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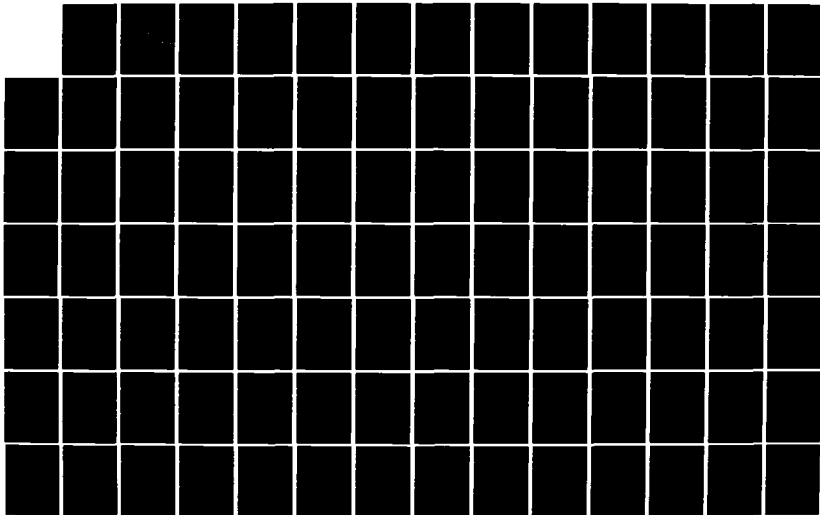
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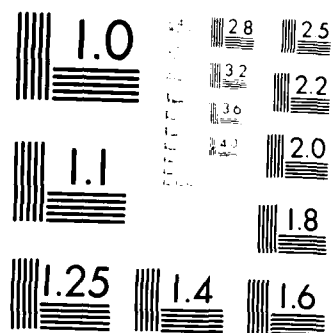
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AN ANALYSIS OF INTERNAL CONTROLS FOR
MATERIAL MANAGEMENT OPERATIONS WITHIN
NAVY MEDICAL COMMAND ACTIVITIES

by

Ronald L. Adams

and

Theodore E. Warywoda

December 1984

Thesis Advisors: D. Whipple, S. Ansari, R. Harris

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An Analysis of Internal Controls for
Material Management Operations within
Navy Medical Command Activities

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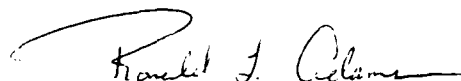
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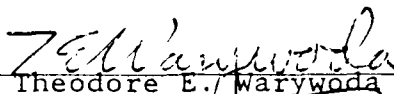
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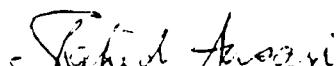


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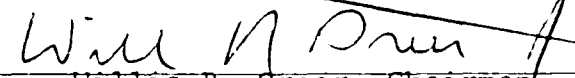
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ABSTRACT

The requirement for strong internal controls to eliminate waste, fraud, abuse, and mismanagement in the Federal Government has been mandated by law and Presidential policy. However, there are events which indicate that there may be important weaknesses in the internal controls for medical supply operations within Navy Medical Command activities. This thesis describes a research effort which evaluates the control system to determine if there are areas in which stronger controls could result in improved effectiveness, efficiency and economy of operations within medical material management operations. The major approach is an analysis of the existing control systems as compared to a "good" control system which is based on management control literature. The conclusions and recommendations reached on the basis of research and analysis are provided.

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I. INTRODUCTION

A BACKGROUND AND PURPOSE

The composite events described below illustrate some of the weaknesses of internal control for medical material management. They are derived from a variety of discussions with involved personnel, and from personal experience of the authors.

1. An overseas activity underwent a Regional Procurement Office audit. The findings from that audit included the discovery of numerous inappropriate acts which may have resulted in fraud. The officer involved was issued a formal letter of reprimand. However, on his first screen he was selected for promotion. The fact that his audited performance and the subsequent letter were not detrimental to his promotion may be attributed to a recognition that the officer had no specific education, training or experience in material management prior to his assignment as Supply Officer.
2. At another activity the Supply Officer refused to stock open purchase items in inventory based on the fact as stated by him that the Navy Supply System and the local Naval Supply Depot (NSD) did not allow it. Due to constrained funds, attributed to the quarterly allocation process, the operating departments of this facility were not able to procure and hold an adequate volume of material to meet the needs of the health care providers. As a result, the Pharmacy and Supply were both routinely out of critical, one of a kind drugs for which there was no local source of

supply. At the same time there were adequate inventories of cough syrups, aspirins and other similar over-the-counter drugs. These could be purchased by the patient at the Navy Exchange if the items were not available through the hospital. The Materials Management Division at this facility was classified by fellow health care providers as ineffective. However, the Supply Officer was the "local expert" and was able to justify his actions to his Director of Administrative Services (DAS) and Commanding Officer (CO). Neither the DAS nor the CO had any experience in Medical Materials Management and only limited knowledge of the Navy Supply System. The problems of ineffectiveness and inefficiency encountered by the health care providers was not reflected in the Supply Officer's Fitness Report. He too was selected for promotion on his first screen.

3. At a major CONUS activity employees stood on the back loading dock of the Supply Division and discussed "how screwed up" the place was. They were frustrated that they were experiencing major disruptions in their operations. An inventory had not been taken for a number of years. During a recent inventory there was an inventory loss of approximately \$250,000. This loss was attributed to Data processing errors which occurred over time but never resolved. An internal audit had been mandated. There had been an obvious lack of control and of management attention which had resulted in the inventory loss. The Supply Officer who had been in charge for most of those years was selected for early promotion. Again, the officer's Fitness Report did not reflect any awareness of these problems by either the Commanding Officer or the Director of Administrative Services.

C. CONTROLS AND THE MANAGER

The elements of a good control system have been discussed but the basis for a successful control system is the manager. Anthony stated that "the success or failure of the management control process depends on the personal characteristics of the manager-his judgement, his knowledge, his ability to influence others" [Ref. 21:p. 11]. The Association of Government Accountants (ACA) Task Force classified "competent personnel" as a control technique, in that, "personnel should be competent, by education, training, and, experience to execute the control responsibility to which they are assigned." Unless personnel are technically qualified to execute the responsibilities of the positions they hold, agency heads cannot expect the effective execution of control policies, procedures and practices [Ref. 19:p 11]. The GAO established standards for internal control which define the minimum level for acceptable quality of control systems. They listed as their third general standard:

Competent Personnel: Managers and employees are to have personal and professional integrity and are to maintain a level of competence that allow them to accomplish their assigned duties, as well as understand the importance of developing and implementing good internal controls [Ref. 2:p 2].

A manager is the key to a successful/effective control system. Therefore, in the opinion of the authors, the evaluation of a control system should begin with the manager. Does he/she have a deficiency in education, training, experience or a combination there of which impacts adversely on the effectiveness of the control system? In reviewing the literature on control problems and/or symptoms of problems it was found that the lack of or inadequacy of training and experience of managers was cited as a control problem/weakness.

strategies which would impact programming, a change in the operating and measurement phase, or a continuation of the status quo. It is for these reasons that the system is shown in figure 2.1 as a continuous, closed loop, interactive phase with one system leading to another [Ref. 18:pp. 18-10].

There are two factors which the authors consider critical to a control system. They are goal congruence and linkage. A control system should be designed so that actions people take in their self-interest are also in the best interest of the organization. This requires recognition of the fact that individuals act in their own interest and their individual goals are not necessarily those of the organizations [Ref. 18:pp. 41-42]. It has been repeatedly emphasized, in the development of control systems, that controls need to be linked to objectives in that the controls are established which provide reasonable assurance that the objectives of the control system will be accomplished [Ref. 2:p. 2], [Ref. 19:pp. 8-9]. An area that requires special emphasis is the linkage between desired versus rewarded performance. A manager must evaluate the performance measurement/reward system to insure that rewarded behavior is the desired behavior and that the desired behavior is rewarded and not punished [Ref. 20:p. 31].

There are two final points to be made about control systems. First, they should be cost beneficial, in that the benefits should be greater than the costs. And second, the emphasis is not for more control but for better controls. However the overall success of a control system is dependent on the manager. [Ref. 7:p.16]

served, methods of distribution, change in any of these, etc [Ref. 18:p. 10].

2. Budgeting Planning

Budgeting is a plan expressed in qualitative, usually monetary, terms that covers a specified period of time, usually one year. The budgeting process translates programs into areas of responsibility relative to managers who are responsible for execution of the program or a part of it [Ref. 18:p. 20]. The budget is defined as a financial plan. For purposes of this thesis, planning will be utilized in lieu of budgeting as all planning, as indicated above, is not monetarily based.

3. Operating and Measurement

Once a plan is set and operations are in effect data and information regarding the operations and resource utilization is recorded. The records are classified by programs and responsibility centers and are used as a basis to measure the performance of managers. The measurement is based on data which allows comparison (variance analysis) of actual performance to planned performance.

4. Reporting and Analysis

Reporting is the communication of information based on data collected on internal operations and data about the environment of the organization. The information allows managers to coordinate the efforts of various responsibility centers. The information provides a basis for analyzing actual performance to planned performance. The analysis attempts to explain variance and provides management with a tool for decision making, in that what actions, if any, to take. Actions could include; altering the plan which results in a new planning process, a change in the overall

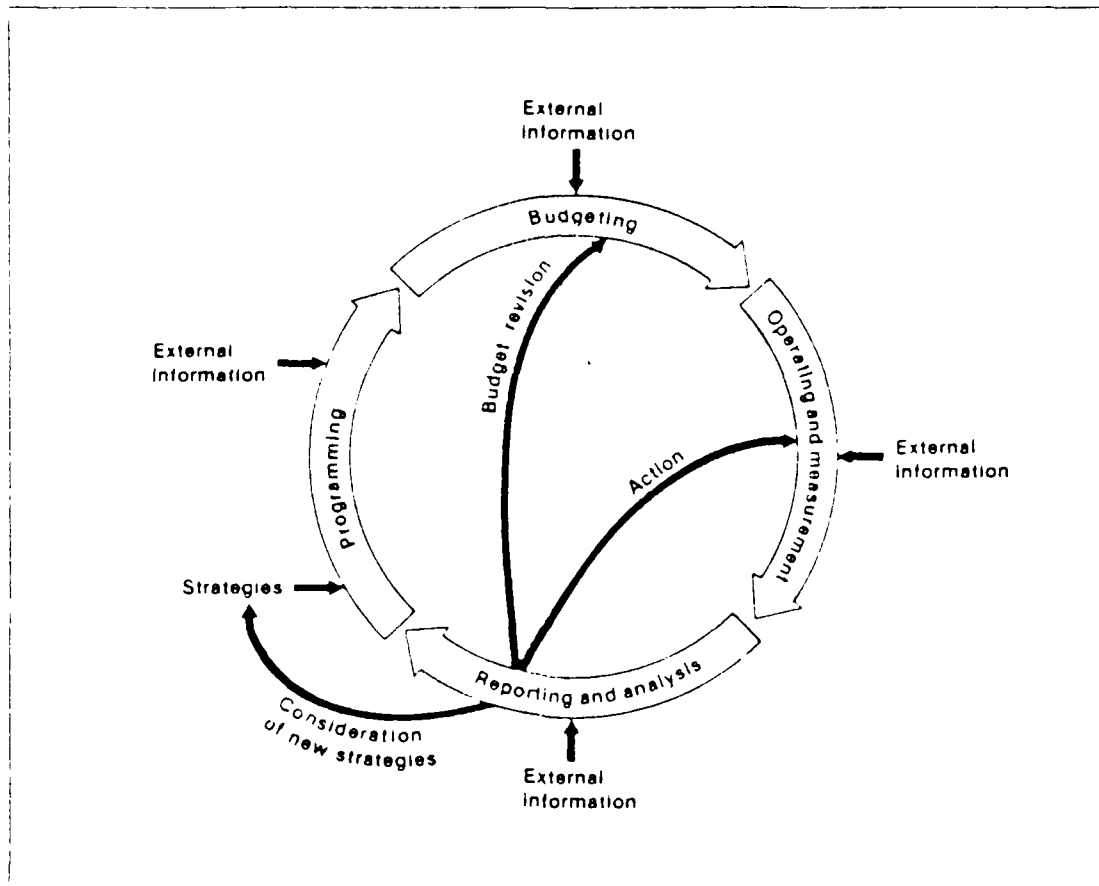


Figure 2.1 Control Loop.

undertaken by the organization and the quantity of resources to be devoted to each program. Programs represent the principal activities of the organization and are based on the objectives and strategies of the organization which are developed in the strategic planning process [Ref. 18:p. 20]. Strategic planning involves the process of deciding the long range plans and goals of an organization and the mix and employment of resources which affect the physical, financial and organizational structure of the organization. It is based on an assessment of the environment and includes such factors as source of product to provide, the market to be

"A control system is a system whose purpose is to allow and maintain a designed state or condition" and is comprised of four elements: (1) A detector or sensor which is a measuring device to detect what is happening in the parameter being controlled; (2) A selector device for assessing the significance of what is happening by comparing information on what is actually happening to some standard or expectation of what should be happening; (3) An effector device for altering behavior if the need for doing so is indicated; and (4) A communications network to transmit information between the detector, selector, and the effector [Ref. 18:pp. 3-4]. The basis of a control system is derived from the management process of planning in which management decides what the organization should be doing, and the control system provides for comparison of actual accomplishments with the plans. Anthony and Dearden have identified six functions of a control system:

1. Planning what the organization should do.
2. Coordinating the activities of the several parts.
3. Communicating information.
4. Evaluating information and deciding what, if any, action should be taken.
5. Influencing people to change their behavior, and
6. Processing information that is used in other functions [Ref. 18:p. 7].

Based on these six functions they developed a management control system which consists of four phases; (1) Programming, (2) Budgeting, (3) Operating and measurement, and (4) Reporting and analysis [Ref. 18:p. 19]. Figure 2.1 depicts the structure of the different phases.

1. Programming

Programming is the initial phase of the control cycle and is the process of deciding what programs will be

There seems to be considerable conflict and confusion regarding internal control within the military. [Ref. 8,9,10,11,12] Perhaps this is in part attributed to the lack of a clear definition of internal control or perhaps it is because the approach has made it seem more complicated than it is. This is not to say that control is simple. On the contrary, Merchant points out that control is "a relatively poorly understood part of the management function", even though there have been volumes of articles and books written on the subject. [Ref. 13:p. 1] Based on the review of some of the literature, the elements of a good control system are discussed.

B. A CONTROL SYSTEM

There are two basic approaches to or views of control systems, structural (informational) and behavioral (social). [Ref. 14:p. 101] [Ref. 15:p. 840] Merchant argues in favor of the behavioral approach on the basis that "control involves managers taking steps to help assure that human beings do what is best for the organization". [Ref. 13:p. 6] His approach is supported by Lawler and Rhode, [Ref. 16:p. 6], and by Euske who states that "possibly the most important aspect of management control is that it is concerned with people in organizations" [Ref. 17:p. 2]. However, Ansari argues in favor of an integrated approach which includes both a structural and behavioral view. [Ref. 18,14] The point is that managers need to recognize that there are two views for designing and evaluating control systems. Managers must decide the form of control to be emphasized and the potential impact of information on social behavior, and the corresponding impact of social behavior on information flow.

A similar definition is given by GAO [Ref. 2:p. 1], the Department of Defense [Ref. 3:encl. 1], the Secretary of the Navy (SECNAV) [Ref. 4:pp. 1-5], and the Navy Medical Command (NAVMEDCOM) [Ref. 5:p. 3].

The AICPA defined internal control as being comprised of administrative control and accounting control which are further defined as:

1. Administrative control includes, but is not limited to the plan of organization and the procedures and records that are concerned with the decision process leading to management's authorization of transactions. Such an authorization is a management function directly associated with the responsibility of the organization and is the starting point for establishing accounting control of transactions.
2. Accounting control comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records and consequently is designed to provide reasonable assurance that:
 - a) Transactions are executed in accordance with management's general or specific authorization.
 - b) Transactions are recorded as necessary to permit preparations of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements and to maintain accountability for assets.
 - c) Access to assets is permitted only in accordance with management's authorization.
 - d) The recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. [Ref. 6]

Internal control is more generally defined as all the methods by which an organization governs its activities to accomplish its defined purpose. It includes many types of controls ; accounting controls, administrative controls, management controls, program controls, and budget controls. These are classified as subsets of an organization's overall internal control system [Ref. 7: p. 13].

II. INTERNAL CONTROL SYSTEMS

The need for the evaluation of the control system for supply operations within the Navy Medical Command was identified in Chapter I. This chapter provides a definition of internal control based on the definitions given by the Office of Management and Budget (OMB), the General Accounting Office (GAO), the American Institute of Certified Public Accountants (AICPA), the Navy Medical Command and other agencies. The elements of a "good" control system are outlined. It is this control system against which the existing control system for the supply operations will be compared. The role of the manager and the requirements for competency by education, training, and experience are discussed. The chapter concludes with a brief list of control problems and symptoms of problems which will be utilized in evaluating the existing control system.

A. INTERNAL CONTROL DEFINED

There has been considerable discussion about internal control and the need for a review of the control system for supply operations within the Navy Medical Command. Internal control has been defined by OMB as:

The plan of organization and methods and procedures adopted by management to provide reasonable assurance that obligations and costs are in compliance with applicable law; funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets [Ref. 1, p. 2].

The supply instructor for the "Financial and Supply Management Training Course" (FSMTC) at the Naval School of Health Sciences was interviewed and we also reviewed the curriculum for the (FSMTC) course.

We visited the Navy Medical Command (NAVMEDCOM) where we interviewed Commander Don Eversman, Head of Navy Materials Management and obtained a listing of requirements by education, training, and experience for the various Material Management Billets at Naval Hospitals.

