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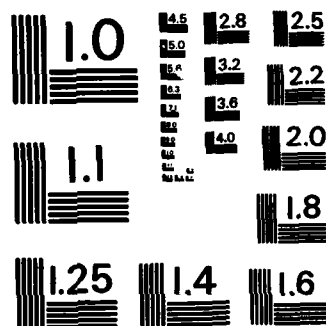
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NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

SUBMARINE TENDER SHIPBOARD UNIFORM
AUTOMATED DATA PROCESSING SYSTEM
REQUISITION/ISSUE/RECEIPT DOCUMENT
PROCESSING ERRORS, OMISSIONS AND
PROCEDURAL DEVIATIONS

by

Glenn D. Eberling

June 1982

Thesis Advisor:

Roger Weissinger-Baylon

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Submarine Tender
Shipboard Uniform Automated Data Processing System
Requisition/Issue/Receipt Document Processing
Errors, Omissions and Procedural Deviations

by

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ABSTRACT

The Shipboard Uniform Automated Data Processing System (SUADPS) was designed in the late 1960's to improve afloat supply management by utilizing automated data processing equipment. This system is still currently operational on the U.S. Navy's thirteen submarine tenders performing most of the basic clerical functions of supply. SUADPS in its present form is obsolete and requires substantial manual interfacing from initial document preparation to final processing and filing. Some of the adverse aspects of SUADPS manual interfacing are document processing errors, omissions and procedural deviations. If not adequately curbed, these aspects can degrade submarine tender supply effectiveness. Within a few years, system improvements will be made available to the fleet to alleviate some of the deficiencies incorporated in the present system. Recommendations for measures to combat the spectrum of SUADPS document processing errors, omissions and procedural deviations are included in this thesis.

TABLE OF CONTENTS

I.	INTRODUCTION TO THE STUDY	8
A.	INTRODUCTION	8
B.	THESIS OBJECTIVE	9
C.	SCOPE	9
D.	APPROACH	10
II.	BACKGROUND OF THE STUDY	12
A.	SUADPS OVERVIEW	12
B.	AN/UYK-5(V) COMPUTER	15
C.	SUADPS ORGANIZATIONAL STRUCTURE	16
1.	Submarine Tenders	17
2.	Supply Department	17
a.	Supply Support Division	19
b.	Stores Division	20
c.	Stock Control Division	21
d.	Automated Data Processing (ADP) Division	22
e.	ROV(SS) Division	23
f.	Quality Assurance Team	23
D.	SUADPS DOCUMENT PROCESSING	24
1.	Receipt Processing Cycle	24
2.	Issue Document Processing Cycle	26
III.	REQUISITION/ISSUE RECEIPT DOCUMENT PROCESSING PROBLEM AREAS	29
A.	INTRODUCTION	29

B.	REQUISITION/ISSUE DOCUMENT SCREENING ERRORS, OMISSIONS AND PROCEDURAL DEVIATIONS	31
C.	ISSUE AND RECEIPT DOCUMENT PROCESSING ERRORS, OMISSIONS AND PROCEDURAL DEVIATIONS	33
D.	SUADPS DOCUMENT PROCESSING DISCREPANCY INDICATORS	34
IV.	FACTORS THAT CONTRIBUTE TO REQUISITION/ISSUE/ RECEIPT DOCUMENT PROCESSING ERRORS, OMISSIONS AND PROCEDURAL DEVIATIONS	36
A.	INTRODUCTION	36
B.	NON-SUADPS COMPETING REQUIREMENTS	36
C.	PHYSICAL LAYOUT OF DIVISIONAL SPACES	37
D.	SUADPS TRAINING AND REFERENCE AIDS	38
E.	HUMAN FRAILTIES	39
F.	CONFLICTING PRIORITIES	40
G.	CONFLICT POTENTIAL	42
H.	SUADPS MANAGER	44
I.	FLUCTUATING TEMPO OF OPERATIONS	46
V.	CONCLUSIONS/RECOMMENDATIONS	47
A.	CONCLUSIONS	47
B.	RECOMMENDATIONS	49
1.	SUADPS Auxiliary Squads	50
2.	SUADPS Reference and Training Aids	51
3.	Storekeeper Personnel Assignment Policies	51
4.	SUADPS Management Meetings	53
5.	SUADPS Manager	54
	LIST OF REFERENCES	58
	INITIAL DISTRIBUTION LIST	59

LIST OF ACRONYMS

ADP	Automated Data Processing
DTO	Direct Turn-over
FMF	Financial Master File
MRF	Master Record File
MSSLL	Master Stock Status and Locator Listing
NBR	Numbers File
NIS	Not in Stock
QA	Quality Assurance
ROV(SS)	Repair Other Vessel--Submarine
RPPO	Repair Part Petty Officer
RQN	Requisition Record File
SNAP	Shipboard Non-tactical ADP Program
SSSLL	Supplemental Stock Status and Locator Listing
SUADPS	Shipboard Uniform Automated Data Processing System

I. INTRODUCTION TO THE STUDY

A. INTRODUCTION

Presently there are thirteen submarine tenders in service in the United States Navy providing deployable repair and logistical support to over one hundred and thirty nuclear and diesel powered submarines, including fleet ballistic missile submarines, a major component of America's strategic nuclear deterrent force. Each of these submarine tenders maintains a repair part and consumable stock inventory varying between 30,000 and 90,000 line items in support of the ship's mission. Thousands of stock inventory transactions occur monthly as issues from and receipts to the stock inventory are made. Processing of these transactions is conducted utilizing the Shipboard Uniform Automated Data Processing System (SUADPS) 207 Class Accounting System.

SUADPS was designed in the late 1960's to improve afloat supply management by utilizing automatic data processing equipment [Ref. 1: p. 1-1]. Under the SUADPS concept, all inventory control and financial records are managed on magnetic tape or drum files. SUADPS will perform most of the basic clerical functions of supply, e.g. posting issues and receipts, recording demand and frequency, accumulating financial data, as well as producing records and reports [Ref. 2: p. 1-3].

SUADPS in its present form is obsolete and requires substantial manual interfacing from initial document preparation to final processing and filing [Ref. 1: p. 1-1]. Some of the adverse aspects of SUADPS manual interfacing are document processing errors, omissions and procedural deviations. If not adequately curbed, these aspects can degrade submarine tender supply effectiveness. Within a few years, system improvements will be made available to the fleet; for the present, fleet units must take measures to combat the spectrum of SUADPS document processing errors, omissions and procedural deviations that are associated with the system's manual interfacing.

B. THESIS OBJECTIVE

The objective of this thesis is to identify some of the various types of submarine tender SUADPS document processing errors, omissions and procedural deviations associated with manual interfacing issue and receipt processing operations; their possible ramifications with respect to supply effectiveness; direct and indirect causes; and to formulate recommendations to reduce their reoccurrence.

