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## THESIS

A Review of Navy Stock Fund Accounting  
Practices for Procurements  
from Commercial Sources

by

Ralph Otto Scherini

June 1987

Thesis Advisor:

D. G. Matthews

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A Review of Navy Stock Fund Accounting Practices  
for Procurments from Commercial Sources

by

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Lieutenant Commander, United States Navy  
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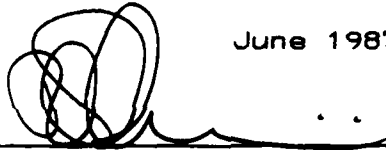
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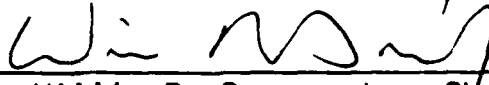
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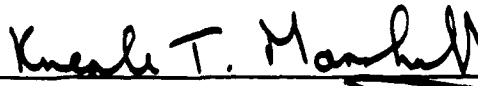
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## ABSTRACT

The Navy Stock Fund (NSF) is a revolving fund used to purchase supply inventories and hold them until needed by customers. The accounting system employed to monitor and control the NSF is a complex system dispersed throughout a maze of different activities, ADP systems and reporting systems. The various NSF management levels use different accounting systems to serve their specific purposes and thus account for the NSF resources at differing levels of detail.

This thesis focuses on accounting systems the NSF uses for the procurement of wholesale inventory from commercial contractors. It attempts to determine if these systems can be improved through the application of accounting procedures currently in use by a major private sector firm. Specifically, the thesis attempts to identify major problems caused by the required levels of detail used within the NSF accounting system and determine if private sector financial inventory accounting practices can be directly employed by the Navy to resolve or improve these problems.

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## I. INTRODUCTION

### A. GENERAL INFORMATION

A May 1986 Government Accounting Office (GAO) report entitled "Inventory Management; Problems in Accountability and Security of DOD Supply Inventories" gave fuel to the continued controversy over the U.S. Navy's supply system effectiveness:

We identified potentially significant supply management problems at all levels in the areas of receipt confirmation, records accuracy, inventory taking, reconciliation and research of inventory discrepancies, retail activity controls over inventory, and physical security. Also, our concurrent review of over 300 prior DOD and GAO reports showed that most of these systemic problems have existed for years.

Although the DOD components have taken some corrective actions ... have not corrected the root causes of these repetitive problems. The services and DLA continue to experience significant inaccuracies in inventory records and physical inventory adjustments. In many cases, causative research cannot determine the underlying reasons for the inventory discrepancies. Until these deficiencies are corrected, adequate accountability over supply system inventories will not be achieved. [Ref. 1: pp. 1]

As one might expect, the above report led to various self reviews within the Navy and the Naval Supply Systems Command (NAVSUP). The results of one such review were presented in early 1987 by the NAVSUP Private Sector Council. While not the major thrust of the presentation, the Council addressed some of the many problems being experienced with the receipt reconciliation of commercial contracts within the Navy supply

system. According to the Council, a major portion of these problems stem from the hierarchical levels of detail within the Navy Stock Fund (NSF) accounting system(s)<sup>1</sup> and the resultant need for reconciliation between levels.

The various management levels of the NSF use different accounting systems to serve their specific purposes and thus account for the NSF resources at differing levels of detail. Navy budgetary decision makers function from the macro perspective of appropriation dollars using balance sheet and income statement data. NSF managers function from the perspective of total dollars expended, obligated, or left unobligated. NSF inventory managers function from the micro perspective of stock numbered or part numbered items on hand or on order. The need for the accounting systems to transfer information between one another requires that certain transactions be reconciled between the differing levels of detail. Thus the Council questioned the supply practices which give rise to the need for this reconciliation.

#### B. OBJECTIVE AND SCOPE

The objective of this thesis is to determine if the NSF accounting system can be improved through the application of inventory and financial accounting procedures currently in use by a major private sector company. Specifically, the

---

1. As will be explained in Chapter III, the NSF accounting system actually encompasses several different accounting systems. Unless specified by name, the term "accounting system" will refer to the universe of accounting systems applicable to the Fund.

thesis attempts to identify major problems that are caused by the required levels of detail used within the NSF accounting system and determine if financial inventory accounting practices used in the private sector can be directly employed by the Navy to resolve or improve existing problems.

In this respect, this thesis takes the actions of the Private Sector Council a step further by addressing the basic theory and ideology of the Navy Stock Fund. The accounting concepts of the NSF are reviewed with particular emphasis on the levels of detail used in the various documents, reports and ledgers. The reporting of financial inventory data for accounting, inventory management, and budgetary purposes is also reviewed.

The Navy supply system, specifically the NSF, is quite large and complex. The accounting system employed to monitor and control the NSF is dispersed throughout a maze of different concepts, Naval commands, ADP systems, and reporting systems. The scope of this thesis is limited to a specific facet of the NSF accounting system: the procurement of inventory from commercial contractors for Navy-wide use. Appendix A provides a list of common acronyms associated with the NSF and used within the course of this thesis.

### C. METHODOLOGY

The first requirement inherent in the development of this thesis was a study of the present NSF accounting system and description of how it functions. Although a major portion of



the procedural guidelines for the NSF accounting system is contained in the Navy Comptroller (NAVCOMPT) Manual, Volumes II and VIII; the interpretation and integration of procedures is by no means an easy task. There is no single comprehensive source of NSF financial and inventory procedures. Consequently, a significant portion of "actual" system procedures had to be obtained from persons experienced in the day-to-day operation of the NSF.

The examination and subsequent analysis of the Navy Stock Fund accounting system was conducted using the following approach:

- Review of statutory and other prescribed requirements including those contained in pertinent Government Accounting Office (GAO), Department of Defense (DOD), and Navy Directives.
- On-site visits and telephone interviews with key personnel at Navy activities involved with the NSF accounting systems.
- Telephone interviews with key persons involved with private sector accounting systems.

Once the various key functions of the accounting system were identified, an analysis was performed to determine the basic levels of detail used within the system to document major transactions. This analysis, combined with a review of how the system met established objectives, led to the identification of system weaknesses.

A review of generally accepted accounting principles applied in private sector inventory accounting, with respect to the level of detail at which accounting is performed, led to identification of theory and practices applicable to the NSF. Their ability to improve upon identified NSF weaknesses and enhance accounting for Navy material procurements was then assessed.

#### D. THESIS ORGANIZATION

The first chapter of this thesis is an introduction to the topic of the Navy Stock Fund accounting system. It describes the scope and objective of the thesis and details the research methodology used to complete the thesis.

Chapter II provides background on the Navy Stock Fund and its operations. This is necessitated by the complex nature of NSF operations and the large number of participants involved. This chapter includes a great deal of information necessary to enable the reader to fully understand the discussions of subsequent chapters.

Chapter III describes the accounting system environment of the NSF by breaking the NSF "accounting system" into individual accounting support systems based on function and objective. Each of these accounting systems are discussed followed by an overall summary. The chapter concludes with a review of the statutory, regulatory and reporting requirements of the NSF system.

Chapter IV examines the details of the NSF accounting system as applied to the commercial acquisition of Navy wide inventory for stockage at Navy stock points. Major inventory transactions and their accompanying ledger entries are reviewed. The specific level of detail within these accounting systems is therefore identified and subsequently analyzed.

Chapter V highlights the potential concerns and weaknesses of the accounting system used in the Navy Stock Fund. The chapter follows up on problems referred to in Chapters III and IV.

Chapter VI addresses the feasibilities and constraints within the NSF environment which may affect the resolution of identified weaknesses as well as future decisions on NSF accounting practices.

Chapter VII provides a review of the accounting procedures used by a major private sector retailing corporation for the procurement of inventory. Following this review, the chapter highlights the private sector accounting policies applicable to the NSF weaknesses identified in previous chapters.

Chapter VIII outlines the improvement potential offered by commercial accounting practices and offers recommendations on improving the NSF accounting practices.

## II. THE NAVY STOCK FUND

### A. HISTORY

The Navy Stock Fund (NSF) is the oldest of all the DOD stock funds [Ref. 2: pp. G-3]. Prior to 1878, all supply systems inventories were managed as Appropriation Purchase Account (APA) material and thus were basically free issue to customers. It was at this time that the General Account of Advances was created. This account was little more than an annually appropriated fund which paid for supplies and services. The 1893 passage of the Navy Supply Fund Act established a \$200,000 body of capital to fund the procurement of ordinary commercial supplies. The fund was designed to be reimbursed by customer appropriations for material issued to them. This system of consistent fund inflows from customers' appropriations as supplies are issued established the "revolving fund" concept behind today's NSF.

The fund received its current name, Navy Stock Fund (NSF), in a 1942 funding increase. However, the basic concept of the fund did not change until a 1949 amendment to the National Security Act of 1947 which authorized the Secretary of Defense to utilize the fund in financing inventories. Title 10 U.S.C. 2208 of that act authorized the Secretary of Defense:

...to require the establishment of working capital funds in the Department of Defense for the purpose of (1) financing inventories of such stores, supplies, materials and equipment as he may designate; and (2) providing working capital for such industrial type activities, and for such commercial type activities as provide common services within or among the departments and agencies of the Department of Defense, as he may designate. [Ref. 3: pp. 25-26]

This amendment added the "working capital" concept to the "revolving fund" concept to produce a system which consists of material and monies and is designed to replenish itself without further approval from Congress. Finally, in 1955, the Secretary of Defence established the formal charter for the NSF which charged the Naval Supply Systems Command (then the Bureau of Supplies and Accounts) with the responsibility for administering and managing the NSF.

The present legislative authority for the NSF is Title IV of the National Security Act Amendment of 1949 which provides authority for working capital funds for all the armed services.

#### B. BASIC OPERATIONS

The purposes of the Navy Stock Fund are basically threefold:

- provide a supply system with the flexibility to adjust to demand changes through the use of the revolving fund concept.
- enable the Navy to defer the expense of material from annual appropriations until it is actually required by an end user.
- provide a management incentive to end users since their own operating funds are utilized in obtaining NSF material.  
[Ref. 4: pp. 4-1]

The NSF, as it exists today, is a non-expiring appropriation used by Naval activities to purchase and hold inventories of supply items. These inventories are purchased from both private industry and other Government agencies. Items procured by the NSF are held in stock until they are requisitioned by a customer activity.

Upon purchase, material is taken up in inventory of the Navy Stock Account (NSA) and is "sold" to ships, aviation

squadrons, operating bases, and other customers for repair work on equipment, for spare parts or for consumption by the user. In this context, the term "sold" refers to the "revolving nature" of the NSF. When items are issued from the NSF to end user activities, the user's financing appropriation reimburses the NSF for the items drawn. This reimbursement provides resources which can be used by the NSF for procuring additional material to be placed in inventory for future sale. Thus the NSF is composed of both material, carried in the NSA, and available funding, the unobligated portion of the appropriation. The NSF is therefore categorized as both a revolving and working capital fund.

The size and scope of the NSF has expanded as the size and scope of the Navy has expanded. Since 1893, the NSF corpus has grown from \$200,000 to an estimated \$19 billion for fiscal year 1987. Congressional approval is required in order to finance NSF level adjustments such as increases to inventory range or depth. These approvals are in the form of NSF appropriations which are substantiated by specific budget requests. These increases to the NSF levels result in increases in inventory destined for future sale to NSF customers.

Once obligated, NSF money carries over year after year. Appropriations for NSF level increases not utilized in the year of appropriation are reverted [Ref. 5: pp. 2-25]. The financial goal of the NSF is to recover all costs of operations. In order to remain solvent, the NSF recoups the following

basic costs through its pricing mechanisms which establish the prices on the items sold to customers: [Ref. 6: pp. 5-I-31]

1. Replacement Cost

This is the cost to obtain a replacement item from a supplier. The replacement price will be the last confirmed contract price, plus an inflation factor for items that have not been confirmed during the prior fiscal year. The replacement price usually includes the cost of transporting the item from the source to a Navy stock point (first destination).

2. Repair Price

This is the cost of repairing a designated Depot Level Repairable (DLR).

3. Depot Washout

This is the cost of replacing DLR's returned by customers which fail to survive the repair process and must be surveyed and replaced through new procurement.

4. Transportation

The cost of relocating the material within the supply system, when required, and shipping the material to customer activities in the continental United States.

5. Physical Losses

The cost of replacing damaged or lost material while it is held in inventory. The NSF is responsible for the financing lost on damaged material held at stock points.

6. Obsolescence

The cost, recognized in advance, of procuring material which is never sold. The NSF buys material for stock in

anticipation of customer demands and continues to support Navy systems until they are deactivated. As a consequence, some of the material bought becomes obsolete and is never sold.

#### 7. Inflation

The NSF establishes prices on the first day of each fiscal year and the replacement price must recognize the average increase which will occur during the fiscal year.

### C. RESPONSIBLE ACTIVITIES OF THE NSF

#### 1. Naval Supply Systems Command (NAVSUP)

NAVSUP administers the NSF and allocates budgeted funds to various activities. In order to exercise control over the NSF, it is split into Budget Projects (BP). These BPs break the range of stock funded items into commodity groups for which differing levels of inventory may apply and each is assigned to a manager for control. The NSF is broken down into ten distinct BPs as shown in Figure 2-1 [Ref. 7: pp. 42].

NAVSUP, as the stock fund manager, makes budget submissions to NAVCOMPT, DOD/OMB on both a BP and total stock fund basis. NAVSUP receives the total obligational authority of the fund and reallocates responsibility for these funds to various BP managers via allotments.

#### 2. Budget Project (BP) Managers

BP managers listed above are responsible for the project's fund allocation, budget formulation, budget execution and accounting. Once the funding is received, BP managers



<u>BP</u>	<u>BP MANAGER</u>	<u>COMMODITY</u>
14	SPCC	HULL, MECHANICAL, ELECTRICAL, ELECTRONICS AND ORDNANCE ITEMS
15	NPFC	PUBLICATIONS AND FORMS
21	NAVRESSO	RETAIL SALES
23	SPCC	LONG LEADTIME MATERIAL FOR SHIP OVERHAULS
25	NAVSUP	FUEL RECLAMATION
28	FMSO	RETAIL CONSUMABLE ITEMS
34	ASO	AVIATION CONSUMABLE ITEMS
38	FMSO	FUEL
81	SPCC	SHIPBOARD DEPOT LEVEL REPAIRABLE
85	ASO	AVIATION DEPOT LEVEL REPAIRABLE

Figure 2-1 NSF Budget Projects

either obligate the funds themselves or sub-allot the money to other activities. For example, NAVSUP allocates BP28 funding from the approved budget to the Navy Fleet Material Support Office (FMSO) which then provides sub-allocations to various activities, such as Navy Supply Centers (NSC), for NSF purchases.

### 3. Inventory Control Points (ICP) and FMSO

Immediately below NAVSUP in the hierarchy are the Fleet Material Support Office (FMSO) and the three Navy Inventory Control Points (ICP): the Navy Ships Parts Control Center (SPCC), the Aviation Supply Office (ASO), and the Navy Publications and Forms Center (NPFC).<sup>1</sup>

A unique command within the Navy Supply System, FMSO is widely known yet probably least fully understood in terms of its complete range of mission responsibilities. Although

---

1. It should be noted that the scope of this thesis is limited to the wholesale material transactions between the ICP (SPCC and ASO) and commercial contractors. FMSO and NPFC NSF functions are beyond the intent and scope of this thesis.

