freezer room temperature will be kept at the lowest degree possible. Any inability to maintain a temperature below 10° F. will be reported to the commander at the home port of the ship and COMSTS. If quick-frozen foods are received having a temperature reading higher than freezer room temperature the shipping cases will be scattered around the freezer room with adequate space between the cases to permit rapid lowering of the product temperature. This action will be taken prior to stacking. Cases should be stacked on dunnage for sanitary reasons and to permit proper air circulation.

2927 MEATS AND MEAT PRODUCTS

1. GENERAL. Many factors affect the stowage of fresh, chilled, frozen, cured, and smoked meat, some of which are the:

1. grade and condition of the meat upon delivery for stowage,
2. prevailing humidity and temperatures,
3. refrigeration facilities available,
4. complement being subsisted,
5. frequency of provisioning,
6. method of stowing,
7. type of wrapping or packaging,
8. amount of storage life "used up" during previous storage and shipment.

2. REFRIGERATION

a. Temperature. The following temperatures are the most favorable:

1. chill space 30° to 34° F.;
2. freezer space 0° F. or lower--lower preferred (If it is impossible to maintain this degree of temperature the lowest pos-

sible temperature will be maintained. Any inability to maintain a temperature below 10° F. will be reported to the commander at the home port of the ship and COMSTS.);

3. thaw room 36° to 38° F.

b. Humidity. A humidity range of 85% to 90% is desirable in chill spaces to prevent excessive drying and subsequent meat shrinkage. If the relative humidity in the chill space is too high a rapid growth of bacteria which causes meat spoilage will take place.

c. Air Circulation. Proper circulation of refrigerated air is necessary to maintain the recommended temperature. Meat must never be stowed on the bare deck but always on grating or dunnage to permit the circulation of air. Nothing will be stowed directly on the refrigeration coils or immediately in front of blowers or fans of the refrigerating unit.

3. STOWAGE. When stowing meat, all handling will be expedited in order to conserve refrigeration and maintain the product in as firm a condition as possible. If it is necessary to stack meats they will be frozen solid prior to stacking. Meat will be stowed in such a manner that a variety of items is available at all times. When possible, meats will be stowed so that break-outs will be made with a minimum of effort and limited disruption of stocks. Most meats will be stowed most satisfactorily if left in their original shipping boxes.

4. SANITATION. Storage spaces must be kept clean and orderly to prevent contamination of the meat. Smoking in storage spaces will be prohibited to prevent the odor from being absorbed by some products. The refrigeration coils or unit will be defrosted and the decks, dunnage, and bulkheads scrubbed and cleaned as often as is practicable. In all

cases the chief engineer will be consulted regarding the defrosting of the refrigeration system.

5. **INSPECTIONS.** An inspection of stored items will be made at reasonable intervals to determine their condition while in storage. All lots should be reinspected at the time of issuance. This is particularly important with seasonal storage stocks.

2928 DAIRY PRODUCTS, POULTRY, AND EGGS

1. **GENERAL.** Dairy products, poultry, and eggs are classified as highly perishable commodities as they deteriorate rapidly in quality when maintained at improper temperatures, when stored in unsanitary spaces, or when exposed to foreign odors. Cold storage cannot improve or even maintain the quality and the condition of commodities which have been processed under unsanitary conditions or which previously have been subjected to high temperatures. Therefore, all receipts will be inspected carefully prior to being placed in the chill room or freezer. Likewise, regular inspections will be made of all products and all lots which are not holding up properly will be issued as soon as possible. Under ordinary circumstances, the product which bears the earliest packing date will be used first. However, it may be necessary, because of the poor condition of a given receipt upon delivery, to issue it ahead of products in storage with earlier dates of packing.

2. REFRIGERATION

a. **Temperature.** The maintenance of an even temperature is of the utmost importance. A variation of more than 2° should be avoided if best results are to be obtained. The following temperatures are recommended:

1. freezer storage space 0° F. or lower--lower preferred

(If it is impossible to maintain this degree of temperature the lowest possible temperature will be maintained. Any inability to maintain a temperature below 10° F. will be reported to the commander at the home port of the ship and COMSTS.);

2. chill space 32° F.

b. **Humidity.** Up to the point where mold growth becomes excessive, high humidity is desired to reduce dehydration of the product.

c. **Air Circulation.** Air circulation is of prime importance. In order to keep the air fresh the room must be kept clean and the air must circulate slowly. However, there must not be a forced draft as such rapid air movement causes excessive freezer burn of the product. Adequate air circulation can be provided by the use of dunnage or deck racks and by proper piling or stacking of the various lots. The packages will not be stacked or piled in such a manner that they will come in contact with the bulkheads, overheads, or come near the refrigerating coils. As a general rule, the containers will never be stacked higher than 12 inches below the overhead or 8 inches below the overhead beam supports and never less than 4 inches from the bulkhead or bulkhead coils.