C. CHAPTER SYNOPSIS

Chapter II provides a definition of internal control, a discussion of the elements of a "good" control system, a discussion of a manager as the key to effective control and a list of control problems and symptoms of problems. Chapter III provides a review of the legislative and executive mandates for internal control. It also provides a review of the reported waste, fraud and abuse within the Federal Government which resulted in increased emphasis on internal controls in the late 1970s. Chapter IV presents the methodology and findings of our research on the control system used in medical supply operations within the Navy Medical Command. Chapter V provides an evaluation of the results present in Chapter IV and compares it with the elements of a control system and the role of a manager in a control system as outlined in Chapter II. Chapter VI contains the conclusions and recommendations we reached on the basis of the research and analysis contained in Chapters IV and V.

percent or less will have up to date local instructions.

13. Do Supply Officers have desk guides with standard operating procedures? We believe ten percent or less will have up to date desk guides.
14. Do Supply Officers receive the level of computerized information processing support that they need? We feel that the Supply Officer need a much higher level of automatic information processing support than they are presently receiving.

B. APPROACH

The authors reviewed relevant literature on management control systems and internal control. A study and review of executive and legislative actions regarding internal control was also completed. A comprehensive questionnaire was developed, (See Appendix A), based on the literature. The responses to the questionnaire were tabulated and analyzed with emphasis on commonalties and differences among the Medical Material Managers and their operations.

As a basis for developing an understanding of Supply Operations and impact of the environment on thesis research the authors examined three medical facilities; a major graduate Medical Education (GME) hospital, A geographic command operated Supply Service, and a medium sized (operating bed capacity) hospital. A review was conducted of organization manuals, organizations as they existed, environments of the facilities, position descriptions and performance standards for employees, instructions, desk guides, management information services, and reports (both required and locally utilized). During these visits interviews were conducted with both officers and employees and the questionnaire was reviewed with the Supply Officer.

efficiently achieve the goals and objectives of the Head, Material Management Service? It is felt that the training is inadequate.

5. Are goals and objectives clearly stated and defined? We believe the goals and objectives are very vague or non-existent.
6. What is the initial level of experience in military material management for personnel being assigned as Head, Material Management? We feel the level will be zero for 90 percent of the Medical Service Corps (MSC) Supply Officers.
7. Are there standards of performance for Supply Officers? We believe the data will show there are no standards to objectively evaluate MSC Supply Officers.
8. Are there prescribed standards for effectiveness and efficiency? We believe that there are no standards.
9. Are there variances of inputs/outputs among the Medical Material Management Services? We believe the data will show wide variances in inputs and outputs.
10. Is there a standardized reporting system for Supply Operations which follows the Chain of Command within Navy Medical Command? The authors feel the reporting system is not standardized and that the reports that are submitted do not go through the Navy Medical Command chain of command.
11. Do the Commanding Officers and Directors of Administrative Services have background or knowledge of supply operations? We believe the level of knowledge of supply operations for Commanding Officers and Directors of Administrative Services will be perceived by the Supply Officers to be low.
12. Do Supply Officers have up to date local instructions which govern their operation? We feel that ten

computer play in these areas? Do the Supply Officers need computerized information processing support, and do they get the level of support that they need? All of these questions are related to the need for control and a control system-an effective control system.

The purposes of this research project are to define internal control; identify the elements of a "good" control system; review the laws and regulations which govern control; evaluate the control system for material management operations within the Navy Medical Command to determine if there is a need for stronger internal controls; to determine if increased effectiveness and efficiency can be achieved through stronger controls; to evaluate the competency of the Supply Officers based on their education, training, and experience; and to recommend changes to achieve increased effectiveness, efficiency and economy of operations either through improved control and/or by increasing the competency of the Supply Officer through education, training, and experience.

Specific questions and hypothesis for this research project are as follows:

1. Do the environments in which the Supply Officers function vary? We believe they do.
2. Are there major differences in the functions performed, and the duties and responsibilities of the Supply Officers? We believe there are no major differences
3. What is the level and area of education of the Supply Officer? We believe that twenty-five percent or less will have a masters degree, and no Supply Officer will have a degree in Logistics or Materials Management.
4. Does the existing training prepare the Medical Service Corps Supply Officer to effectively and

five of the letter ratings reduced. Behind closed doors he was told that he was not a team player because he would not procure material open purchase when the same item or an equal was available standard stock, and because he would not violate regulations concerning the purchase of computer equipment without first obtaining the necessary authorizations and approvals. The officer carries the constant concern that he might not be promoted at all because of the great emphasis placed on fitness reports and the fact that the Navy Medical Command does not have a mechanism for monitoring the performance relative to effectiveness and efficiency of its Supply Officers.

There are numerous questions raised by these events. Are our Supply Officers qualified by education, training, and experience to perform the duties and responsibilities of a material manager? What level of education, training, and experience do our Supply Officers have? What should they have? How effective is the control system? Could it be better? What are the elements of a good control system? How does the existing control system compare to a "good" one? How does the Supply Officer fit into the control system? What does the Commanding Officer and/or Director of Administrative Services use as a standard(s) for the Supply Officer's Fitness Report? Also, considering the emphasis placed on internal control during the past four years, what are the mandates for internal control?

The events described also identify problems of ineffectiveness and inefficiency. These two words are constantly tossed around as though every person knows exactly what is meant by them. But, what is effectiveness and efficiency? What is an effective and efficient supply operation? Where in Navy Instructions or Manuals is this defined? How do we determine effectiveness and efficiency? What role does the

4. Although another Supply Officer was being solicited by the regional procurement office to increase his purchase authority, he would not do so because it would increase the workload but would not result in an upgrade for his civilian employees. The impact of this was significant as his personnel processed purchase orders in 30 days or less compared to an average of 90 days or more for the local Naval Supply Center (NSC) to process orders. As a result of his actions his customers had to buy larger inventories than otherwise necessary. This not only increased inventory control problems but also caused the obligations of funds at an unnecessary rate.
5. A Supply Officer received top fitness reports over a two year period on the basis of a complete reorganization of the supply service which he initiated to improve effectiveness and efficiency. Subsequently purchasing function/actions increased by 300 percent with only a 100 percent increase in personnel (from 2 to 4). The number of line items carried in inventory increased by 300 percent with only a 100 percent increase in personnel (from 1 to 2). Due to the increased inventory, the Command realized a \$98,000 a year reduction in transportation costs, a reduction in the not-in-stock rate from 36 percent to five percent, improved cost control in forms and office supplies, a significant improvement in procurement and receipt control processes as evidenced by audit reports, and a significantly improved ability of the Command to effectively accomplish its mission. However, after a changeover in both the Commanding Officer and the Director of Administrative Services, this same officer received significantly lower fitness reports with both the numerical rating and

D. CONTROL PROBLEMS AND SYMPTOMS OF PROBLEMS

The evaluation of control involves the identification of problems and or weaknesses. The competency of a manager by education, training, and experience is considered a potential problem or weakness. Some causes of control weaknesses are; lack of training, executive and middle management turnover, diversity of operation, the emphasis on attainment of program objectives at the sacrifice of efficiency and control, and excessive paperwork [Ref. 7:p. 4]. In evaluating control systems, problems can be indicated based on symptoms which include the following:

1. The lack of standards
2. Inadequacy or lack of policy, procedures and/or responsibility (statements/organization charts)
3. Reporting is not timely and/or is not utilized as an effective management tool
4. A lack of procedures to insure that controls are evaluated on a reasonable and timely basis
5. Controls and/or control evaluations bear little relationship to organizational exposure to risk of loss of resources [Ref. 19:p. 22].

The listing of problems and symptoms is not intended to be all inclusive but is intended only to provide some examples.

III. INTERNAL CONTROL LEGISLATIVE/EXECUTIVE MANDATES

Chapter II discussed internal control and argued that a manager is the key to a good control system. This chapter examines why there has been so much emphasis on internal control in recent years by providing a review of the legislative and executive mandates for internal control. The events of the mid to late 1970's-waste, fraud, abuse, and mismanagement-resulted in renewed interest and new laws by the Legislature, and increased emphasis and the issuance of policy statements by the President. Specifically, the Budget and Accounting Act of 1921, the Accounting and Auditing Act of 1950, the Federal Managers Financial Integrity Act of 1982 (FMFIA), and OMB Circulars A-123 and A-123 (revised) are discussed. The chapter will conclude with a brief overview of implementation through an internal control program.

A. LEGISLATIVE REQUIREMENTS FOR INTERNAL CONTROLS

Throughout the twentieth century there has been a continuing and growing concern over the expenditure of public funds and the accountability for these expenditures.

1. The Budget and Accounting Act of 1921

On June 10, 1921 the 67th Congress passed Senate Bill 1064 which was titled the "Budget and Accounting Act". Under section 207 of this act the Bureau of the Budget (BOB) was created within the Treasury Department. Under section 209 the BOB was authorized to, "When directed by the President....make a detailed study of the departments and establishments for the purpose of enabling the President to

determine what changes should be made in (1) the existing organization, activities and methods of business of such departments or establishments, (2) the appropriations therefore, and (3) the assignment of particular activities to particular service, or (4) the regrouping of these services." The purpose of this section was to increase economy and efficiency in the conduct of public services.

These two sections in effect deleted part of the requirement (necessity) for the Division of Bookkeeping and Warrants (Office of the Secretary of the Treasury) by transferring (per section 211) the powers and duties relating to the compiling of budget estimates to the BOB. The remaining functions of the Division of Bookkeeping and Warrants and the functions of the Comptroller and Assistant Comptroller of the Treasury were assumed by the newly created (per section 301) General Accounting Office (GAO). Additionally, under section 304, the positions of the six Auditors of the Treasury were abolished and their functions were transferred to the GAO. Under section 302, two new positions, Comptroller General of the United States and the Assistant Comptroller General were created to head the GAO.

Under section 309, the Comptroller General was responsible for prescribing "the forms, systems, and procedures for administrative appropriation and fund accounting in the several departments and establishments, and for the administrative examination of fiscal officer's accounts and claims against the United States".

This act was a move toward improved control over federal (public) funds through; (1) the separation of powers and duties of the Treasury, Division of Bookkeeping and Warrants, and (2) the establishment of an independent agency (GAO) which was responsible for prescribing accounting systems and for auditing of federal departments and agencies.

2. The Accounting and Auditing Act of 1950

On September 12, 1950, House of Representatives Bill 9038 was passed as Public Law 784, The Budget and Accounting Procedures Act of 1950. The major emphasis of this act, internal control, was contained in Part II-Accounting and Auditing- which is known as the Accounting and Auditing Act of 1950. (See Appendix B). As a declaration of policy, under section 111, the Congress declared that Government accounting provide effective controls over income, expenditures, funds, property and other assets.

Additionally, under section 112(a) the Comptroller General was specifically assigned responsibility for prescribing principles, standards and related requirements for accounting with the intent of developing an integrated accounting system within the Federal Government. He was further tasked with the responsibility of approving accounting systems when deemed to be in conformity with the principles, standards and related requirements as established by him. The accounting and Auditing Act of 1950 also placed responsibility on each agency head for the establishment and maintenance of adequate systems of accounting and internal control.

The requirement for internal control was established and well defined. However, almost 20-25 years later, in the early to mid-seventies "fraud, waste and abuse" due to weak or nonexistent internal controls became a major theme in the federal government. Two Inspector General Acts were passed, one in 1976 and the other in 1978. They established the position of Inspector General in major executive agencies, and required semi-annual reports on discovered fraud, waste and abuse. However, these acts lacked enforcement provisions and failed to provide measures to safeguard existing and future resources. [Ref. 22:pp. 12-15]. In addition,

the fraud, waste and abuse "hotlines" which were implemented in the late 1970's did much to increase awareness of the problem, but the focus remained on after-the-fact detection rather than on prevention.

3. The Federal Managers Financial Integrity Act of 1982

Due to the continued and widespread waste, fraud, and abuse within federal agencies Congress took up the cause in 1979 and proposed a Financial Integrity Act. The intent of the proposed bill was to require federal executives to prepare annual reports on the adequacy of agency internal controls. The bill received minimal consideration and died in committee. However, further action was pursued by the House and Senate through the request for a GAO investigation. They also requested assistance from the Association of Government Accountants (AGA) which developed a Task Force to study and report on internal controls within federal agencies.

The bill was proposed again in 1980 as the "Financial Integrity Act of 1980" and the AGA Task Force Report was submitted to the Congress on December 8, 1980 via the Comptroller General. Additionally, the Comptroller General submitted a GAO report to Congress (FGMSD-80-65) dated August 28, 1980 titled "Continuing and Widespread Weaknesses in Internal Controls Result in Losses Through Fraud, Waste and Abuse." The report covered 157 agencies which involved 11 major federal organizations and indicated that millions of dollars had been lost between 1976 and 1979 due to lack of or inadequate internal controls.

The proposed bill failed to clear the Senate Committee on Government Affairs again in 1980. However, on November 13, 1981 the Committee conducted hearings on the Financial Integrity Act of 1981. Testimony presented during the hearings included major points as follows:

1. The 1978 General Services Administration (GSA) scandal in which \$1.2 billion had been spent by federal agencies on furniture over a 10 year period, when GSA had some \$393 million of new or good used furniture in warehouses.
2. The Inspector General of Health Education and Welfare (HEW) estimated that between \$6.3 and 7.4 billion was misspent by HEW annually as a result of fraud, waste and abuse.
3. The Labor Department's Employee Training Administration had \$218 million in questioned costs (by GAO) which had never been recorded.
4. A Department of Transportation clerk embezzled \$856,000 in mass transit funds and detection occurred only because a bank teller questioned the size of deposits made by the embezzler.
5. \$25 million had been erroneously paid out because of internal control weaknesses in the Supplemental Security Income Program.
6. In a 2 1/2 year period 21 federal agencies had 77,000 cases of fraud which resulted in a monetary loss of between \$150 and \$220 million.
7. A single government vehicle was outfitted with 15 sets of tires (according to records) in it's first 32,000 miles of use.
8. Even though 30 years had lapsed since the Accounting and Auditing Act of 1950, only 64% of the federal agencies had accounting systems which had been approved by the Comptroller General, and this did not include the Departments of Defense nor Health and Human Services, which together comprise in excess of 50% of the federal budget.

Mr. Staats, Comptroller General of the United States was quoted, during the hearings:

The reason internal control systems are in a state of disrepair is that top management has devoted most of its concern and emphasis to delivering funds and services, and that effective controls over tasks and functions which lead to the delivery of these funds and services have had a low priority. Because of top management's insufficient concern for internal controls, middle management reflects this same indifference [Ref. 23].

After additional debate the House of Representatives bill 1526 (adopted in joint conference over Senate bill 864), the "Federal Managers Financial Integrity Act of 1982 (FMFIA) was passed by the 97th Congress as Public Law 97-255 (see appendix C) on September 8, 1982.

The FMFIA officially amended the Accounting and Auditing Act of 1950 and formalized the detailed internal control reviews which were the ultimate objective of OMB Circular A-123 which had been issued as an executive mandate in October 1981. In addition to this, the Act provided for:

1. Development by OMB and the Comptroller General of guidelines for the evaluation of internal controls systems.
2. Evaluation of an agency's internal controls in accordance with the guidelines established.
3. Reports by the head of each executive agency indicating whether the agency's internal controls comply with the standards issued by the Comptroller General.
4. Identification of material internal control weaknesses and plans for correcting those weaknesses.

To comply with these requirements, each agency was to develop a plan of continuous internal control evaluation which would form the basis for the annual report to the President and the Congress.

The Act specifically places responsibility. The heads of executive agencies and managers delegated responsibility by the agency heads are legally responsible for maintaining adequate internal controls. In summary, the

Congress went one step further than OMB by fixing the requirements and responsibilities under statute. As a result differences existed between law and administrative policies. The differences were in the area of assignment of responsibility and in increased review and reporting requirements as noted below:

1. Accounting and internal control systems were to conform to standards prescribed by the Comptroller General of the United States.
2. Agencies were to perform annual evaluation of internal control systems as directed by the Director of OMB.
3. Agency heads were to report annually to the President and to the Congress on the status of internal control systems.

B. EXECUTIVE REQUIREMENTS FOR IMPROVED INTERNAL CONTROLS

During the period that the Legislative branch was discussing the Financial Integrity Act, the Executive Branch was also taking action.

1. OMB Circular 123

In compliance with President Reagan's campaign promise to halt the misuse of government resources [Ref. 24:pp. 10-20], the OMB issued Circular A-123 (See Appendix D) in October 1981. This circular attempted to refocus efforts to the ongoing prevention of waste by requiring Executive Agencies to:

1. Conduct vulnerability assessments in order to determine areas susceptible to loss or unauthorized use of resources, errors in report and information, illegal or unethical acts, and/or adverse or unfavorable public opinion.

2. Design new programs so as to incorporate effective systems of internal control.
3. Review internal controls on an on-going basis.
4. Establish administrative control procedures to ensure that internal controls are effective.
5. Issue an internal control directive and review plan by 31 March 1982.
6. Formally assigned responsibility for internal control to the head of each agency- including the design, implementation and monitoring of the internal control system.
7. Required the Inspector General (IG) of each agency to review the internal control system and to ensure that an effective audit follow-up program was implemented.
8. Defined internal controls for the Executive Branch.
9. Provided internal guidance for internal control by stating five objectives and eight basic standards.

After issuance of the Circular, Edwin L. Harper, Deputy Director of OMB released a written statement to the Senate Committee on Government Affairs on November 13, 1981, as a prepared statement for the hearing being held that day, on the proposed Federal Managers Financial Integrity Act. The statement concluded that the Financial Integrity Act was not necessary since release of OMB Circular A-123 and that the objectives of internal control could be accomplished more effectively and efficiently through the administrative means outlined in the circular. [Ref. 23:pp. 24-30]. However, the FMFIA was passed and differences, as outlined in section II.A.3, existed between the FMFIA and OMB Circular A-123.