Its role is not pertinent to this thesis, it is a major NSF manager. FMSO's major role is that of the Navy's Retail Office where it receives the portion of the NSF allotments (BP28) from NAVSUP used to procure Navy inventory from other DOD/Government agencies such as the Defense Logistics Agency (DLA) and the General Services Agency (GSA) as well as from commercial suppliers in some cases. In this capacity, FMSO is responsible for the management, control and suballocation of NSF dollars to over 140 Navy stock points throughout the Navy for their use in buying certain kinds of inventories.

The ICPs are the Navy's central inventory managers who procure, manage, and direct most Navy material throughout the world. The ICP makes all management decisions concerning the material for which it is responsible, including when to buy, how much, and where to stock it.

ICP project managers generally execute the resources sub-allocated to them by contracting for material from commercial vendors. While the personnel assigned to the ICPs negotiate and execute these procurement contracts; the function of contract administration is frequently carried out by the Defense Contract Administration Services (DCAS). Material is consigned to various Navy stock points where it is physically received by the Navy and stored pending issue to customer activities.

#### 4. Stock Points

NSF inventories carried at various stock points are divided into two broad categories: wholesale and retail. Even

though the scope of this thesis focuses solely on wholesale material, a basic understanding of both of these levels is necessary. The most concise explanations of these two inventory segments is provided by Volume 8 of the NAVCOMPT manual as follows:

a. Wholesale. Wholesale inventories are those managed by Navy inventory managers under the DOD single manager concept. These are items for which the Navy is the prime user. They are purchased from vendors under contracts and "pushed" or directed to various stock points based on projected customer requirements .... Financial inventory accounting for these inventories, when stocked at activities under the Centralized Accounting and Billing (CAB) concept, is performed by the cognizant inventory control point (ICP) which also maintains visibility of quantities and locations of inventories. This asset visibility and accountability is facilitated through Transaction Item Reports (TIR) submitted by the stock points operating under the CAB concept for each receipt or issue of an item of inventory. Financial inventory accounting for wholesale stock at non-CAB activities is performed by the local stock point.

b. Retail. Items carried in retail inventories are those managed by other DOD components and General Services Administration, but stocked by the Navy for its own use. There is no Navy-wide visibility of these assets, and it is the responsibility of the local stock point ... to ensure adequate stocks to satisfy local customer demands. Retail inventory also includes items managed by Navy inventory managers under the DOD single manager concept for which the Navy is the prime user, however, the inventory is held below the wholesale level as defined in subparagraph a. [Ref. 5: pp. 1-1]

The portion of the duties and responsibilities of stock points applicable to this thesis are fairly simple. The stock points act as warehousing activities which receive, store and issue NSF wholesale material. All transactions which affect this material are reported to the cognizant ICP via the Transaction Item Reporting (TIR) process. This process uses

the Navy's standard Automatic Digital Network (AUTODIN) communications system to pass transaction information between the automated data bases of the stock points and the ICP. As will be discussed in detail in the next chapter, actual accounting for this material is performed by the ICPs through the Centralized Accounting and Billing (CAB) System.

5. Navy Regional Finance Center (NRFC)

Navy Stock Fund appropriation and inventory accounts are maintained in aggregate by a central accounting office, the Navy Regional Finance Center (NRFC), in Washington, D.C. NRFC is charged with accumulating detailed accounting information for subsequent reporting to higher authority and to NAVSUP.

6. Navy Accounting and Finance Center (NAFC)

The Navy Accounting and Finance Center, Washington, D.C. acts as the Central Accounting Office for the Department of the Navy as a whole. As such, the NAFC performs the departmental level accounting<sup>2</sup> under the direction of the Comptroller of the Navy (NAVCOMPT). NAFC also acts as the statutory and regulatory authority for all accounting procedures within the Navy and sets overall accounting policy for NAVCOMPT.

7. Financial Information Processing Center (FIPC)

Each command in the Navy has an assigned Financial Information Processing Center (FIPC) which performs necessary accounting and associated reporting functions for fund allotted

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<sup>2</sup>. Departmental level accounting refers to the level of accounting performed by each of the departments of DOD; i.e. the Departments of the Air Force, Army and Navy.

to them. In the interests of economy and of using the best qualified personnel, accounting operations for most activities are furnished by a regional FIPC. SPCC and the NSCs are FIPCs for themselves and the FIPC for NAVSUP is NRFC Washington, D.C.

#### 8. Disbursing Offices

Disbursing Offices are those activities which make fiscal payments for the U.S. Government. There are many categories of disbursing offices throughout DOD such as: DCAS, the Navy Finance Center (NFC), Fleet Accounting and Disbursing Centers (FAADC), Financial Information Processing Centers (FIPC) and disbursing components on Navy activities ashore and afloat. The Disbursing Offices report payments to the appropriate FIPC and to NAFC via the Centralized Expenditure and Reimbursement Processing System (CERPS)-. It is through this financial network and reporting systems that the Navy's contractual obligations are paid and monitored.

#### D. ADVANTAGES OF THE NSF

The Navy Stock Fund represents a management concept which has served and continues to serve the Navy Supply System extremely well. Some of the more obvious advantages to its use are as follows:

1. Customer activities are better able to manage and retain visibility of appropriated funds since the funds are not charged for material until requisitioned. There is also

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3. CERPS is the system used by both the NRFC and NAFC to process all Navy disbursements and collections documentation and post them to the proper accounting systems.

an incentive to avoid unnecessary material requisitions, since he can see his own money flow out with the issue of each item of supply requested.

2. There are economies of scale associated with the use of a single inventory from which issues can be made for all purposes.

3. The cost of maintaining the inventory is reflected in a single account, the Navy Stock Account (NSA), rather than in costs associated with the NSF's myriad potential customers.

4. The managers of a large centralized inventory are afforded the capability of taking advantage of favorable market conditions in the procurement of future material requirements.

5. Since the NSF is a permanent fund, changing material requirements due to changing weapons systems, operational tempos and military conditions can be planned and provided for. This affords the NSF much more flexibility than other methods of funding requirements.

### III. THE NSF ACCOUNTING PROCEDURES

#### A. INTRODUCTION

The accounting/reporting system for the NSF is designed to provide the means for administrative control for annual apportionments, budget project allocations and sub-allotments and to relate transactions to the category of material [Ref. 5: pp. 2-26]. The accounting system used by the NSF is quite complex. This is especially true if one considers the different ADP systems in use by the Navy supply system as part of the "accounting system". However, for the purposes of this thesis, the accounting system is considered separate from the ADP software and hardware employed.

#### B. BACKGROUND

The NSF is an appropriated revolving fund which purchases material from an available cash account and carries it in an inventory account, the Navy Stock Account (NSA). All purchases of inventories using the NSF are accounted for on an accrual basis. Accrual accounting is the basis of accounting where revenues are accounted for when earned rather than when received and liabilities are established when title of the ordered material has passed to the Navy. [Ref. 5: pp. 3-109] This method of accounting has been modified to establish liabilities upon receipt of material unless the applicable contractor's invoice has been paid in advance of material receipt. This will be discussed in detail later on in the next chapter.

The "accounting system" of the NSF must perform different types of accounting based upon the control and reporting needs of the command involved. For the purposes of this thesis, the author has broken the NSF "accounting system" down into three separate accounting systems: 1) fund accounting; 2) financial inventory accounting; and 3) general ledger level accounting. These accounting systems interact to form the NSF "accounting system". Fund and financial inventory accounting are decentralized to the BP/stock point levels while the general ledger level accounting is centrally performed by NRFC in Washington, D.C. [Ref. 8: pp. 83]. Each of these systems is individually discussed in the following subsections. The chapter concludes with a review of the statutory, regulatory, and reporting requirements of the NSF accounting system. Integration of these systems into the NSF accounting system with respect to the ICP procurement of wholesale material is reviewed in the next chapter.

#### C. THE NSF ACCOUNTING SYSTEMS

##### 1. Fund Accounting System

The Fund Accounting System is the way the Navy maintains control over appropriated monies. A fund is a separate financial entity within the Navy for which accountability is established. The Department of the Navy has many such funds, one of which is the Navy Stock Fund. The NAVCOMPT Manual defines fund accounting as "...accounting systems that are used to record the transactions that affect financial resources associated with



inventories." [Ref. 5: pp. a-4] The Fund Accounting System actually has several different names depending on the hierarchical level at which it is being used. At the NAVSUP/NSF level, it is called Fund Accounting; at the BP manager/allotment level, it is called Allotment Accounting; and at the field/holder level, it is called Obligational Accounting.

The purpose of the NSF Fund Accounting System is to maintain an accurate status of NSF allocation and report progress in spending resources. It is the Fund Accounting System that monitors and controls the allotment and sub-allocation process from NAVSUP all the way down to the lowest field level activity. The Fund Accounting System is intended to enable NAVSUP to maintain current visibility of the financial status of the NSF. Additionally, the Fund Accounting System is tasked with tracking material receipt to maintain visibility of material paid for but not yet received or received but not yet paid for [Ref. 8: pp. 80]. Each holder of a NSF allotment or suballocation is responsible for reporting the status of their NSF allotment/suballocation to the issuer. At the highest level, NAVSUP reports the status of the NSF to NAVCOMPT. The system operates within the frame of reference of the source fiscal year of the funds being recorded.

Fund accounting is the process whereby managers record and report the progress made in obligating and expending resources made available by allotment. Each activity which receives NSF fund authorization and performs fund accounting

establishes a general ledger, called allotment ledger, on a Fund Resources Ledger--Stock Fund (NAVCOMPT Form 2128)<sup>1</sup> that at all times indicates the balance of the fund control accounts. The following control accounts are established within the Fund Accounting System:

<u>Account No.</u>	<u>Title</u>
100	Authorizations Received
300	Uncommitted Authorizations
400	Commitments
500	Obligations
600	Expenditures

Figure 3-1 Chart of Fund Control Accounts

Detailed accounting is performed for allotment holders by the FIPC. In all cases, the ledgers maintained by holders of allotments and sub-allocations are subsidiary to the control accounts of the headquarters ledgers.

BP Managers account for the allocations received through the use of project ledgers. The monthly execution status of the BP allocation is reported to the allotment manager via NRFC by means of a Project Control Ledger Summary Report (NAVSUP Form 1091). A sample 1091 report is provided in Figure 3-2. A NSF summary report, which combines the 1091 reports from all the BP managers, is prepared and forwarded to

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1. It should be noted that the physical medium of the ledgers discussed in this thesis differ from command to command based on the ADP system installed.

NAVSUP by NRFC. This summary report is designed for submission to OSD/OMB via CNO/NAVCOMPT to officially report the execution status of the NSF apportionment.

Although technically two different ledger systems, both the Fund Resources Ledger and the Project Ledger use the same accounts. Procurements are reflected first as a commitment when the command requests that a contract be negotiated, transactions are next reflected as obligations when contracts are signed and finally as expenditures when vendor's bills are paid. Since the terms "commitment", "obligation", and "expenditure" will be used extensively throughout this thesis, it is important that their meaning be fully understood. The Practical Comptrollership Course Text used at the Navy Post-graduate School explains the terms as follows:

a. Commitment. A commitment is an administrative reservation of funds based upon firm procurement directives, orders, requisitions, or requests which authorize the creation of obligations. The act of entering into a commitment is usually the first step in the process of spending available funds. The effect of entering into a commitment and the recording of that commitment on the records of the appropriate allotment is to reserve funds for future obligations. A commitment is subject to cancellation by the approving authority if not obligated.

**PROJECT CONTROL LEDGER SUMMARY—NAVSUP FORM 1091**

**PROJECT CONTROL LEDGER SUMMARY**

1105 7701 18

NAVSUP FORM 1091 (REV. 2-64)

S/N 010B-LF-6027702

REPORT NO. ACTIVITY NAME AND LOCATION

PROJ. NO.

REPORTING MONTH

NAVY STOCK FUND	UN-HELD ALLOCMENTS	FULL ALLOCMENTS	OPEN ALLOCMENTS	TOTAL
<b>ALLIATIONS</b>				
Obligations (As of 1 July)				
Accounts payable (As of 1 July)				
Current year allocations				
<b>TOTAL TO DATE</b>				
<b>ALLOCMENTS</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>COMMITMENTS</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>OBLIGATIONS</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>ACCOUNTS PAYABLE</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>UNPAID MATERIAL</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>MATERIAL IN TRANSIT</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>PROGRESS PAYMENTS</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				
<b>EXPENDITURES</b>				
Prior months				
Current month				
<b>TOTAL, CURRENT FISCAL YEAR</b>				

**Figure 3-2 Project Control Ledger Summary Report**

b. Obligation. An obligation is a legal reservation of funds and a duty to make a future payment. This duty is incurred as soon as an order is placed, or a contract is awarded for the delivery of the goods. It is not necessary that goods actually be delivered before the obligation is created; neither is it necessary that a bill, or invoice, be received first. The placement of an order is sufficient. An obligation legally encumbers a specified sum of money which will require expenditure in the future.

c. Expenditure. An expenditure is a charge against the available funds of an allotment or sub-allotment. It is evidenced by voucher, claim, or other document approved by competent authority. An expenditure represents the actual payment of NSF dollars.

A monthly summary of all the financial transactions for each specific allotment and suballocation is compiled by the FIPC using the Status of Fund Authorization Report--Stock Fund (NAVCOMPT 2129) and is sent to the allotment grantor. For example, the NSCs submit 2129 reports to the BP managers at FMSO and, under certain circumstances to an ICP as well<sup>2</sup>. As can be seen in Figure 3-3, the report details the amounts of authorizations to date, commitments, obligations, accounts payable (material which has been received but not yet paid for), material-in-transit (material which has been paid for but not yet received), and disbursements.

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2. As noted in Chapter 2, the BP managers at the Navy ICPs execute their obligational authority by procuring wholesale material.

**STATUS OF FUND AUTHORIZATION—STOCK FUND—NAVCOMPT FORM 2129**

NAVCOMPT FORM 2129 (REV. 10-67)  
S N-0104-704-0802

NAVCOMPT 7303-14

**STATUS OF FUND AUTHORIZATION—STOCK FUND**

FROM		TO		FOR AUTHORIZATION ISSUED TO	
TYPE <input type="checkbox"/> ALLOTMENT <input type="checkbox"/> BALLOTMENT		APPROPRIATION AND SUB-HEAD	BUDGET PROJECT NO	AUTHORIZATION NO	FOR PERIOD ENDING
ITEM	PRISM MONTH TOTAL	CHANGE THIS PERIOD		WHEN TOTAL	
AUTHORIZATION		AUTHORIZATION RECEIVED			
		ADJUSTMENTS MADE DURING			
COMMITMENTS					
OBLIGATIONS					
ACCOUNTS PAYABLE					
PREPAID STOCK FUND MATERIAL					
STOCK FUND MATERIAL IN TRANSIT					
PROGRESS PAYMENTS					
OTHER ITEMS					
TOTAL		TOTAL		TOTAL	
REMARKS					
I CERTIFY that the amounts herein reported are in accordance with 31 USC 200 and prescribed accounting procedures.				APPROPRIATION OFFICER (Signature and Post)	

**Figure 3-3 Status of Funds Authorization--Stock Fund**

Expenditures are accounted for at the allotment level (ICP) where visibility exists [Ref. 5: pp. 3-57]. Expenditures accrue upon receipt of the contractor's invoice and liabilities are established upon receipt of documentation indicating material has been received but not yet paid for. The Funds Resources Ledger--Stock Fund (NAVCOMPT Form 2128) is used to record accrued expenditures and liabilities using the following accounts:

<u>Account No.</u>	<u>Title</u>
510	Accounts Payable
520	Prepaid Stock Fund Material
530	Stock Fund Material in Transit
540	Progress Payments

Figure 3-4 Chart of Expenditure Accrual Accounts

Through the use of the above series of reports, the Project Control Ledger Summary Report (NAVSUP Form 1091) and the Status of Fund Authorization Report--Stock Fund (NAVCOMPT 2129), the status of NSF is reported to the NAVSUP and the Navy budget managers.