C. SCOPE

The scope of this analysis is limited to those facets of submarine tender SUADPS issue/receipt document processing problems that are directly attributed to local practices and management policies. Design-related system inadequacies

will only be highlighted as background material to facilitate a better understanding of their overall contribution to issue/receipt processing difficulties.

D. APPROACH

In the course of researching data for the preparation of this thesis, over thirty personal interviews were conducted with various submarine tender Supply Department personnel involved in SUADPS related activities. Personnel interviewed included: submarine tender Supply Department heads, their assistants, Stock Control/Stores/Supply Support/ADP/ROV(SS) officers, and storekeepers of various ranks from several different submarine tenders. In addition to interviewing personnel presently involved in SUADPS related activities, interviews were conducted with supply personnel possessing prior experience in submarine tender SUADPS operations.

In the interest of obtaining spontaneous and candid remarks from those interviewed, the personal interviews were conducted on an informal, unstructured basis with duration lasting between thirty minutes and two hours. Each interviewee was prebriefed on the purpose and scope of the interview so that only topics germane to this thesis would be discussed. In addition to the material generated from conducting personal interviews, reflections from my own experiences in the SUADPS arena, first as a submarine supply

officer interfacing with submarine tenders, then as Stores/Supply Support/Stock Control/ADP officer aboard a submarine tender were included. Lastly, in conjunction with the personal interviews, a review of literature pertaining to the Shipboard Uniform Automated Data Processing System (SUADPS) was conducted to supplement the material generated from the interviews.

II. BACKGROUND OF THE STUDY

A limited familiarity of the subject matter is required in order to understand and appreciate the material presented in this thesis. For this reason, Chapter II provides background information on the Shipboard Uniform Automated Data Processing System (SUADPS), AN/UYK-5V Computer System, SUADPS organizational structure and SUADPS related supply operations.

A. SUADPS OVERVIEW

The Shipboard Uniform Automated Data Processing System (SUADPS) was designed in the late 1960's to improve afloat supply management by utilizing automatic data processing equipment. Under the present batch processed, magnetic tape-oriented SUADPS concept, all inventory control and financial records are managed on magnetic tape or drum files. SUADPS performs most of the basic clerical functions of supply, e.g., posting issues and receipts, recording demand and frequency, accumulating financial data as well as optional reports and records as required [Ref. 2: p. 1-3]. This system is currently operational in some fifty-six (56) major fleet units (AD, AFS, AR, AS, AS-FBM, CV and LPH/LHA's) and seventeen (17) Marine Aircraft Group (MAG) Activities [Ref. 1: p. 1-3].

SUADPS utilizes a modular concept where each definable requirement is programmed in a self-contained software component or module. Software modules are accessed and actuated by the use of a unique document identifier assigned to each transaction. All modules are united and governed by an executive component known as SUADPS. This programming technique permits locally generated transactions and externally generated status and change notice actions to be introduced at a single point of entry. In order to guard against erroneous postings, a separate module validates all data at the point of entry using extensive comparisons and validation tables. After each module completes its function, control is automatically returned to the executive component (SUADPS) so that a single update can accept and validate all input, post to applicable files and create necessary output. [Ref. 2: p. 1-3]

There are four major magnetic tape or drum files maintained under SUADPS: the Master Record File (MRF), the Requisition Record File (RQN), the Numbers File (NBR) and the Financial Master File (FMF). The Master Record File (MRF) contains a variable length record for each item stocked aboard the tender. Each record contains identification and quantitative data required for the shipboard management of the item. The data in the Master Record File (MRF) is kept current by the application of transactions during update processing (computer process in which accumulated transactions

are applied to system tape or drum files and output is produced) and by the application of change notice transactions (which update item management information such as stock number, unit price, etc.) provided by inventory managers. In addition to records on items stocked, records also are maintained on not-carried items in order to record demand, frequency of demand and outstanding requisitions. [Ref. 2: p. 2-5]

Periodically a printout of certain essential data elements from each stock record in the Master Record File (MRF) is produced. This printout is called the Master Stock Status and Locator Listing (MSSLL). A Supplemental Stock Status and Locator Listing (SSSLL) is produced after each update and contains current data on all stock numbers affected since the last complete MSSLL was produced. Both the Master Stock Status and Locator Listing (MSSLL) and the supplemental MSSLL are essential supply management reference aids and must be kept current in order to remain effective. [Ref. 3: p. 3-16]

The Requisition Record File (RQN) is an active history file of all outstanding and completed requisitions not yet transferred to the Requisition History File (RHF). The Numbers File (NBR) contains supplementary Master Record File (MRF) data elements and a record of stock number changes and cross-reference data. The Financial Master File (FMF) consists of a series of tables and counters which generally

correspond to financial reports and records required of the financial transactions that are posted automatically to the tables during update processing. [Ref. 2: p. 2-17]

Having recognized the limitations of the present baseline system, the Navy is now developing a new upgraded SUADPS that will utilize the increased processing capabilities provided by the new Shipboard Non-Tactical ADP Program I (SNAPI) environment as well as the incorporation of remote peripheral subsystems to provide immediate user enhancement. Modern design features (e.g. online, real time, transaction driven processing utilizing a data base management system/source data entry methodology and multi-programming/processing procedures) will be incorporated into the system. Under SUADPS Real Time, supply support responsiveness, net effectiveness, storeroom stock validity levels and Supply Department supply support mission functions should be significantly enhanced. [Ref. 2: p. 1-1]

B. AN/UYK-5(V) COMPUTER

Submarine tenders are presently equipped with the AN/UYK-5(V) computer system. This system was designed in the late 1950's and was first implemented on a tender in 1966. The complete system comprised of a digital data computer central processor, digital data recorder-reproducer, input/output keyboard printer, card reader punch and data processing line printer is commonly known by the Univac

designation U-1500. In addition to the AN/UYK-5(V) computer suite of hardware, which is government owned, each SUADPS user also requires ancillary punch card equipment.

[Ref. 2: p. 2-1]

The present system, with batch magnetic tape input and output, sequential processing, and small memory capacity, has been identified as severely constraining fleet data processing effectiveness and is being replaced through the Shipboard Non-Tactical ADP Program (SNAP). This program will provide a modern computer system with a hierarchical storage capability including real-time storage, interactive query and modularly expandable subsystems. It will be capable of real-time support of the existing and planned functional work processes required to accomplish fleet mission essential responsibilities. [Ref. 1: p. 1-1]

C. SUADPS ORGANIZATIONAL STRUCTURE

The major characteristics of the Shipboard Uniform Automated Data Processing System (SUADPS) are influenced by the complex environment in which it operates. In order to facilitate a successful SUADPS operation, a harmonious and cohesive effort is required by all parties concerned. This section provides a brief description and outline of the shipboard organizational structure utilizing SUADPS and related responsibilities as they pertain to the submarine tender environment.