2. OMB Circular A-123 (revised)

In an effort to resolve the differences between A-123 and the FMFIA, the OMB issued the "Guidelines for the

Evaluation and Improvement of and Reporting on Internal Control Systems in the Federal Government" in December 1982. This was closely followed by the Comptroller General's "Standards for Internal Control in the Government" in June 1983. Publication of these three documents on internal control significantly changed the basis guidance. As a result, a revised OMB Circular was issued on 16 August 1983 (see appendix E) which incorporated these revised guidelines and standards for internal control. It was a patchwork but relatively complete framework for internal control in the federal government. The revised Circular contains:

1. The requirement for appointment of a single senior official to coordinate the overall agency program in order to minimize duplication and enhance visibility.
2. Encouragement for the agency Inspector General to provide technical assistance and expertise.
3. Recognition that "reasonable assurance" of effective internal controls means that benefits must exceed implementation costs.
4. When applicable, the required evaluation of managers' internal control abilities in performance evaluation.
5. The requirement for biannual vulnerability assessments to aid officials in prioritizing areas of emphasis.
6. Internal control definitions and standards as promulgated by the U.S. Comptroller General.
7. The requirement for a formal follow-up system at the agency level to record and track correction of deficiencies.
8. The requirement for ongoing internal control reviews and audits to determine if controls are operating as intended.
9. The requirement that agency heads report annually to the President and Congress "stating whether the

evaluation of internal controls was conducted in accordance with the Internal Control Guidelines, stating whether the agency's system of internal accounting and administrative control complies with the Comptroller General's standards and provides reasonable assurance that obligations and costs are in accordance with applicable law; funds, property, and other assets are safeguarded; and revenues and expenditures are properly recorded and permit the preparation of reliable financial and statistical reports; reporting the material weaknesses, if any, in the agency's system of internal control, however identified; and containing a plan for correction of any weaknesses".

C. SUMMARY OF EXECUTIVE/LEGISLATIVE ACTION ON INTERNAL CONTROLS

Table I contains a brief summary of the history of formal legislative action taken towards the establishment of internal controls within the Federal Government. Also included in table I is a brief description of action taken by the Executive Branch of the Federal Government in an attempt to establish internal controls within the agencies under its jurisdiction. More detailed information on specific legislative and executive actions can be found in the appropriate appendix to this thesis.

D. IMPLEMENTATION WITHIN NAVY MEDICAL COMMANDS

The requirements of the FMFIA and the Circular were implemented by a series of Department of Defense, Department of the Navy, and Naval Medical Command Instructions. These instructions key on internal review which the General Accounting Office emphasized as an element of a satisfactory internal control system [Ref. 25].

TABLE I
HISTORY OF INTERNAL CONTROL MANDATES

ACT	MAJOR PROVISIONS
Budget and Accounting Act of 1921	Started Internal Control in Federal Government by creating Bureau of the Budget, General Accounting Office and Comptroller General to prescribe accounting systems for federal departments.
Budget and Accounting Act of 1950	Required controls over income, expenditures, funds, and other assets. Made Comptroller General responsible for principles, standards, and related requirements and for approving systems complying with same. Made agency head responsible for accounting and internal control systems.
OMB Circular 123 of October 1981	Made Agency heads responsible for internal controls. Required internal control directive on-going review/assessment of internal control every two years. Control responsibilities included in performance appraisals of managers
FMPIA Act of 1982	Required Comptroller General to prescribe standards of internal control. OMB to establish guidelines for evaluation of internal controls. Required annual report to President and Congress on adequacy of internal controls. Made agency heads legally responsible for internal controls.
OMB Circular 123 (revised) of December 1982	One official to coordinate agency program for internal control. Benefits must exceed costs formal follow-up at agency level. Annual report to include plan for corrective action.

In providing a Navy response to the requirements of the OMB circular the Comptroller of the Navy (NAVCOMP) directed a vulnerability assessment within the Navy and Marine Corps. The results of the survey were published by the Secretary of the Navy in January 1983. Of the twenty areas covered, Medical was one of six categorized as being a high vulnerability area [Ref. 8]. As a point of emphasis placed on internal control, Capt. T.J. Leshko, Assistant Director of the Naval Audit Service, stated that Medical is one of two areas of top priority for the Naval Audit Service in 1985. [Ref. 26]

IV. RESEARCH METHODOLOGY AND RESULTS

Chapter II and III have established that there is a need for well trained managers and proper internal controls if activities are to be performed effectively. They have also shown a long history of the federal government's interest in these problems. This Chapter presents the methods and finding of our research in the control systems used in medical supply operations within the Navy Medical Command.

A. METHODOLOGY

The study was based on a survey questionnaire. It developed a series of questions which were directly linked to the issues and hypothesis listed in Chapter I. The questions were based on a seven point Likert Scale.

The questionnaire, found in Appendix A, included: level and area of education; years of experience; and attendance at, and awareness of training courses. The questions dealt with the extent/degree that education, training or experience prepared the Supply Officer to perform effectively, efficiently and in compliance with applicable rules and regulations. Other questions dealt with the existence and clarity of organizational goals and relationship to performance evaluation, and how performance is measured and reported.

Thirteen questions dealt with the source of computer support, the type of equipment and process, the need for computer support, and the level of support received. Eleven general questions dealt with the environment and functions of the supply operations. Finally six questions provided clarification to data elements of the Supply Workload

TABLE IX
DATA ON ATTENDANCE/AWARENESS OF TRAINING COURSES

COURSE	PERCENT COMPLETED	PERCENT AWARE OF COURSE
Fiscal and Supply Mgmt. (12 Week Course, Bethesda)	71.4	71.4
FMSO Retail Inventory and Financial Management	85.7	85.7
The DPSC Internship Program	0.0	64.3
Federal Supply Management Policies/Procedures (GSA)	0.0	57.1
Types of Government Contracts (GSA)	0.0	61.3
Small Purchases/Federal Supply Schedules (GSA)	46.0	91.4
Federal Procurement Process (GSA)	0.0	50.0
Government Contract Law (GSA)	0.0	57.1
Government Contract Administration (GSA)	0.0	57.1
Government Contract Termination (GSA)	7.7	57.1
MILSTRIP (GSA)	0.0	21.4
MILSTRIP (NSC OAKLAND)	7.7	57.1
FEDSTRIP (GSA)	0.0	28.6
Supply Management Forecasting Techniques	0.0	28.6
Inventory Management and Economic Order Quantity (EOQ) Techniques	8.3	50.0
MILSTAMP (NSC OAKLAND)	0.0	14.3
Basic Elements of Property Management	0.0	28.6
Property Management for Custodial Officers	0.0	35.7
Storage and Materials Handling	0.0	28.6
Introduction to Transportation Management (NSC OAKLAND)	0.0	14.3
Warehouse Operations Management (NSC OAKLAND)	0.0	14.3

Each Supply Officer was requested to identify the number of Assistant Supply Officer billets he/she had, and

TABLE VIII
PREFERENCES FOR MASTERS DEGREE

MASTERS DEGREE	NPS	CIV	A	AF
four	N	N	N	N
one	Y	Y	Y	Y
one	Y	N	N	N
one	N	N	N	Y
BACHELORS ONLY				
two	Y	Y	Y	Y
one	N	Y	Y	Y
one	Y	Y	N	Y
one	Y	Y	N	N
one	N	N	N	N

Twenty one training course were listed and the Supply Officers were requested to mark which they had attended, and which ones they were aware of before seeing the questionnaire. The responses are listed in Table IX

The goals of the 12 week FSMTC at Bethesda are:

1. To provide the entry level Medical Service Corps Officer with a working knowledge of the fiscal and supply management function.
2. To familiarize the student with a working knowledge of budgeting, accounting, auditing, inventory management and procurement.
3. To assist him or her in developing an understanding of the role and environment of a resource manager as a principal advisor to the Commanding Officer [Ref. 28].

The entry level officer is defined for material management as those who are assigned to a dental center or as an Assistant Head, Material Management. [Ref. 29]

TABLE VII
COMPUTER/INFORMATION PROCESSING SUPPORT DATA

QUESTIONS	SCALE							AVG
	7	6	5	4	3	2	1	
To what degree do you rely on DP/MIS for information support?	7	6	5	4	3	2	1	
To what degree do you require information in a timely manner?	4	6	2	-	-	1	-	5.9
To what degree do you require current information?	5	6	1	1	-	-	-	6.2
To what degree is DP/MIS responsive to your requests for new information? (New Reports, New Formats, etc.)	5	4	2	2	-	-	-	5.9
How often does DP/MIS meet your requirements for information on a timely basis?	-	3	1	3	3	2	1	3.9
How often does DP/MIS satisfy your requests for further information?	1	3	4	4	1	-	-	4.9
	-	-	2	1	5	3	1	2.8

AVG = Average Value

8. Education, Training, and Experience

Education, training, and experience levels are prescribed by NAVMEDCOM for all Head, Material Management billets. All of the billets require completion of the 12 week Financial and Supply Management Training Course (FSMTC) at Bethesda, Md., and all billets require "significant" experience. Only four of the billets require a Masters level of education and those billets are at the Naval Hospitals in San Diego, Portsmouth, and Oakland and at the National Capital Region in Bethesda. (See Appendix F). The masters requirement is not specifically related to Material Management/Material Logistics. NAVMEDCOM has been granted two billets at the Naval Postgraduate School (NPS) Monterey, Ca. for Material Logistics Support (Curriculum 827) as outlined in Appendix G.

There were 14 responses to questions on education, training, and experience. Of the 14 responses received, 57.1 percent (8) of the Supply Officers have a Masters degree. Three have an MBA/HA, three have a Masters in HCA, one has a Masters in Financial Management and one has a Masters in Systems Management. Of the six people who don't have a Masters degree, five have a Bachelors degree in HCA and one in Business Administration. When asked if they would apply for a Masters program in General Supply Management if it were available through the NPS, the Army (A), the Air Force (AF), or a civilian school (CIV), they responded as outlined in Table VIII

TABLE VI
PURCHASING ACTIONS/EMPLOYEE DATA

Activity	Purchase Actions	Number of Employees	Actions per Employee
A	9568	19	503.57
B	6893	10	689.3
C	7571	10	757.1

7. Computer Support

Fourteen responses were received to questions regarding computer support for inventory control functions. Computer support was classified as none, inhouse, and other. The responses were: 7.1 percent (1) operated a manual system and has no computer support; 21.4 percent (3) have support provided by a command other than the hospital; and 70.5 percent (10) have computer support provided by the hospital Data Processing Service. Of the ten with inhouse support, 70 percent (7) are supported by card oriented IBM 1401s and 30 percent (3) are supported by Data Point micro computers. Of the 13 with computer support, only 1 (7.7 percent) reported having an interactive process. The other 12 utilize a batch process.

To determine perceived need for computer support the Supply Officers were asked what their needs were for updated information-instantaneously, daily, weekly, etc. The responses were; 28.6 percent (4)-continuously or instantaneously, 64.3 percent (9)-daily, and 7.1 percent (1)-biweekly. Indicators of perceived need for and satisfaction with computer support received are outlined in Table VII

- d) Number of line items NIS for which a requisition is received as of the last day of the reporting period? (0)
- e) Other? (1)

The Supply Officers were asked how frequently their COs and DASS discussed the reports with them. Only 11 people responded and the responses were the same for both questions. The responses were: 54.5 percent (6)-never; 27.3 percent (3)-monthly; 9.1 percent (1)-not on a regular basis.

6. Inputs and Outputs

Data was taken from the organization charts, Workload Summary Reports, and Purchase Statistics Reports to develop ratios of inputs to outputs for the number of line items of inventory managed and the number of purchase actions. The data is presented in Tables V and VI

TABLE V										
LINE ITEMS MANAGED/EMPLOYEE										
ACTIVITY	A	B	C	D	E	F	G	H	I	J
1. Line items (LI)	1035	3072	2211	823	1050	1668	2995	1343	1353	1926
2. Employees (E)	4	11	6	2	2	3	5	2	2	2
3. LI/E	259	279	369	412	525	556	599	672	677	963

Only ten activities are shown in Table V as the organization charts for the other hospitals did not clearly delineate the number of personnel assigned to the inventory control function.

1. Do you include open purchase requisitions in the not carried figure?
YES (3) NO (9)
2. Do you include Servmart requisitions in the not carried figure?
YES (2) NO (10)
3. Do you include Servmart requisitions in the DTO total?
YES (4) NO (8)
4. Assuming you received a Servmart shopping list from 20 different departments, each list for 10 items, when you make a consolidated list it is for 43 line items and you cut a single 1348 money chit; would you count this as;
20 requisitions? (5)
200 requisitions? (0)
43 requisitions? (1)
1 requisition? (4)
5. Assuming you receive a requisition (DD1149 or other/local form) from 4 different departments each for 10 line items and consolidated into a single purchase order for 27 line items, would you count this as:
4 requisitions? (5)
40 requisitions? (1)
27 requisitions? (1)
1 requisition? (5)
6. Is your NIS rate computed on the basis of:
 - a) Total number of requisitions received during the month which cannot be issued at time of receipt?
(5)
 - b) Total number of line items which are NIS during the month? (3)
 - c) Total number of line items NIS on date of report cutoff? (1)

5. Reporting

A listing of reports and office command to which they are submitted by the Supply Officer was requested. The responses are listed in Table IV. The FIR and Semi-annual Stock Stratification are submitted only by those activities operating under a FMSO controlled budget (SAC 200).

TABLE IV
STANDARD REPORTS SUBMITTED BY MEDICAL MATERIAL
MANAGEMENT

REPORT TITLE	RECEIVING AUTHORITY
Summary of Purchase Actions (DD1057)	NAVSUP
Financial Inventory Report (FIR)	Fleet Material Support Office (FMSO)
Semi-Annual Stock Stratification	Fleet Material Support Office (FMSO)
Non-Standard Medical and Dental Material	Navy Medical Material Support Command
Medical Expense and Performance Report (UCA)	OASD/HA via Chain of Command
Supply Workload Summary	Supply Officer

The Supply Workload Summary Report was
discontinued on 31 August 1983

UCA = Uniform Chart of Accounts

OASD/HA = Office of the Assistant Secretary
of Defense for Health Affairs

To clarify the data contained in the Supply Workload Summary Report the Supply Officers were asked six questions. The questions and responses are as follows:

TABLE III
RESPONSES TO QUESTIONS REGARDING CO/DAS KNOWLEDGE
OF MEDICAL MATERIAL MANAGEMENT OPERATIONS

QUESTION	SCALE						
	1	2	3	4	5	6	AVG
General knowledge of Supply Service	-	1	3	3	2	1	3.8
Commanding Officer	2	1	2	3	3	-	4.6
Director of Administrative Services	-	1	1	6	2	1	3.9
Knowledge of Rules and Regulations	2	1	2	4	2	-	4.7
Commanding Officer	-	1	2	4	2	-	-
Director of Administrative Services	-	1	2	4	2	-	-

DK= Don't know AVG= Average Value

TABLE II
GOALS AND OBJECTIVES DATA

QUESTION	SCALE							AVG
	7	6	5	4	3	2	1	0
To what degree have clearly defined goals and objectives been established for you as Chief, Medical Supply?	(1)	(8)	(-)	(3)	(1)	(-)	(-)	(-)
To what degree do you feel your Fitness Report is based on the measure of achievement of those goals and objectives?	(2)	(5)	(1)	(1)	(2)	(-)	(-)	(-)
								5.4
								5.0

AVG = Average value

percent (2)-\$25,000. Requisitions which exceed the purchase authority are submitted to an NSD,NSC or other support activity. If the purchase cannot be effected by the primary support activity or NSD, the purchase order is passed to a designated NSC which is Oakland, CA. for the West Coast and Pacific areas and Norfolk, Va. for the East Coast, Carribean and European areas.

3. Goals and Objectives

The Supply Officers were asked, "To what degree have clearly defined goals and objectives been established for you and to what degree do you feel your fitness report is based on the measure of achievement of the goals and objectives?" The responses are listed in Table II. The averages were 5.4 and 5.0 on the Likert Scale where seven (7) means to a very high degree and zero (0) means to a very low degree. A review of regulations, organization manuals, instructions and policy statements resulted in a failure to find a statement of goals and objectives.

Based on interviews with three Supply Officers, the goals and objectives are those defined by the Commanding Officer and/or Director of Administrative Services. These goals and objectives normally change with turnover in the Commanding Officer and/or Director of Administrative Services.

4. Superior Officer Knowledge of Supply Operations

The Supply Officers were requested to respond to four questions which indicate their opinion of the extent of their CO's DAS's knowledge of supply operations. The responses are listed in Table III.

The organization structure for all 15 activities included a purchasing section, inventory control section, receipt control section and a warehouse section.

2. Environment

Although these factors do not cover all aspects of the environment they provide some idea of the varying complexity.

Six of the sample hospitals are located outside of the United States. Nine (60 percent) of the respondents operate a main supply operation (Special Accounting Class (SAC) 200) with the hospital comptroller having fiscal responsibility for the inventory, and supply having the requirement to perform semiannual stratification of inventory. Stock fund money is allocated by the Fleet Material Support Office (FMSO) through a budget process. Four (26.7 percent) of the respondents reported having open allotments. There is no budget ceiling on open allotments and the fiscal accounting is done directly by the FMSO. Two (13.3 percent) of the respondents operate under a Ready Supply Store ((RSS) (SAC 203)). for which funds are allotted and controlled by a Naval Supply Depot (NSD) or a Naval Supply Center (NSC) and the fiscal accounting of funds is done by the NSD/NSC.