3. **SANITATION.** All storage spaces including coils and drain pipes will be kept in a clean, sanitary condition, free from foreign odors. Butter, milk, cream, ice cream, and eggs will not be stored near strong cheeses, apples, citrus, melons, members of the cabbage family, or fish. Under all ordinary circumstances poultry and butter will be stored in the original containers, as this contributes immeasurably to cleanliness, preventing spread of odors, and protection from rodent and insect infestation.

4. **DEFROSTING.** Refrigeration coils and units in cold storage spaces will be defrosted as often as practicable, and the decks, dunnage, and bulkheads scrubbed and cleaned with soap powders and water. A layer of frost or ice one inch or more in thickness will substantially reduce the efficiency of the refrigeration system and may result in overloading the compressors. In all cases, the chief engineer will be consulted regarding the defrosting of the refrigeration system.

5. COMMODITY DATA

★ **a. Shell Eggs.** Seasonal reserve stocks of shell eggs may be kept satisfactorily for as long as 6 to 9 months if stored at a temperature of 29° to 31° F. in a relative humidity of 87%. When possible, the storing of eggs with butter, cheeses, fresh meats, and fresh milk will be avoided, even though they are to be stored for only a short period of time.

b. Frozen Eggs. Frozen whole eggs, yolks, or whites will be stored at the lowest possible temperature not higher than the 10° F., as they are highly perishable. Frozen eggs must not be allowed to thaw slowly at room temperature but should be defrosted in running water to hasten the thawing process. This product sours easily and requires careful handling at all times.

c. Butter. Butter will be stored at the lowest possible temperature, not higher than 10° F. in a humidity of 80% to prevent mold growth and excessive dehydration. It will be packed closely, covered, and set apart from other subsistence items giving off distinctive odors. Excessive moisture, warm temperatures, nonsterile packages, and paper wrappers are favorable to mold growth. Butter stored at high temperatures is extremely susceptible to rancidity.

★ **d. Cheese.** Cheese will be stowed at temperatures of 30° to 35° F. in

a humidity of 70% to 75%. Temperatures in excess of 40° F. permit ripening which accelerates as the temperature increases. Cheese will become rancid and develop undesirable flavors if kept at temperatures above 70° F. Cheese, if kept at temperatures below 30° F. is inclined to become crumbly. Rough handling of bulk cheese will result in cracking the paraffin which protects the cheese and in turn render cheese unfit for human consumption. The growth of mold on the surface of well-paraffined cheese with unbroken rind is not harmful. Indications of cheese deterioration are excessive mold, "oiling-off", drying out, "blown" cheese, cheese mites, and off flavors. Cottage cheese is kept best when it is frozen. Cottage cheese will be thawed slowly immediately before use.

★ **e. Fresh Whole Milk and Fresh Cream.** Upon receipt, fresh whole milk or fresh cream will be inspected carefully to insure that the product is satisfactory in quality, that the milk temperature is not in excess of 50° F., and that the containers are clean and sanitary. Milk and cream will not be held longer than 60 hours. The best storage temperature for milk is 33° to 38° F.

f. Frozen Whole Milk. Frozen whole milk must not be more than 30 days old when received and must be in a hard frozen condition. Frozen whole milk will be stored at the lowest possible temperature not higher than 10° F. The milk will not be kept longer than 90 days after receipt. All lots of milk in storage will be marked carefully to insure that the stock bearing the earliest freezing date is issued first. Frozen whole milk will be defrosted by arranging the containers to permit a free circulation of air at room temperature (65° to 95° F.). Defrosting times vary from 3 to 8

hours depending upon the temperature of the milk. Prior to use, the milk must be mixed by turning the carton end over end several times. The quantity of frozen whole milk to be defrosted at any given time will be the quantity needed for immediate use. Frozen whole milk which has been defrosted wholly or partially will not be refrozen.

g. Ice Cream. Quick freezing and low temperatures are essential in the making and storing of ice cream. After ice cream has hardened it will be stored at the lowest possible temperature, not higher than 10° F., until used.