## 2. Financial Inventory Accounting System

The NAVCOMPT Manual defines inventory accounting as "A system that accounts for the financial value of the receipt, storage and issue of material financed by the NSF and APA allotments." [Ref. 5: pp. a-2] The NSF Financial Inventory Accounting System is the system of accounts and reports used to maintain complete financial visibility of the inventory

levels of the Navy Stock Account. The system maintains this visibility on a daily basis in monetary terms. Inventory is carried in the financial records at a standard price established by the office, command, ICP, or headquarters having management responsibility for the category of material. All NSF sales or issues are made at the standard price which is comprised of the elements discussed in Chapter II.

The following are the main purposes of the Financial Inventory Accounting and Reporting System:

- a. To fulfill the requirements of the National Security Act of 1947 which requires that the military departments maintain records on material in store and requires that the Secretary of Defense report annually on such property to the President and to the Congress.
- b. To ensure the integrity of stock funds and to maintain similar financial safeguards over material acquired under other appropriations.
- c. To provide a source for the preparation of stock fund statements and status reports of appropriation financed inventories for submission to the Department of Defense.
- d. To furnish inventory managers with essential financial data for budgetary requirements. [Ref. 5: pp. 5-1]

The central tool used in the Financial Inventory Accounting System is the Financial Inventory Report (FIR). The FIR is the monthly report submitted by all holders of NSA inventory to the FAADCs showing the accumulated money value of transactions that have occurred at an activity during the preceding month.

In general terms, the procedures for financially accounting for inventory under the FIR concept are somewhat "similar" to a standard costing system. Receipts are added to a beginning



inventory, valued at standard cost, price variances are added or subtracted based on the variation between actual and standard costs, and expenditures are deducted from this amount, at standard cost, to obtain the ending inventory valued at standard cost. However, unlike a standard costing system, the data base from which FIRs are constructed are maintained at an extraordinary level of detail.

There are three categories into which inventories at the NSC are financially classified: cognizance symbol (Cog), condition code, and material control code (MCC).<sup>3</sup> An entire set of subsidiary inventory accounts are maintained under each Cog by MCC and condition code. Additionally, financial information on material in the NSA is identified by Special Accounting Classifications (SAC). SAC is a method of identifying material held by secondary users or locations. Examples include: SAC 200: Main Supply, SAC 203: Ready Supply Store, and SAC 207: Afloat Supply. A separate FIR is developed for each cognizant symbol within each SAC. Appendix B presents current FIR codes.

The FIR operation differs depending on the type of inventory being reported upon. Wholesale accounting takes place at the

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<sup>3</sup>. Cogs are two position codes used for internal Navy purposes to identify material category, method of funding, and the ICP exercising supply management over the material. Condition codes are single positions codes describing the physical condition of the material. MCCs are single position codes assigned by the inventory manager to segregate items into more manageable groups or to identify special control requirements. Detailed descriptions and listings of these codes are contained in Volume 2 of Supply Ashore, NAVSUP Manual.

ICP via the CAB system. Both the CAB and the TIR system will be discussed in detail in following paragraphs. For retail material, daily inventory transactions at the stock point are recorded in monetary terms in the Financial Inventory Control Ledgers (FICL) which are maintained by the stock point's FIPC. The FICLs are summed monthly to make up the FIR. Additionally, the FICLs are matched with the Master Stock Item Records (MSIR) on a quarterly basis. The purpose of this matching procedure is to provide a system of checks and balances for the financial inventory control system. This is intended to support the goal of Financial Inventory Accounting which deals with ensuring the financial and physical integrity of inventory owned by the NSF. All differences between the two systems should be investigated to determine the cause, accounted for and corrected during this reconciliation process. Adjustments are made as required to bring the FICL in line with physical inventory on hand as reflected by the MSIR.

Each stock point and ICP produce a series of monthly FIRs reflecting the financial results of all inventory and financial transactions which have occurred during the month. The information is displayed in approximately 70 captions which segregate the values of the significant types of transactions. The FIR is prepared in 3 sections containing data by stores account, material control code, and special accounting class. The monthly FIRs, along with associated billing documents, are forwarded to the appropriate FAADC. Copies of the applicable

portions of the FIR are also mailed directly to the inventory managers. Each FAADC prepares a consolidated FIR and forwards it to the NRFC. The NRFC processes the FIRs received from the two FAADCs, forwards the consolidated information to the inventory managers, and uses the information to maintain the Navy's general ledgers.

As discussed in Chapter II, under the Centralized Accounting and Billing (CAB) system operated by the ICPs, many stock points are not required to perform FIR accounting for wholesale material. The ICPs themselves perform the Financial Inventory Accounting using the information passed to them via the Transaction Item Reporting (TIR) system. The ICPs maintain the FICLs for the wholesale material and prepare summary FIRs and billing documents for submission to the FAADC. The FIR submitted by the ICPs is segregated by the identification of the reporting activity at which the transaction occurred rather than by special accounting class. A reconciliation is performed by the ICP to bring FICLs into line with the ICP's inventory control file, the Master Data File (MDF).<sup>4</sup>

### 3. General Ledger Level Accounting

General Ledger Level Accounting is performed by the NRFC based on the inputs received from the Fund Accounting System, Financial Inventory Accounting System and CERPS. The General

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<sup>4</sup>. The MDF contains all physical inventory control data on CAB Cog wholesale stocks maintained at the CAB activities.

Ledger Level Accounting System is considered the highest level of accounting within the NSF. Its purpose is to accumulate the monetary information on the NSF necessary to provide required reports, including Income Statements and Balance Sheets, up the chain of command. The General Ledger Level Accounting System utilizes the General Ledger Chart of Accounts mandated by NAVCOMPT Manual Vol 8, Chapter 7. Essentially, these are the accounts utilized in the preparation of the NSF Balance Sheets and Income Statements. Appendix C provides a listing of these accounts. The use of these accounts is mandatory and no changes are authorized without prior approval of the DOD Comptroller. Subsidiary accounts are established for several special accounting requirements but aggregate directly to these prescribed accounts.

There are two separate types of accounts contained within the prescribed General Ledger Chart of Accounts; balance sheet accounts and income statement accounts. Figure 3-5 provides a simplified NSF balance sheet.

<u>ASSETS</u>	<u>LIABILITIES</u>
Cash	Accounts Payable
Inventory	
Accounts Receivable	<u>EQUITY</u>
Material-in-Transit	Corpus
	Net Earnings

Figure 3-5 NSF Balance Sheet Format [Ref. 2: pp. G-18]

As noted in the previous chapter, the two principle assets of the NSF are cash and inventory. The additional

assets applicable to this thesis are Material-in-Transit (MIT) and Accounts Payable. MIT represents NSF material that has been paid for but not yet received and Accounts Payable, the major liability of the NSF, represent material received but not yet paid for. The NSF also carries equity accounts in the form of the Corpus, which represents the initial capitalization (appropriation) of the fund and Net Earnings representing the net of the cumulative gains or losses from daily operations.

The cash asset represents the cash balance held in the Treasury cash account (appropriation 17X4911) established for the NSF. The cash balance rises and falls in relation to the disbursements and collections made daily either to pay for NSF material purchased or collections for customer sales [Ref. 7: pp. 55]. The inventory assets are an aggregation from the FIRs of the Financial Inventory Accounting System. The Accounts Payable and MIT assets are aggregated from the NC 2129 Status of Fund Reports of the Funds Accounting System.

The NRFC must manipulate the various inputs it receives to accommodate the General Ledger Chart of Accounts. Appendix D provides a listing of the conversions used to accomplish this. Once these aggregations and conversions are completed, NRFC produces a series of reports, including Balance Sheets and Income Statements, to NAVSUP. Beyond the NSF, NRFC uses the General Ledger Level Accounts as inputs to the DOD-wide aggregated reports using the Uniform Chart of Accounts mandated for departmental level accounting.

## D. STATUTORY, REGULATORY AND REPORTING REQUIREMENTS

### 1. Background

The reasons behind the NSF accounting systems can be divided into two basic categories: (1) statutory and regulatory requirements, which include external reporting requirements, and (2) implicit requirements, which include both the need for the maintenance of inventory integrity and the provision of budgetary information to fund managers. Statutory and regulatory requirements are discussed in the following paragraphs. The implicit requirements, although important, will not be addressed.

### 2. Statutory Requirements

The accountability requirement of the NSF accounting system is based on the National Security Act of 1947, as amended by Title 10, U.S. Code 2701. Essentially, the law sets forth the requirement that some form of financial inventory accounting be maintain and gives the responsibility for how it is conducted to the Secretary of Defense. Title 10 specifies that ". . . the Secretary of Defense shall have the records of . . . stored supplies of the military departments maintained on both a quantitative and monetary basis, so far as practical." Title 10 further requires that "the Secretary of Defense shall report once a year to Congress and the President on property records maintained under this section."

### 3. Regulatory Requirements

The Government Accounting Office, with reference to the National Security Act of 1947, established the importance

of adequately accounting for property held by Federal agencies in GAO Manual Title II, Section 12.5 which states the following:

The importance of adequately accounting for property held by Federal agencies stems primarily from the fact that public funds are invested in such resources. This investment creates the management need to be able to account for such resources and to use all appropriate techniques, including reliable financial information, to procure, use, and manage them properly . . . . Accurate and reliable financial and quantitative information on property resources, for use by internal management and for preparing financial reports for the Congress and others, can only be obtained from a properly designed and operated system of accounts and related procedures. [Ref. 9: pp. 2-26]

DOD implemented the statutory and GAO accountability requirements in the DOD Manual 7220.9M, DOD Accounting Manual. This manual states:

. . . an accounting entity may be accountable for any of the kinds of assets . . . such as inventories of material . . . . Accordingly, the value of such assets . . . will be fully disclosed in the system of accounts for each accounting entity accountable therefore.

In this regard, DOD established separate pro forma charts of financial inventory control accounts, the DOD Chart of Accounts, for items furnished by stock funds in DOD Instruction 7420.13-R "Stock Fund Operations". These are the accounts into which the NSF General Ledger Level accounts are aggregated.

#### 4. Reporting Requirements

Requirements to report inventory status, including in-transit inventory, to a level that supports budgetary planning and review were initiated by Title 31, U.S. Code 661. Title 31 requires that each Federal agency account for its resources, liabilities, and costs of operations on an accrual

basis to facilitate the preparation of cost-based budgets. Title 31 further requires that the accrual accounting system include monetary property accounting records as an integral part of the accounting system.

DOD implemented these statutory reporting requirements in DOD Manual 7220.9M DOD Accounting Manual. This manual states:

. . . full disclosure of . . . assets . . . will assist responsible officials in assuring . . . that they are considered in budgeting for resource requirements. Moreover, the inclusion of such assets in the system of accounts on an integrated basis provides a 'closed' accounting system which gives added reliability to both the fund and budget data and the proprietary data.

DOD implemented the requirements to report stock fund inventory status for budgetary planning and review purposes in DOD Instruction 7420.13-R "Stock Fund Operations". DOD Instruction 7420.13-R states that the required statutory reports to the President and Congress "shall consist of the SF 220, "Statement of Financial Condition", and the SF 221, "Statement of Income and Retained Earnings".



#### IV. INTEGRATION OF ACCOUNTING SYSTEMS

##### A. INTRODUCTION

The previous chapters introduced various systems used to account for the NSF. These chapters also introduced NSF major players, basic operations and reviewed many concepts applicable to the NSF as a whole. The purpose of this chapter is to review how these "accounting systems" integrate to form the overall NSF financial accounting mechanism. This chapter will trace individual transactions which occur when an ICP obtains material via commercial contract for wholesale stock. Starting with the buy decision at the ICP, the accounting and reporting requirements along with the impact of each stage in the procurement cycle are outlined. Particular emphasis is placed on the level of detail of each transaction.

##### B. BACKGROUND

Accounting for receipts from commercial procurement is not a simple process. Each receipt involves the NRFC, a FAADC, an ICP, a Government representative at the contractor's plant (the DCASR), a disbursing activity (DCAS), and one or more stock points (NSC). The accounting process is further complicated by variations in contracting methods, contract modifications, diversion of material to end users different than originally consigned, inconsistencies in the preparation and distribution of documents involved, along

with irregularities and systemic problems with the ADP systems involved in the process.

The author has broken the acquisition cycle down into seven stages: (1) the NSF allotment; (2) the ICP buy decision, which includes the contracts award process as well as the commitment and obligation of funds; (3) acceptance of title; (4) material shipment; (5) payment of invoices; (6) receipt and storage; and (7) reconciliation. The accounting effects of major transactions occurring in each of the above stages will be displayed as general journal entries. The accounting entries will be shown on a cumulative basis to enable the reader to see the progression of accounting entries through the procurement cycle. The entries are also summarized in Appendix E. The current entry will be identified by bold type. The General Ledger Level entries are assumed to be after NRFC receipt of the appropriate reports and documents unless otherwise noted. Figure 4-1 provides the assumed sequencing of the procurement dependent upon acceptance mode. The accounting entries in this chapter will reference these sequence numbers.

#### C. ALLOTMENT OF NSF AUTHORITY

The following **General Ledger Level** entry represents the initial NSF Congressional appropriation:

0:	100	CASH AVAILABLE FOR DISBURSEMENT
	300	DIRECT APPROPRIATIONS

The acquisition cycle, as defined here, begins as BP managers receive annual NSF allocations. There is no Financial Inventory Accounting nor General Ledger Level entry for the allotment of the NSF.

<u>Source Acceptance Procurement Sequence</u>	<u>Destination Acceptance Procurement Sequence</u>
#1 NSF Allotment Authorization ICP Buy Decision	#1 NSF Allotment Authorization ICP Buy Decision
#2 Commitment of Funds	#2 Commitment of Funds
#3 Obligation of Funds	#3 Obligation of Funds
#4S Material Acceptance	#4D Material Shipment
#5S Material Shipment	#5D Material Receipt
#6S Invoice Payment	#6D Material Acceptance
#7S Material Receipt	#7D Invoice Payment

Figure 4-1 Procurement Cycle Sequence

The Fund Accounting entry at the ICP is as follows:

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION

D. ICP BUY DECISION

Upon determination that a wholesale buy is warranted, the Inventory Manager (IM) at the ICP registers a purchase initiation. This is an administrative action to begin the procurement process but is not part of official accounting records. Once the buy is approved, the IM registers a

commitment formally reserving the necessary NSF monies. The Fund Accounting entry at the ICP is as follows:

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION
2:	300	UNCOMMITTED AUTHORIZATION
	400	COMMITMENTS

There is no Financial Inventory Accounting nor General Ledger Level entry for this initial transaction.

During contract development, there are two decisions made which directly affect the accounting system later on. The first is the contract administrator assignment. The contract administrator, among other things, acts as the disbursing office for the contract, receiving and paying contractors' invoices. The Defense Contract Administration Service (DCAS) is the administrator for most ICP commercial buy contracts. However, there are instances where the ICP itself acts as contract administrator and pays invoices. This chapter and the remainder of the thesis will focus on the former situation; DCAS as contract administrator.