1. Submarine Tenders

There are presently thirteen submarine tenders in service in the U.S. Navy providing deployable repair and logistical support to over one hundred and thirty nuclear and diesel-powered submarines, including fleet ballistic missile submarines, a major component of America's strategic nuclear deterrent force. Besides providing submarines and their crews with repairs, spare parts, ordnance, provisions, medical, dental and legal support, these tenders are the flagships of their respective submarine squadrons or groups. The submarine tender is organized into various departments, according to functional area of expertise (e.g. repair, weapons repair, supply, medical, deck, engineering and operations). One of the largest of these departments, the Supply Department, is charged with maintaining a repair part and consumable stock inventory consisting of between 30,000 and 90,000 line items in support of the ship's mission.

2. Supply Department

The Supply Department of a submarine tender is a service organization whose mission is to provide the materials and personnel services necessary to support an operational submarine squadron, the departments of the tender, and other ships and units as may be assigned by higher authority. In fulfilling its mission, the Supply Department is responsible for procuring, receiving, storing, issuing, shipping and accounting for all material requirements

and for the operation of such personnel support facilities as are authorized by Navy regulations and current Navy Department directives [Ref. 4: p. 1-5]. A typical submarine tender Supply Department is organized into seven divisions. Of these the Stores, Supply Support, Stock Control and Automated Data Processing Divisions are directly involved in SUADPS activities. The remaining divisions, Ships Store, Food Service and Disbursing, are primarily personnel service oriented.

The components, repair parts, and consumable stock inventory maintained by the submarine tender's Supply Department is financed by either the Navy Stock Fund (a revolving fund which finances inventory for issue to fleet and shore units and is reimbursed by its customers for issues made) or Navy Procurement Appropriations. The range and depth of items to be carried in inventory is determined by allowance, load lists and shipboard demand. Allowance type codes are utilized to indicate the authority for maintaining each item in stock and to identify the basis for establishing stock levels. In addition to the above stocking basis, provisions exist for the stocking of substitute, economic retention and specifically authorized additional items. Adjustments in depth, range, safety levels, operating levels, requisition objectives, reorder points and other factors that are germane to inventory management are specified by the submarine tender's organizational senior in the chain of

command (called a Type Commander) in official instructions and notices.

A standard measurement of a Supply Department's performance is its effectiveness. Supply gross effectiveness (total issues from stock divided by total demands) and net effectiveness (total issues from stock divided by the total demands for carried material transactions) are two standard measures of Supply Department performance which can be used to view trends within a particular tender and to compare performance between individual ships of other groups of supply activities. Supply gross and net effectiveness can be adversely affected by SUADPS document processing errors, omissions, and procedural deviations, and result in delays in supplying vitally needed repair parts and consumables to supported units. Two common scenarios outlining a not-in-stock situation where processing errors, omissions or procedural deviations could have been at fault are: a) the required item is aboard but is not located, therefore cannot be issued; b) records indicate that the required item is aboard in sufficient quantities and therefore preclude replenishment when, in fact, that is not the case.

a. Supply Support Division

The Supply Support Division acts as the single point of liaison between requesting customers and the Supply Department. Its mission includes providing technical assistance to ensure that material requirements are properly

identified, processing requests for materials and services, providing information on the current status of unfilled requisitions, expediting requisitions for critically needed materials, and monitoring the turn-in of repairable materials. This division is normally organized into three branches: Screening and Material Identification Branch, Purchase Branch, and Expediting Branch. Of these three branches, the Expediting Branch is generally the most visible and receives the most attention by supervisory personnel. The Supply Support Division Officer is normally required to brief the status of those requisitions that the Expediting Branch is handling to higher authority several times a week.

b. Stores Division

The Stores Division is responsible for the receipt, stowage, issue and shipment of supplies in support of tender departments and all supported units except provisions (foodstuff) and Ship's Store stock. The Stores Division maintains the submarine tender's inventory the 25 plus storerooms assigned and is normally responsible for the necessary preventive maintenance and preservation of these spaces. The Stores Division usually operates a receiving/shipping warehouse ashore in support of tender operations. The Stores Division is normally organized into three groups: Forward Storeroom Group, Aft Storeroom Group, and Warehouse Operation Group.

c. Stock Control Division

The Stock Control Division maintains inventory and financial control of Navy Stock Fund and Appropriation Purchases Account material carried by the tender. It monitors all SUADPS input into the ship's master supply records including: preparing updates, outside procurement documentation, and processing of receipt, issue, transfer, survey and inventory documents for computer processing.

The Stock Control Division is generally organized into three branches: Financial Control, Systems Control, and Inventory Control. The Financial Control Branch prepares inputs to update financial records and processes financial listings from the assigned Fleet Accounting and Disbursing Center (FAADC). The Systems Branch determines computer time requirements, prepares schedules of these requirements and monitors timely receipt and update of data as required by update schedule. It is also responsible for input and monitoring of all Type III Report Generator document identifiers and changes to non-privileged validation tables, which validate the data elements on input documents to prevent erroneous data from entering the system. The Inventory Control Branch codes all receipt and issue documents as required for computer processing and maintains manual files thereof. It monitors and processes inventory and supply management listings, ensuring their accuracy. Depending upon the tender, an END-USE (Customer Financing

Appropriation) Financial Branch is either assigned to the Stock Control or the Supply Support Division. The END-USE Financial Branch acts as a liaison between Supply Department customers and SUADPS financial master records. They assist in the Financial Requisition/OPTAR Log and computer generated Budget/OPTAR Report reconciliation process and monitor the financial status of funds which have been granted to supported units.

d. Automated Data Processing (ADP) Division

The Automated Data Processing (ADP) Division performs all functions related to the direct operation of the tender's data processing system. The Automated Data Processing Division is organized into three branches: Programming, Operations and Maintenance. The Programming Branch provides technical and administrative assistance in the development and maintenance of local programs, maintains the currency of externally developed and operational programs, and provides liaison between Operations Branch personnel and representatives of user departments. The Operations Branch operates the digital computing equipment, establishes schedules to ensure efficient use of equipment and prepares the equipment for program processing. The Maintenance Branch ensures the operational readiness of the equipment, maintains control over computer room sited repair parts and consumables for the computer equipment, and

performs preventive maintenance and emergency repairs as required.

e. ROV(SS) Division

Some submarine tenders have a Repair Other Vessel--Submarine (ROV-SS) Division incorporated within the Supply Department, either attached as a branch of the Supply Support Division or as a separate independent division, reporting directly to the Supply Officer. Although the ROV(SS) Division is usually manned with repair part petty officers (RPPO) from the Repair Department and storekeepers from the Supply Department, the key supervisory positions are held by Supply Department personnel. Submarine tenders are allocated specific funds to finance the material costs associated with the repair of supported units. The ROV(SS) Division is charged with the management of requisitions germane to these ROV funds. The extent of the activities assigned to the ROV(SS) Division varies from tender to tender, but may include such functions as: requisition document preparation, initial screening and processing, memorandum financial accounting of ROV funds, storeroom issue, expediting priority requisitions, status maintenance of status for outstanding requisitions and direct turnover receipt processing.

f. Quality Assurance Team

Most tender supply departments have, either attached to one of the storekeeping divisions or under the

direct control of the Supply Officer or his assistant, a storekeeping quality assurance team. The extent of their duties and responsibilities varies depending upon how well the Supply Department is manned with storekeepers. As a minimum, they investigate all storeroom refusals, including researching the requisition documents for screening errors as well as storeroom location verifications.