h. Frozen Dry Poultry. Frozen dry poultry will be stored at temperatures under 20° F. to prevent partial thawing and development of rancidity. The earliest evidence of deterioration during storage is the loss of the fresh surface appearance

of the product, commonly called loss of "bloom". Surface desiccation of poultry or "freezer burn" occurs when the skin of the bird becomes pock-marked. Poultry showing freezer burn is objectionable for reasons other than appearance, as the fats beneath the desiccated areas become rancid and the muscle tissues become dry and tough. Frozen poultry will be stored as compactly as possible to restrict the amount of air circulation and retard freezer burn. To prevent dehydration frozen poultry will not be removed from its original package, nor openly exposed to air currents until ready for use.

i. Eviscerated Poultry. The procurement of eviscerated poultry will save approximately 50% in shipping space and 25% in shipping weight over New York dressed poultry.

Section II: STORAGE AND CARE OF NONPERISHABLE SUBSISTENCE ITEMS

2935 GENERAL

The term "nonperishable subsistence items" refers to those food items that are canned, dried, dehydrated, or processed to the extent that they may, under normal conditions be stored in ordinary storage. Spoilage can and will occur if nonperishable subsistence items are mishandled, improperly stored, or stored for excessive periods of time. Length of storage is based upon the date of packing and not upon the date of receipt on board.

2936 STORAGE

1. STOREROOMS. Nonperishable subsistence items will be stored, when possible, in clean, cool, dry, well-ventilated storerooms. Steam or heated pipes should not be present in a well-constructed storeroom. Adequate venti-

lation should be provided so that excessively high temperatures will not prevail during the hot summer months or in tropical areas. Protection against freezing should be provided. The storerooms will be kept clean to prevent the contamination of bagged foods by dirt, dust, or other extraneous material.

2. STOWAGE. Careful and correct stowage methods will prevent damage and will insure speed and efficiency in receiving, handling, and issuing nonperishable subsistence items. Nonperishable subsistence items will be segregated so that the oldest lots as packed and not as received are issued first, unless newer lots show evidence of deterioration or spoilage. The particular method used for stowing each item depends on the nature of the container, the nature of the commodity and the bursting or breaking strength of the bottom layers. For

example, items packed in glass containers with metal tops or cork stoppers should be laid sideways to prevent the drying out of the stoppers and subsequent leakages. Items will not be stacked so high as to cause a bursting or crushing of the bottom layers nor will the items be stacked so high that the top layer is subject to higher temperatures. Nonperishable subsistence items will not be stacked near steam or other heated pipes. Dunnage or gratings will be used when possible to raise the products off the floor and individual lots will be piled in such a manner as to permit a free circulation of air. Lots should not be stowed in corners or against bulkheads as such stowage leaves insufficient room for cleaning and inspection. The items will be cross-stacked properly to keep the stack solid and prevent it from toppling. Proper bracing will be employed to prevent the shifting of cargo. The safe storage period for nonperishable subsistence items varies greatly, depending on temperature, humidity, care in handling, protection from the weather, quality of the food when received, and the packing. Therefore, periodic inspections are necessary. If it is necessary to use open storage, the products will be stacked on dunnage and covered with tarpaulins or similar tenting materials. When wrapping the nonperishable subsistence items with tarpaulins, the tarpaulin will be raised to permit free circulation of air. Dunnage or bulkheads will be used and stores will never be placed directly upon the ground where they can readily absorb moisture. This also permits air circulation under the stack. Sufficient air circulation at all times is vitally needed to insure a reasonable storage period.

2937 CAUSES OF SPOILAGE

1. AGE. All foodstuffs are subject to varying degrees of natural

deterioration. This is inherent in the food itself and no precautions can be taken. This should not be confused with that of micro-organisms, chemical agents, or other outside agents. These facts make it necessary to always use the oldest lots first.

2. BACTERIA, YEASTS, MOLDS. Bacteria, yeasts, and molds are the primary causes of food spoilage. These living organisms can survive only under favorable conditions. Canned foods may be spoiled by bacteria which have survived the canning process or by those which have gained access to the can through imperfections in or damage to the container. Spoiling is usually evidenced by the development of gas and in most cases by an objectionable odor and taste. Yeast growths create damage, particularly at temperatures between 77° F. and 95° F. to products with a relatively high sugar content such as honey, syrups, dried fruits, sweet beverages, fruit concentrates, and canned fruits. Molds produce visible threadlike filaments, musty odors, and off-flavors in those products in which they are growing. Surface molds on firm textured food are not necessarily harmful and may be removed by washing.