The second decision concerns the material acceptance location. Acceptance of title to material can be performed at either the source--the contractor's plant, or at destination, the ultimate consignee--the stock point. This decision determines the point at which the Navy assumes title to the material and has a major impact on accounting processes. Therefore, the effect of each acceptance alternative is reviewed throughout the cycle.

Each contract is assigned a unique contract number.<sup>1</sup> Since contracts may be let for the procurement of multiple items from the same contractor, each item (or stock number) is assigned a specific contract line item number (CLIN). Contracts for wholesale material usually require delivery to multiple consignees--stock points. Hence, there are frequently many consignees assigned within each CLIN, each being assigned a specific and unique sub-CLIN. Wholesale contracts are therefore administratively processed at the sub-CLIN level of detail.

The obligation, or legal reservation, of the NSF monies legally occurs upon contract award. This obligation is recorded in an ICP subsidiary ledger called the Obligation Status File (OSF). The OSF is part of the ICP's automated inventory system, Uniform Inventory Control Program (UICP), which consists of a series of data files and application programs. In addition to the OSF, obligation associated entries are made in other UICP files such as the Contract Status File (CSF) and the Due In/Due Out File (DDF) which maintains a record of material scheduled for movement. The OSF is maintained at the contract level of detail while the CSF is at the CLIN level of detail and the DDF at the Sub-CLIN level of detail.

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<sup>1</sup>. The reader may be familiar with the term PIIN (Procurement Instrument Identification Number) which is a generic term used in referring to contract numbers. The author will continue to use the term "contract number" for simplicity.

The Fund Accounting entry at the ICP upon contract award is as follows:

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION
2:	300	UNCOMMITTED AUTHORIZATION
	400	COMMITMENTS
3:	400	COMMITMENTS
	500	OBLIGATIONS

There is no Financial Inventory Accounting entry nor is there a General Ledger Level entry. Upon contract award, the ICP sends a "Letter of Obligational Authority" to DCAS enabling it to make invoice payments against the contract. Additionally, the ICP sends the consignees a copy of the contract and Preposition Material Receipt Cards (PMRC) for each of the items destined for that stock point. This provides stock points advance notification and establishes a receipt due record on their Receipt Due File.

#### E. ACCEPTANCE OF TITLE

##### 1. General

Formal acceptance of title to material triggers a sequence of events. The Navy actually owns the material at this point and, according to both Generally Accepted Accounting Principles (GAAP) and the Navy's definition of accrual accounting, should recognize the asset and liability through establishment of Material-in-Transit (MIT) and Accounts Payable. However, as will be discussed below, this is usually not accomplished. The instrument officially documenting

acceptance is a Material Inspection and Receiving Report (DD Form 250) and is usually at the sub-CLIN level of detail.

## 2. Source Acceptance

Source acceptance means contracted material is inspected and accepted at the contractor's plant. Source acceptance is performed by the DCAS Representative (DCASR) at the contractor's plant and is the acceptance method most frequently used on ICP wholesale buys. The DCASR is tasked with forwarding advance copies of the DD250 to consignees listed on the contract. Other copies are shipped with the material. Source acceptance falters at this point due to the demonstrated non reliability of the DD250 as an acceptance document. Advance copies frequently never arrive or arrive after material receipt at the stock points.

Theoretically, upon receipt of these advance DD250s, stock point personnel stamp them "Source Accepted" and forward one copy to the contract FIPC to be used in establishing the accounts payable and recording the material-in-transit from the contractor's plant. However, since the advance DD250s are frequently not received or are received after the material, timely posting of the accounting records cannot be accomplished as described. Therefore, accounting entries are normally not made upon formal acceptance of material on a source acceptance contract. Instead, accounts payable are established based on material receipt by the consignee and TIR data forwarded to the ICP. MIT is estab-

lished based on expenditure summarization forwarded to the ICP by NRFC after the payment of invoices.

### 3. Destination Acceptance

Destination acceptance means that contracted material is accepted at the consignee location, usually a stock point, and transfer of title occurs only at that point. The DD250's are shipped with the material from the contractor's plant. Because acceptance occurs at the time of material receipt, discussion of the transaction involves accounting entries not yet introduced and are better explained in subsequent sections.

## F. MATERIAL SHIPMENT

The acceptance mode has no effect on the actual shipment of material; only on ownership of the material during shipment. When source accepted, material is legally Navy property during shipment. When destination accepted, material still belongs to the contractor during shipment. It is important to note that no notification of shipment occurs. Therefore the various participants are forced to assume that source accepted material is shipped upon acceptance.

## G. PAYMENT OF INVOICES

### 1. General

As paying agent for the contract, DCAS receives notification that the material has been accepted. If source accepted, notification is from the accepting DCASR. If destination accepted, notification is upon receipt of the



DD250 stamped "Material Received" which the consignee sends. Once material has been accepted, DCAS will make appropriate payments upon receipt of the contractor's invoice.<sup>2</sup>

DCAS forwards information on the paid Public Voucher (PV) to NRFC Washington DC via CERPS for posting to the General Ledger Level Accounting system. NRFC in turn notifies the ICP of contract payment via an Expenditure Notification Report (NC Form 634) in computer tape format mailed to the ICP and accompanied by computer punch cards (DOCID Y1/Y2). A monthly summary NC 634 is also produced. The Y1/Y2 notification represents official notification and triggers an expenditure entry on the ICP's Funds Resources Ledger. Y1/Y2 notification is at the contract number level of detail and notifies the ICP that a payment has been made against a particular contract. Since, as discussed above, accounting entries cannot be made as required for source accepted material, this is the point in the procurement cycle where either (1) MIT will be established if the material has not already been received or (2) Accounts Payables will be cleared if the material had been previously received.

In addition to the above Y1/Y2 notification, the ICP occasionally receives additional notification of contract payment directly from the DCASR. The DCASR sends this

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<sup>2</sup>. Many contracts call for progress payments at designated intervals prior to acceptance. These are outside the scope of this thesis. Additionally, the contractor's invoice may consist of several partial invoices or one lump sum. Payment is only for the amount invoiced and actually accepted.

Contract Payment Notification (CPN) to the ICP via tape format before the paid PV goes through an additional audit prior to submission to NRFC. However, CPNs can not be used by ICPs as official expenditure notification because:

- (1) CPNs are not consistently submitted
- (2) CPNs may be incorrect since they do not reflect the final audited version of the paid PV; and
- (3) UICP is not programmed to accept the CPN. [Ref. 10] CPNs are in CLIN level of detail and notify the ICP that a particular contract line item has been paid.

It is important to note here that the ICP has no visibility over which sub-CLIN has been paid. Using the Y1/Y2 notification, the ICP only knows that a certain portion of the "total contract" has been paid.

## 2. Source Acceptance

Since, in most cases, the DD250 documenting acceptance by the DCASR is not received and the material has not been received at the final stock point, the Y1/Y2 notification is the first transaction the ICP receives on a source acceptance contract. The ICP therefore uses the Y1/Y2 as acceptance notification and records the material as being in transit. [Ref. 10] The assumption is made that material paid for but not yet received must essentially be in transit.<sup>3</sup> The following Fund Accounting entry is therefore made upon receipt of the Y1/Y2 notification:

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<sup>3</sup>. It is known that paperwork errors such as delinquent contractors' invoices and billing errors cause MIT. Although these MIT accounts represent large monetary values, they are not within the context of this thesis.

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION
2:	300	UNCOMMITTED AUTHORIZATION
	400	COMMITMENTS
3:	400	COMMITMENTS
	500	OBLIGATIONS
6S:	500	OBLIGATIONS
	600	CASH DISBURSEMENTS
	520	PREPAID STOCK FUND MATERIAL
	530	STOCK FUND MATERIAL IN TRANSIT

The net effect of these entries is to reduce the Uncommitted Authorization account by an amount equal to contract payments made to date and replace it with a Cash Disbursements entry. The entry also recognizes the material as in transit from the contractor. The reader should note that visibility over exactly what material has been paid for does not exist. Eventually, as all contract payments are made and Y1/Y2 notifications received, the entire contract will be represented by Cash Disbursements and MIT account entries.<sup>4</sup>

There is no Financial Inventory Accounting entry since the material has not yet been received. The General Ledger Level entry is:

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<sup>4</sup>. As discussed in Chapter One, the extent of MIT in the NSF has become of great concern and precipitated this thesis.

0:	100	CASH AVAILABLE FOR DISBURSEMENT
	300	DIRECT APPROPRIATIONS
6S:	140	INVENTORIES IN TRANSIT--FROM PROCUREMENT
	500	PURCHASES AT COST <sup>5</sup>
	160	UNDISTRIBUTED DISBURSEMENTS <sup>6</sup>
	100	CASH AVAILABLE FOR DISBURSEMENT
	500	PURCHASES AT COST
	160	UNDISTRIBUTED DISBURSEMENTS

It should be noted that large values of Accounts Payables do exist on source acceptance contracts as the result of billing errors and delinquent contractors' invoices. However, these are not the norm and are thus addressed in the destination acceptance section of the material receipt section.

The net effect of these entries is the reduction of cash available for disbursement and an equal increase in inventories in transit. The MIT entries of both the Fund Accounting and General Ledger Level Accounting Systems are eventually replaced upon the ICP's receipt of TIRs indicating material has been received at the consignee.

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5. For the sake of simplicity, it is assumed that the contract purchase price equals the standard price. Adjusting entries such as "516 Purchase Price Variance" are used in situations where variances occur. Similar adjusting entries exist for both the Fund Accounting and Financial Inventory Accounting Systems.

6. Undistributed Disbursements is a clearing account showing any net difference between disbursements reported by CERPS and the NSF as a result of suspended payments. These suspended payments are posted to the appropriate obligation on a monthly basis and the contra Undistributed Disbursements entry made.

### 3. Destination Acceptance

As mentioned earlier, because the acceptance transaction occurs at the same time as the material receipt, detailed discussion of the accounting entries will be better facilitated if explained in the next section.

## H. MATERIAL RECEIPT AND STORAGE

### 1. General

Material receipt is accomplished by consignees listed on the contract. Upon receipt of material, stock point personnel stamp the DD250 "Material Received" and forward a copy to the contract FIPC. The material is then taken up in inventory as a "Receipt from Procurement, Commercial Sources" and reported to the ICP via the TIR system. The TIR is at the stock number level of detail which equates to the sub-CLIN level of detail (individual line item assigned to a specific consignee).

Although carried on the stock point's MSIR, the material is wholesale inventory for which no Financial Inventory Accounting entry is made to the stock point's FICL, nor the receipt reflected in the stock point's FIR. The stock point TIR enters the transaction into the ICP's site coded Financial Inventory Control Ledgers via the CAB system. Here, the transaction is accounted for by stock number and CLIN and the entry converted into monetary terms at standard price.

### 2. Source Acceptance

Receipt TIRs from stock points process through various UICP files and decrement the value of outstanding

contracts. The following entry is made on the ICP's consolidated FIR:

**7S: A1: RECEIPTS FROM PROCUREMENT--COMMERCIAL SOURCES  
R1: CLOSING INVENTORY**

The Fund Accounting entry at the ICP removes the in transit status of the material:

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION
2:	300	UNCOMMITTED AUTHORIZATION
	400	COMMITMENTS
3:	400	COMMITMENTS
	500	OBLIGATIONS
6S:	500	OBLIGATIONS
	600	CASH DISBURSEMENTS
	520	PREPAID STOCK FUND MATERIAL
	530	STOCK FUND MATERIAL IN TRANSIT
7S:	530	STOCK FUND MATERIAL IN TRANSIT
	520	PREPAID STOCK FUND MATERIAL

The procurement cycle is now completed in the Funds Accounting System for the source acceptance contract. Note that the Fund Accounting System does not deal with assets in the conventional sense; only with the expenditure of available funds. Its purpose, that of monitoring the status of NSF obligations and expenditures, has been met with respect to the procurement cycle when all material ordered on a single contract has been received.

The General Ledger Level entry at NRFC for the eventual receipt of source accepted MIT is as follows:

0:	100	CASH AVAILABLE FOR DISBURSEMENT
	300	DIRECT APPROPRIATIONS
6S:	140	INVENTORIES IN TRANSIT--FROM PROCUREMENT
	500	PURCHASES AT COST
	160	UNDISTRIBUTED DISBURSEMENTS
	100	CASH AVAILABLE FOR DISBURSEMENT
	500	PURCHASES AT COST
	160	UNDISTRIBUTED DISBURSEMENTS
7S:	130	INVENTORIES--STOCK ON HAND
	140	INVENTORIES IN TRANSIT--FROM PROCUREMENT

The procurement cycle for source acceptance contracts is also now completed in the General Ledger Level Accounting System. The net effect of the procurement cycle has been a reduction of the NSF appropriation and an equal increase in stock on hand. The NSF appropriation will eventually be reimbursed upon the issue (sale) of this material to the NSF customer.

### 3. Destination Acceptance

Since formal acceptance and final receipt occurs simultaneously, there are no material in transit entries for destination acceptance contracts. These contracts usually result in the ICP receiving the receipt TIR prior to receiving the applicable Y1/Y2 notification due to their transmission modes. TIRs are a same day AUTODIN transaction from the receiving stock point to the ICP. As explained above, Y1/Y2 notifications result from stock points mailing DD250s to DCAS, followed by the DCAS invoice payment, PV audit, and transmission of the paid PV information to NRFC via CERPS. The path finally ends with the Y1/Y2 notification mailing to the ICP. This sequence of events can take up to three

months. The CPN sequence, when submitted by the DCASR, is shorter but still arrives at the ICP after the TIR.

As in any receipt TIR, the appropriate UICP files are accessed and the value of the transaction reflected. If the contract has not been prepaid, the NSF must now recognize the liability by an Accounts Payable entry. The invoice payment will also be recognized upon subsequent receipt of the applicable Y1/Y2 notification. The Y1/Y2 transaction completes the destination acceptance contract procurement cycle for the ICP Fund Accounting System and the applicable accounting entries are:

1:	100	AUTHORIZATIONS RECEIVED
	300	UNCOMMITTED AUTHORIZATION
2:	300	UNCOMMITTED AUTHORIZATION
	400	COMMITMENTS
3:	400	COMMITMENTS
	500	OBLIGATIONS
5D/6D:	500	OBLIGATIONS
	510	ACCOUNTS PAYABLE
7D:	510	ACCOUNTS PAYABLE
	600	CASH DISBURSEMENTS

The net result of the procurement cycle for destination acceptance contracts when all Y1/Y2 notifications arrive at the ICP is a reduction of the Uncommitted Authorization account and an equal increase in the Expenditure account.

Since acceptance and receipt occur simultaneously in these destination acceptance contract, it is the first transaction recorded on the Financial Inventory Accounting System. As mentioned



In Chapter II, the ICPs have two basic roles in the FIR system: they accumulate and report financial inventory data on wholesale stock for use by higher authority, and they receive financial inventory data from stock points and the NRFC concerning material over which they have cognizance. The TIR/CAB systems material receipt input is translated into inventory control transactions in the ICP's MDF and results in the following FIR entry:

**6: A1: RECEIPTS FROM PROCUREMENT--COMMERCIAL SOURCES  
R1: CLOSING INVENTORY**

The same receipt TIR information will eventually result in a General Ledger Level stock on hand entry and recognition of the accounts payable liability through the reporting channels described in Chapter III. The subsequent receipt of the paid PV information via CERPS will result in the accounting recognition of payment and will close the destination acceptance contract procurement cycle in the General Ledger Accounting System as follows:

0:	100	CASH AVAILABLE FOR DISBURSEMENT
	300	DIRECT APPROPRIATIONS
5D/6D:	130	INVENTORIES--STOCK ON HAND
	510	PURCHASES AT STANDARD PRICE
	500	PURCHASES AT COST
	201	ACCOUNTS PAYABLE
7D:	201	ACCOUNTS PAYABLE
	500	PURCHASES AT COST
	160	UNDISTRIBUTED DISBURSEMENTS
	100	CASH AVAILABLE FOR DISBURSEMENT
	510	PURCHASES AT STANDARD PRICE
	160	UNDISTRIBUTED DISBURSEMENTS

Just as with source accepted contracts, the net effect of the destination acceptance contract procurement cycle is a reduction of the NSF appropriation and an equal increase in the stock on hand. Appendix E presents a summary of the accounting entries discussed so far. Appendix F provides a summary list of the level of detail used in the various documents, files and transactions discussed throughout the thesis.