D. SUADPS DOCUMENT PROCESSING

Of all the supply-related transactions that can affect the Master Record File (MRF) and eventually supply effectiveness, issue and receipt processing are the most commonplace. They require substantial manual processing by many various branches of the Supply Department organization prior to computer input. The document flow path of requisition/issue/receipt documents can change in accordance with given variables. In order to facilitate a better appreciation for the magnitude of the requisition/issue/receipt document processing-flow pipeline and the potential problem areas that are inherent in its design, a thorough understanding of the mechanics of the system is required. The following sections on receipt and issue document processing are provided for this purpose.

1. Receipt Processing Cycle

Receipts for stock and direct turnover to tender customers are initially delivered to a designated Shipping/

Receiving processing space, either on the tender or the supply warehouse located ashore. Stores Division personnel separate the direct-turnover-material from the stock material and process them in accordance with established procedures. Items for stock are segregated by storeroom location and Receipt Documents are annotated with date processed, storeroom location (if the location is not already stated in supplementary address column of the receipt document). A designated copy of the receipt document is then pulled in accordance with Local Receipt-in Process (RIP) procedures and forwarded to the Stores Division office. Stock material is then transported to their respective storerooms for stowage and further processing. Often certain days of the week are designated for this purpose, depending on the availability of pier cranes and loading personnel.

Once the material reaches its intended storeroom, the storekeeper responsible for the storeroom will verify the stock number and quantity shown on the receipt document with external markings on the containers. The condition of the material will be checked for shortages, overages and damages that may have occurred in transit. The storekeeper will then place the material in the location as designated on the receipt document. The location indicated on the receipt document reflects the primary location at the time the requisition was prepared. Since the location can be

changed prior to the receipt of material, the stock number on the bin tag should be compared with the stock number shown on the receipt document before placing the material in the bin. When bin tags are not used, a comparison with the material presently stowed in the bin must be made. If no material is on hand or if the bin is filled, the Master Stock Status and Locator Listing (MSSLL) and supplemental MSSLL must be used to verify the location and selection of a secondary location. The receipt document will be annotated with the location, date, initials of the stowing storekeeper and the quantity received. A specified copy of the receipt document is pulled and forwarded to the Stores Division office at the end of the day. If the quantity received and placed in the stowage location is different from the quantity printed on the receipt document, a special annotation is made on the receipt document; either "Excess or Shortage Receipt." In cases where a shortage is received, the stores division will prepare a survey document to account for the shortage and forward the survey document to Stock Control Division for further processing.

2. Issue Document Processing Cycle

All Requisition/Issue documents (NAVSUP Form 1250-1) enter the processing cycle at one point, the Screening Branch of the Tender Supply Support Division. The screening desk verifies that all required data is properly annotated on the Requisition document. After the Requisition document has

been screened for proper entries, the Screening Desk Storekeeper consults the Supplementary Stock Status and Locator Listing (SSSLL) and then the Master Stock Status Locator Listing (MSSLL) as required for availability of the material requested. If the requested material National Stock Number is listed in the SSSLL/MSSLL, the following data is verified: Cognizance Symbol (COG), Material Control Code (MCC), Federal Supply Classification (FSC), National Item Identification Number (NIIN), Unit of Issue (UI), Unit Price (UI), substitutes, locations and onhand quantity. If the material requested has a listed location in the SSSLL/MSSLL, all locations are annotated on the requisition document. Any substitute stock number and stock locations are also annotated on the requisition document. Requests for material with National Stock Numbers not listed in the SSSLL/MSSLL, or listed but without locations, and non-standard material are separated from the other requisition documents and are processed accordingly.

All requisitions for material that have both stock numbers and locations listed in the MSSLL/SSSLL are to be storeroom-location verified for issue of on-hand quantities, no matter what the on-hand quantity in the MSSLL/SSSLL indicates. This requirement is essential in view of the fact that the MSSLL/SSSLL is never up to date due to the constant receipt processing of stock material since the last SUADPS update. Requisitions destined for storeroom issue are

stamped and logged in the Supply Support Center Process Control Log then placed in the Stores Division issue box located in the Supply Support Center along with a document control sheet.

A Stores Division representative will pick up requisition documents and control sheets. He will verify all documents received against the document control sheet and then distribute the requisition documents to the respective storeroom storekeepers. The storeroom storekeeper will proceed to the respective storeroom and attempt to make the issue by checking all locations listed on the requisition document, including substitute stock numbers and their locations, until sufficient quantity of the desired material is found. The issue is then made. If all locations and substitute stock numbers and their locations have been checked and the material cannot be found, the requisition document is annotated in accordance with Supply Department directives.

All copies of requisition/issue documents except those specifically required to be attached to the issued material are then returned to the Stores Division office prior to close of business daily. A designated Stores Division storekeeper assembles all documents and verifies that they are all accounted for and are annotated properly. The documents are then forwarded to the Stock Control Division for further processing and eventual computer input to a SUADPS update.

III. REQUISITION/ISSUE/RECEIPT DOCUMENT PROCESSING PROBLEM AREAS

A. INTRODUCTION

In October of 1979, the Navy Supply Systems Command (NAVSUP) published a report on the development plan for the Navy's new Shipboard Uniform Automated Data Processing System--Real Time (SUADPS-RT) program. A section of this report was devoted to the functional deficiencies of the current baseline SUADPS system. It concluded that the present system is painfully obsolete and significantly degrades requisition/issue/receipt processing efficiency and accuracy. Specific system design-related issuing/receiving/storing functional work problems mentioned include:

Issuing

- Determining current material identification data is untimely.
- Request for Issue documentation is "hard copy" oriented, requiring diversion of personnel to document preparation.
- Excessive time is utilized in transporting requisition/receipt documentation and data among the numerous work centers and stock control and storerooms throughout the ship.
- Inventory Management/Financial records are not concurrently posted with issue transactions. This results in out-of-balance conditions between supply and financial records which are often reconciled only by exhaustive manual effort.

Receiving/Storing

- Lack of on-line receipt processing can cause the generation of Not-in-Stock (NIS) Direct Turn-Over (DTO) requisitions for material in the "in-process" receipts cycle.
- Lack of real-time receipt transaction validation and correction procedures and timely adjustment transaction generation cause financial record inaccuracies.
- The baseline system does not provide a timely method for obtaining "partial" receipt data or "unidentified material" receipt data.
- Location change data is not processed timely in the baseline system.
- Receipt/issue "post-posting" procedures create material on-hand and stock record inaccuracies.
- Special handling/storage data is not readily available in a real-time mode.
- Results of physical inventories are not processed in a real-time mode, and contribute to stock record inaccuracies.