Requisitions for standard stock materials are submitted directly to the source (Defense Personnel Support Center (DPSC), General Services Administrations (GSA) etc.) by 53.3 percent (8) of the respondents. Twenty percent (3) submit requisitions to an NSC and the NSC passes requisitions to the source (DPSC, GSA, etc.) for item which they do not carry. The remaining 26.7 percent (4) submit requisitions to an NSD.

Purchasing authority of respondents ranged from \$1,000 to \$25,000 as follows: 6.7 percent (1)-\$1,000; 66.7 percent (10)-\$2,500; 13.3 percent (2)-\$10,000; and 13.3

B. FINDINGS AND RESULTS

The questionnaires were completed by 13 and partially completed by two Supply Officers. The response rates were 43.3 percent of the population (30) and 46.4 percent of the sample (28) for questions which 13 responses were received and 50 percent of the population (30) and 53.6 percent of the sample (28) for which 15 responses were received. However, review of Appendix F shows that four of the hospitals have combined Fiscal and Supply billets. Subtracting those four from the population and sample increases the response rates to 50 percent of population (26) and 54.2 percent of sample (24) for questions which received 13 responses, and 57.7 percent of population (26) and 62.5 percent of sample for questions which we received 15 responses. There was either no questionnaire sent to or no response received from these hospitals so all data presented is for supply only organizations. The results and findings are categorized by: duties, responsibilities, and functions; environment; goals and objective; Commanding Officer and Director of Administrative Services knowledge of supply operations; reporting; Inputs/Outputs; computer support; education, training, and experience; and instructions and desk guides.

1. Duties, Responsibilities and Functions

The duties, responsibilities and function are the same for all Supply Officers and are as follows:

Material Management Division The material management division plans, administer, directs, and controls the Supply program for the command. The division provides for procurement, receipt, storage, use, inventory control, and security of all material under its custody; administer supply procedures and prepares reports as directed by the Navy Comptroller. the Navy Supply Systems Command, NAVMEDCOM, and supply demand control points. The division may be divided into purchase, control, inventory, medical equipment maintenance and repair, material and central sterile supply branches [Ref. 27:pp. 3-23].

Summary Report which was included as a part of the research/questionnaire package.

The questionnaire was mailed to 28 Supply Officers (Head, Material Management). There are 31 Naval Hospitals. Eight of these are located outside the United States in Cuba, Guam, Italy, Japan (2), Phillipines, Puerto Rico, and Spain. The two Eurorpean hospitals were excluded from the sample due to expected time delays associated with mail handling. Two of the remaining 30 hospitals do not have Supply Officers as their supply functions were taken over by the Regional Command during the last reorganization. Each Supply Officer was requested to submit copies of organization charts which show personnel assignment by organizational functions such as warehousing, inventory control etc. and copies of workload reports which provides data on outputs. Data from the organization charts and workload summaries were combined to show ratios of input to outputs.

We reviewed technical manuals and regulations in assessing the duties and responsibilities, functions performed, and governing rules and regulations for each activity. We conducted interviews to determine the level of education, training, and experience required by NAVMEDCOM for each Head, Material Management billet. We interviewed the Instructors for the Fiscal and Supply Management Training course to determine objectives of that course.

We visited three Naval Hospitals. The questionnaire was discussed with the Supply Officers for clarification of responses. The organization charts were compared to the actual structure. Position descriptions were compared to performance standards to evaluate linkage (for employees). Instructions and procedural manuals were reviewed for accuracy as compared to what was actually being done and for completeness, and to evaluate the data that was being recorded and reported.

to indicate the number filled at that time. Fifty percent (7) reported having billets for assistants. Six had one billet each and one had four billets. All six of the single billets were reported as filled and the command with four assistant billets reported none were filled.

In the area of experience, 14 responses were received. The years of experience prior to assignment to the current billet ranged from zero to five. Fifty percent (7) reported having no prior experience, and 64.3 percent (9) had no prior military experience as a Supply Officer in a military hospital. Only two people (14.3 percent) had experience as an assistant prior to assignment to their first Head, Material Management billet. As indicated in Appendix F, there are only two assistant billets, one at San Diego and one at Bethesda and six training billets, one each at San Diego, Bethesda, Orlando, Jacksonville, Pensacola, and Portsmouth. Six of the hospitals have combined Fiscal and Supply billets and not Supply per se.

Each Supply Officer was requested to answer 20 opinion questions which asked the extent/degree that your education, experience, or training (specifically in purchasing, inventory control, warehousing operations, and property management) prepared you to: (1) achieve the goals and objectives (effectiveness); (2) achieve the goals and objectives with a minimum utilization of resources (efficiency); and (3) Comply with the applicable rules and regulations which govern the specific functions. The responses are tabulated in Table X .

9. Instructions and Desk Guides

The Supply Officers were requested to list the number of local instructions and the number which required revision/updating, and to indicate the percent of employees who have detailed desk guides which provide information and

TABLE X
EDUCATION, TRAINING, AND EXPERIENCE DATA

	SCALE 7 6 5 4 3 2 1	AVG.	PERCENT RESPONDING 4-7
<u>EDUCATION</u>			
Goals Achievement	4 4 2 2 1	4.6	77
Resource Utilization	1 4 5 2 1	5.2	92
<u>TRAINING</u>			
Inventory (59)			
Goals Achievement #1	4 4 1 1 1 2	5.2	77
Resource Utilization #1	2 6 1 1 3	5.2	77
Goals Achievement #2	3 5 1 1 2 1	5.2	77
Resource Utilization #2	1 7 1 1 1 2	5.0	77
Compliance	7 1 3 1 1	4.9	85
Purchasing (29)			
Goals Achievement	2 5 3 1 1	5.5	92
Resource Utilization	1 5 5 2	5.4	100
Compliance with FARS	1 4 4 3 1	5.0	92
Compliance with rules and regulations	1 4 4 3 1	5.0	92
Complete applicable forms	5 2 1 3 1	4.5	67
Warehouse Functions (6)			
Goals Achievement	1 6 1 2 1 1 1	4.8	77
Resource Utilization	2 2 3 1 3 2 1	4.7	62
Fixed Facility Minimum Costs	2 5 2 1 1 2	4.0	69
Property Management (30)			
Goals Achievement	1 3 2 3 3	4.2	50
Resource Utilization	1 1 4 1 3 3	4.0	54
Compliance with rules and regulations	1 5 2 2 3	3.9	62
<u>EXPERIENCE</u>			
Goals Achievement	2 3 3 2 1 1	4.8	83
Resource Utilization	4 3 4 1	4.75	92

Responses to opinion listed on pages 2,4,5 and 6 of Appendix A.
The numbers in parentheses represents the numbers of hours of training,
in the area, provided during the 12 week FSMTC.

instructions in detail such that another person could perform the duties by following the desk guide. The responses are outlined in Tables XI and XII .

TABLE XI
COMMAND SUPPLY INSTRUCTIONS

Hospital	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of Instructions	9	7	8	8	9	4	10	10	10	2	5	3	4
Number which require revision/updating	3	1	0	3	0	0	0	0	0	0	2	0	1

TABLE XII
DESK GUIDES

Percent of employees with desk guides	0	10	25	40	50	75	80	90	98	100
Number of responses	1	1	1	1	2	1	2	1	1	3

V. DISCUSSION

This chapter evaluates the results present in Chapter IV and compares it with the elements of a good control system and the role of a manager in control system as outlined in Chapter II. Conclusions and recommendations based on the questions and hypotheses outlined in the Purpose section will be drawn. As stated in Chapter II, a manager is the key to effective control and the evaluation of a control system should begin with the manager.

A. THE MANAGER: EDUCATION, TRAINING, AND EXPERIENCE

The manager should be competent by education, training, and experience to execute the control responsibility to which they are assigned. The NAVMEDCOM has established the requirement that the Supply Officer at the four largest (based on bed capacity) hospitals-San Diego, Oakland, Portsmouth, and Bethesda- have a Masters level education. The question which the authors are not able to answer is why? Why only these four? As outlined in Chapter IV all Heads of Material Management Services are assigned the same duties, responsibilities and functions by the NAVMEDCOM Organization Manual for Naval Hospitals. The same regulations-NAVSUP Manuals, Federal Acquisition Regulations, etc.-are applicable to all of the hospitals. The variances are based primarily on level of purchase authority and on what organization (NSD, hospital, FMSO) controls the inventory funding. These variances are not considered significant as all purchases less than \$25,000 are classified by the Field Purchasing Manual (NAVSUP P-467) as small purchases. The variance occurs at the \$1,000 level.

According to Federal Acquisition Regulations, purchases over \$1,000 are required to be competitively awarded which requires solicitation from multiple sources. The variances in funding source for inventory are whether or not a financial Inventory Report and/or Semiannual Stratification Report are required, and what activity the Supply Officer is accountable to and obtains additional funding from. The training requirements for Supply Officers assigned to an activity with \$1,000 purchase authority and for an inventory operation other than a SAC 200 would require less training. However, the rotation policy for officers negates this variance in training requirements.

In evaluating the data we could not categorize the hospitals into groups which were more effective and/or efficient based on the education level of the Supply Officer. Fifty percent of the Supply Officers have Master degrees yet the most efficient hospital as outlined by Table V was organized by a person with only a bachelors degree. However, he had a diverse background in undergraduate studies in Business Administration, Health Care Administration, and Management. He also had completed numerous training courses and had three years of experience as an Assistant Chief of Supply Service prior to his assignment at this activity.

The elements missing from all of the education curriculums were in the area of supply functions specific academic courses-Logistics, Transportation Management, Contracting, Material Handling Systems, Contract Administration, etc.

Two questions which arise. Should all Heads of Material Management be required to have a Masters level education? Should the education be specifically in the area of Material Management Material Logistics? There is no indication that the officers with a Masters degree perform better than those who have only a bachelors degree. However, five of the

officers with Masters degrees had no prior experience in military medical material management and four of these had either not completed the FSMTC or had done so only within the past 18 months. Since no one had a degree in Material Management a comparison could not be made. However, since NAVMEDCOM has obtained two billets at NPS in Material Logistics Support for MSC Supply Officers, to begin in June 1985, this indicates a recognition that there is a need for material management specific education at the Masters level.

However, in the authors' opinion, the Material Logistics Support curriculum does not meet the specific needs of the health care community and has requirements which are not specifically related to the duties and responsibilities of the MSC Supply Officer. Control is a responsibility of every manager and the Supply Officer is confronted with diverse control requirements. The only course which provides an academic basis for Management Control Systems is MN4161 Financial Management Control Systems. Although the title states financial, the course has general application. It involves a "study of the structure and the processes of management control in government organizations. Specific topics include the basic concepts of planning and control, organization of the management control function, measurement of inputs and outputs, pricing government services, programming, budgeting, accounting and performance evaluation" [Ref. 30:p 107].

Another course which deals with control problems in the health care environment is MN4652, Micro Health Systems Analysis. "The purpose of this course is to analyze in depth, using analyses of extant institutional constructs, the potential for deriving policy recommendations and designing research to motivate more efficient provision of health care by individual facilities. The emphasis will be on identifying gaps in incentives and organizational

structures which lead to suboptimal facility behavior in the cost containment and quality areas" [Ref. 30:p 109].

The two courses which have no specific relationship to the duties and responsibilities of MSC Supply Officers are Policy Analysis (MN4145) and Production Management (MN3374). The policy analysis course "concentrates on analysis of large scale defense resource allocation problems..." [Ref. 30:p 11]. The Production Management course "examines the production process..." [Ref. 30:p 104].

Additionally, at a rate of two per year it would take 14 years to put people with specialized education into all of the Head, Material Management Service billets. This does not address the need for people to fill the Assistant Chief of Staff for Logistics billets at the Geographic Commands.

The training requirements prescribed by NAVMEDCOM for the Heads, Material Management billets is attendance at the 12 week FSMTTC. However, 28.6 percent (4) of the 14 military respondents had not attended. The participation at the other training courses was lower except for the FMSO Retail Inventory and Financial Management course. A major factor was the low rates of awareness. If the Supply Officers do not have the specific training and are not aware of the courses who is training the supply employees? One of the causes of control weakness as listed in Chapter II, Section D is lack of training.

The requirement by NAVMEDCOM for experience is "significant" experience. However, 64.3 percent of the 14 respondents had no prior military medical supply experience prior to their assignment as Head, Material Management, and 50.2 percent had no prior medical supply experience. This brings up numerous questions which the authors are unable to answer based on the research completed. Where are the people being assigned after their experience tours at Naval Dental Centers? Why doesn't the Naval Hospital Oakland have

billets for training and/or assistants when they are relatively proportional in size and complexity to San Diego, Bethesda, and Portsmouth which do? (See Appendix F). A cause of control weakness which was listed in Chapter II is management turnover which can equate to loss/lack of experience.

In summary, do the Supply Officers have the education, training, and experience to perform their job effectively and efficiently? Based on the opinions of the Supply Officers, as listed in Table X, the answer is yes. They have clearly defined goals and objectives and their Fitness Reports are based on accomplishments of these goals and objectives. (See Table II). However, this is not supported by the other data. The Management Control System does not support this.

B. MANAGEMENT CONTROL SYSTEM

A control system was presented previously as a continuous closed loop, interactive process which consists of four elements; (1) Programming, (2) Budgeting/Planning, (3) Operating and Measurement, and (4) Reporting and Analysis. One of the symptoms of control problems listed in Chapter II is that reporting is not timely and/or is not utilized as an effective management tool. The reporting and analysis phase is, in the authors' opinion, the weakest phase of the management control system for supply operations within NAVMEDCOM. It is virtually nonexistent. Therefore the discussion will begin with this phase.

1. Reporting and Analysis

As indicated by Table IV, there are no standard performance reports submitted via the chain of command to NAVMEDCOM. This indicates that any controls which may exist

do so outside of NAVMEDCOM. Of the reports that are submitted none provides a means of analyzing effectiveness and efficiency. Only 8.3 percent of the COs and 27.3 percent of the DASSs have a level of knowledge (6.3 on the scale) of supply operations which permits them to evaluate the Supply Officers independent of the reports, according to Table III. However, based on the authors' experiences with nine COs and 11 DASSs, and discussions with six supply officers, these reported values are higher than expected. The authors expected the COs to average approximately 2 and DASSs to average 3 on the seven point scale. There is no explanation for the variance between expected and actual value. However, in the opinion of the authors, the reported values are suspect and may not be valid/realistic as most COs and DASSs rely heavily on the Supply Officer as was indicated in the events described in Chapter I.

There are two questions which need to be answered. For those who receive the report, what data are they looking at and what standard is it compared against? For those who don't review report, what standards of performance do they use for Fitness Report evaluations? The limited usefulness of the Uniform Chart of Accounts (UCA) as a management tool has been discussed in detail by Taylor and Little, [Ref. 31], and does not need to be belabored further.

2. Operating and Recording

The reports reflect data that is collected and recorded during operations. The data collected is based on the control objectives which are normally defined as standards. The responses to the six questions regarding clarification of data reported on the Supply Workload Summary Report (see Chapter IV) demonstrates that the data being reported is not standardized. This makes it difficult if not impossible to compare one activity to another and

suggests there must also be a weakness in the Budgeting/Planning phase.

A question which arises in evaluating the Purchase Statistics Report is, Are the data meaningful? The output reported in the Purchase Statistics Report is "Actions". An action is a single purchase order or delivery order. A Purchase order could represent one line item or 201 line items. It could represent requisitions from one department or 27 departments. If Navy hospitals used the single line item requisition (DD-1348-6) for open purchase material and issued a purchase/delivery order for each requisition received then the number of actions shown in table VI could be 60,000 to 100,000 or more instead of 6,000 to 9,000. This also represents a weakness in standards for reporting.

3. Budgeting/Planning

This phase involves the establishment of a set of standards. The budget is a set of standards (standard unit cost, standard rate of applying overhead, etc.) which provides a basis for measuring, monitoring and evaluating performance. The standards are based on the goals which are determined during the programming phase. A symptom of control problems is a lack of standards. The standards define what data will be collected and reported.

An exhaustive search of instructions, manuals, etc. failed to define performance standards for Supply Officers. The lack of standards results in the collection and reporting of data which has no direct relationship to the control objective. This assumes that objectives and goals have been established during the programming phase. The lack of standards could be costing the Navy Medical Command millions of dollars each year. Table XIII shows the Input/Output data from Table V, and shows the decrease in manpower requirements for these 10 activities if there were

standards of 1,200, 2500, and 5,000 line items of inventory managed per employee.

TABLE XIII
LINE ITEMS MANAGED/EMPLOYEE WITH STANDARDS

ACTIVITY	A	B	C	D	E	F	G	H	I	J
1. Line items (LI)	1035	3072	2211	823	1050	1668	2995	1343	1353	1926
2. Employees (E)	4	11	6	2	2	3	5	2	2	2
3. LI/E	259	279	369	412	525	556	599	672	677	963
4. E/1200 LI	1	3	2	1	1	2	3	2	2	2
5. Difference (2-4)	-3	-8	-4	-1	-1	-1	-2	0	0	0
6. E /2500 LI	1	2	1	1	1	1	2	1	1	1
7. Difference (3-5)	-3	-9	-5	-1	-1	-1	-3	-1	-1	-1

E/1200 LI = Number of employees required to manage LI if standard was 1200 LI per employee.

E /2500 LI = Number of employees required to manage LI if standard was 2500 LI per employee and assuming state-of-the-art computer technology.