3. INSECTS (ROACHES, FLIES, WEEVILS, MOTHS). Insects can cause great damage not only to natural foods, but also live upon manufactured foods such as breakfast food cereals, crackers, and spices. Food stored at temperatures between 60° F. and 90° F. are especially attractive to insects. They will not disturb foods at high or low temperatures. Infested supplies should be segregated and if not too heavily infested may be "reconditioned" for use. Cornmeal is especially susceptible to insect infestation and rancidity. In using insect repellants care should be exercised not to contaminate the foods or cause damage by the

absorption of the fumigant or insecticide flavor by the food.

4. **RODENTS (RATS AND MICE).** Rodents not only physically destroy foods by feeding, chewing, and cutting the bags for nests or nesting material, but also pollute food with their excreta and hairs. Rodents are carriers of filth and disease; the importance of controlling these pests is self-evident. The most effective method of control is to prevent access of these animals in the first place.

5. **PHYSICAL ENVIRONMENTAL FACTORS**

a. **Freezing.** Dry products such as grains, flour, sugar, starch, cereals, and dehydrated foods ordinarily are not injured by freezing. If foods containing relatively large amounts of water, such as canned products, are accidentally frozen it will be found that their usefulness and palatability have not been harmed. However, their physical appearance may suffer due to changes in consistency and texture (softening). Emulsions such as cheese, butter, prepared mustard, and mayonnaise, will be destroyed by freezing although the food itself is not spoiled.

b. **Heat (High Temperatures).** A high storage temperature for a long period of time will encourage bacterial growth, mold growth, and insect infestation. It is particularly dangerous when accompanied by high humidity. Chemical action is accelerated causing rancidity in many items; the food acids naturally present within the cans are activated resulting in pinholing, blacking of the interior, and hydrogen swells. High temperature is the chief cause of spoilage in canned foods and should be controlled whenever possible by providing adequate ventilation. Cocoa will keep several years under cool, dry storage conditions. The formation of a white "bloom" (de-

scribed as a "whitening" or "graying" due to storage under fluctuating temperatures) has little or no effect on its flavor. If cocoa is subjected to high temperatures for long periods mustiness or rancidity may occur. Cocoa absorbs moisture and odors, therefore, cans should be kept tightly closed. Tea will absorb odors, and high humidity causes it to become musty and sour. Roasted ground coffee develops a weak and stale flavor rapidly. Coffee of all types will absorb odors to some extent and the flavor will be harmed.

c. **Moisture (Humidity), Ventilation, and Light.** High humidity favors growth of insects, bacteria, and molds. It causes products which readily absorb moisture, such as sugar and salt, to cake and become hard. Dehydrated products are perishable and are subject to moisture absorption, insect infestation, and mold. A loss of flavor and discoloration (darkening) will occur with age. Dried vegetables and fruits are subject to insect infestation and molding (particularly fruits) and should be inspected at frequent intervals. Where sharp fluctuating temperature and high humidity prevail, the lack of proper ventilation may cause excessively high temperatures. Proper ventilation is one of the most important factors in protecting foods, particularly in tropical areas. Light damage is restricted to those products that are packed in glass or transparent containers. Exposure causes color changes and may affect the flavor of foods containing, or composed of, edible oils and fats.

6. **PHYSICAL FACTORS FOR CANNED PRODUCTS**

a. **Spoilage Factors.** Canned products, such as meats, fish, poultry, vegetables, fruits, and juices are subject to several physical environmental factors causing

spoilage. These factors deserve special consideration:

1. rust, unless it actually penetrates the can, causing leakage, will not injure the contents or render them inedible;
 2. dents, unless so severe as to cause leakage, do not indicate that the contents are in an unsatisfactory condition;
 3. high temperatures are detrimental to all canned provisions and reduce their storage life to a marked degree;
 4. freezing causes loss in palatability and may cause change in texture, alternate freezing and thawing may cause powdering of the protective lacquer and loss of its adhering power.
- b. Defects. Major defects found in canned subsistence items are:
1. fading of color, loss of flavor, or softening of contents, all due

to chemical action and natural aging processes;

2. discoloration of contents or inside of can because of a chemical action, usually found in products containing sulphur compounds, i.e., corn, peas, and meat products;
3. swells, springers, and flippers caused either by chemical or bacterial action or by improper packing (regardless of the primary cause, all cans exhibiting these defects should be discarded);
4. pinholing due to chemical action of the food acids on the tin (enameled cans tend to pinhole faster due to localized action);
5. flat sours due to bacterial action, noticed by changes in odor, color, or turbidity of the product.