The report went on to state that the improvements that will occur as a result of the implementation of such new programs as SNAP and SUADPS-Real Time will go a long way towards correcting the deficiencies incorporated in the present baseline system. Supply customers will be able to electronically requisition required material via remote terminals that will feed directly into a central processor. Requisition processing and screening errors will be virtually eliminated as these functions become totally automated [Ref. 1: p. 8-1]. Unfortunately, the implementation of these badly needed improvements will not occur for several years.

In the meantime, SUADPS managers must cope with system design-related deficiencies as best they can.

In the course of researching data for the preparation of this thesis, numerous interviews were conducted with various submarine tender Supply Department personnel involved in SUADPS related activities in order to elicit specific examples of SUADPS requisition/issue/receipt document processing errors, omissions and procedural deviations that can be attributed to SUADPS manual interfacing. The extent of these particular SUADPS document processing errors, omissions and procedural deviations was found to vary from ship to ship. This chapter will enumerate these SUADPS requisition/issue/receipt document processing errors, omissions and procedural deviations, as ascertained from interviews conducted, and examine possible adverse effects on submarine tender supply effectiveness.

B. REQUISITION/ISSUE DOCUMENT SCREENING ERRORS, OMISSIONS AND PROCEDURAL DEVIATIONS

As elicited from interviews, specific examples of requisition/issue document screening errors, omissions and procedural deviations include the following:

Screening/Verification Related

- 1) Failure to consult the Master Stock Status Locator Listing (MSSLL) when the required national stock number, part number or local item control number is not found in the Supplementary Stock Status and Locator Listing (SSSLL);

- 2) Failure to consult the Supplementary Stock Status and Locator Listing (SSSLL) in favor of utilizing the Master Stock Status Locator Listing (MSSLL) exclusively;
- 3) Failure to validate national stock number, part number, local item control number against the current number file (NBR) to determine if stock number changes have taken place when the required stock number cannot be found in either the MSSLL or the SSSLL;
- 4) Failure to verify that all other required data are correctly stated on the requisition document;
- 5) Failure to consult the Management Listing--Navy (ML-N) when the required national stock number can't be found in the MSSLL/SSSLL/NBR.

Annotation/Transcription Related

- 1) Failure to annotate on the requisition document all stock locations listed in either the SSSLL or MSSLL when multiple locations exist;
- 2) Failure to annotate substitute stock numbers and their respective stock locations on requisition documents;
- 3) Transcription errors when annotating requisition documents.

Errors, omissions and procedural deviations by screening personnel can result in requisitions being passed off ship as not-in-stock transactions when, in fact, sufficient quantities of the requested material or an acceptable substitute are available onboard. Failure to verify that all required data is correctly annotated on requisition documents often results in SUADPS processing delays, as all transactions in which the computer detects an error are rejected. These errors will appear on a Transaction Error Listing and will not process against any system files until manually corrected

and re-input to SUADPS on the following update. These issue transaction processing delays are of concern because they may lead to automated stock replenishment reorder delays, thus increasing the likelihood of a future not-in-stock situation. Issue transaction processing delays also contribute to financial accounting disparities between SUADPS generated financial budget reports and user manual Budget/Optar logs. These disparities require substantial effort on all parties concerned to reconcile the differences.

C. ISSUE AND RECEIPT DOCUMENT PROCESSING ERRORS, OMISSIONS AND PROCEDURAL DEVIATIONS

Stores Division receipt processing errors, omissions and procedural deviations include such occurrences as:

- 1) Misplacing material in the wrong stock locations;
- 2) Failure to verify that the stock number and quantity indicated on the receipt document matches the actual stock number and quantity of the material being receipt processed;
- 3) Transcription errors in recording required data on receipt documents;
- 4) Mishandling and loss of receipt documents;
- 5) Failure to adequately research and prepare dummy receipt documents for material that arrives at the store-room without attached receipt documents;
- 6) Failure to annotate stock location of material being receipt processed, if not already printed on receipt document.

Issue processing errors and omissions include:

- 1) Failing to adequately verify that a required item is in fact not currently located in its assigned location;

- 2) Transcription errors when interpreting and annotating issue document data;
- 3) Mishandling and subsequent loss of issue documents.

Failure to accurately record issues from, and receipts to, stock not only adversely affect storeroom validity and supply effectiveness statistics but also requires an inordinate amount of effort to rectify. Receipt processing errors are a particular concern to Supply Department management personnel, as once material is miscounted or misplaced in the wrong stock location, the chances of discovering these errors are slight. Wall-to-wall inventories of supply storerooms are infrequent and costly to conduct in terms of effort involved and inconveniences inflicted on all concerned. Invalid not-in-stock transactions resulting from failure to adequately verify that a required item was in fact not available in its assigned stock location can be detected and corrected provided the Supply Department Quality Assurance Team is conscientiously performing its duties.

D. SUADPS DOCUMENT PROCESSING DISCREPANCY INDICATORS

There are several SUADPS output reports and transaction listings available that can assist submarine tender Supply Department Heads and their SUADPS division officers in ascertaining the nature and extent to which particular SUADPS document processing errors, omissions and procedural deviations apply. Of these, the Transaction Error Listing and Suspended Transaction Listing are two of the most commonly

used indicators of SUADPS transaction problem areas. The Budget/OPTAR Report 21 (a detailed breakdown and summary of a supported unit's/tender division's requisitions and current financial status), when reconciled, can provide data on requisition/issue/receipt documents that may have been lost or misplaced in the submarine tender SUADPS document processing cycle. If closely scrutinized, these reports and listings can be of immense value to SUADPS managers in combatting SUADPS document processing errors, omissions and procedural deviations.

IV. FACTORS THAT CONTRIBUTE TO REQUISITION/ISSUE/RECEIPT
DOCUMENT PROCESSING ERRORS, OMISSIONS
AND PROCEDURAL DEVIATIONS

A. INTRODUCTION

As previously stated, the current SUADPS system requires substantial manual interfacing from initial document preparation to final processing and filing. Many individuals from several different work centers are involved in the processing cycle. Coordination and cooperation between these various individuals and work centers are essential in order to accurately and efficiently record issue and receipt transactions. The degree of attention paid to this human dimension of SUADPS can have a profound effect on system effectiveness. Of the requisition/issue/receipt document processing errors, omissions and procedural deviations outlined in Chapter III, a major portion can be attributed to manual interfacing related factors. This chapter will examine some of the problems associated with SUADPS manual interfacing and other factors that contribute to requisition/issue/receipt document processing errors, omissions and procedural deviations.