The number of line items managed per employee ranges from 258.75 to 963.0. Based on the lack of standards, the only comments that can be made are that activity A is the least efficient and activity J is the most efficient, etc. However, if each man year cost \$18,960 including benefits then it is possible to say that activity J is \$37,920 more efficient than activity A. The standard of 1200 is not unreasonable. Based on our experience, one activity with an Electronic Accounting Machine (EAM) and two inventory control clerks managed 2,100 line items with a Not-in-Stock (NIS) rate of five percent or less. An employee of an overhaul and repair facility reports managing approximately 2,500 line items individually. If Hussains' appraisal of

modern computer technology (hardware and software) is accurate, then a standard of 5,400 is not unreasonable if Supply Officers were supported with modern computer technology, instead of older data processing equipment. This is based on the fact that inventory control functions are divisible into tasks which are best suited to programmed decision functions. The speed of modern equipment permits the processing of thousands of transactions, calculations and decisions in a matter of seconds. These same processes would require numerous people over a period of several days to complete [Ref. 32].

The point is that there are no standards and that in setting standards consideration should be given to trade offs in labor for technology, with potentially significant reduction in costs.

4. Programming

This brings the control system full cycle back to programming. Standards are based on goals and objectives. What are the goals and objectives? Who set the goals and objectives? What is the basis for developing goals and objectives for supply operations? What are the standards on which resource inputs are based? The Supply Officers reported having clearly defined goals and objectives (See Table II) but these, according to our interviews, are established by the Cos and DASSs. NAVMEDCOM does not have established standards for input/outputs which results in considerable variance as evidenced in Tables V and VI. The COs have no guidance for establishing goals and objectives for supply operations. COs and DASSs as a group do not have a high degree of knowledge of supply operations. (See Table III). The level and area of education and mix of education, training and experience leaves the authors' with considerable doubts regarding the ability of the Supply Officers in

general to establish meaningful goals and objectives which result in effective and efficient operations.

Responding to the above questions, we believe the objective of any supply operation is to get the right material to the right place at the right time and to do so with a minimum utilization of resources and in compliance with applicable rules and regulations. Goals and objectives must begin at the NAVMEDCOM level. Meaningful analysis can occur only at this level for inputs/outputs, but only if they implement a data recording and reporting system which is linked to the control objectives. These goals and objectives and standards can be based on factors which are common to all supply operations and which include the functional areas of supply. NAVMEDCOM cannot develop goals and objectives which are dependent on the immediate environment of the hospital. Some of the variances in the environment are listed in Chapter IV, and include constraints on funding, number of activities through which requisitions must be processed (time delays), the supporting activities themselves, etc. The environment is effected by policy statements and can be controlled to a degree by policy statement (restrictions). Employee desk guides provide detailed procedures which help to control the internal environment. The lack of these was identified in Chapter II as a symptom of control problems.

C. SUMMARY

Based on the comparisons of the existing control system with that developed in Chapter II there are numerous weaknesses in the present system of internal control. There is no standardized, useful reporting system within the NAVMEDCOM organization. The reports that are utilized are filled with data which is of questionable value. The COs

and DASS' knowledge of supply operations may well be even lower than that reported, and does not provide an adequate basis for monitoring performance. There is a demonstrated lack of standards and a lack of NAVMEDCOM stated goals and objectives for supply operations. Further we question the overall level and area of education, and the mix of education, training, and experience of the Supply Officers. Requirements have been developed which seem to be directed in these areas but there are still potential problems and a demonstrated non-compliance with the requirements, especially in the areas of training and experience.

As a basis for conducting this research project the authors developed a set of questions and hypotheses which are outlined in Chapter I. These will be addressed in the next chapter on Conclusions and Recommendations.

REPORT CONTROL SYMBOL 1520 PAGE 6

EXPERIENCE

List all Medical Supply experience, beginning with current assignment.

Hosp. Size (auth. bed)	Military		Conus		From	To	Position Title			
	Yes	No	Yes	No	Mo/Yr	Mo/Yr				
_____bed	()	()	()	()	_____	_____	_____			
_____bed	()	()	()	()	_____	_____	_____			
_____bed	()	()	()	()	_____	_____	_____			
_____bed	()	()	()	()	_____	_____	_____			

VERY HIGH EXTENT VERY LOW EXTENT DON'T KNOW

To what extent has your past experience prepared you to meet the goals and objectives of the Medical Supply Service?

() () () () () () () ()

To what extent has your past experience prepared you to attain these goals and objectives with a MINIMUM UTILIZATION OF RESOURCES?

() () () () () () () ()

ORGANIZATION

Do you have an Officers billet for a Military Assistant? YES () NO ()

How many? _____ How many are filled at this time? _____

How many specific local (NRM, NAVHOSP) instructions pertain to supply operations? _____

How many of these local instructions need revision/updating? _____

What percentage of your employees have detailed desk guides which provide information and instructions in detail such that another person could perform those duties by following the desk guides? _____ %

Is your activity a SAC 200 () SAC 206 () Open Allotment ()

What is your purchase authority? \$ _____

REPORT CONTROL SYMBOL 1520 PAGE 5

	VERY HIGH DEGREE	VERY LOW DEGREE	DON'T KNOW
To what degree has your training in inventory control prepared you to achieve the goals and objectives of that function?	() () () () () ()		(O)
To what degree has your training in inventory control prepared you to achieve the goals and objectives of that function with a MINIMUM UTILIZATION OF RESOURCES?	() () () () () ()		(O)
To what degree has your training in inventory control ensured your compliance with applicable rules and regulations?	() () () () () ()		(O)
To what degree has your training prepared you to achieve the goals and objectives of the warehouse operation function?	() () () () () ()		(O)
To what degree has your training prepared you to achieve the goals and objectives of the warehouse operation function with a MINIMUM UTILIZATION OF RESOURCES?	() () () () () ()		(O)
To what degree has your training prepared you to maximize warehouse operations within fixed facilities at minimal cost?	() () () () () ()		(O)
To what degree has your training prepared you to manage a property management program that meets applicable rules and regulations?	() () () () () ()		(O)
To what degree has your training prepared you to achieve the goals and objectives of the property management program?	() () () () () ()		(O)
To what extent has your training prepared you to achieve the goals and objectives of a Property Management Program with a MINIMUM UTILIZATION OF RESOURCES?	() () () () () ()		(O)

REPORT CONTROL SYMBOL 1520 PAGE 4

Please read and consider each of the following questions carefully and provide us with your opinion on how well you have been trained in the appropriate function of supply operations or resource utilization. If you have had no training in the function you should mark either VERY HIGH DEGREE or VERY LOW DEGREE depending on the question. Otherwise mark the appropriate box based on to what degree your past training has prepared you to perform the function.

	VERY HIGH DEGREE					VERY LOW DEGREE		DON'T KNOW
To what degree has your past training in purchasing prepared you to meet the goals and objectives of that function?	()	()	()	()	()	()	()	(O)
To what degree has your training in purchasing prepared you to accomplish this function with a MINIMUM UTILIZATION OF RESOURCES?	()	()	()	()	()	()	()	(O)
To what degree has your training in purchasing ensured your compliance with Federal Acquisition Regulations?	()	()	()	()	()	()	()	(O)
To what degree has your training in purchasing ensured your compliance with other applicable rules and regulations?	()	()	()	()	()	()	()	(O)
To what degree has your training prepared you to properly complete the required forms and worksheets of the Purchasing Process?	()	()	()	()	()	()	()	(O)
To what degree has your training in inventory control prepared you to meet the goals and objectives of that function?	()	()	()	()	()	()	()	(O)
To what degree has your training in inventory control prepared you to meet the goals and objectives of that function with a MINIMUM UTILIZATION OF RESOURCES?	()	()	()	()	()	()	()	(O)

REPORT CONTROL SYMBOL 1520 PAGE 3

COURSE TITLE	COMPLETED		YR. LAST ATTENDED	WERE YOU AWARE OF THE COURSE BEFORE TODAY?	
	YES	NO		YES	NO
Government Contract Law (GSA)	()	()	_____	()	()
Government Contract Admin- istration (GSA)	()	()	_____	()	()
Government Contract Termini- nation (GSA)	()	()	_____	()	()
MILSTRIP (GSA)	()	()	_____	()	()
MILSTRIP (NSC OAKLAND)	()	()	_____	()	()
FEDSTRIP (GSA)	()	()	_____	()	()
Supply Management Forecast- ing Techniques	()	()	_____	()	()
Inventory Management and Economic Order Quantity (EOQ) Techniques	()	()	_____	()	()
MILSTAMP (NSC Oakland)	()	()	_____	()	()
Basic Elements of Property Management	()	()	_____	()	()
Property Management for Custodial Officers	()	()	_____	()	()
Storage and Materials Handling	()	()	_____	()	()
Introduction to Transportation Management (NSC Oakland)	()	()	_____	()	()
Warehouse Operations Manage- ment (NSC Oakland)	()	()	_____	()	()
Others provided by local NSD, NARPO, etc.	()	()	_____		

REPORT CONTROL SYMBOL 1520 PAGE 2

	VERY HIGH EXTENT					VERY LOW EXTENT	DON'T KNOW
To what extent has your past education prepared you to meet the goals and objectives of Medical Supply?	()	()	()	()	()	()	(O)
To what extent has your past education prepared you to achieve the goals and objectives with MINIMUM UTILIZATION OF RESOURCES?	()	()	()	()	()	()	(O)
Would you apply for a Masters Degree Program in General Supply Management if it were available at:							
Naval Postgraduate School?	YES ()					NO ()	
A civilian school?	YES ()					NO ()	
The Army?	YES ()					NO ()	
The Air Force?	YES ()					NO ()	

TRAINING

HAVE YOU COMPLETED ANY OF THE FOLLOWING TRAINING COURSES/PROGRAMS?

COURSE TITLE	COMPLETED		YR. LAST ATTENDED	WERE YOU AWARE OF THE COURSE BEFORE TODAY?	
	YES	NO		YES	NO
Fiscal and Supply Mgmt. (12 Week Course, Bethesda)	()	()	_____	()	()
FMSO Retail Inventory and Financial Management	()	()	_____	()	()
The DPSC Internship Program	()	()	_____	()	()
Federal Supply Management Policies, Procedures (GSA)	()	()	_____	()	()
Types of Government Contracts (GSA)	()	()	_____	()	()
Small Purchases, Federal Supply Schedules (GSA)	()	()	_____	()	()
Federal Procurement Process (GSA)	()	()	_____	()	()

REPORT CONTROL SYMBOL 1520 PAGE 1

"ALL RESPONSES ARE STRICTLY VOLUNTARY"

***MARK "DON'T KNOW" ONLY WHEN YOU FEEL YOUR KNOWLEDGE OF THE SUBJECT IS
TOO LIMITED TO GIVE AN OBJECTIVE OPINION***

GENERAL

Rank _____ Billet Title _____

I am filling a LT () LCDR () CDR () CAPT () billet

Sex M () F () Age _____

Years of military service as Officer _____ Enlisted _____

VERY
HIGH
DEGREEVERY
LOW
DEGREEDON'T
KNOW

To what degree have clearly defined goals
and objectives been established for you as
Chief, Medical Supply?

() () () () () () () ()

To what degree do you feel your Fitness
Report is based on the measure of achieve-
ment of those goals and objectives?

() () () () () () () ()

EDUCATION

Bachelors Degree YES () NO () Major _____

Masters Degree YES () NO () Major _____

Ph D Degree YES () NO () Major _____

If less than a Bachelors Degree, number of years completed _____

Quarter hours of Data Processing/MIS completed, _____

or Semester hours of Data Processing/MIS completed, _____

Have you completed any college courses specifically related to Medical
Supply Operations? (Logistics Material Management, Transportation
Management, etc.) YES () NO ()

IF YES, PLEASE LIST BY COURSE TITLE:

APPENDIX A QUESTIONNAIRE

REPORT CONTROL SYMBOL 1520

INFORMATION REQUIRED

PLEASE HAVE THE APPROPRIATE EMPLOYEES PROVIDE COPIES OF THE
REQUESTED INFORMATION AND/OR ANSWER THE FOLLOWING QUESTIONS

1. A divisional organization chart which shows your current organization within the purchasing, inventory control, receipt control, and warehouse sections. For each of the above listed sections show the number of employees, including military, by grade and job series. (For example: PURCHASING 3 GS-8(1106), 1 GS-7(1105), 1 E-5, etc.)

2. Copies of your purchase statistics reports (Form 80 and 1057) as applicable for April 1983 through March 1984.

3. Copies of your Supply Workload Summary Report for April 1983 through July 1984. For the Supply Workload Summary Report, please answer the following questions:

a. Do you include open purchase requisitions in the not carried figure? YES ☐ NO ☐

b. Do you include Servmart requisitions in the not carried figure? YES ☐ NO ☐

c. Do you include Servmart requisitions in the DTO total? YES ☐ NO ☐

d. Assuming you received a Servmart shopping list from 20 different departments, each list for 10 items, when you make a consolidated list it is for 43 line items and you cut a single 1348 money chit; would you count this as:

- ☐ 20 requisitions?
- ☐ 200 requisitions?
- ☐ 43 requisitions?
- ☐ 1 requisition?

e. Assuming you receive a requisition (DD1149 or other/local form) from 4 different departments each for 10 line items and consolidated into a single purchase order for 27 line items, would you count this as:

- ☐ 4 requisitions?
- ☐ 40 requisitions?
- ☐ 27 requisitions?
- ☐ 1 requisition?

f. Is your NIS rate computed on the basis of:

☐ Total number of requisitions received during the month which cannot be issued at time of receipt?

☐ Total number of line items which are NIS during the month?

☐ Total number of line items NIS on date of report cutoff?

☐ Number of line items NIS for which a requisition is received as of the last day of the reporting period?

☐ Other? (please explain)

----- END OF INFORMATION REQUIRED -----

complete MN3371, MN3372, MN3373, MN3375
MN4310, MN4161, MN4155, and MN4652 to earn a P-Code in
Material Logistics.

5. It is recommended that further investigation and study be completed to determine the needs of the Supply Officers for computerized information processing.
6. It is recommended that further study be conducted to determine the method and process of providing improved computerized information support toward improving the effectiveness and efficiency of medical material management operations.
7. It is recommended that all Head, Material Management billets be P-Coded, to require a Masters degree in Material Management/Material Logistics.
8. It is recommended that NAVMEDCOM negotiate with the Naval Postgraduate School to delete Policy Analysis (MN4145) and Production Management (MN3374) from the Material Logistics curriculum for Medical Service Corps Officers, and that Micro Health Systems Analysis (MN4652) and Financial Management Control Systems (MN4161) be substituted. It is also recommended that specific requirements include functional courses in Contracts and Administrations, Materials Logistics, Transportation Management and Material Handling Systems (See Appendix F) as compared to the requirements outlined in Appendix G.
9. It is recommended that the negotiations for curriculum changes at NPS be completed and changes effected prior to June 1985
10. It is recommended that; on a selective basis, those people who currently hold a Masters degree, have a minimum of three years before being retirement eligible, are augmented, are assigned to a Supply Billet, and desire to remain in Material Management/Logistics, be sent to the Naval Postgraduate School for six to nine months to

Chapter IV and Table VII, Supply Officers need reliable, current information on at least a daily basis. The information needs to be provided in a format which best supports the Supply Officers decision making requirements. The data in Table VII indicates that Supply Officers do not receive the support which they state that they need.

In summary, the control system for Material Management Operations (MMO) within the Navy Medical Command (NMC) has numerous weaknesses which result in problems and conflict; there is a definite need for stronger internal control. Such stronger internal controls, including the establishment of standards, should result in increased effectiveness (getting the right material to the right place at the right time) and efficiency; and MSC Supply Officers do not have the education, training and experience appropriate for their jobs.

A. RECOMMENDATIONS

1. It is recommended that further research and economic analysis be completed toward the establishment of standards for effectiveness and efficiency.
2. It is recommended that effectiveness be measured on the basis of getting the right material to the right place at the right time.
3. It is recommended that measures of efficiency be established for each functional area of supply (Inventory Control, Purchasing, etc,) and be directly linked to attaining effectiveness.
4. It is recommended that priority be given to development and implementation of a computerized data recording, reporting, and measurement and evaluation system which supports the goals of effectiveness and efficiency.

data in Table X the respondents believed that the training has prepared them to effectively and efficiently achieve the goals and objectives. However, this cannot be conclusive since effective and efficient are neither defined nor measured accurately. Thus, is not possible to compare the level of performance to the response levels. Additionally, Tables V, VI, and XIII seem to discount the response and raises a question. If training has prepared them to be effective and efficient, why aren't some of the less efficient, in terms of Table V, being more efficient? As outlined in the discussion, training requirements have been set by NAVMEDCOM, yet 28.6 percent have not met the requirement.

13. What level of experience in military Medical Material Management will be associated with officers being assigned initially as Head, Material Management? We expected that 90 percent of the officers would have none. Based on the data presented in Chapter IV, 14.3 percent of the respondents had military medical material management experience as an assistant prior to their first assignment as Head, Material Management. Of the respondents, 64.3 percent had NO military medical material management experience prior to the current assignment and 50 percent had no prior medical supply experience in either a civilian or military hospital. Although the data does not support our hypotheses, the more important factor is that all of the billets require "significant" experience.
14. Do Supply Officers receive the level of computerized information processing support which they need? We believed that they did not receive the level of support needed. Based on the data presented in

8. Is there a standardized reporting system for Supply Operations which follows the chain of command within the Navy Medical Command? We believed not. Table IV shows the reports and commands to which they are submitted. The only report submitted to NAVMEDCOM is the MEPR (UCA). This report was discussed by Taylor and Little as being of limited value as a management tool. It is however, a standard report but not one which provides a definitive measure of efficiency and does not measure effectiveness.
9. Do the Commanding Officers and Directors of Administrative Services have a high degree of knowledge of supply operations? As expected, tDASs do not have a high degree of knowledge and as discussed in Chapter V, the authors expected the COs and DASs to be ranked lower than they actually are.
10. Are the goals and objectives clearly stated and defined? We believed that they were not. While goals and objectives, based on Table II, are clearly stated and defined, they are defined at the hospital level and do not include effectiveness and efficiency for which there seem to be no standards or measurement and evaluation system.
11. What is the level and area of education of the Supply Officers? We believed that twenty five percent or less would have a Masters degree and none would have a degree in Logistics or Material Management. In fact, 57 percent of the respondents hold Masters degrees and none have degrees in Logistics or Material Management.
12. Does the existing training prepare the MSC Supply Officer to effectively and efficiently achieve the goals and objectives of the Material Management Service? We believed that it does not. Based on the

percent do not have desk guides for all employees. Even though 10 to 98 percent of employees at the other commands were reported as having desk guides, none reported 100 percent.