## V. AREAS OF CONCERN AND WEAKNESS

### A. INTRODUCTION

This chapter will address five areas of concern which the author views as potential weaknesses in the NSF accounting system. The five areas are: (1) reconciliation of the procurement cycle; (2) source acceptance contracts (3) inconsistencies between function and level of detail used in the NSF accounting system; (4) UICP problems; and (5) the issue of in transit accounts. While each area is discussed in detail in the sections to follow, the reader must keep in mind that all the areas are interrelated; influencing one another--each a cause and effect of the others. Additionally, it is important to note that the issues identified here are not a comprehensive listing of weakness within the NSF accounting system.

### B. RECONCILIATION OF THE PROCUREMENT CYCLE

The value of wholesale material received from commercial sources cannot readily be reconciled with the value paid to contractors for the material. This process is complicated because, as described in Chapter IV, most wholesale procurements are originated by one activity, have the title accepted for the Navy by another activity, have the material physically received by numerous different activities, and have payment made by a fourth activity. Although procedures do

exist to relate these actions, they have proven to be inefficient and often ineffective.

The need and reasoning for the reconciliation of commercial procurements is simple: ensure the Navy receives what it pays for. This requirement is born out of the statutory and regulatory requirements discussed in Chapter III. Reconciliation of receipts from procurement should and does take place at the activity with both the visibility and responsibility for the material--the ICP. Since ICPs award the contract, receive notification of material receipt and receive notification of payments made on the contract, it seems logical that they would be able to monitor the procurement cycle to determine if all material procured has been received. However, that is not the case.

The fact that the three accounting systems must interface and that differing levels of detail are used at various key points within the procurement cycle leads to difficulty in the reconciliation process. In this case, the two most important aspects of the procurement cycle to be reconciled, receipts of material from commercial contractors and payment of the contractor's invoice, are documented at differing levels of detail. Receipts are documented at the stock number (NIIN) and Sub-CLIN level of detail and contract payments at the contract level of detail.

The overall major difficulty in the reconciliation process is that ICP visibility of what material has been paid

for is extremely limited. Contract payments are accounted for based on Y1/Y2 notification from NRFC. With the Y1/Y2 notification at the contract level of detail, the ICP only knows that some portion of the contract has been paid. The ICP does not know what material has been paid for nor does it know the identity of the intended receiver(s).<sup>1</sup> The applicable CLIN can be obtained, however, from review of the CPN received directly from the DCASR. This solution has problems in that, as mentioned in Chapter IV, CPN receipts are very inconsistent, unreliable, and their review involves a great deal of manual effort since UICP is not designed to utilize CPN data input.

Material receipts are documented at the NIIN and Sub-CLIN level of detail via the TIR sent by the receiving stock point. Even though this represents the level of detail necessary to accomplish proper payment--receipt reconciliation, this information by itself is not usable unless the same level of detail is available for contract payments. It should be noted that Sub-CLIN information is included only if the stock point receives a PMRC with that information from the ICP prior to material receipt or if the information is manually transcribed from an enclosed copy of the contract. The PMRC issue is discussed further in a later section.

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1. It is assumed that the contract, like the majority of wholesale contracts, is for multiple NIINs to be delivered to multiple consignees.

Because ICPs know what material on a contract has been received but not what has been paid for, the monetary difference between the two accounts is monitored via the Fund Accounting System. If more payments have been made on a contract than the value of material received, the difference is represented by MIT. If the reverse is true, the difference is represented by Accounts Payable. The MIT account is therefore used as a gauge of how well the receipt reconciliation process functions because it represents material paid for but not yet received. Figure 5-1 shows the extent of MIT over the past three years. As can be seen from Figure 5-1, the growth in NSF MIT has been quite alarming.<sup>2</sup> The reader should note that using MIT values as calculated above for this purpose is somewhat limited because both MIT and accounts payable are also created through paperwork and keypunch errors in the receiving and billing processes.

#### C. SOURCE ACCEPTANCE

It is the author's belief that a major NSF accounting problem is the use of source acceptance contracts to purchase material. The very nature of this type of procurement creates the possibility of errors in contract payments and errors or delays in material deliveries. Since payment is made based on acceptance at the contractors' plants, there is no sure way to know if future problems will occur in packing, shipping,

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<sup>2</sup>. It should be noted that part of this growth is the result of a correcting an erroneous automatic write-off program at the ICPs.

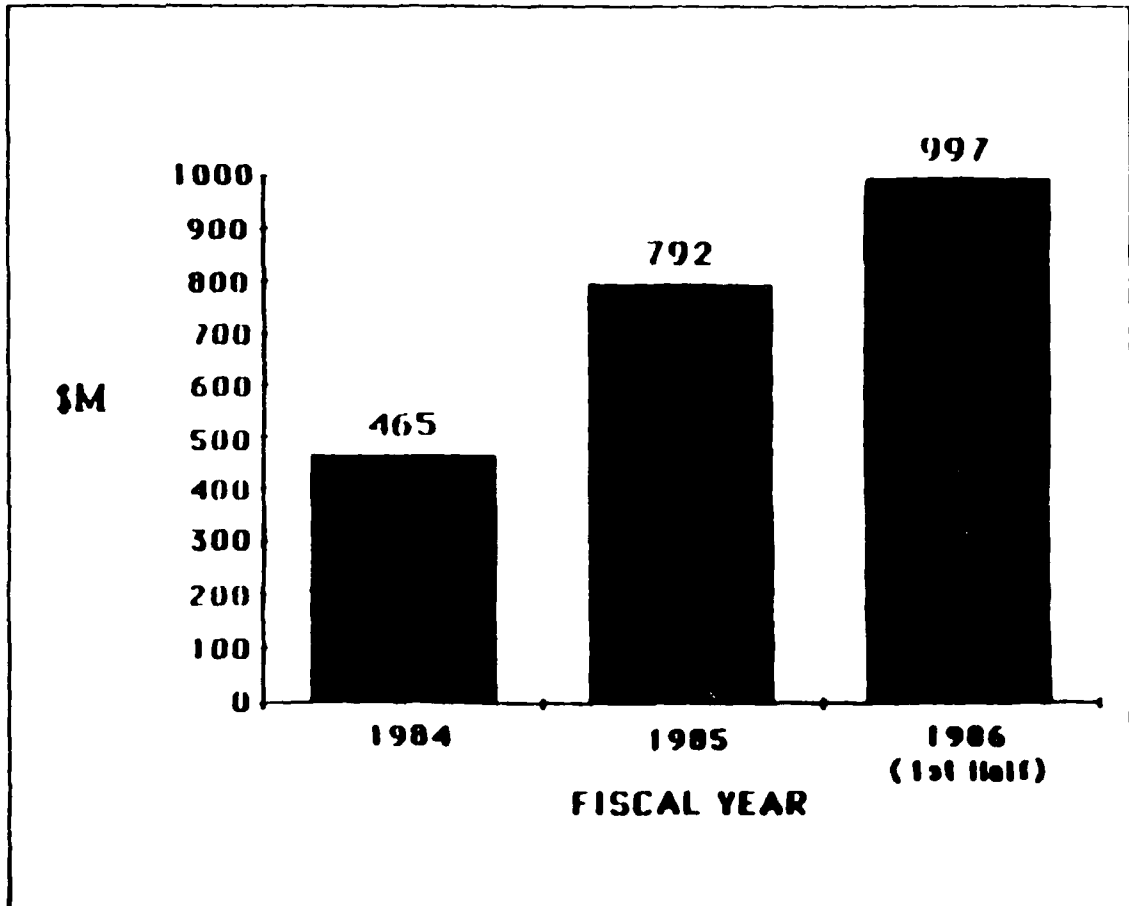


Figure 5-1 MIT Historical Profile

on receipt that would have an effect on how much or when payment is made.

Source acceptance is one of the major direct causes of the NSF MIT problem. Source acceptance enables contractors to receive payment earlier than other acceptance methods, even though the Navy does not have physical possession of the material, and results in the receipt of the Y1/Y2 expenditure notification at the ICP prior to the receipt TIR from the receiving stock point. The result is MIT: material paid for and "assumed" in transit from the contractor's plant.

By accepting title to material still at the contractor's plant, the Navy becomes legally liable for the payment of material before realizing the benefit of its availability for issue. The material will not physically be in Navy hands until shipment completion at which time it becomes available for issue to NSF customers. The Navy has therefore accepted and, in the majority of cases, paid for material over which it has little or no control and which represents a non usable asset.

#### D. INCONSISTENCIES BETWEEN FUNCTION AND LEVEL OF DETAIL

The level of detail used in the three accounting systems appears to be inconsistent with their functions. The higher in the hierarchy the accounting system functions, the lesser the level of detail should be. The Financial Inventory



Accounting System, used at the lowest command level<sup>3</sup>, uses the greatest level of detail--NIIN and below. The General Ledger Level Accounting System, used at the highest command levels, uses the monetary level of detail aggregated from the other accounting systems and CERPS. However, the use of the Funds Accounting System in monitoring MIT appears contradictory to the designed function of the system.

Fund accounting is defined as "accounting systems that are used to record the transactions that affect financial resources associated with inventories." [Ref. 5: pp. a-4] The purpose of the NSF Fund Accounting System is to maintain an accurate status of the NSF allocation and report progress in obligating resources. It is the Fund Accounting System that monitors and controls the allotment and sub-allocation process from NAVSUP all the way down to the lowest field level activity. The Fund Accounting System is intended to enable NAVSUP to maintain current visibility of the financial status of the NSF. Yet, the Fund Accounting System is responsible for tracking material receipt to maintain visibility of material paid for but not yet received or received but not yet paid for [Ref. 8: pp. 80]. The level of detail in the Funds Accounting system is dollar value whereas the very nature of MIT requires a greater level of detail-- Sub-CLIN.

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<sup>3</sup>. For wholesale inventory, the ICP is the lowest level at which accounting for the assets is performed.

## E. UICP PROBLEMS

### 1. Background

The computer system used in almost every program invariably receives partial if not a great deal more than its share of the blame for problems in program operations. The NSF accounting system is no exception. The basic UICP problems of saturation and lack of flexibility to meet the growing needs and demands of a highly dynamic NSF system lie at the heart of many NSF "problems".

### 2. The UICP "Mine Field"

Reconciliation of the procurement cycle is designed to take place automatically within UICP. As discussed in previous chapters, receipt TIRs from receiving stock points process through three UICP files: the DDF, CSF and OSF. Upon TIR receipt, it decrements the outstanding due on the DDF; the outstanding sub-CLINs on the CSF are updated to reflect receipt; and the value of the material receipt decrements the value of the obligations outstanding on the OSF. However, the receipt TIR frequently "errors out"<sup>4</sup> on one or more of these files. The reasons for this are as many and varied as the myriad problems, both small and large, within UICP and their solution lies outside the scope of this thesis. The results of this "erroring out" are the issue here.

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4. Forced to eject from UICP automatic processing due to some inconsistency in either the TIR itself or the specific data elements within the file the TIR is attempting to match with.

The erroring out of receipt TIRs cause time delays in processing receipt transactions and subsequent accounting entries. Recall from the previous chapter that for either source or destination acceptance contracts, delays in receipt TIRs will cause increases in MIT accounts since the Y1/Y2 payment notification has a greater chance of reaching the accounting ledgers before the receipt information. This increase in the MIT accounts not only gives inaccurate indications to NSF managers and budget analysts who view it as a failure to receive paid material, but it also creates a bad image of Navy fiscal management to DOD, Congress and the general public.

### 3. PMRCs

Problems with providing stock points advance notification of expected shipments has long stood at the forefront of many UICP and NSF accounting difficulties. Upon contract award, the ICP is tasked with the responsibility of providing consignees a copy of the contract in addition to UICPs automatic generation of a PMRC. The PMRC is designed not only to provide consignee stock points with advance notification, but to actually establish a stock due in the stock points' Receipt Due File. This has the desired effects of establishing a stock record for the item if not already established, reflecting as an asset on the stock points' inventory reorder calculations and simplifying the receipt process.

As documented in many studies, ICPs experience a great deal of difficulty in the production, maintenance and validation of PMRCs. The importance of the PMRC in this issue lies in the fact that PMRCs are designed to provide stock points with the contract information necessary to reflect Sub-CLIN information in the receipt TIR. This is critical in the procurement reconciliation process. If not provided on the TIR, the ICP has no chance of reconciling the receipt with the payment for the material.

#### 4. Non-Acceptance of CPNs

UICP is unable to accept CPNs provided by DCASRs to document expenditures on a particular contract. The CPN is the only payment documentation in existence today which provides the Sub-CLIN information needed for reconciliation. Instead, the ICP must get its expenditure information from a third party, the NRFC, in a format acceptable to UICP but not at the needed level of detail. CPNs are currently used by ICPs only in their manual review and follow up efforts on outstanding MITs.

#### F. MATERIAL-IN-TRANSIT

If MIT is to be used as the yardstick by which the Navy gauges the success of its payment versus receipt reconciliation, then "accidental MIT" or MIT caused by unintentional timing delays as discussed above must be corrected and prevented in the future to provide an accurate picture. Not only does MIT have serious budgetary impacts but it creates

potential for adverse publicity if inappropriately interpreted as the Navy not receiving material for which it has paid.

ICPs are required to follow-up on all MIT over 60 days old and to follow-up a second time when 120 days old [Ref. 5: pp. 3-116]. After six months without a reply, write-off authority can be requested from NAVCOMPT via NAVSUP. However, the write off of MIT does not solve the problems associated with MIT, but merely circumvents the flaws in the current accounting and management system.

Significant resources are currently being focused on the investigation and resolution of the MIT issue. The MIT issue is a very real problem in the current NSF business operations and constitutes an overall issue too complex for analysis in a single thesis. Therefore the total MIT issue is considered beyond the scope of this thesis and MIT resolutions will not be specifically addressed.

#### G. SUMMARY

This chapter discussed some of the areas viewed by the author as potential weaknesses in the NSF accounting system. These issues by no means constitute the only weak areas within the NSF accounting system but were discussed because they are considered major issues. However, in reviewing these issues as a whole, there appears to be one single issue of commonality--level of detail. It appears to the author that this therefore becomes the overriding issue at hand.

The procurement cycle reconciliation is weak because the level of detail used to record receipts is different from that used to record contract payments. MIT accounts therefore become important in an attempt to monitor resulting mismatches in the reconciliation process. Yet, the level of detail used in the Funds Accounting System seems to be inconsistent with the function of monitoring MIT.