Section III: FOOD PREPARATION

2945 CARE EXERCISED IN THE PREPARATION OF FOOD

Utmost care must be exercised in the preparation of food so that meals will be wholesome and appetizing. The best food and the most carefully planned menus are practically worthless if the food is poorly cooked, uninviting in appearance, handled in an unsanitary or sloppy manner, or prepared too long in advance. All personnel engaged in the preparation of food will be under close and constant supervision of trained personnel charged with the responsibility. The chief steward constantly will be alert to correct mistakes of those under him and to teach them the correct methods for preparation of food.

2946 TIME BETWEEN PREPARATION AND SERVICE OF FOOD

1. FOUR HOUR TIME LIMIT. The length of time between the

preparation and the service of food will be held to a minimum. The appearance, palatability, and nutritive value of cooked food are reduced when the food is held any length of time beyond the actual end of the cooking period. Unattractive food is not consumed and therefore wasted. Food should always be served immediately after preparation. If food must be held, no more than four hours should elapse from the time of removal of food from the hot oven or cooking utensil to the time of service. This timing should begin at the instant the food is removed from the heat and not after the food has been sliced or otherwise prepared for serving.

2. SUPERVISION. Improper methods of food preparation, inferior standards for cooked foods, and the lack of constant supervision by trained personnel are the reasons which are responsible largely for undesirable results in the cooked products.

3. NAVY-MARINE CORPS RECIPE SERVICE. The Navy-Marine Corps Recipe Service (S. and A. Publication 7) provides the steward department personnel with brief and clearly defined formulations for the preparation of nutritionally adequate food of uniformly good flavor and quality. This publication which itemizes the quantities and kinds of ingredients to be used provides effective portion control when modified by the knowledge of the actual or the estimated number of personnel to be fed, their eating habits, and the general acceptability of the items being served. It also includes the correct mixing methods, cooking time, and cooking temperatures.

2947 INSTRUCTIONS FOR HANDLING CREAM, STERILIZED, STABILIZED

★1. STORAGE. The 18% milkfat product can be satisfactorily stored as a nonperishable subsistence item but the 30% milkfat product requires chilled storage at 35° -45° F. at all times. The maximum storage life of either type is not in excess of six months.

2. USES. Cream, sterilized, stabilized, may be used as cereal cream, coffee cream, and with skim milk powder to prepare reconstituted beverage milk. The 30% milkfat product also may be used to prepare whipping cream.

3. FORMULAS

a. Cereal Cream and Coffee Cream. Cereal cream and coffee cream may be prepared from the 18% milkfat product by diluting one part of cream with one part of water. Such procedure will produce a cream of 9% butterfat content. Using activities may find that a product of lower butterfat content is more desirable. This can be obtained by diluting at a

higher ratio with respect to water, thereby decreasing the cost accordingly. The use of 30% milkfat product for the preparation of cereal cream and coffee cream is not recommended.

b. Beverage Milk. Both the 18% and 30% milkfat products can be used with skim milk powder in the preparation of beverage milk. When available, the 30% product will be used because it is cheaper on the basis of the butterfat content than the 18% milkfat product. Suggested formulas are as follows:

1. 18% milkfat product:

- 1 gallon cream, sterilized, stabilized;
- 4 pounds skim milk powder;
- 4 gallons water.

(Prepares approximately 5 1/4 gallons of beverage milk.)

2. 30% milkfat product:

- 1 gallon cream, sterilized, stabilized;
- 7 pounds skim milk powder;
- 7 1/2 gallons of water.

(Prepares approximately 9 gallons of beverage milk.)

In preparing beverage milk, the skim milk powder will be dissolved completely in water, and then the necessary amount of cream, sterilized, stabilized, added to the reconstituted skim milk. The formulas will produce a milk beverage of nutritive content that is comparable to high quality, fresh milk.

c. Whipping Cream. The 30% milkfat product only will be used in the preparation of whipping cream, using the formula as follows:

- 1 gallon cream, sterilized, stabilized (30%);
- 1 pound sugar;
- 9 teaspoons (or 9 tablets) vanilla flavor.