4. Are there major differences in the functions performed, and the duties and responsibilities of the Supply Officers? We would have expected that there would be no major differences. All duties and functions are prescribed by the NAVMEDCOM Organization Manual for hospitals. All hospital supply operations (purchasing, inventory control, etc.) are governed by the same NAVSUP Manuals and Publications, and acquisitions regulations. Thus, in fact, the duties, responsibilities and functions do not seem to vary.
5. Are there variances in input/outputs among the Medical Material Management Services? We expected that there would be large variances in input/output ratios. The data in Table V shows that the number of line items of inventory managed per employee ranged from 258 to 963. Table VI shows that the number of purchase actions per employee ranged from 503 to 757 for three similar hospitals (Graduate Medical Education hospitals). This seems to support the hypothesis.
6. Are there prescribed standards for effectiveness and efficiency? We believed not. The responses seem to confirm that there are no standards for effectiveness or efficiency. Each of the reports address measures of efficiency and none provided any measure of effectiveness.
7. Are there standards of performance for Supply Officers? We believed not. There seems to be no standards for effectiveness and efficiency. There seems to be no standards of performance for Supply Management.

VI. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to discuss the findings of the questionnaire survey data presented in the previous chapters. The following conclusions are based on the research questions and hypotheses discussed earlier in this study.

1. Do the environments in which the Supply Officers function vary? We believed that they would. In fact, the environments do seem to vary because of the geographic location (overseas versus U.S.), the number of organizations (NSD/NSC) which stock requisitions/purchase order have to pass through, the level of purchase authority, and the organization that controls stock funds. The turnover in COs and DASS who set and change goals and objectives causes changes in the environment for supply operations.
2. Do Supply Officers have up to date local instructions which govern their operations? We would have expected ten percent or less to have up to date local instructions. A review of table XI indicates that 53.9 percent of the respondents have them. However, the important aspect from a control standpoint is that 46.1 percent don't have up to date local instructions.
3. Do Supply Officers have desk guides with standard operating procedures for their employees? We would have expected ten percent or less to have up to date desk guides. According to Table XII, only one activity (7.1 percent) did not have any desk guides and only three activities (21.4 percent) reported having desk guides for all employees. However, 78.6

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To whom do you first submit your Standard Stock Requisitions?
 NSD () NSC () SOURCE (DLA, GSA, etc.) ()

Your customers requisition NSA items on a (weekly, biweekly, monthly, etc.) _____ basis.

FOR THE NEXT FOUR QUESTIONS IF YOU DON'T KNOW THE ANSWER WITHOUT HAVING TO COMPUTE OR RESEARCH, MARK "DK" IN THE ANSWER SPACE

Of the items that you carry, what percent are carried by your primary NSD/NSC? _____%

What is your requisitioning objective for NSD/NSC carried items? _____

What is your requisitioning objective for items not carried by your primary support NSD/NSC? _____

What percentage of your 1348's & 1149's are processed by:

- Your receiving section _____%
- Your local NSD/Support activity _____%
- An NSC _____%
- Your GEOCOM _____%

Computer support is provided by: None () In-house () Other (specify as NSD, NSC, PWC, etc.) _____

What type of computer equipment/process is utilized to run supply programs?

Manufacturer (IBM, Datapoint, etc.) _____

Model (401 EAM, 1401, etc.) _____

Mode (batch, on-line, interactive, etc.) _____

To meet your needs as a Medical Supply Officer, information should be updated (Instantaneously, daily, weekly, etc.) _____

Inventory Control Records are maintained by: Batch Process ()
 Interactive Process () Manual ()

ANSWER THE NEXT THREE QUESTIONS ONLY IF YOU UTILIZE A BATCH OR MANUAL PROCESS

Inventory updates are completed by DP/MIS on what basis?
 (Daily, weekly, etc.) _____

How many days lapse between your cut-off and receipt of update from DP/MIS? _____

Requisitions for NSD items which are generated by DP/MIS are released within how many days after you receive the update? _____

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	VERY HIGH DEGREE	VERY LOW DEGREE	DON'T KNOW
To what degree do you rely on DP/MIS for information support?	() () () () () () ()		(O)
To what degree do you require information in a timely manner?	() () () () () () ()		(O)
To what degree do you require current information?	() () () () () () ()		(O)
To what degree is DP/MIS responsive to your requests for new information? (New reports, New formats, etc.)	() () () () () () ()		(O)
	ALWAYS	NEVER	DON'T KNOW
How often does DP/MIS meet your need for current information?	() () () () () () ()		(O)
How often does DP/MIS meet your requirement for information on a timely basis?	() () () () () () ()		(O)
How often does DP/MIS satisfy your requests for further information?	() () () () () () ()		(O)

What workload/Performance reports do you prepare and to whom are they submitted? (CO, NAVMEDCOM, FMSO, NAVSUP, etc.)

REPORT TITLE	SUBMITTED TO	FREQUENCY
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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How frequently does your Commanding Officer discuss these reports with you? (Monthly, quarterly, never, etc.) _____

How frequently does your Director of Administrative Services discuss these reports with you? (Monthly, quarterly, never, etc.) _____

	VERY HIGH EXTENT		VERY LOW EXTENT		DON'T KNOW
To what extent does your Commanding Officer have a general knowledge of the Medical Supply Service?	()	()	()	()	()
To what degree is your Commanding Officer knowledgeable of the rules and regulations that govern the Medical Supply Service?	()	()	()	()	()
To what extent does your immediate superior have a general knowledge of the Medical Supply Service?	()	()	()	()	()
To what degree is your immediate superior knowledgeable of the rules and regulations that govern the Medical Supply Service?	()	()	()	()	()

*****END OF QUESTIONNAIRE*****

APPENDIX B
ACCOUNTING AND AUDITING ACT OF 1950

[CHAPTER 948]

AN ACT

September 12, 1950
[H. R. 908]
[Public Law 751]

To authorize the President to determine the form of the national budget and of departmental estimates, to modernize and simplify governmental accounting and auditing methods and procedures, and for other purposes.

Budget and Accounting Procedures Act of 1950.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Budget and Accounting Procedures Act of 1950".

TITLE I—BUDGETING AND ACCOUNTING

PART I—BUDGETING

U. S. C. 42
"Appropriations."

SEC. 101. Section 2 of the Budget and Accounting Act, 1921 (42 Stat. 20), is amended by adding at the end thereof the following:

"The term 'appropriations' includes, in appropriate context, funds and authorizations to create obligations by contract in advance of appropriations, or any other authority making funds available for obligation or expenditure."

42 Stat. 20.
31 U. S. C. § 11.
Transmittal of Budget to Congress.

SEC. 102. (a) Section 201 of such Act is amended to read as follows:

"SEC. 201. The President shall transmit to Congress during the first fifteen days of each regular session, the Budget, which shall set forth his Budget message, summary data and text, and supporting detail. The Budget shall set forth in such form and detail as the President may determine—

"(a) functions and activities of the Government;

"(b) any other desirable classifications of data;

"(c) a reconciliation of the summary data on expenditures with proposed appropriations;

"(d) estimated expenditures and proposed appropriations necessary in his judgment for the support of the Government for the ensuing fiscal year, except that estimated expenditures and proposed appropriations for such year for the legislative branch of the Government and the Supreme Court of the United States shall be transmitted to the President on or before October 15 of each year, and shall be included by him in the Budget without revision;

"(e) estimated receipts of the Government during the ensuing fiscal year, under (1) laws existing at the time the Budget is transmitted and also (2) under the revenue proposals, if any, contained in the Budget;

"(f) actual appropriations, expenditures, and receipts of the Government during the last completed fiscal year;

"(g) estimated expenditures and receipts, and actual or proposed appropriations of the Government during the fiscal year in progress;

"(h) balanced statements of (1) the condition of the Treasury at the end of the last completed fiscal year, (2) the estimated condition of the Treasury at the end of the fiscal year in progress, and (3) the estimated condition of the Treasury at the end of the ensuing fiscal year if the financial proposals contained in the Budget are adopted;

"(i) all essential facts regarding the bonded and other indebtedness of the Government; and

"(j) such other financial statements and data as in his opinion are necessary or desirable in order to make known in all practicable detail the financial condition of the Government."

(b) Section 203 of such Act is amended to read as follows:

"Sec. 203. (a) The President from time to time may transmit to Congress such proposed supplemental or deficiency appropriations as in his judgment (1) are necessary on account of laws enacted after the transmission of the Budget, or (2) are otherwise in the public interest. He shall accompany such proposals with a statement of the reasons therefor, including the reasons for their omission from the Budget.

"(b) Whenever such proposed supplemental or deficiency appropriations reach an aggregate which, if they had been contained in the Budget, would have required the President to make a recommendation under subsection (a) of section 202, he shall thereupon make such recommendation."

(c) Section 204 of such Act is amended to read as follows:

"Sec. 204. (a) Except as otherwise provided in this Act, the contents, order, and arrangement of the proposed appropriations and the statements of expenditures and estimated expenditures contained in the Budget or transmitted under section 203, and the notes and other data submitted therewith, shall conform to requirements prescribed by the President.

"(b) The Budget, and statements furnished with any proposed supplemental or deficiency appropriations, shall be accompanied by information as to personal services and other objects of expenditure in the same manner and form as in the Budget for the fiscal year 1950: *Provided*, That this requirement may be waived or modified, either generally or in specific cases, by joint action of the committees of Congress having jurisdiction over appropriation: *And provided further*, That nothing in this Act shall be construed to limit the authority of committees of Congress to request and receive such information in such form as they may desire in consideration of and action upon budget estimates."

(d) Section 205 of such Act is amended to read as follows:

"Sec. 205. Whenever any basic change is made in the form of the Budget, the President, in addition to the Budget, shall transmit to Congress such explanatory notes and tables as may be necessary to show where the various items embraced in the Budget of the prior year are contained in the new Budget."

(e) The last sentence of section 207 of such Act is amended to read as follows: "The Bureau, under such rules and regulations as the President may prescribe, shall prepare the Budget, and any proposed supplemental or deficiency appropriations, and to this end shall have authority to assemble, correlate, revise, reduce, or increase the requests for appropriations of the several departments or establishments."

(f) Section 214 of such Act is amended to read as follows:

"Sec. 214. The head of each department and establishment shall prepare or cause to be prepared in each year his requests for regular, supplemental, or deficiency appropriations."

42 Stat. 21.
21 U.S.C. 1114, 550.
Transmittals to Congress of supplemental or deficiency appropriations.

42 Stat. 21.
31 U.S.C. 111.

42 Stat. 21.
31 U.S.C. 111, 581,
582, 583, 587, 588, 589,
612, 614, 617, 618, 622-
624, 640, Supp. 111,
1st ed. note d and
Supp. ed. pp. 532-
543.

42 Stat. 21.
Basic change in
Budget.
Notes, etc., to Congress.

42 Stat. 21.
21 U.S.C. 1114, 623,
624, Supp. 111, 112,
1st ed., p. 543.

42 Stat. 21.
31 U.S.C. 111.
Departmental requests for appropriations.

42 Stat. 28
31 U. S. C. 1121, 565,
567, 568, 569, 571, 574
Amk. D. 832, post,
pp. 840, 841, 842.

(g) Section 215 of such Act is amended to read as follows:

"SEC. 215. The head of each department and establishment shall submit his requests for appropriations to the Bureau on or before a date which the President shall determine. In case of his failure to do so, the President shall cause such requests to be prepared as are necessary to enable him to include such requests with the Budget in respect to the work of such department or establishment."

42 Stat. 28
31 U. S. C. 124

(h) Section 216 of such Act is amended to read as follows:

"SEC. 216. Requests for regular, supplemental, or deficiency appropriations which are submitted to the Bureau by the head of any department or establishment shall be prepared and submitted as the President may determine in accordance with the provisions of section 201."

Amk. D. 832

GOVERNMENT STATISTICAL ACTIVITIES

SEC. 103. The President, through the Director of the Bureau of the Budget, is authorized and directed to develop programs and to issue regulations and orders for the improved gathering, compiling, analyzing, publishing, and disseminating of statistical information for any purpose by the various agencies in the executive branch of the Government. Such regulations and orders shall be adhered to by such agencies.

IMPROVED ADMINISTRATION OF EXECUTIVE AGENCIES

SEC. 104. The President, through the Director of the Bureau of the Budget, is authorized and directed to evaluate and develop improved plans for the organization, coordination, and management of the executive branch of the Government with a view to efficient and economical service.

BUSINESS-TYPE BUDGETS

31 U. S. C. 1547.

SEC. 105. The first two sentences of section 102 of the Government Corporation Control Act of 1945 (59 Stat. 597), are amended to read as follows: "Each wholly owned Government corporation shall cause to be prepared annually a business-type budget which shall be submitted to the Bureau of the Budget, under such rules and regulations as the President may establish as to the date of submission, the form and content, the classifications of data, and the manner in which such budget program shall be prepared and presented."

PART II—ACCOUNTING AND AUDITING

SHORT TITLE

Accounting and Auditing Act of 1950

SEC. 110. This part may be cited as the "Accounting and Auditing Act of 1950".

DECLARATION OF POLICY

SEC. 111. It is the policy of the Congress in enacting this part that—

(a) The accounting of the Government provide full disclosure of the results of financial operations, adequate financial information needed in the management of operations and the formulation and execution of the Budget, and effective control over income, expenditures, funds, property, and other assets.

(b) Full consideration be given to the needs and responsibilities of both the legislative and executive branches in the establishment of accounting and reporting systems and requirements.

(c) The maintenance of accounting systems and the producing of financial reports with respect to the operations of executive agencies, including central facilities for bringing together and

disclosing information on the results of the financial operations of the Government as a whole, be the responsibility of the executive branch.

(d) The auditing for the Government, conducted by the Comptroller General of the United States as an agent of the Congress be directed at determining the extent to which accounting and related financial reporting fulfill the purposes specified, financial transactions have been consummated in accordance with laws, regulations or other legal requirements, and adequate internal financial control over operations is exercised, and afford an effective basis for the settlement of accounts of accountable officers.

(e) Emphasis be placed on effecting orderly improvements resulting in simplified and more effective accounting, financial reporting, budgeting, and auditing requirements and procedures and on the elimination of those which involve duplication or which do not serve a purpose commensurate with the costs involved.

(f) The Comptroller General of the United States, the Secretary of the Treasury, and the Director of the Bureau of the Budget conduct a continuous program for the improvement of accounting and financial reporting in the Government.

ACCOUNTING AND REPORTING PROVISIONS

SEC. 112. (a) The Comptroller General of the United States, after consulting the Secretary of the Treasury and the Director of the Bureau of the Budget concerning their accounting, financial reporting, and budgetary needs, and considering the needs of the other executive agencies, shall prescribe the principles, standards, and related requirements for accounting to be observed by each executive agency, including requirements for suitable integration between the accounting processes of each executive agency and the accounting of the Treasury Department. Requirements prescribed by the Comptroller General shall be designed to permit the executive agencies to carry out their responsibilities under section 113 of this part, while providing a basis for integrated accounting for the Government, full disclosure of the results of the financial operations of each executive agency and the Government as a whole, and financial information and control necessary to enable the Congress and the President to discharge their respective responsibilities. The Comptroller General shall continue to exercise the authority vested in him by section 205 (b) of the Federal Property and Administrative Services Act of 1949 (63 Stat. 389) and, to the extent he deems necessary, the authority vested in him by section 309 of the Budget and Accounting Act, 1921 (42 Stat. 25). Any such exercise of authority shall be consistent with the provisions of this section.

(b) The General Accounting Office shall cooperate with the executive agencies in the development of their accounting systems, including the Treasury Department, in the development and establishment of the system of central accounting and reporting required by section 114 of this part. Such accounting systems shall be approved by the Comptroller General when deemed by him to be adequate and in conformity with the principles, standards, and related requirements prescribed by him.

(c) The General Accounting Office shall from time to time review the accounting systems of the executive agencies. The results of such reviews shall be available to the heads of the executive agencies concerned, to the Secretary of the Treasury, and to the Director of the Bureau of the Budget, and the Comptroller General shall make such reports thereon to the Congress as he deems proper.

Requirements for accounting.

41 U. S. C., Sup. III, § 213 (b).

31 U. S. C. §§ 49, 50, No. 132, Sup. III, § 50 note.

Development of accounting systems, etc.

Review by General Accounting Office.

Establishment of accounting systems, etc.

SEC. 113. (a) The head of each executive agency shall establish and maintain systems of accounting and internal control designed to provide—

- (1) full disclosure of the financial results of the agency's activities;
- (2) adequate financial information needed for the agency's management purposes;
- (3) effective control over and accountability for all funds, property, and other assets for which the agency is responsible, including appropriate internal audit;
- (4) reliable accounting results to serve as the basis for preparation and support of the agency's budget requests, for controlling the execution of its budget, and for providing financial information required by the Bureau of the Budget under section 213 of the Budget and Accounting Act, 1921 (42 Stat. 23);
- (5) suitable integration of the accounting of the agency with the accounting of the Treasury Department in connection with the central accounting and reporting responsibilities imposed on the Secretary of the Treasury by section 114 of this part.