Contributing to this is the inability of the ADP systems to maintain needed information accurately and at equivalent levels of detail. The receipt side is encumbered by UICP's "mine field" inhibiting smooth transaction reporting and by its frequent failure to generate PMRC information. The expenditure side is seriously affected by UICP's inability to accept CPNs containing the proper level of detail. Finally, the policy of source acceptance appears to lie at the base of the reconciliation issue by forcing the system to account for material in transit from contractors' plants. The final chapter of this thesis outlines the improvement potential offered by commercial accounting practices and offers recommendations on improving the NSF accounting practices.

## VI. FEASIBILITIES AND CONSTRAINTS

### A. INTRODUCTION

The purpose of this chapter is to address current issues within the NSF environment which may affect, either positively or negatively, resolution of NSF weaknesses as well as have some impact on future decisions on NSF accounting practices.

### B. THE PROMPT PAYMENT ACT

The Prompt Payment Act of 1982 has had significant impact on Federal financial management and accounting of funds. This legislation requires Federal agencies to pay their bills on time, pay interest penalties when payments are late, and take discounts only when payments are made within the discount period [Ref. 7: pp. 18]. Failure to meet these requirements can result in the Navy having to pay large sums in penalties and interest payments. The constraints of the Prompt Payment Act must therefore be kept in mind when considering any modifications to the NSF Accounting System. Any such changes possessing the potential for delaying the notification of acceptance would not be positively received.

### C. BUDGETARY CONSTRAINTS

Any discussion of potential constraints on the Navy would be incomplete without mention of today's climate of budgetary constraints. The current environment of austere fiscal funding is a hard fact in the wake of events such as the

Gramm-Rudman-Hollings bill and the extensive negative press received on supply issues in recent years.

#### D. ADP MODERNIZATION

##### 1. Introduction

As discussed in previous sections, current ADP systems used within the NSF have come under fire from many sources. Not only are they antiquated, saturated and inflexible, but the NSF ADP systems are causative factors in many problems within the NSF. The upgrading and replacement of these systems has been an ongoing project for several years. The goals for improvement of these systems has been three-fold: (1) provide ICPs and stock points with new hardware systems and associated software; (2) modernize various functions of the NSF; and (3) provide a modern telecommunications network to tie the individual activities and systems into a fully integrated supply system. [Ref. 11: pp. 3] The following subsections describe components of this ADP modernization applicable to the NSF accounting system.

##### 2. Resolicitation

Largest of the ADP projects, the Resolicitation Project, is designed to replace the ADP hardware systems used by ICPs. Hardware installation is well underway and transition from the old hardware to the new hardware is scheduled for completion in late 1988. Not only does this provide greater speed and data capacity to all UICP applications, but it provides the ICPs with many new capabilities, such as the



INV/PRO/FIN DIAGNOSTIC application discussed below. These new capabilities are making operations under the current UICP system much more flexible, easier and user friendly.

### 3. Resystemization

Resystemization is the title given to the project currently under way to revise UICP operations in order to take advantage of the capabilities of the new hardware and software systems. It includes the use of fourth generation software languages, a real time interactive data base design and the use of a Data Base Management System (DBMS). DBMS enables all data files affected by a single transaction to be updated simultaneously. It is not unusual in the current system to find various files out of balance even though they contain similar information. The "UICP Mine Field" discussed in Chapter IV is an example of this.

Additionally, Resystemization incorporates an intensive review of the methodology of current ICP/wholesale operations as a whole. The goal is to ensure enhancements of current shortcomings and to provide for future system requirements well into the next century. The major part of the Resystemization effort is scheduled for completion in the 1989/1990 timeframe.

### 4. Stock Point ADP Replacement (SPAR)

The Stock Point ADP Replacement Program (SPAR) will totally redesign stock point ADP systems and parallels Resolicitation in both mission and design. In addition to

redesigning stock point operations, SPAR will have significant impact on the NSF accounting system. The SPAR project combines procurement, financial, inventory and supply data files into a single integrated data base. As will be discussed below, this integrated data base is envisioned to be connected with other data bases via a sophisticated communications data network. The goal is the elimination of reconciliation currently being attempted. Completion of SPAR is tentatively scheduled for 1994.

5. Stock Point Logistic Integrated Communications Environment (SPLICE)

The Stock Point Logistic Integrated Communications Environment (SPLICE) is a project for development of hardware and associated software designed to link various ADP systems via state-of-the-art telecommunications network. This will provide for real time exchange of data and information. SPLICE essentially enables each stock point to function as a node in a telecommunication network and to instantaneously exchange information and data with other Navy stock points, Navy ICPs, DLA stock points and other activities brought up on the network. Certain operational commands will also be able to link into the network for real time information exchange. The advent of SPLICE will redefine the TIR and CAB systems as we know them today and will provide the capability for alleviating timing delays and data transmission errors associated with today's procurement cycle reconciliation

process. Even though the SPAR--Resystemization SPLICE network will not correct errors in the receiving and billing process that are caused by human intervention, it possess tremendous potential for future application growth.

#### 6. INV/PRO/FIN DIAGNOSTIC

One of the many advantages already being received from the Resolicitation project is the on-line analysis capability the new hardware provides ICP managers. The process, called FOCUS, enables managers to perform on-line reviews of data in various files on a real time basis. This new capability has resulted in the development of the INV/FIN/PRO Diagnostic which is designed to scan certain data elements and identify disconnects between UICP inventory, procurement and financial files. The INV/FIN/PRO Diagnostic is currently being used to review the DDF, CSF and OSF--the "UICP Mine Field". Thousands of mismatched data entries are being identified and corrected resulting in fewer TIR errors. However, since current UICP inputs continue to build new mismatches, the long term fix to problems such as the "UICP Mine Field" appears to be the DBMS aspect of resystemization discussed above.[Ref. 12]

#### E. HUB CONCEPT

A recent initiative under evaluation at NAVSUP proposes a new procurement receipt processing concept. This initiative, commonly call the "HUB Concept", provides for Navy acceptance and receipt of new procurement material at a

centralized location, the HUB. Under the HUB concept, the DCASR will continue to perform source inspection but the formal acceptance function is transferred to the HUB. Additionally, point of payment shifts from DCAS to the ICP.

Using the SPLICE network, the HUB will perform all receipt functions normally carried out at the ultimate consignee except for final storage. The HUB will also formally accept material for the Navy, process the receipt onto the stock point's MSIR, make appropriate TIRs to ICPs, and transport material to ultimate stock points. Since the material is already registered on the receiving stock points' MSIR, only the final stow is accomplished at the stock point.

Advertised benefits of the HUB include: elimination of new procurement MIT, documented proof of delivery from contractors, reduced workload at receiving stock points, faster inventory updates and streamlining of accounting transactions at ICPs. Cons of the HUB concept include high establishment costs and operating expenses, increased invoice processing workloads at ICPs and the need for establishing an additional transportation system.

#### F. NEW UNIFORM CHART OF ACCOUNTS

NAFC is currently in the process of revising the Uniform Chart of Accounts (UCA) used in General Ledger Accounting for the entire Navy, a part of which is the NSF. This action is in response to revised DOD regulations establishing a new set of General Ledger Accounts for Stock Fund operations. The new

UCA is required to be implemented in forthcoming ADP support systems such as SPAR and RESYSTEMIZATION.

#### G. IDAFIPS

The Integrated Disbursing and Accounting Financial Information Processing System (IDAFIPS) is a project approaching implementation and designed to integrate the Navy disbursing and accounting systems into a single coordinated system. As such, IDAFIPS will have significant impact on the manner in which the Navy pays bills. Under IDAFIPS, the Integrated Disbursing and Accounting Financial Management System (IDAFMS) and the Integrated Disbursing and Accounting Financial Reporting System (IDAFRS), constitute the Navy's new standard system for bill payment and reporting. This system will utilize the SPLICE network to certify invoices, make payments and report such payments up through the chain of command to the Department of the Treasury. Although integration with SPAR is currently planned, integration of IDAFMS with Resystemization has not yet been officially addressed [Ref. 13: pp. III-11]. Phased implementation is scheduled to start in 1989.

#### H. THE NSF ARCHITECTURE

The recently published Navy Stock Fund Accounting Information Systems Architecture, jointly endorsed by OPNAV, NAVJMP7 and NAVSUP, documents many problems within the NSF Accounting System and provides recommendations for resolution. The NSF Architecture is part of the Navy's Information

System Architecture program which provides for structured, top-down formal reviews of Navy systems. These architectures document complex systems by identifying interfaces, requirements and deficiencies and outlining potential Plan of Action and Milestones for their resolution. The IDAFIPS program discussed above is a result of a previous DOD Architecture. While it is too early to tell exactly what impact this review will have on the future of the NSF, it is safe to assume that its recommendations will become the basis of future NSF Accounting System changes.

## VII. PRIVATE SECTOR ACCOUNTING SYSTEM

### A. INTRODUCTION

A review of the accounting procedures used by a major private sector retailing corporation for the procurement of inventory was conducted and is outlined in this chapter. Following this review, the chapter highlights the accounting policies and issues applicable to the NSF weaknesses identified in the previous chapter. Although emphasis is placed on the procedures used by this single retailing firm; other major private sector firms were contacted with regard to accounting policies applicable to NSF weaknesses and are incorporated in these remarks. A discussion of how these procedures can aid in improving upon NSF weaknesses is discussed in the final chapter.

The sources for this chapter consist of numerous telephone interviews with financial representatives of various major commercial firms. These firms were chosen because of their size, sophistication and centralized inventory control policies. Additionally, these firms represent key business sectors such as the automotive industry, national retailers, and major accounting firms. Terminology used is generic and not that of any specific firm or company. At their request, these private sector sources remain undisclosed.

## B. ACCOUNTING SYSTEMS WITHIN THE PRIVATE SECTOR

### 1. Background

As in Chapter IV, the author has broken the private sector "accounting system" into smaller distinct accounting systems which interact to form the corporation's overall accounting system. While these individual systems are not identical to those of the NSF, they are close enough to serve as reference. The systems are: (1) the General Ledger Level Accounting System; (2) the Contract Control Accounting System; and (3) the Financial Inventory Accounting System. Each of these systems is individually discussed along with any pertinent comparison with the NSF system in the following subsections.

### 2. General Ledger Level Accounting System

General Ledger Level Accounting is performed by the Accounting Division of the Finance Group centrally located at corporate headquarters. The General Ledger Level Accounting System receives inputs from the other accounting systems through a sophisticated computer telecommunications data network.<sup>1</sup>

The General Ledger Level Accounting System is the highest level of accounting within the firm's hierarchy and is

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1. The private sector companies investigated for this thesis were large enough to have activities located throughout the continental United States warranting the use of sophisticated computer communications networks. Smaller firms use local area networks and even non-automated procedures in their purchasing operations.



maintained at the dollar level of detail. Its purpose is to accumulate the monetary information necessary to provide required financial reports both internal and external. Inputs received from other accounting systems are posted to subsidiary ledgers and then aggregated into the General Ledger Level control accounts. For example, the value of inventory at each of the "stock points" is maintained on a real time basis on site specific ledgers and is aggregated into the control account: Inventory--Active. This figure is then used in certain top management reports as well as external reporting. The site specific subsidiary ledgers themselves are used for other management reports as needed by the various Groups. Other information systems, derived from the subsidiary ledger, established to meet various management requirements, are not for purposes of this thesis, considered part of the General Ledger Level Accounting System.

### 3. Contract Accounting System

The Contract Accounting System, centrally maintained at corporate headquarters by the Accounting Division of the Comptroller Group, is designed to provide management the financial status of the firm's contracts on a real time basis. This provides visibility over the use of corporate funds needed for the management of the firm's cash and capital structure. The contracts applicable to this thesis are new procurement contracts which are discussed in greater detail in the second half of this chapter. The subsidiary

ledger pertaining to these contracts is the Buyer Contract File which is accessible by contract number, purchase order number, Buyer code, date or activity designator. Execution of a procurement contract does not result in establishment of an Accounts Payable in the firm's General Ledger Level system, but it does code a commitment on the part of the firm for which management desires visibility.

#### 4. Financial Inventory Accounting System

The Financial Inventory Accounting System is a decentralized system that accounts for the receipt, storage, sale and issue of material on both a quantitative and monetary basis. It is the system of accounts and reports used to maintain complete financial visibility of the inventory levels at each of the field activities on a real time basis. The system provides aggregated financial information to the General Ledger Level Accounting System via the firm's telecommunications data network also on a real time basis.

### C. FUNCTIONING OF THE PRIVATE SECTOR SYSTEM

#### 1. Background

Again as in Chapter IV, the author has broken the acquisition cycle down into specific events for the purposes of this thesis. These events are: (1) the buy process; (2) material shipment; (3) receipt and storage; (4) acceptance of title; (5) payment of invoices; and (6) reconciliation. The accounting effects of the above events will be discussed in each of the following subsections.

## 2. The Buy Process

The buy order is an award contract awarded to a central authority which, for the purpose of this thesis, is called the "Buyer". The procurement contracts call for suppliers to make available a specified amount of inventory at a specified price against which purchase orders will be placed within a specified time-frame. No test material information is provided at time of contract. Additionally, no formal entry is made in either the general ledger level or financial inventory accounting system ledgers at this time because the private sector does not recognize a liability until after a purchase order is placed against that contract and before the material accepted.<sup>2</sup> However, as explained below, an entry is made on the Buyer Contract File of the Contract Accounting System. The Buyer Contract File is accessible by either contract number or part number.

The responsibility for placing purchase orders against an established contract rests with the purchasing agent for the inventory managers, called the "Re-buyer". There are numerous regional Re-buyers located throughout the continental United States, each responsible for ordering supplies as needed by the inventory managers in their region. Re-buyers have access to the Buyer Contract File via the firm's telecommunications network. Referencing the contract number, these purchase

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<sup>2</sup>. Exceptions do exist and will be discussed in greater detail in the following sub-section.

refers specifically to exact quantities, dates of delivery and delivery destination (one per purchase order). Upon issuance to the supplier, the purchase order is entered in a contract sub-system ledger of the Buyer Contract File and serves to tie the contract to the quantity and dollar value of the unobligated contract. Obligation in this sense refers to the placement of a purchase order against a specific contract. If the quantity specified in each contract is not "obligated" within the time-frame specified in the contract, the Buyer is subject to certain penalties as listed on the contract. The dollar value (quantity multiplied by unit price) of the unobligated contract is monitored by the Buyer to ensure against such penalties. Notification of the purchase order is sent to the consignee.

### 3. Acceptance of Title

The majority of procurement contracts in the private sector are destination acceptance contracts which indicate legal passage of title at the ultimate receiving destination as designated on the purchase order. One exception, maintained under strict controls, is upon receipt of shipment notification for "Master Source Contracts". These source acceptance contracts, representing less than one percent (50 out of 8,500 annual contracts) of the total procurement contract volume, are with the sole source companies of high turnover inventory items which are always maintained in stock. Master Source Contracts companies are those companies,

presently numbering less than a dozen, the firm has been and will continue dealing with for many years. Inventory items provided under these contracts are high turnover items ordered in large volumes.

The reasoning behind this unique change in acceptance policy lies in both the firm's desire to maintain rapid cash flows with established highly valued sources and its desire to minimize inventory levels and costs. Since there are daily transactions on these Master Source Contracts, special communications networks have been established to not only ensure efficient and accurate shipment notification, but provide for electronic transfer of funds and invoices.<sup>3</sup>

As discussed in Chapter IV, the acceptance of title has major impact on the accounting process. The firm legally owns the material at this point and must recognize both the asset (inventory) and the liability (accounts payable) in its accounting records. The acceptance notification used is an entry into the Buyer Contract File by receiving activities indicating receipt and acceptance of the material on that purchase order. The acceptance notification used for Master Source Contracts is the same entry but based on receipt of the electronic shipment notification instead of actual material receipt. By processing this shipment notification as it would any other receipt, no distinction between source

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<sup>3</sup>. The author must note here that source acceptance is unique even among the private sector.

accepted or destination accepted material is made in the accounting records.