(Prepares approximately 2 gallons of whipped cream.)

Section IV: SANITARY ASPECTS OF FOOD PREPARATION

2955 RESPONSIBILITIES

The chief steward, under the direction of the master of the ship, is responsible for maintaining steward department spaces in a sanitary condition and for assuring that the proper sanitary precautions for food-service personnel are observed. All steward department personnel are responsible for a complete knowledge of the sanitary aspects of food service. The regulations governing sanitary food service and the procedures to be followed are prescribed in Instruction in Sanitary Precautions for Food-Service Personnel published by the Bureau of Naval Personnel and Operation and Maintenance of Dishwashing Machines published by the Bureau of Ships. Steward department officers and key personnel are responsible for a complete working knowledge of the instructions prescribed in these publications which apply to them in the performance of their duties. The chief steward is responsible for enforcing the procedures prescribed in these publications and for the instructions contained herein, particularly the instructions in connection with the stowage of subsistence (see par. 2936-2).

2956 FOOD POISONING INSTRUCTIONS AND PRECAUTIONS

1. **TIME LAG.** If food cannot be served immediately after it has been prepared, the four hour limit for holding food to be served will be observed (see par. 2946-1).

2. RECHILLING AND HEATING

a. **General.** If food is to be held longer than four hours after it has been cooked, it will either be thoroughly chilled to a temperature of 50° F. or below as soon after

cooking as possible, or held at a temperature of 140° F. or above. These temperatures hold development of harmful bacteria to a minimum. If the product is refrigerated at intervals and then permitted to warm up, the total time of the various periods in the growth range will be not more than four hours. Ordinarily the chilling procedure will be used, because holding foods at a high temperature for a long period of time results in the loss of nutritive value as well as undesirable changes in flavor and appearance.

b. **Leftovers to be Chilled.** When leftover or warm foods are chilled, care must be taken to assure prompt chilling of food all the way through. Foods that are to be refrigerated must be placed in several shallow pans to a depth of not more than three inches. Foods will not be put in one large, deep pan. Chilling in a deep pan may take so long to get to the center of the food mass, that sufficient time is allowed for growth of harmful bacteria and the development of a toxin. Any other procedure which might delay cooling also will be guarded against.

c. **Cream-filled foods.** Bread puddings, custards, eclairs, and foods with cream fillings will be covered, cooled quickly, and placed in a refrigerator or in some other cool place until ready to serve. If it is not possible to cool them in some manner, they will not be prepared for the general mess.

d. **Food to be Ground.** Food to be ground for hash or other dishes must be cooked immediately after it has been ground. It must not be ground some time previous to actual cooking and then returned to the refrigerator to be cooked at a later time. To grind food increases the area for contamination and the growth of harmful bacteria. In the

case of chilled foods, to grind them warms them up to the point where bacterial growth may start.

3. GENERAL PRECAUTIONS

a. Reconstituted Dehydrated Products. Products such as reconstituted dried eggs and vegetables are as susceptible to spoilage after reconstitution as the fresh product. Therefore, they will not be reconstituted any sooner than is necessary to achieve the right degree of absorption of moisture unless they are thoroughly chilled immediately after mixing with the water.

b. Thawing of Frozen Foods. Frozen foods will never be permitted to thaw until immediately before preparation for cooking or serving. Once they have thawed they are as susceptible to spoilage as fresh foods. Once defrosted, quick-frozen foods must not be refrozen.

c. Infected Personnel. Commissary personnel who have boils, or infected cuts on their hands, will not be permitted to handle food. All personnel will be cautioned against sneezing or coughing in places where food is prepared and served. The utmost observance of personal cleanliness is to be enforced.

d. Water. Only pure water, distilled when practicable, will be allowed for cooking purposes.

e. Spoiled Food. Food which shows the slightest signs of spoilage either in appearance or odor will not be served except upon the advice of a medical officer. All food held in the galley will be covered properly to prevent contamination by rats, mice, flies, or roaches. In preparing food, all scraps and waste matter will be disposed of as rapidly as possible to prevent the attraction of flies.

PART K: LAUNDRY OPERATIONS AFLOAT

2965 THE LAUNDRY

★ 1. PATRONS. Laundry services will be provided regularly to permanently assigned military personnel and civilian crew members and for the laundering of utility uniforms worn by troop mess personnel. Laundry service provided to permanently assigned military personnel and the laundering of utility uniforms for troop mess personnel will be at no cost to the individual. Passenger's laundry may be serviced at the discretion of the master of the ship and at the direction of the commander at the home port. Under no circumstances will personal laundry take precedence over the ship's laundry.