31 U. S. C. § 2.

Reports by Secretary of Treasury.

(b) The accounting systems of executive agencies shall conform to the principles, standards, and related requirements prescribed by the Comptroller General pursuant to section 112 (a) of this part.

SEC. 114. (a) The Secretary of the Treasury shall prepare such reports for the information of the President, the Congress, and the public as will present the results of the financial operations of the Government: *Provided*, That there shall be included such financial data as the Director of the Bureau of the Budget may require in connection with the preparation of the Budget or for other purposes of the Bureau. Each executive agency shall furnish the Secretary of the Treasury such reports and information relating to its financial condition and operations as the Secretary, by rules and regulations, may require for the effective performance of his responsibilities under this section.

(b) The Secretary of the Treasury is authorized to establish the facilities necessary to produce the financial reports required by subsection (a) of this section. The Secretary is further authorized to reorganize the accounting functions and install, revise, or eliminate accounting procedures and financial reports of the Treasury Department in order to develop effective and coordinated systems of accounting and financial reporting in the several bureaus and offices of the Department with such concentration of accounting and reporting as is necessary to accomplish integration of accounting results for the activities of the Department and provide the operating center for the consolidation of accounting results of other executive agencies with those of the Department. The authority vested in and the duties imposed upon the Department by sections 10, 15, and 22 of the Act entitled "An Act making appropriations for the legislative, executive, and judicial branches of the Government for the fiscal year ending June thirtieth, eighteen hundred ninety-five, and for other purposes", approved July 31, 1894 (28 Stat. 162, 208-210), may be exercised and performed by the Secretary of the Treasury as a part of his broader authority and duties under this section and in such a manner as to provide a unified system of central accounting and reporting on the most efficient and useful basis.

31 U. S. C. §§ 255, 264.

(c) The system of central accounting and reporting provided for herein shall be consistent with the principles, standards, and related requirements prescribed by the Comptroller General pursuant to section 112 of this part.

SEC. 115. (a) When the Secretary of the Treasury and the Comptroller General determine that existing procedures can be modified in the interest of simplification, improvement, or economy, with sufficient safeguards over the control and accounting for the public funds, they may issue joint regulations providing for the waiving, in whole or in part, of the requirements of existing law that—

Joint regulations.

(1) warrants be issued and countersigned in connection with the receipt, retention, and disbursement of public moneys and trust funds; and

(2) funds be requisitioned, and advanced to accountable officers under each separate appropriation head or otherwise.

(b) Such regulations may further provide for the payment of vouchers by authorized disbursing officers by means of checks issued against the general account of the Treasurer of the United States: *Provided*, That in such case the regulations shall provide for appropriate action in the event of delinquency by disbursing officers in the rendition of their accounts or for other reasons arising out of the condition of the officers' accounts, including under necessary circumstances, the suspension or withdrawal of authority to disburse.

SEC. 116. The Comptroller General is authorized to discontinue the maintenance in the General Accounting Office of appropriation, expenditure, limitation, receipt, and personal ledger accounts when in his opinion the accounting systems and internal control of the executive, legislative, and judicial agencies are sufficient to enable him to perform properly the functions to which such accounts relate.

Discontinuance of accounts in General Accounting Office.

AUDITING PROVISIONS

SEC. 117. (a) Except as otherwise specifically provided by law, the financial transactions of each executive, legislative, and judicial agency, including but not limited to the accounts of accountable officers, shall be audited by the General Accounting Office in accordance with such principles and procedures and under such rules and regulations as may be prescribed by the Comptroller General of the United States. In the determination of auditing procedures to be followed and the extent of examination of vouchers and other documents, the Comptroller General shall give due regard to generally accepted principles of auditing, including consideration of the effectiveness of accounting organizations and systems, internal audit and control, and related administrative practices of the respective agencies.

Audits by General Accounting Office.

(b) Whenever the Comptroller General determines that the audit shall be conducted at the place or places where the accounts and other records of an executive agency are normally kept, he may require any executive agency to retain in whole or in part accounts of accountable officers, contracts, vouchers, and other documents, which are required under existing law to be submitted to the General Accounting Office, under such conditions and for such period not exceeding ten years as he may specify, unless a longer period is agreed upon with the executive agency: *Provided*, That under agreements between the Comptroller General and legislative and judicial agencies the provisions of this sentence may be extended to the accounts and records of such agencies.

Retention of accounts, etc.

GENERAL PROVISIONS

SEC. 118. As used in this part, the term "executive agency" means any executive department or independent establishment in the executive branch of the Government but (a) except for the purposes of sections 114, 116, and 119 shall not include any Government corporation or agency subject to the Government Corporation Control Act

"Executive agency."

558

PUBLIC LAWS—CH. 946—SEPT. 12, 1950

[64 STAT.]

51 U. S. C. § 1041-1050,
Sup. III, § 546 et seq.
Amr. p. 534.
Administrative ex-
amination of accounts.

(59 Stat. 597), and (b) except for the purposes of sections 111, 114, and 116 shall not include the Post Office Department.

SEC. 119. The head of each executive agency is authorized to designate the place or places, at the seat of government or elsewhere, at which the administrative examination of fiscal officers' accounts will be performed, and with the concurrence of the Comptroller General to waive the administrative examination in whole or in part: *Provided*, That the same authority is hereby conferred upon the officers responsible for the administrative examination of accounts for legislative and judicial agencies.

TITLE II—APPROPRIATIONS.

AUTHORIZATIONS FOR APPROPRIATIONS

SEC. 201. No requests for legislation, which, if enacted, would authorize subsequent appropriations for a department or establishment in the executive branch of the Government, shall be transmitted to the Bureau of the Budget, to the President, or to the Congress by such department or establishment, or by any organization unit thereof, without the prior approval of the head of such department or establishment.

ADJUSTMENT OF APPROPRIATIONS FOR REORGANIZATION

SEC. 202. (a) When under authority of law a function or an activity is transferred or assigned from one agency within any department or establishment to another agency in the same department or establishment, the balance of appropriations which are determined by the head of such department or establishment to be available and necessary to finance or discharge the function or activity so transferred or assigned may, with the approval of the President, be transferred to, and be available for use by, the agency to which said function or activity is transferred or assigned for any purpose for which said funds were originally available. Balances so transferred shall be credited to any applicable existing appropriation account or accounts, or to any new appropriation account or accounts, which are hereby authorized to be established, and shall be merged with funds in the applicable existing or newly established appropriation account or accounts and thereafter accounted for as one fund.

(b) When under authority of law a function or activity is transferred or assigned from one department or establishment to another department or establishment, the balance of appropriations which are determined by the President to be available and necessary to finance or discharge the function or activity so transferred or assigned, shall be transferred to and be available for use by the department or establishment to which said function or activity is transferred or assigned for any purpose for which said funds were originally available. Balances so transferred shall be credited to any applicable existing appropriation account or accounts, or to any new appropriation account or accounts, which are hereby authorized to be established, and shall be merged with funds in the applicable existing or newly established appropriation account or accounts and thereafter accounted for as one fund.

TITLE III—REPEALS AND SAVING PROVISIONS

REPEALS

SEC. 301. The following Acts and parts of Acts are hereby repealed:

(1) Section 10 of the Act of August 1, 1914 (38 Stat. 680; U. S. C. title 31, sec. 582)

APPENDIX C

FMFIA

96 STAT. 814

PUBLIC LAW 97-255—SEPT 8 1982

Public Law 97-255
97th Congress

An Act

Sept. 8, 1982
[H. R. 1526]

To amend the Accounting and Auditing Act of 1950 to require ongoing evaluations and reports on the adequacy of the systems of internal accounting and administrative control of each executive agency, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*Federal
Managers
Financial
Integrity Act of
1982
31 USC 66 note

SECTION 1. This Act may be cited as the "Federal Managers' Financial Integrity Act of 1982."

SEC. 2. Section 113 of the Accounting and Auditing Act of 1950 (31 U.S.C. 66a) is amended by adding at the end thereof the following new subsection:

Internal
Accounting and
administrative
controls
Establishment

"(d)(1)(A) To ensure compliance with the requirements of subsection (a)(3) of this section, internal accounting and administrative controls of each executive agency shall be established in accordance with standards prescribed by the Comptroller General, and shall provide reasonable assurances that—

"(i) obligations and costs are in compliance with applicable law;

"(ii) funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and

"(iii) revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets.

"(B) The standards prescribed by the Comptroller General under this paragraph shall include standards to ensure the prompt resolution of all audit findings.

Evaluation
guidelines

"(2) By December 31, 1982, the Director of the Office of Management and Budget, in consultation with the Comptroller General, shall establish guidelines for the evaluation by agencies of their systems of internal accounting and administrative control to determine such systems' compliance with the requirements of paragraph (1) of this subsection. The Director, in consultation with the Comptroller General, may modify such guidelines from time to time as deemed necessary.

Modification

Compliance,
statement

"(3) By December 31, 1983, and by December 31 of each succeeding year, the head of each executive agency shall, on the basis of an evaluation conducted in accordance with guidelines prescribed under paragraph (2) of this subsection, prepare a statement—

"(A) that the agency's systems of internal accounting and administrative control fully comply with the requirements of paragraph (1); or

"(B) that such systems do not fully comply with such requirements.

Report

"(4) In the event that the head of an agency prepares a statement described in paragraph (3)(B), the head of such agency shall include with such statement a report in which any material weaknesses in the agency's systems of internal accounting and administrative

PUBLIC LAW 97-255—SEPT. 8, 1982

96 STAT. 815

control are identified and the plans and schedule for correcting any such weakness are described.

"(5) The statements and reports required by this subsection shall be signed by the head of each executive agency and transmitted to the President and the Congress. Such statements and reports shall also be made available to the public, except that, in the case of any such statement or report containing information which is—

Statements and reports transmitted to President and Congress, availability to public

"(A) specifically prohibited from disclosure by any provision of law, or

"(B) specifically required by Executive order to be kept secret in the interest of national defense or the conduct of foreign affairs,

such information shall be deleted prior to the report or statement being made available to the public."

SEC. 3. Section 201 of the Budget and Accounting Act, 1921 (31 U.S.C. 11), is amended by adding at the end thereof the following new subsection:

"(k)(1) The President shall include in the supporting detail accompanying each Budget submitted on or after January 1, 1983, a separate statement, with respect to each department and establishment, of the amounts of appropriations requested by the President for the Office of Inspector General, if any, of each such establishment or department.

Appropriations

"(2) At the request of a committee of the Congress, additional information concerning the amount of appropriations originally requested by any office of Inspector General, shall be submitted to such committee."

SEC. 4. Section 113(b) of the Accounting and Auditing Act of 1950 (31 U.S.C. 66a(b)), is amended by adding at the end thereof the following new sentence: "Each annual statement prepared pursuant to subsection (d) of this section shall include a separate report on whether the agency's accounting system conforms to the principles, standards, and related requirements prescribed by the Comptroller General under section 112 of this Act."

Agency's accounting system

31 USC 66a

Approved September 8, 1982.

LEGISLATIVE HISTORY—H.R. 1526 (S. 864)

HOUSE REPORT No. 97-38 (Comm. on Government Operations)
CONGRESSIONAL RECORD

Vol. 127 (1981) May 18, considered and passed House

Vol. 128 (1982) Aug. 4, considered and passed Senate, amended

Aug. 19, House concurred in Senate amendment



APPENDIX D
OMB CIRCULAR A-123



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

October 28, 1981

CIRCULAR No. A-123

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Internal Control Systems

1. Purpose. This Circular prescribes policies and standards to be followed by executive departments and agencies in establishing and maintaining internal controls in their program and administrative activities.
2. Background. The Budget and Accounting Procedures Act of 1950 requires the head of each department and agency to establish and maintain adequate systems of internal control. The Antideficiency Act, 31 U.S.C. 665, requires that agency systems for the control of funds be approved by the Director of OMB. Despite these statutory requirements, there continue to be numerous instances of fraud, waste, and abuse of Government resources and of mismanagement of Government programs. These problems frequently result from weaknesses in internal controls or from breakdowns in compliance with internal controls.
3. Policy. Agencies shall maintain effective systems of accounting and administrative control. All levels of management shall involve themselves in assuring the adequacy of controls. New programs shall be designed so as to incorporate effective systems of internal control. All systems shall be evaluated on an ongoing basis.
4. Definitions. For the purpose of this Circular, the following terms are defined:
 - a. Agency -- any department or independent establishment of the executive branch.
 - b. Agency Component -- a major organization, program, or functional subdivision of an agency having one or more separate systems of internal control.
 - c. Internal Controls -- the plan of organization and all of the methods and measures adopted within an agency to safeguard its resources, assure the accuracy and reliability of its information, assure adherence to applicable laws, regulations and policies, and promote operational economy and efficiency.

d. Internal Control Documentation -- written policies, organization charts, procedural write-ups, manuals, memoranda, flow charts, decision tables, completed questionnaires, software, and related written materials used to describe the internal control methods and measures, to communicate responsibilities and authorities for operating such methods and measures, and to serve as a reference for persons reviewing the internal controls and their functioning.

e. Internal Control System -- the totality of the methods and measures of internal control for all or part of an agency.

f. Vulnerability Assessment -- a review of the susceptibility of an agency or program to loss or unauthorized use of resources, errors in reports and information, illegal or unethical acts, and/or adverse or unfavorable public opinion.

g. Internal Control Review -- a detailed examination of an agency's or agency component's system of internal control to determine whether adequate control measures exist and are implemented to prevent or detect the occurrence of potential risks in a cost effective manner.

5. Responsibility. Designing, installing and monitoring internal control systems for their effectiveness and identifying and initiating needed changes is the responsibility of the agency head. The Inspector General, or his equivalent in agencies without an Inspector General, also has a responsibility in regard to internal controls, as explained in paragraph 5b.

a. Agency heads are responsible for the establishment and maintenance of a system or systems of internal control within their agencies. This responsibility includes determining that the system is functioning as prescribed and is modified, as appropriate, for changes in conditions.

Each agency head shall issue an internal control directive (if one does not exist) and a review plan by March 31, 1982 (see paragraph 8). Where additional internal control directives are required for agency components, the head of the agency shall ensure that such directives are consistent with the agency directive.

b. The Inspector General, or the senior audit official where there is no Inspector General, will, in conjunction with internal audits, review internal control documentation, systems, and compliance to determine whether the policies and standards established by this Circular are being implemented properly. Reviews should also be made of the audit follow-up system in order to ensure management's follow-up of audit findings and recommendations. Additional reviews will be performed as necessary to provide sufficient agency coverage.

AD-A152 284

AN ANALYSIS OF INTERNAL CONTROLS FOR MATERIAL
MANAGEMENT OPERATIONS WITHIN NAVY MEDICAL COMMAND
ACTIVITIES(U) NAVAL POSTGRADUATE SCHOOL MONTEREY CA
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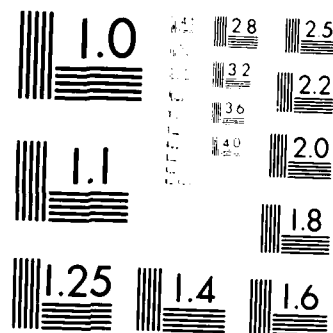
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6. Objectives of Internal Control. The objectives of internal control are to provide management with reasonable, but not absolute, assurance that financial and other resources are safeguarded from unauthorized use or disposition; transactions are executed in accordance with authorizations; financial and statistical records and reports are reliable; applicable laws, regulations and policies are adhered to; and resources are efficiently and effectively managed.
7. Standards of Internal Control. Certain basic standards shall be adhered to in the system(s) of internal control established by an agency or agency component. These include:
 - a. Documentation -- Internal controls, accountability for resources, and all financial transactions shall be clearly documented, and documentation shall readily be available.
 - b. Recording of Transactions -- Transactions shall be recorded as executed, when executed, and be properly classified.
 - c. Execution of Transactions -- Independent evidence shall be maintained that authorizations are issued by persons acting within the scope of their authority and that transactions conform with the terms of the authorizations.
 - d. Separation of Duties -- Key duties such as authorizing, approving, recording transactions, issuing or receiving assets, making payments, and reviewing or auditing shall be assigned to separate individuals to minimize the risk of loss to the Government. Internal control depends largely on the elimination of opportunities to conceal errors or irregularities. This in turn depends on the assignment of work in such a fashion that no one individual controls all phases of an activity or transaction, thereby creating a situation that permits error or irregularities to go undetected.
 - e. Supervision -- Qualified and continuous supervision shall be provided to assure that approved procedures are followed. Lines of personal responsibility and accountability shall be clear.
 - f. Access to Resources -- Access to resources shall be limited to authorized personnel. Access includes both direct physical access and indirect access through the preparation or processing of documents that authorize the use or disposition of resources. Periodic comparison shall be made of the

resources with the recorded accountability to determine whether the two agree. The frequency of the comparison shall be a function of the vulnerability of the asset.

g. Competent Personnel -- Reasonable care shall be taken that key personnel have high standards of integrity, and are competent, by education, training or experience to accomplish their assigned duties.

h. Reasonable Assurance -- Internal control systems shall provide reasonable, but not absolute, assurance that the objectives of the system will be accomplished. This standard recognizes that the cost of internal controls should not exceed the benefits derived therefrom, and that the benefits consist of reductions in the risks of failing to achieve the stated objectives.