Based on the acceptance entry on the Buyer Contract File, an Accounts Payable posting is made to the ledgers of the Contract Accounting System for the total dollar value of the purchase order.<sup>4</sup> These ledgers then aggregate into the control ledgers of the General Ledger Level system.

#### 4. Material Shipment

The terms of shipment, such as FOB terms and transportation charges, are specified by the contract; however, final destination is specified by the individual purchase order. Each contract also includes a clause providing for exceptions to the standard shipment clause in special cases on a purchase order by purchase order basis and for a specified fee. Normally, material is shipped to either a central Distribution Center or to individual field activities, depending on the individual purchase order. The majority of shipments are from supplier to individual field activities.

With the single exception of "Master Source Contracts as discussed above, there are no accounting entries made in any accounting system upon shipment from a supplier for destination accepted contracts. The supplier, however, is required by the standard contract to immediately send shipment

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<sup>4</sup>. If a discrepancy exists between the receipt and the purchase order, the receipt value takes precedence.

notification to the Re-buyer. This notification includes the following minimum information:

- purchase order number
- time/date of shipment
- shipment carrier and mode
- bill of lading number
- estimated day of arrival

As will be discussed below, this notification becomes crucial to the firm's reconciliation of the procurement cycle.

#### 5. Receipt and Storage

The receipt of material is entered onto the Financial Inventory Accounting System of the receiving activity. No entry is made for Master Source Contracts since the receipt has already been posted to the field activity's records. The total dollar value of inventory on hand at that activity is updated, again through the firm's telecommunications data network, to the subsidiary inventory ledgers of the General Ledger Level Accounting System at corporate headquarters. This dollar value is aggregated with the dollar values of the inventory locations for posting to the control accounts of the General Ledger Level system.

#### 6. Reconciliation

Official reconciliation of the procurement cycle takes place upon receipt of the material at the destination

listed on the purchase order.<sup>5</sup> Based on the previously received purchase order notification (and shipment notification if applicable), discrepancies are noted, sent to the Re-buyer via the data network for resolution with the supplier as necessary. In the interim, if an unresolved discrepancy exists between the receipt and the purchase order, the receipt value takes precedence.

7. Payment of Invoices

Payment of suppliers' invoices is centrally performed at corporate headquarters. The Buyer Contract File is referenced for both invoice and receipt/acceptance validation. If valid, the invoice is paid; payment being for the total value of the purchase order. Payment is reflected on the Buyer Contract File which aggregates to the control accounts of the General Ledger Accounting System. It is important to note here that neither the Control Accounting System nor the General Ledger Level Accounting System have visibility over which items have been received or paid for.

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5. Shipments from the Distribution Center to field activities or between activities become the property of the receiving field activity upon shipment. Not only does the receiving activity have official reconciliation responsibility but also the incentive for reconciliation is placed in the hands of the receiving activity since improper reconciliations can result in shortages in its inventory.



## VIII. IMPROVEMENT POTENTIAL AND RECOMMENDATIONS

### A. INTRODUCTION

This Chapter discusses the improvement potential offered by private sector accounting practices and offers recommendations on improving NSF weaknesses discussed in Chapter V. In addition to the accounting policies of the firm discussed in the previous chapter, other major private sector firms were contacted with regard to accounting policies applicable to the stated NSF weaknesses. Their procedures are incorporated in a review of private sector issues applicable to the stated NSF weaknesses. This review is followed by the author's recommendations which are made in light of both the feasibilities and constraints discussed in Chapter VI and the review of the private sector accounting system outlined in Chapter VII. The chapter finishes with a summary of the issues raised and approached by the thesis.

### B. PRIVATE SECTOR ACCOUNTING CONSIDERATIONS

#### 1. Acceptance of Title to Material

As explained earlier, the formal act of accepting title to material has both legal and accounting implications. Accepted material legally becomes assets of the purchasing company which must be accounted for. The norm in private sector accounting practice is to write contracts for acceptance of title at the destination. Source acceptance is used

only in very special circumstances, such as the "Master Source Contract" system discussed in the previous chapter, and represents a departure from the norm for most firms. Private sector firms therefore do not have the MIT problems that the NSF experiences. Even the firm with the Master Source Contract system avoids the MIT issue by not recognizing the in-transit status of the material in the accounting records. The private sector policy of automatically debiting inventory to the accounts of the receiving activity upon inter-activity shipments places the incentive for reconciliation squarely in the hands of the receiving activity. This is logical since improper shipments and reconciliations can result in shortages in the inventory accounts of the receiving activity.

## 2. Use of Accrual Accounting

Required by Generally Accepted Accounting Principles (GAAP), use of the accrual accounting principle in the private sector is based on the fact that it provides a better measure of operating performance [Ref. 14: pp. 84]. Operating performance measures are the result of recognizing the effects of transactions have on assets, liabilities and equity over a time period whenever goods or services are produced or utilized instead of when cash is received or paid [Ref. 14: pp. 84]. Thus the accrual basis recognizes the effects of assets from operations and the effects of liabilities and transactions, regardless of the status of cash, in the period

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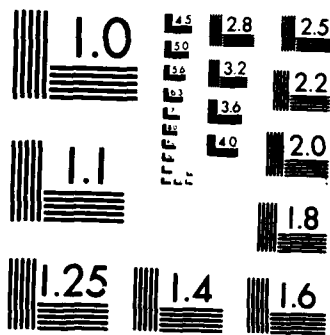
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Commercial accounting practices place emphasis on one critical facet that must be in place for accrual accounting to be successful: transactions must be de-coupled from cash transfer actions, i.e. posting of transactions must be initiated by something other than the transfer of cash. Otherwise, the transaction does not meet the definition of accrual accounting.

### 3. Streamlining Level of Detail with Function

One of the basic accounting principles which continues to receive emphasis in private sector accounting systems is the streamlining of the level of detail needed at different management levels. As information systems, accounting systems are designed to provide data useful to management within a specified function. If the accounting level of detail is inappropriate, management can receive too little or too much information. The accounting system therefore can become a burden on management.

The private sector makes clear distinctions in the level of accounting detail at the different levels of management. Budget analysts and financial managers in the private sector are not inundated with information on material receipts and issues. The accounting systems supporting their function provides only aggregated monetary values. Once funds have been budgeted and expended, budget analysts and financial managers lose sight of the funds except in broad terms such as "inventory".

Material is ordered and received at the part number level of detail; however, accounts payables and subsequent invoice payments for this same material are strictly at the dollar level of detail. No visibility exists, nor is it desired, of the individual receipts and storage in the General Ledger Accounting System. More detailed levels of detail are used where needed such as maintaining financial inventory accounting records at individual storage locations. As discussed later, it is these storage locations which perform the reconciliation process for the procurement cycle.

A credit card analogy is useful to further explain the issue at hand here. With a credit card, one can purchase many different items at any particular time without having to use cash. Invoice statements listing the dollar value totals of the purchase transactions made during period are later sent to the cardholder. Individual items purchased are not listed on these invoices, only cash register totals of each purchase transaction. The card holder doesn't go back through individual cash register receipts to ensure that each item purchased has been received; that verification was performed at the time of purchase. At most, the cardholder verifies the total dollar value of each purchase transaction on the invoice.

Like the credit cardholder, the disbursing agent in the private sector is not concerned with the details of each contract. A valid invoice based on a valid contract results in payment. The payment status of individual receipts

is not known because the reconciliation process is detached from the invoice payment process.

## C. CONCLUSIONS AND RECOMMENDATIONS

### 1. NSF Environment

The NSF environment has entered into a dynamic decade of change. Forces promoting change are being applied from all directions and the atmosphere is ripe for change. Recurring critical reviews of the NSF and its accounting system, such as the very recent NSF Architecture and this thesis, have been recurring for many years. These provide NSF managers with needed critical assessments and are leading to constructive improvement programs. The projects discussed in Chapter VI; Resolicitation, Resystemization, SPAR, SPLICE, and IDAFIPS; possess tremendous change potential and are themselves the result of past critical reviews. The advances of these and other systems will provide NSF managers the capability to correct deficiencies from the ground up. Chances are, that with the implementation of these and other ongoing projects, the NSF accounting system of the 2000's will little resemble the current system.

However, the pressure for movement and improvements in the NSF accounting environment will not subside with the change which is now on the horizon. The tightening Federal budget will continue to increase the demand for establishing and maintaining improved management controls at all levels of NSF accounting and reporting. Oversight, both Federal and

public will continue to intensify. All levels of the NSF organization will continue to support simplification efforts while technical advances will increasingly demanded to satisfy the need for timely, accurate and consistent information in support of this process. If the Navy is to be successful in directing this change in molding the NSF accounting system into a useful, intelligent tool, then we, the NSF managers, must revise our management roles and become expert change agents.

## 2. Use of Source Acceptance Contracts

The current policy of procuring wholesale inventory on source acceptance contracts is a basic causative factor in many of the weaknesses and problems discussed throughout this thesis. If material were destination accepted vice source accepted, the Navy would not legally own it and therefore would not need to account for it while in transit from contractor plants. The mere fact that material is source accepted places a heavy burden on the NSF accounting system. As discussed below, the NSF accounting system's inability to document the source acceptance transaction not only results in the violation of accrual accounting principles, but in the accumulation of MIT.

Following the example of the private sector, the NSF should eliminate source acceptance as the standard wholesale procurement contract and adopt destination acceptance policies. However, care must be taken to ensure that the



notification method between stock points, ICPs and disbursing activity is efficient, timely and accurate. Otherwise, it could lead to problems with meeting requirements of the Prompt Payment Act; these requirements being based on the timing between acceptance/receipt of material, the receipt of the contractors' invoice and subsequent payment. Delays in acceptance notification and the resultant delays in invoice payments could result in increased Navy interest penalty payments. Additionally, use of destination acceptance contracts would have the added benefit of placing increased pressure on the Navy's commercial sources for more accurate and timely shipments.

Use of the HUB concept would transfer the point of acceptance away from the source but would still fail to place it at destination. As presently proposed, it appears that the current form of MIT would simply be replaced by a new form. Material will still have to be transported from the HUB to the ultimate consignee while legally being accounted for by the NSF.<sup>1</sup>

### 3. Accrual Accounting

Title 31, U.S. Code 661 requires that Federal agencies account for resources, liabilities, and costs of

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1. It is also interesting to note that private sector firms currently operating under the HUB concept are investigating the possibilities of changing to a destination acceptance system. The reasons for this include lessening the handling of material to reduce risk of misplacement and to lowering safety levels by shortening procurement lead times.

operations on an accrual basis. Although designed to operate on an accrual basis, the NSF accounting system does not do so due to flaws in its reporting system. As discussed under the source acceptance category in Chapter IV, wholesale inventory assets are not recognized upon Navy acceptance of title as required under accrual accounting. Instead, these assets are recognized either upon payment of the contractor's invoice whereby they become MIT or upon TIR indicating receipt at the stock point. Therefore, the violation of accrual accounting concepts, while not intentional, was the forced outcome of an accounting system incapable of coping with current accounting demands. The solution to this issue, as discussed above, is either the elimination source acceptance as the standard wholesale procurement contract or the smart development and implementation of change in this area.

#### 4. Level of Detail

As discussed in Chapter V, the level of detail used in the NSF accounting system appears to be an underlying cause of weaknesses in the NSF accounting system. Greater attention must be paid to the level of detail within each of the accounting systems of the NSF as changes to the system are implemented over the next decade. The greatest level of detail belongs in the Financial Inventory Accounting System where detailed records of assets and their condition must be maintained. The least amount of detail belongs in the General Ledger Level Accounting System where its purpose is to

accumulate monetary information on the NSF necessary to provide required reports up the chain of command.

The current use of the funds accounting system to monitor MIT requires a greater level of detail than is consistent with the function and purpose of the system. The purpose of the NSF Fund Accounting System is to maintain an accurate status of NSF allocation and report progress in spending resources. As such, it serves as a budgetary information system and, like the credit card analogy, should not be monitoring individual receipt transactions as it is currently programmed.

While the reasoning behind monitoring MIT is essential under current NSF operating procedures, responsibility for monitoring MIT should be placed on the accounting system responsible for maintaining financial visibility of the NSF inventory levels; the NSF Financial Inventory Accounting System. Under CAB procedures, ICP's are accountable for wholesale material stored at TIR stock points and for inventory in-transit between stock points. It naturally follows that ICPs should account for the value of this material in their financial inventory accounting records.

Reconciliation of material receipts and invoice payments within the NSF has become an increasingly difficult challenge over the years. Ensuring that material purchased was actually received was a relatively simple matter prior to World War II when the material purchase, inspection, receipt, and payment

functions were all performed at local activities and material was generally stored in the warehouse by the time payment was made. However, the rapid expansion in Navy logistics requirements--caused by growth, mobility, and technology--resulted in the separation of the purchasing, inspecting, receiving, and disbursing functions. The accounting system therefore became increasingly more difficult and confusing while the ADP systems supporting it became the ends rather than the means. Saturated and inflexible, accounting policies were developed to fit the ADP systems. Hence, issues like MIT, contract source acceptance, and confused levels of detail and function resulted. The solution to the level of detail issue lies in the proper structuring of the NSF Accounting Systems along functional lines in consonance with the upcoming changes.

#### D. SUMMARY

Recent events such as media headlines and GAO reports precipitated this thesis which asks the question: Can the NSF accounting system benefit from private sector accounting policies? After investigating and discussing the basic background needed for further review, a detailed review of the accounting system(s) used by the NSF to procure wholesale inventory from private sources was conducted.

Based on this review and subsequent analysis, major weaknesses in the NSF accounting system were identified and discussed. A review of the NSF environment was also conducted

In order to identify its potential feasibilities and constraints. In light of these constraints and feasibilities, several major firms in the private sector were contacted and a review of their accounting policies and practices in these areas of identified NSF weaknesses was conducted.

Based on the experience of these key private sector firms, it is the conclusion of the author that the NSF must go back to basics as it moves into a decade of major change. NSF managers must become change agents and clearly define the functions to be supported by accounting systems. The accounting levels of detail assigned to each system must be commensurate with function and objective.

In light of the decade of change facing the NSF, failure to properly address and resolve these issues could result in a "new system" with old problems which can be the most serious task to face Navy accounting in the future along with continued potential to cause severe embarrassment to Navy management.