B. NON-SUADPS COMPETING REQUIREMENTS

Although the prime function of a submarine tender store-keeping division is to conduct SUADPS activities, there are

several non-SUADPS related responsibilities and requirements that also must be met. Storekeeping personnel are consistently being sidetracked to non-SUADPS related functions such as: standing watch, mess-cook duty, compartment cleaning, master-at-arms force, ship's security and damage control teams. In addition to the aforementioned non-SUADPS requirements, the Stores Division is particularly burdened with a substantial preventative maintenance and space preservation load. With its twenty-five plus storerooms, adjoining spaces and passageways to maintain, Stores Division personnel are hard pressed to pass weekly zone inspections on the one hand while processing thousands of issues and receipts on the other.

The damage caused by these necessary diversions is often intensified when storekeeping personnel assets required to fulfill these non-SUADPS duties are disproportionately selected from the various storekeeping division. Understaffing of certain fundamental SUADPS activities such as requisition document screening, and issue/receipt processing, while maintaining non-SUADPS related activities at full strength, can lead to requisition/issue/receipt document processing errors, omissions and procedural deviations.

C. PHYSICAL LAYOUT OF DIVISIONAL SPACES

The physical layout of the Stores Division with its twenty-five plus storerooms and off-ship warehouse operation

lends itself to considerable problems of a supervisory nature. In order to process issues and receipts, storeroom storekeepers are often spread throughout the ship, working independently in their assigned storerooms with little or no direct supervision. Submarine tenders that assign a greater proportion of junior grade personnel to the Stores Division compound this supervisory problem, as less experienced junior grade personnel usually require more assistance in performing their duties.

As compared with the other storekeeping divisions, the physical working conditions inherent with Stores Division are generally considered arduous . . . processing issues and receipts manually in non-air-conditioned storerooms during the summer season is not a particularly pleasant experience. If not adequately compensated for (e.g. issuance of portable fans in summer, space heaters in winter), arduous physical working conditions can adversely affect storekeeper morale and performance.

D. SUADPS TRAINING AND REFERENCE AIDS

Regardless of the degree of rigor incorporated into a shipboard SUADPS training program, there is a limit as to how much technical knowledge can be expectably retained by an individual. For this reason, the necessity for the availability of usable SUADPS training and reference aids cannot be over-emphasized.

Aboard submarine tenders there is a wide assortment of training and reference aids available to assist storekeepers in the performance of their SUADPS related duties. Besides Naval Supply Systems Command Publication 522, 464, and 485, there is a full range of instructions, handbooks, notices and desk guides outlining SUADPS operations and procedures. The degree to which these reference materials are utilized tends to be governed by their format. Reference materials that are presented in an easy-to-read-and-use style are generally preferred to the more detailed, complicated versions. If the required information is not readily accessible and retrievable, the temptation to forego verification of a procedure or data element increases.

E. HUMAN FRAILTIES

The high degree of manual interfacing that is required to perform requisition document screening and issue/receipt processing significantly contributes to the proliferation of SUADPS processing errors, omissions and procedural deviations as accuracy and efficiency can be substantially influenced by human frailties. The requisition screening function is particularly susceptible to errors and deletions induced by human frailties. Screening scores of requisition documents day-in-day-out, ensuring that all required data is properly annotated, is monotonous by nature. Screening storekeepers find the requirement to consult more than one

reference to research a particular stock number very tedious, especially in cases where after exhaustive research has been conducted, the required stock number is found to be invalid. The flow of incoming requisitions is rarely uniform as it is not unusual for customers to submit requisitions in large quantity packages. During peak requisition submission periods, the percentage of errors and screening shortcuts tends to increase, most likely induced by pressure to clear one's desk prior to securing for the day. As with requisition screening, storeroom issue and receipt operations are persistently affected by human frailties. Failing to adequately verify stock availability can often be attributed to haste or laziness on the part of the storekeeper involved, especially in cases where the assigned location is partially inaccessible or contains numerous other items impeding easy retrieval.

F. CONFLICTING PRIORITIES

Because resources are limited, everything cannot be done at once. Where there are more problems than resources, priority decisions are necessary. These decisions may be made as a result of situational pressures, or freely by the manager. If situational demands are allowed to predominate, important tasks may well be ignored [Ref. 5: p. 273]. SUADPS issue/receipt document processing efficiency is occasionally impeded by conflicting divisional priorities.

Shortcuts in SUADPS document processing made by one division can have the effect of generating additional work not only for the other storekeeping divisions, but eventually for themselves as well.

Supply Support Division attention is often distracted away from its requisition screening function by what are locally perceived as more visible and pressing requirements such as high priority requisition expediting, repairables management and purchasing services. These other Supply Support Division functions receive considerably more external management visibility and attention than does the screening function. The screening of processing errors and omissions tends to receive little external management attention. They are either rectified by the Supply Department Q.A. Team when not-in-stock transactions are researched or they are corrected and re-inputted into the computer by stock control personnel when processing the transaction error listing. The weekly requirement to brief the local submarine group/squadron commander on the status of outstanding high priority requisitions and repairables provides more than enough incentive to the Supply Support Officer to prioritize the expediting and repairables management functions.

Allocation of Supply Support personnel assets, in terms of quality and quantity, tend to be influenced by the relative external management visibility and attention that a particular function receives. It then stands to reason that

since the expediting and repairables management functions receive the most external management visibility and attention, they tend to be staffed with the best quality personnel assets available to the Supply Support Division while the screening section usually ranks toward the other end of the priority scale.

Careful attention is required to see that screening and storeroom operations are not overshadowed by other activities, as deficiencies in issue/receipt processing can result in a wide range of adverse scenarios. A considerable portion of Stock Control Division's workload can be attributed to shortcomings in screening and storeroom issue/receipt processing activities. Countless man hours are expended processing SUADPS error listings and reconciling financial/inventory imbalances that might otherwise be spent on more worthwhile endeavors.

G. CONFLICT POTENTIAL

"Conflicts are common in organizations because everyone does not agree about their own authority and responsibilities, and all are not equally committed to the same organizational objectives. The potential for conflict depends on how incompatible the goals are, the extent to which required resources are shared and the degree of interdependence of task activities" [Ref. 5: p. 446]. By applying these standards, the potential for conflict between storekeeping

divisions aboard submarine tenders is sizable, as divisional goals are often incompatible, the degree of interdependence is considerable and the competition for resources is acute at times.

Consciously or unconsciously, each of the storekeeping division officers is competing with each other for performance evaluation standings. The sensitivity of division officers to evaluation leads them to produce the performance that will measure up in terms of the criterion rather than in terms of more important purposes [Ref. 6: p. 446]. The linkage between performance evaluation standings and division functional achievements can result in lack of cooperation and coordination between the various storekeeping divisions as assistance provided to a competing division could result in boosting their evaluation standing while at the same time reducing the relative standing of the division that provided the assistance in the first place. Under these conditions, careful attention is required to maintain focus on optimum departmental performance goals as opposed to functional achievements.

In view of the competitive atmosphere that exists for relative performance standings and the shortage of available storekeepers with which to apply to functional tasks, competition between the various storekeeping divisions for personnel assets is keen. Failure to adequately lobby for personnel assets when they become available can result in

disproportional allocation of storekeeper assets in terms of both quality and quantity.