2. PROCESSING OF PERSONAL LAUNDRY. The processing of personal laundry will be consolidated with the ship's laundry in the administration and operating functions of the laundry.

3. AMOUNT OF LAUNDRY TO BE SERVICED. Personal laundry will not exceed one bundle per person per week. A bundle may consist of any reasonable number of items appearing on the laundry slip.

4. RESPONSIBILITY. Services provided will be at the owner's risk and no claim for reimbursement against the ship or the Government for damages, shortages, or losses will be made. However, normal care and diligence will be exercised in the laundry operation. Excessive damages or losses to personal laundry will be investigated by the chief steward who will recommend to the master of the ship such appropriate corrective action as may be necessary.

5. PRICES. Normally, the approved ship's service prices prevailing at the home port of the ship, as approved by the cognizant com-

mander, will be charged for personal laundry services. The price list will be displayed conspicuously aboard the ship.

6. ACCOUNTING. Collections for laundry services will be made by the purser and credited to 17X4912.3302 Navy Industrial Fund, and the appropriate expenditure account.

7. BLANK FORMS. The laundry slip, with the claim check attached, is the only form required and will be procured from the commander at the home port. However, area and subarea commanders may, at their discretion, require additional operational data on an intermittent basis. This additional data will be held to a minimum.

2966 OPERATIONAL RESPONSIBILITIES

1. GENERAL. Regulations, approved by the master of the ship, will be posted governing the operation of the ship's laundry. Included in the regulations will be the designation of the hours for the receipt and issue of personal laundry.

2. RESPONSIBILITY OF CHIEF STEWARD. The chief steward, with respect to personal laundry, will be responsible for:

1. furnishing a laundry slip to personnel authorized to utilize laundry services;
2. receiving laundry with the laundry slip and claim check filled out by the owner, extending the prices for articles appearing on the slip in the column headed "price", entering the total amount thereunder and on the claim check;
3. attaching the laundry slip to the laundry and presenting the owner with the claim check;
4. verification of owner's count on laundry slip by checking

items received against owner's count, differences, if any, will be noted;

5. the return of clean laundry to the owner after the claim check stamped "paid" by the purser has been presented;

6. appropriately disposing of laundry slips in accordance with instructions of the commander at the home port.

3. RESPONSIBILITY OF THE PURSER. The purser, with respect

to personal laundry, will be responsible for:

1. collection of monies indicated on claim check, signing and stamping claim check "paid";
2. furnishing Receipt for Cash--Subvoucher (Standard Form 1165) to owner for amount collected;
3. indicating the total monies collected for personal laundry services on the Cash Collection Voucher (DD Form 1131).

PART L: SAFETY

2970 RESPONSIBILITY FOR SAFETY

1. GENERAL. Regulations covering the safe operation, cleaning instructions, and personnel allowed to operate the steward department equipment, approved by the master of the ship, will be posted adjacent to all steward department equipment.

2. RESPONSIBILITY OF THE CHIEF STEWARD. The chief steward, with respect to safety, will be responsible for:

1. inspecting all steward department equipment and safety devices weekly and reporting any discrepancies, in writing, to the chief engineer;
2. requiring that persons responsible for the various steward department spaces check all equipment and safety devices daily and immediately report to the chief steward any discrepancies;
3. informing all steward personnel, in writing, as to their duties and responsibilities and requiring that such personnel sign the original (to be kept on file) signifying that they are fully cognizant of their duties and responsibilities;
4. posting instructions for the operation of all steward department equipment; for the operation of all safety devices, and for the cleaning of such equipment; these instructions will be posted adjacent to all steward department equipment and must be visible to the operator;
5. establishing definite lines of authority within the steward department to insure that at all times competent personnel are in charge of all spaces and operating personnel;
6. establishing a formal indoctrination program to insure that all troops and newly assigned civilian steward department personnel are thoroughly familiar with their duties and responsibilities;
7. insuring that "troop" personnel do not operate meat slicers, meat saws, meat and vegetable grinders, and laundry equipment (except home type machines);
8. insuring that, while the steward department equipment is not in use, the power source will be secured by unplugging the receptacle plug or by opening the disconnect switch, as applicable, also the operating switch.