APPENDIX A  
LIST OF ACRONYMS

AAA - Authorization Accounting Activity  
APA - Appropriation Purchase Account  
ASO - Aviation Supply Office  
AUTODIN - Automatic Digital Network  
BP - Budget Project  
CAB - Centralized Accounting and Billing  
CERPS - Centralized Expenditure and Reimbursement Processing System  
CLIN - Contract Line Item Number  
COG - Cognizance Symbol  
CPN - Contract Payment Notification  
DBMS - Data Base Management System  
DCAS - Defense Contract Administration Service  
DCASR - Defense Contract Administration Service Regions  
DLA - Defense Logistics Agency  
DLR - Depot Level Repairable  
DOCID - Document Identification  
DOD - Department of Defense  
FAADC - Fleet Accounting and Disbursing Center  
FICL - Financial Inventory Control Ledger  
FIPC - Financial Information Processing Center  
FIR - Financial Inventory Report

FMSO - Navy Fleet Material Support Office  
GAAP - Generally Accepted Accounting Procedures  
GAO - Government Accounting Office  
GSA - General Services Agency  
ICP - Inventory Control Point  
IDAFIPS - Integrated Disbursing and Accounting and Financial  
Information Processing System  
IDAFMS - Integrated Disbursing and Accounting Financial  
Management System  
IDAFRS - Integrated Disbursing and Accounting Financial  
Reporting System  
IM - Inventory Manager  
MCC - Material Control Code  
MDF - Master Data File  
MIT - Material-in-Transit  
MSIR - Master Stock Item Record  
NAFC - Navy Accounting and Finance Center  
NAVCOMPT - Comptroller of the Navy  
NAVRESSO - Navy Retail Sales Office  
NAVSUP - Naval Supply Systems Command  
NFC - Navy Finance Center  
NPFC - Navy Publications and Forms Center  
NRFC - Navy Regional Financial Center  
NSA - Navy Stock Account  
NSC - Navy Supply Center  
NSD - Navy Supply Depot

NSF - Navy Stock Fund

OMB - Office of Management and Budget

OSD - Office of the Secretary of Defense

OSF - Obligation Status File

PIIN - Procurement Instrument Identification Number

PMRC - Preposition Material Receipt Card

PV - Public Voucher

SAC - Special Accounting Classification

SIT - Stock in Transit

SPAR - Stock Point ADP Replacement Program

SPCC - Navy Ships Parts Control Center

SPLICE - Stock Point Logistic Integrated Communications  
Environment Project

TIR - Transaction Item Reporting

UADPS-SP - Uniform Automated Data Processing System for Stock  
Points

UCA - Uniform Chart of Accounts

UICP - Uniform Inventory Control Program



APPENDIX B

FIR CAPTIONS - RECEIPT SIDE

<u>A CAPTIONS</u>	<u>RECEIPTS FROM PROCUREMENT</u>
A1	COMMERCIAL SOURCES
A2	COMMERCIAL SOURCES--RETURNS
A3	GOVERNMENT SOURCES
A4	GOVERNMENT SOURCES--RETURNS
A8	UNMATCHED ABSTRACT AND IR ADJUSTMENTS
<u>B CAPTIONS</u>	<u>RECEIPTS WITHOUT REIMBURSEMENT</u>
B1	RETURNS FROM USERS
B2	INTRA-SERVICE RETURNS
B3	DLR EXCHANGE
B4	CAPITALIZATIONS
<u>C CAPTION</u>	<u>PROPERTY DISPOSAL</u>
C1	FROM PROPERTY DISPOSAL
<u>D CAPTIONS</u>	<u>GAINS BY INVENTORY ADJUSTMENT</u>
D3	RECLASSIFICATIONS
D4	PHYSICAL INVENTORY
D5	INCOMING SHIPMENT
D6	DLR EXCHANGE
D7	RETURNS FROM COG 1Q
D8	FROM NON-APPROPRIATED FUND ACTIVITIES
D9	ICP FILE ADJUSTMENTS
<u>E CAPTIONS</u>	<u>GAINS BY FINANCIAL ADJUSTMENT</u>
E1	PURCHASE VARIANCE
E2	STANDARD PRICE VARIANCE
E3	DISCOUNT ON MATERIAL RETURNS
E4	ACCOUNTING ADJUSTMENTS
E5	ASSEMBLY/DISASSEMBLY
E8	DLR EXCHANGE--RETURNS
E9	DLR EXCHANGE--NON-RETURNS
<u>F CAPTIONS</u>	<u>TRANSFERS FROM OTHER SUPPLY OFFICERS</u>
F1	STOCK TRANSFERS CAB
F4	STOCK TRANSFERS
F5	OTHER TRANSFERS
<u>H CAPTION</u>	<u>OPENING INVENTORY</u>
H1	OPENING INVENTORY

FIR - EXPENDITURE SIDE

<u>J CAPTIONS</u>	<u>ISSUES FROM PROCUREMENT</u>
J1	SERVICE USE
J2	RETURNS FROM SERVICE USE
J3	OTHER DOD (INTERFUND)
J4	RETURNS FROM OTHER THAN SERVICE USE
J5	SALES TO FOREIGN GOVERNMENTS
J7	CASH SALES
J8	CASH SALES RETURNS
J9	CASH SALES FOREIGN GOVERNMENT
<u>K CAPTIONS</u>	<u>ISSUES WITHOUT REIMBURSEMENTS</u>
K1	SERVICE USE (APA)
K2	SERVICE USE RETURN
K3	COGNIZANCE TRANSFER
K5	DECAPITALIZATION
K7	MATERIAL RETURNS IM
K8	OTHER RETURNS
<u>L CAPTION</u>	<u>PROPERTY DISPOSAL</u>
L1	TRANSFERS TO PROPERTY DISPOSAL
<u>M CAPTIONS</u>	<u>LOSSES BY INVENTORY ADJUSTMENT</u>
M3	RECLASSIFICATION
M4	PHYSICAL INVENTORY
M5	INCOMING SHIPMENT LOSS
M6	SHRINKAGE, THEFT, ETC.
M7	MAJOR DIASTER LOSSES
M8	DLR EXCHANGE
M9	ICP ADJUSTMENT
MA	TRANSFERS TO COG 1Q
MB	TRANSFER TO NON-APPROPRIATED FUND
<u>N CAPTIONS</u>	<u>LOSSES BY FINANCIAL ADJUSTMENT</u>
N1	PURCHASE VARIANCE
N2	STANDARD PRICE ADJUSTMENT
N3	DISCOUNT ON MATERIAL RETURNS
N4	ACCOUNTING ADJUSTMENTS
N5	ASSEMBLY/DISASSEMBLY
N6	FMS PRICE REDUCTION
N8	DLR EXCHANGE
<u>P CAPTIONS</u>	<u>TRANSFERS TO OTHER SUPPLY OFFICERS</u>
P1	STOCK TRANSFERS CAB
P4	STOCK TRANSFERS
P5	OTHER TRANSFERS
<u>R CAPTION</u>	<u>CLOSING INVENTORY</u>
R1	CLOSING INVENTORY

APPENDIX C

GENERAL LEDGER LEVEL CHART OF ACCOUNTS

ASSETS

Acct #	Account Title
100	Cash Available for Disbursement
115	Accounts Receivable--U.S. Government Agencies
119	Accounts Receivable--Other
130	Inventories--Stock on Hand
131	Inventories With Contractors and Testing Agencies
132	Inventories in Process of Assembly/Disassembly
135	Inventories Temporarily in Use
136	Inventories With Agents
140	Inventories in Transit--From Procurement
141	Inventories in Transit--Between Storage Points (Stock)
142	Inventories in Transit From Customers
143	Inventories in Transit--Between Storage Points (Direct Turnover)
144	Inventory Suspense Account
150	Progress Payments to Contractors
160	Undistributed Disbursements

LIABILITIES

200	Accounts Payable--U.S. Government Agencies
201	Accounts Payable--Other
230	Undistributed Collections
250	Reserve for Equity of Others (Supply Support Arrangements)
264	Ships' Stores Profits Transferable
269	Advances for Unbilled Stock Fund Sales

CAPITAL

300	Direct Appropriations
304	Cash Transfers to U.S. Treasury
305	Cash Transfers to Appropriations
306	Cash Transfers from Appropriations
320	Capitalized Inventories
323	Inventories Decapitalized
340	Other Assets Capitalized/Decapitalized
345	Other Liabilities Capitalized/Decapitalized
350	Operating Results

INCOME

Acct #	Account Title
400	Reimbursement Issues (Gross)
420	Surcharge for Inventory Losses
421	Surcharge for Transportation
422	Purchase Price Variance--Gain
425	Credit Allowed on Material Returns
430	Discounts Earned on Purchases
431	Authorized Discounts Lost on Purchases
435	Discounts on Material Returns--Gain
440	Recoveries for Retail Stock Losses
445	Material Return Credits Received
451	Assembly/Disassembly
452	Standard Price Changes--Gain
453	Physical Inventory Adjustments--Gain
454	Accounting Adjustments--Gain
455	Condition/Category Transfers--In
460	Receipt of Material Returns Without Credit
463	Proceeds From Disposal of Excess Material
470	Receipts of Material Without Charge
473	Incoming Shipments--Gain

EXPENSE

500	Purchase at Cost
505	Cost of Sales at Standard Price
510	Purchases at Standard Price
515	Price Variance Distribution Account
516	Purchase Price Variance--Loss
518	Accounting Adjustments--Loss
519	Physical Inventory Adjustments--Loss
520	Standard Price Changes--Loss
521	Condition/Category Transfer--out
522	Assembly/Disassembly--Loss
525	Price Reductions
526	Discounts on Material Returns--Loss
530	Transfers to Property Disposal
531	Discounts Lost on Purchases
535	Material Returns for Credit
540	Transportation Expense
550	Repair Expense
555	Material Return Credits Applied
560	Inventory Loss Due to Shrinkage, Theft, Contamination, and Deterioration
563	Inventory Loss Due to Major Disasters
570	Issues Without Reimbursements
575	Material Returns Without Credit
580	Allowances for Retail Stock Losses
583	Incoming Shipments--Loss
590	Other Expense

APPENDIX D

FIR-TO-GENERAL LEDGER LEVEL  
CHART OF ACCOUNTS CONVERSION

<u>ACCT #</u>	<u>CREDITS</u>	<u>FIR CODES</u>
130	Inventories--Stock on Hand	Total Expenditures
136	Inventories with Agents	D8
141	Inventories in Transit Between Storage Points	F4
142	Inventories in Transit From Customers	E8,E9,D6
143	Inventories in Transit Between Storage Points--Other	F5
144	Inventory Suspense Account	
265	Audit Suspense	GX
320	Capitalized Inventories	B4
400	Reimbursable Issues--Gross	J1,J3,J5,J7,JA,JB
425	Credit Allowed on Material Returns	J2,J4,JB (As debits)
435	Discounts on Material Returns--Gain	E3
451	Assembly/Disassembly--Gain	E5
452	Standard Price Changes--Gain	E2
453	Physical Inventory Adjustments--Gain	D4
454	Accounting Adjustments--Gain	E4,E7,N8
460	Material Returns Without Credit	B1 + B3 + B6
470	Receipts of Material Without Charge	B2
473	Incoming Shipments--Gain	D5
510	Purchase at Standard	A1,A2,A3,A8,E1, (N1 credits)
518	Accounting Adjustments--Loss	E9
530	Transfer to Property Disposal	C1
455	Condition/Category Transfer--In	D3,D7

FIR-TO-GENERAL LEDGER LEVEL  
CHART OF ACCOUNTS CONVERSION

<u>ACCT #</u>	<u>DEBITS</u>	<u>FIR CODES</u>
115	Accounts Receivable	All J Series
130	Inventories--Stock on Hand	Total Receipts
136	Inventories with Agents	MB
141A	Inventories in Transit Between Storage Points	P4
142	Inventories in Transit from Customers	N8
143	Inventories in Transit Between Storage Points--Other	P5
144	Inventory Suspense Accounts	QX
323	Inventories Decapitalized	K5
454	Accounting Adjustments--Loss	E9
505	Sales at Standard Price	J1, J3, J5, J7, J9, JA, JB
518	Accounting Adjustment--Loss	N4, N6, N8, N9
519	Physical Inventory Adjustments--Loss	M4
520	Standard Price Changes--Loss	N2
521	Condition/Category Transfers	M3, MA
522	Assembly/Disassembly--Loss	N5
530	Transfers to Property Disposal	L1
535	Material Returns for Credit	A4 (as debits)
555	Material Return Credits Applied	J2, J4, J8, JC (As debits)
560	Inventory Loss Due to Shrinkage, Etc.	M6
563	Inventory Loss Due to Major Disasters	M7
570	Issues without Reimbursement	K3, K8
575	Material Returns without Credit	K7
583	Incoming Shipments--Loss	M5, M8, MC

APPENDIX E

SUMMARY OF NSF ACCOUNTING ENTRIES

SOURCE ACCEPTANCE CONTRACTS

Fund Accounting

1:	100		AUTHORIZATIONS RECEIVED
		300	UNCOMMITTED AUTHORIZATION
2:	300		UNCOMMITTED AUTHORIZATION
		400	COMMITMENTS
3:	400		COMMITMENTS
		500	OBLIGATIONS
6S:	500		OBLIGATIONS
		600	CASH DISBURSEMENTS
		520	PREPAID STOCK FUND MATERIAL
		530	STOCK FUND MATERIAL IN TRANSIT
7S:	530		STOCK FUND MATERIAL IN TRANSIT
		520	PREPAID STOCK FUND MATERIAL

Financial Inventory Accounting

7S:	A1:	RECEIPTS FROM PROCUREMENT--COMMERCIAL SOURCES
	R1:	CLOSING INVENTORY

General Ledger Level

0:	100		CASH AVAILABLE FOR DISBURSEMENT
		300	DIRECT APPROPRIATIONS
6S:	140		INVENTORIES IN TRANSIT--FROM PROCUREMENT
		500	PURCHASES AT COST
		160	UNDISTRIBUTED DISBURSEMENTS
		100	CASH AVAILABLE FOR DISBURSEMENT
		500	PURCHASES AT COST
		160	UNDISTRIBUTED DISBURSEMENTS
7S:	130		INVENTORIES--STOCK ON HAND
		140	INVENTORIES IN TRANSIT--FROM PROCUREMENT

SUMMARY OF NSF ACCOUNTING ENTRIES  
DESTINATION ACCEPTANCE CONTRACTS

Fund Accounting

1:	100		AUTHORIZATIONS RECEIVED
		300	UNCOMMITTED AUTHORIZATION
2:	300		UNCOMMITTED AUTHORIZATION
		400	COMMITMENTS
3:	400		COMMITMENTS
		500	OBLIGATIONS
5D/6D:	500		OBLIGATIONS
		510	ACCOUNTS PAYABLE
7D:	510		ACCOUNTS PAYABLE
		600	CASH DISBURSEMENTS

Financial Inventory Accounting

6: A1: RECEIPTS FROM PROCUREMENT--COMMERCIAL SOURCES  
R1: CLOSING INVENTORY

General Ledger Accounting

0:	100		CASH AVAILABLE FOR DISBURSEMENT
		300	DIRECT APPROPRIATIONS
5D/6D:	130		INVENTORIES--STOCK ON HAND
		510	PURCHASES AT STANDARD PRICE
	500		PURCHASES AT COST
		201	ACCOUNTS PAYABLE
7D:	201		ACCOUNTS PAYABLE
		500	PURCHASES AT COST
	160		UNDISTRIBUTED DISBURSEMENTS
		100	CASH AVAILABLE FOR DISBURSEMENT
	510		PURCHASES AT STANDARD PRICE
		160	UNDISTRIBUTED DISBURSEMENTS



APPENDIX F

SUMMARY OF THE NSF ACCOUNTING SYSTEM LEVEL OF DETAIL

<u>Item</u>	<u>Level of Detail</u>
Fund Accounting System	Dollar by BP
Financial Inventory Accounting System	NIIN Sub-CLIN
General Ledger Level Accounting System	Dollar by Appropriation
OSF	Contract
DDF	Contract CLIN Sub-CLIN NIIN
CSF	Contract CLIN NIIN
PMRC	Sub-CLIN
Receipt Document (DD250)	Sub-CLIN
Y1/Y2 Notification	Contract
CPN	CLIN
TIR	NIIN Sub-CLIN
MIT	Dollar Value

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