With each division officer viewing the combined SUADPS operation from his/her own narrow perspective, the emergence of common objectives and priorities is doubtful. In practice, the degree of conflict and adverse competition that exists between the various storekeeping divisions tends to be directly related to the management practices of the department head and the personality traits of the individual storekeeping division officers. Supply Department heads who favor the hands-off approach to SUADPS management can invite conflict and adverse competition.

H. SUADPS MANAGER

Selection of an appropriate span of management is important to the efficient operation of the organization [Ref. 7: p. 254]. One of the inadequacies inherent in the submarine tender Supply Department organizational structure is the absence of a dedicated SUADPS advocate to assist the Supply Department head in coordinating and integrating departmental efforts, prioritizing objectives, and allocating personnel assets between the various storekeeping divisions.

Presently storekeeping divisions report directly to either the Supply Department head or his assistant. Depending on personal preferences of the department head, the duties and responsibilities assigned to the assistant vary

from strictly administrative tasks (i.e. performance evaluations, departmental correspondence, etc.) to direct supervision of one or more of the Supply Department divisions. In addition to managing the storekeeping divisions, both the department head and his assistant have their hands full supervising the personnel services divisions such as Food Service, Ships Store and Disbursing. The personnel services divisions are generally led by very junior officers, typically on their first assignment since graduating from Supply Corps School, while the relatively more senior grade officers tend to be assigned to the storekeeping divisions.

Not all Supply Department heads nor their assistants have operational experience in SUADPS billets prior to their submarine tender assignment. For those that do, the passage of time can have an eroding effect on previously gained knowledge and experience. Most are afforded the opportunity to attend a two-week SUADPS management course prior to reporting aboard for duty. Even with prior SUADPS experience, the Supply Department head and his assistant are deluged with the demands of managing a major department. They are hard pressed to find time to devote to SUADPS related matters in any detail. Under these conditions, SUADPS operations tend to be managed by exception.

I. FLUCTUATING TEMPO OF OPERATION

Aboard submarine tenders, the tempo of SUADPS issue/receipt operations is rarely uniform due to a host of diversions and varying input factors (i.e. fluctuating requisition submission levels, sporadic arrivals of stock replenishment ships/trucks, etc.). SUADPS related projects such as store-room inventories, material on-load/off-load/relocation actions, often necessitate postponement of receipt/issue processing operations, thus contributing to issue/receipt processing delays and backlogs. In issue/receipt processing backlog situations the pressure to expedite processing of these functions is normally accelerated in order to complete the required tasks in a specified time period. Under these conditions, haste on the part of the storekeepers processing requisitions/receipts can lead to errors, omissions and procedural deviations.

V. CONCLUSIONS/RECOMMENDATIONS

A. CONCLUSIONS

1) The nature and degree of SUADPS requisition/issue/receipt document processing errors, omissions and procedural deviations can have a profound effect on the accuracy of SUADPS computer record files and eventually on supply effectiveness levels.

2) The perpetration of SUADPS document processing irregularities can result in the requirement for countless man hours to be expended processing SUADPS error listings and reconciling financial/inventory imbalances that might otherwise be spent on more worthwhile endeavors.

3) In terms of local control (i.e. submarine tender supply officer), there are three general categories of manual interfacing related factors which can lead to requisition/issue/receipt document processing errors, omissions and procedural deviations. The first of these categories revolves around externally generated circumstances or already existing situations which the shipboard supply officer can impact but not do away with. As a result these items can only be compensated for. This category includes such circumstances or situations as physical dispersion of Stores Division spaces, human frailties, system design limitations,

non-SUADPS competing requirements, and a fluctuating tempo of operations.

The second category includes those factors which are present in the shipboard work environment, tend to detract from mission accomplishment and are self-induced. Included in this category are such factors as conflicting divisional priorities and adverse competition. These factors can be reduced/eliminated by the shipboard supply officer through greater care to management of the assigned individuals and modification of priorities/guidance.

The third category is comprised of factors that are related to internal coordination and training. These factors can be locally modified. This category includes factors such as the absense of a SUADPS manager to assist the Supply Department Head in coordinating and integrating departmental SUADPS efforts, the utilization of deficient SUADPS reference aids by shipboard personnel and the absence of an effective training program.

4) The improvements that will occur as a result of the implementation of SUADPS-Real Time and Shipboard Non-Tactical ADP Program (SNAP) will go a long way toward correcting many of the design related deficiencies of the present baseline system. Unfortunately these badly needed improvements are a few years off. Supply customers will be able to electronically requisition required material via remote terminals that will feed directly into a central processor. The

requisition processing screening irregularities outlined in Chapter III, Section B, will be virtually eliminated as these functions become totally automated. On the other hand the manual interfacing related to storeroom operations appears to be unimpacted by SNAP improvements. Thus the issue/receipt document processing errors, omissions and procedural deviations discussed in Chapter III, Section C will continue as problem areas after the SNAP implementation and are therefore worthy of considerable attention by shipboard personnel now and in the future.

B. RECOMMENDATIONS

The interviews conducted in the course of researching material for this thesis not only yielded SUADPS document processing problem areas, but also recommendations for preventive and corrective action as well. Some of the recommendations presented in this chapter are presently in effect on one or more submarine tenders, while others are basically in the idea stage. Either way, however, each one is intended to open the lines of communication between the various storekeeping divisions, promote common objectives and priorities, and compensate for circumstances beyond local control, so that SUADPS document processing errors, omissions and procedural deviations can be minimized.

1. SUADPS Auxiliary Squads

Occasionally the need to augment the Stores Division arises, be it to conduct storeroom inventories, stock relocation projects, off-load actions or just to catch up with receipt/issue processing that has fallen behind. The formation of temporary SUADPS auxiliary squads, comprised of personnel from each of the storekeeping divisions, to apply to the task at hand, is an effective way to meet these requirements.

Sufficient quantities of motivated volunteers can be acquired by providing an assortment of both extrinsic and intrinsic rewards to SUADPS auxiliary squad members upon accomplishment of requisite tasks. These rewards can include such motivators as special recognition by higher authority, favorable comments on performance evaluations or compensatory time off from normal duty. With some training, personnel from the Automated Data Processing Division can be employed to supplement the SUADPS auxiliary squad. Data processing personnel tend to be very conscientious and already possess a basic familiarity with SUADPS. The employment of SUADPS auxiliary squads not only facilitates successful completion of required tasks, but can also broaden the level of professional expertise of SUADPS auxiliary squad members and foster goodwill and harmony among the division involved.

2. SUADPS Reference and Training Aids

The availability of locally produced desk reference guides, outlining SUADPS procedures in an easy-to-read-and-use format, is an invaluable tool in combating SUADPS document processing errors, omissions and procedural deviations. The insertion of illustrations of SUADPS related supply documents in various stages of the processing cycle, including examples of all the procedural variations, is an effective way to remove any ambiguities generated from the narrative. In order to have required information readily accessible and retrievable, enough copies of the desk guide should be printed so that each work station and supply storeroom is outfitted. If properly utilized, these reference guides can lessen the temptation to forego verification of a procedure or data element.

3. Storekeeper Personnel Assignment Policies

In the interest of maintaining focus on optimum departmental performance goals, vice division functional achievements, a conscious effort is required to insure that storekeeper personnel assets are allocated to the various storekeeping divisions on an as-needed and equitable basis. Special consideration should be given to the burdensome supervisory problems and substantial preventative maintenance and space preservation load that are unique to the Stores Division. The establishment of divisional manning levels with each billet function clearly identified and

delineated as to its overall contribution to departmental objectives, would facilitate easy identification of billets to be gapped should shortfalls in manning levels occur. With formal divisional manning levels and essential billet positions predetermined, resource allocation conflicts between the storekeeping divisions can be minimized.

The periodic rotation of storekeeping personnel between Stores, Supply Support and Stock Control Divisions can enhance the professional expertise of those involved and contribute to partial elimination of SUADPS document processing errors, omissions and procedural deviations. The professional knowledge and experience gained in one division is a valuable commodity to bring to a follow-up assignment in another division. Certain SUADPS functional billets are particularly well suited as candidates for specific rotational policy assignments. For example, personnel assigned to the Requisition Document Screening Section of the Supply Support Division could be substituted and vice versa, with error listing processors from the Stock Control Division. Initially, the new error listing processors would be essentially correcting screening errors they themselves could have been responsible for; while those personnel now assigned to the screening section would be more than appreciative of the need to properly screen requisition documents to preclude complications further down the document processing line.

Besides enhancing the professional expertise of those storekeepers involved and contributing to the elimination of SUADPS document processing errors, omissions and procedural deviations, the periodic rotation of storekeeping personnel fosters cooperation and coordination between the various storekeeping divisions. When transacting business with other divisions, the sight of familiar faces of friends and former working partners can have a harmonizing effect on working relations. Having been rotated from other divisions and billets, one gains an appreciation for the need to work together toward a common goal.

4. SUADPS Management Meetings

If departmental strategy is to be effectively implemented there must be organizational arrangements to provide members with the information they will need to perform their tasks and relate their work to that of others [Ref. 6: p. 121]. Too often divisional personnel get so engrossed in their own functional activities that they lose perspective of the overall supply operation. The requirement to maintain open channels of communication between the various storekeeping divisions is essential in order to prevent interdivisional conflicts and incompatible priorities from interfering with departmental objectives.

Much of the work in conflict resolution advocates improved communications to resolve social conflict [Ref. 8: p. 103]. Periodic SUADPS management meetings with division

officers, chief petty officers and leading petty officers attending from each of the storekeeping divisions to discuss mutually related SUADPS matters would go a long way toward promoting inter-divisional communication. This avenue of approach provides the various divisional parties with a forum by which direct face-to-face encounters can be facilitated to bring about exploration and solution to inter-divisional and departmental problems.

Basically each of these SUADPS management meetings could open with a short briefing by each of the division officers on the status of ongoing projects, problem areas, and other matters considered applicable. The floor could then be opened to discussion and comment on the material that had just been presented and to bring up new matters of mutual concern. Besides providing for a means to promote inter-divisional communication, periodic SUADPS management meetings can also be utilized as a valuable training tool.

5. SUADPS Manager

Supply Department heads must do what they can to arrange departmental interests, inter-divisional rivalries and the machinery of measurement and evaluation so that they do not deflect energy from organizational purpose into harmful or irrelevant activity [Ref. 6: p. 110]. With the Supply Department head and his assistant heavily inundated with the profusion of demands inherent in managing a major size department, there is little time available to devote to SUADPS

related matters in any detail. As previously stated, the SUADPS issue/receipt document processing cycle requires a great deal of cooperation and coordination between various individuals and work centers in order to accurately and efficiently record transactions. With so many forces at work to bring about conflict and adverse competition between the storekeeping divisions, the emergence of common objectives and priorities cannot be left to chance.

A plausible solution to this problem can be achieved through the establishment of a SUADPS manager position to assist the Supply Department head in coordinating and integrating departmental efforts, prioritizing objectives, and allocating personnel assets between the various storekeeping divisions. Needless to say, a candidate for this position should be equipped with the requisite professional expertise and experience required to fulfill his/her duties properly. The broader the experience base, the better able he/she will be able to view the entire SUADPS operation from a balanced perspective.

Currently Supply Corps lieutenants serve a twenty-four month tour of duty aboard submarine tenders. During the course of their tour, they are sometimes rotated between Stores, Supply Support and Stock Control Divisions. The rotational patterns and length of divisional assignments vary from tender to tender. With only minor modifications in

officer personnel assignment policies, the establishment of a SUADPS manager billet can be facilitated.

First, the rotation of Supply Corps lieutenants would have to be adjusted so that one of the three normally assigned lieutenants would be coming up for off-ship transfer as a replacement arrives every eight months. Next, an internal rotational policy would have to be established whereby upon reporting aboard, Supply Corps lieutenants would spend their first eight month assignment as Stores Division Officer, followed by an eight month assignment as Supply Support Division Officer. For the remaining eight months of the two year tour, the officer would then be double hatted as the Stock Control Officer and Supply Department SUADPS Manager. Having just completed sixteen months of duty in the Stores and Supply Support Divisions, the now double hatted Stock Control Officer/SUADPS Manager would be more than qualified to assist the Supply Department Head in managing the entire SUADPS operation. Congruent with this policy, the Supply Department Head would have to impress upon department personnel that performance evaluation grades would not be primarily linked to division functional achievements; and that contributions toward common departmental goals and objectives would be favorably received. Speaking from a position of experience and acting with the full backing of the Supply Department Head, the SUADPS Manager would possess the necessary ingredients required to unite the

various storekeeping divisions and resolve interdivisional conflicts.

LIST OF REFERENCES

1. Naval Supply Systems Command, development plan for Shipboard Uniform Automated Data Processing System--Real Time (SUADPS-RT) prepared 1 October 1979.
2. Naval Supply Systems Command, NAVSUP Publication 522, Shipboard Uniform Automated Data Processing System--207 (SUADPS--207) Support Procedures, 17 April 1980.
3. Naval Supply Systems Command, NAVSUP Publication 464, SUADPS--207 Executive Handbook, November 1979.
4. Naval Supply Systems Command, NAVSUP Publication 485, Afloat Supply Procedures, undated.
5. Webber, R. A., Management: Basic Elements of Managing Organizations, Richard D. Irwin, Inc., 1979.
6. Andrews, K. R., The Concept of Corporate Strategy, Richard D. Irwin, Inc., 1980.
7. Stoner, J. A., Management, Prentice Hall, 1978.
8. Robbins, S. P., Managing Organizational Conflict, A Non-Traditional Approach, Prentice Hall Inc., 1974.

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