8. Requirements for Agency Internal Control Directive and Plans.
An agency directive and accompanying plan required by paragraph 5 will, at a minimum:

a. Identify an appropriate official, establish an internal control committee, or otherwise establish specific responsibility for seeing that agency internal control systems are developed (where they do not exist), maintained, reviewed, and improved as necessary.

b. Provide for coordination between program managers and technical staffs, including the Office of Inspector General or its equivalent in agencies without an Inspector General, in matters concerning internal control.

c. Assign responsibility for internal control to specific officials in each component of the agency and provide that performance appraisals reflect accomplishments of this responsibility.

d. Require each internal control system to meet the standards of internal control described in paragraph 7.

e. Provide a plan by March 31, 1982 for vulnerability assessments covering all agency components to be accomplished by December 31, 1984, and as frequently as circumstances warrant thereafter, but not less frequently than biennially. Such assessments should be used to determine when and in what sequence reviews of the effectiveness of internal controls should be performed and systems improved or documented.

Vulnerability assessments should consider, but need not be limited to, the following: newness of the program, dollar value of the program, nature of the program and its clientele, recent changes in program control or resource levels, impact of the program on persons or organizations external to the agency, the appreciation for effective internal control by

persons operating the program, assumed effectiveness of existing controls, recent instances of errors or irregularities, and the interval since the most recent evaluation or audit.

f. Provide for internal control reviews on an ongoing basis to determine whether the controls are operating as intended and are effective. These reviews should identify internal controls that need to be strengthened or streamlined. They should be a part of normal management and budget analyses and should draw on available audit reports and other sources.

The frequency of the reviews shall be determined by the Inspector General and/or the agency head. The Inspector General may do a review at any time.

g. Establish administrative procedures to enforce the intended functioning of the internal controls. Included in the procedures should be notations in performance appraisals for positive accomplishments related to internal controls, appropriate disciplinary actions for violations of internal controls, and correction of internal control weaknesses, however identified.

These procedures should also include reports to the agency head on all significant internal control breakdowns and financial losses, in accordance with criteria established by the agency head. Reporting and discipline for lesser violations may be handled at lower levels.

9. Specific Internal Control Guides. Models and other guidelines for internal controls for specialized aspects of agency operations will be developed from time-to-time and issued separately to aid agencies in designing specific internal control systems.
10. Reporting. Agencies may be required to include information on financial losses, system breakdowns and progress in making system reviews as part of their annual report to OMB on financial management improvement.
11. Effective Date. This Circular is effective on publication.
12. Inquiries. All questions or inquiries should be addressed to the Financial Management Branch, Office of Management and Budget, telephone number 202/395-4773.
13. Sunset Review Date. This Circular shall have an independent policy review to ascertain its effectiveness three years from the date of issuance.

David A. Stockman
David A. Stockman
Director

APPENDIX E
CIRCULAR A-123 (REVISED)



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

AUG 16 1983

CIRCULAR No. A-123
Revised

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Internal Control Systems

1. Purpose. This Circular prescribes policies and standards to be followed by executive departments and agencies in establishing, maintaining, evaluating, improving, and reporting on internal controls in their program and administrative activities.
2. Rescission. This revision replaces Circular No. A-123, "Internal Control Systems," dated October 28, 1981.
3. Background. The Accounting and Auditing Act of 1950 requires the head of each department and agency to establish and maintain adequate systems of internal control. Office of Management and Budget (OMB) Circular A-123, issued in October 1981, promulgated internal control standards and a system of agency responsibilities and requirements to address the numerous instances of fraud, waste, and abuse of Government resources and mismanagement of Government programs resulting from weaknesses in internal controls or breakdowns in compliance with internal controls.

The Federal Managers' Financial Integrity Act, P.L. 97-255, (hereafter referred to as the Act), amended the Accounting and Auditing Act of 1950. The Act's requirements and objectives are basically the same as the original Circular's, except that the internal accounting and administrative control standards are to be prescribed by the Comptroller General; annual evaluations are to be conducted by each executive agency of its system of internal accounting and administrative control, in accordance with guidelines established for such evaluations by the Director of the Office of Management and Budget; and an annual statement is to be submitted by the head of each executive agency to the President and the Congress on the status of the agency's system of internal control. The guidelines, entitled "Guidelines for the Evaluation and Improvement of and Reporting on Internal Control Systems in the Federal Government" were issued in December 1982.

In addition to the requirements of the Act, 31 U.S.C. 1514 requires that agency systems for the control of funds be approved by the Director of OMB. These requirements are prescribed by Circular A-34, "Budget Execution."

4. Policy. Agencies shall maintain effective systems of accounting and administrative control. All levels of management shall involve themselves in assuring the adequacy of controls. New programs shall incorporate effective systems of internal control. All systems shall be evaluated on an ongoing basis, and weaknesses, when detected, shall be promptly corrected. Reports shall be issued, as required, on internal control activities and the results of evaluations.
5. Definitions. For the purpose of this Circular, the following terms are defined:
 - a. Agency -- any department or independent establishment in the executive branch.
 - b. Agency Component -- a major organization, program or functional subdivision of an agency having one or more separate systems of internal control.
 - c. Control Objective -- a desired goal or condition for a specific event cycle that reflects the application of the overall objectives of internal control to that specific cycle. /1
 - d. Internal Control -- the plan of organization and methods and procedures adopted by management to provide reasonable assurance that obligations and costs are in compliance with applicable law; funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation; and revenues and expenditures applicable to agency operations are properly recorded and accounted for to permit the preparation of accounts and reliable financial and statistical reports and to maintain accountability over the assets.

/1 Control objectives are not absolutes. Since the achievement of control objectives can be and is affected by such factors as budget constraints, statutory and regulatory restrictions, staff limitations, and cost-benefit considerations, the lack of achievement of control objectives does not necessarily represent a defect or deficiency in internal control requiring correction. Such limiting factors need to be considered in determining whether there is reasonable assurance the control objectives are being achieved.

e. Internal Control Documentation -- written policies, organization charts, procedural write-ups, manuals, memoranda, flow charts, decision tables, completed questionnaires, software, and related written materials used to describe the internal control methods and measures, to communicate responsibilities and authorities for operating such methods and measures, and to serve as a reference for persons reviewing the internal controls and their functioning.

f. Internal Control Guidelines -- the guidelines issued by OMB in December 1982, entitled "Guidelines for the Evaluation and Improvement of and Reporting on Internal Control Systems in the Federal Government".

g. Internal Control Review -- a detailed examination of a system of internal control to determine whether adequate control measures exist and are implemented to prevent or detect the occurrence of potential risks in a cost effective manner.

h. Internal Control Standards -- the standards issued by the Comptroller General on June 1, 1983, for use in establishing and maintaining systems of internal control. These are applicable to all operations and administrative functions but are not intended to limit or interfere with duly granted authority related to development of legislation, rulemaking, or other discretionary policymaking in an agency.

i. Internal Control System -- the sum of the organization's methods and measures used to achieve the objectives of internal control.

j. Internal Control Technique -- processes and documents that are being relied on to efficiently and effectively accomplish an internal control objective and thus help safeguard an activity from waste, loss, unauthorized use, or misappropriation.

k. Material Weakness -- a situation in which the designed procedures or degree of operational compliance therewith does not provide reasonable assurance that the objectives of internal control specified in the Act are being accomplished.

1. Vulnerability Assessment -- a review of the susceptibility of a program or function to waste, loss, unauthorized use, or misappropriation.

6. Responsibility. The head of each agency is responsible for ensuring that the design, installation, evaluation, and improvement of internal controls, and issuance of reports on the agency's internal control systems are in accordance with the requirements of the Act and the guidance contained in the Internal Control Guidelines. Designated internal control officials and heads of organizational units within agencies have responsibilities for ensuring the performance of necessary internal control evaluations and providing assurances to the agency head. These responsibilities are described in paragraphs 6b and c. The Inspector General, or equivalent in agencies without an Inspector General, has a limited responsibility in regard to internal controls, as explained in paragraph 6d.

a. Agency heads are responsible for establishing and maintaining the system of internal control within their agencies. This includes determining that the system is established in accordance with the standards prescribed by the Comptroller General and that it provides reasonable assurance that the objectives of internal control, as described in paragraph 7, are met. It also includes determining that the system is functioning as prescribed and is modified, as appropriate, for changes in conditions.

b. A designated senior official shall be responsible for coordinating the overall agency-wide effort of evaluating, improving and reporting on internal control systems in accordance with the Internal Control Guidelines. This responsibility includes providing assurance to the agency head that those processes were conducted in a thorough and conscientious manner.

c. Heads of organizational units are responsible for the system of internal control in their units. This responsibility includes providing to the agency head assurance that he or she is cognizant of the importance of internal controls; has performed the evaluation process in accordance with the Internal Control Guidelines and in a conscientious manner; and believes the objectives of internal control are being complied with in his or her area of responsibility within prescribed limits.

d. The Inspector General (IG), or the senior audit official where there is no Inspector General, is encouraged to provide technical assistance in the agency effort to evaluate and improve internal controls. This would be in addition to the reviews of internal control documentation and systems, undertaken at the IG's initiative or at the request of the agency head, and the reports issued as a result of these reviews.

e. In addition, the IG may advise the agency head whether the agency's internal control evaluation process has been conducted in accordance with the Internal Control Guidelines. Performing the limited review required to provide such advice should not be interpreted to preclude the IG from providing technical assistance in the agency effort to evaluate and improve internal controls, or otherwise limit the authority of the IG. The extent of IG involvement in the agency's internal control evaluation, improvement and reporting process should be coordinated among the agency head, IG, and the designated internal control official.

7. Objectives of Internal Control. The objectives of internal control, as specified in the Act, are to provide management with reasonable assurance that:

- a. Obligations and costs comply with applicable law.
- b. Assets are safeguarded against waste, loss, unauthorized use, and misappropriation.
- c. Revenues and expenditures applicable to agency operations are recorded and accounted for properly so that accounts and reliable financial and statistical reports may be prepared and accountability of the assets may be maintained.

The objectives of internal control apply to all program and administrative activities.

8. Internal Control Standards. An agency's or agency component's system of internal control shall be established and maintained in accordance with the standards prescribed by the Comptroller General as presented below. OAG commentary on selected standards is contained in the bracketed paragraphs.

3. General Standards

1. Reasonable Assurance. Internal control systems are to provide reasonable assurance that the objectives of the systems will be accomplished.

[This standard recognizes that the cost of internal control should not exceed the benefits derived therefrom and that the benefits consist of reductions in the risks of failing to achieve the stated control objectives.]

2. Supportive Attitude. Managers and employees are to maintain and demonstrate a positive and supportive attitude toward internal controls at all times.

3. Competent Personnel. Managers and employees are to have personal and professional integrity and are to maintain a level of competence that allows them to accomplish their assigned duties, as well as understand the importance of developing and implementing good internal controls.

4. Control Objectives. Internal control objectives are to be identified or developed for each agency activity and are to be logical, applicable, and reasonably complete.

5. Control Techniques. Internal control techniques are to be effective and efficient in accomplishing their internal control objectives.

[Internal control techniques are to be designed for and operated in all agency programs and administrative activities in order to accomplish the control objectives consistently.]

3. Specific Standards

1. Documentation. Internal control systems and all transactions and other significant events are to be clearly documented, and the documentation is to be readily available for examination.

2. Recording of Transactions and Events. Transactions and other significant events are to be promptly recorded and properly classified.

3. Execution of Transactions and Events. Transactions and other significant events are to be authorized and executed only by persons acting within the scope of their authority.

[Independent evidence is to be maintained that authorizations are issued by persons acting within the scope of their authority and that the transactions conform with the terms of the authorizations.]

4. Separation of Duties. Key duties and responsibilities in authorizing, processing, recording, and reviewing transactions should be separated among individuals.

[Key duties such as authorizing, approving, and recording transactions, issuing or receiving assets, making payments, and reviewing or auditing are to be assigned to separate individuals to minimize the risk of loss to the government. Internal control depends largely on the reduced opportunities to make and conceal errors or to engage in or conceal irregularities. This, in turn depends on the assignment of work so that no one individual controls all phases of an activity or transaction, thereby creating a situation that permits errors or irregularities to go undetected.]

5. Supervision. Qualified and continuous supervision is to be provided to ensure that internal control objectives are achieved.

[Qualified and continuous supervision also is to ensure that approved procedures are followed. Lines of personal responsibility and accountability are to be clearly established.]

6. Access to and Accountability for Resources. Access to resources and records is to be limited to authorized individuals, and accountability for the custody and use of resources is to be assigned and maintained. Periodic comparison shall be made of the resources with the recorded accountability to determine whether the two agree. The frequency of the comparison shall be a function of the vulnerability of the asset.

c. Audit Resolution Standard

1. Promot Resolution of Audit Findings. Managers are to (1) promptly evaluate findings and recommendations reported by auditors, (2) determine proper actions in response to audit findings and recommendations, and (3) complete, within established time frames, all actions that correct or otherwise resolve the matters brought to management's attention.

9. Requirements for Agency Internal Control Directive. Each agency shall update its internal control directive which will, at a minimum:

a. Establish specific responsibilities for seeing that agency internal control systems are developed (where they do not exist), maintained, evaluated, improved as necessary, and reported upon in accordance with the Internal Control Guidelines.

b. Provide for coordination among the designated internal control official, heads of organizational units, program managers, and technical staffs, including the Office of Inspector General or its equivalent in agencies without an Inspector General, in matters concerning internal control.

c. Assign responsibility for internal control to appropriate levels of management in each agency component and establish administrative procedures to enforce the intended functioning of internal controls. These procedures should require performance agreements for each Senior Executive Service and Merit Pay or equivalent employee with significant management responsibility to include fulfillment of assigned internal (i.e., management) control responsibilities; notations in performance appraisals for positive accomplishments related to internal controls; appropriate disciplinary action for violations of internal controls; and timely correction of internal control weaknesses, however identified.

d. Require each internal control system to meet the standards of internal control described in paragraph 3.

e. Provide for an ongoing program of vulnerability assessments covering all agency components and assessable units. Assessments shall be accomplished as frequently as circumstances warrant. Agencies shall assure the evaluation of each assessable unit at least once every two years.

f. Provide for internal control reviews, audits, increased or improved monitoring procedures or other processes on an ongoing basis to determine whether the controls are operating as intended and are effective. These reviews or other actions should identify internal controls that need to be strengthened or streamlined. The timing of the reviews or other actions shall be determined based upon the results of the vulnerability assessments, management priorities, resource availability, and other management initiatives planned or underway.

10. Follow-up Actions. The recommendations resulting from vulnerability assessments and internal control reviews should be considered by management on a timely basis and appropriate corrective actions should be taken as promptly as possible. A formal follow-up system should be established that records and tracks recommendations and projected action dates, and monitors whether the changes are made as scheduled. The existing audit follow-up system maintained by the designated agency follow-up official could be used for this purpose.
11. Specific Internal Control Guides. Models and other guidelines for internal controls for specialized aspects of agency operations will be developed from time to time and issued separately to aid agencies in designing specific internal control systems.
12. Reporting. By December 31, 1983, and by each succeeding December 31, the head of each executive agency subject to P.L. 97-255 (31 U.S.C. 3512) shall submit a statement to the President and to the Congress stating whether the evaluation of internal controls was conducted in accordance with the Internal Control Guidelines, stating whether the agency's system of internal accounting and administrative control complies with the Comptroller General's standards and provides reasonable assurance

MATERIAL LOGISTICS SUPPORT

- 1 THE NAVAL POSTGRADUATE SCHOOL OFFERS A 6-QUARTER PROGRAM LEADING TO A MASTER OF SCIENCE DEGREE IN MANAGEMENT. THE MATERIAL LOGISTICS SUPPORT CURRICULUM LEADS TO THE XX32P SUBSPECIALTY CODE.
- 2 THE SPONSOR FOR THE XX32P COMMUNITY IS NAVMAT-02.
- 3 SELF-STUDY PREPARATION IS STRONGLY RECOMMENDED. REFRESHER MATHEMATICS AND SOME OF THE REQUIRED COURSES ARE AVAILABLE AS PROGRAMMED SELF-INSTRUCTION COURSES THROUGH THE NAVAL POSTGRADUATE SCHOOL OFFICE OF CONTINUING EDUCATION (AV 878-2568).

MATERIAL LOGISTICS SUPPORT EDUCATIONAL SKILL REQUIREMENTS (ESRS)

THE STUDENT UPON GRADUATION, WILL HAVE ACQUIRED THE FOLLOWING SKILLS:

- 1 THOROUGH UNDERSTANDING OF MANAGERIAL THEORY AND PRINCIPLES.
- 2 THOROUGH KNOWLEDGE OF ORGANIZATIONAL PLANNING, COORDINATING, AND CONTROL SYSTEMS: DIAGNOSIS, DESIGN, IMPLEMENTATION AND OPERATION.
- 3 KNOWLEDGE OF THE THEORIES AND PRINCIPLES OF FINANCE, PHYSICAL DISTRIBUTION AND PRODUCTION.
- 4 THOROUGH KNOWLEDGE OF RESOURCE ALLOCATION PRINCIPLES AND PROCESSES INCLUDING KNOWLEDGE OF THE PPBS AND DON BUDGETING AND EXECUTION SYSTEMS.
- 5 GENERAL KNOWLEDGE OF SYSTEMS DESIGN AND ANALYSIS THEORY AND PRACTICE INCLUDING RELIABILITY, MAINTAINABILITY, CONFIGURATION MANAGEMENT, SYSTEMS INTERPRETATION, QUALITY ASSURANCE, AND SYSTEMS PERFORMANCE MEASUREMENT.
- 6 THOROUGH KNOWLEDGE OF THE LIFE CYCLE OF COSTING, COST-BENEFIT ANALYSIS, OPTIMIZATION TECHNIQUES, AND PROBABILITY MODELS AND STATISTICS.
- 7 KNOWLEDGE OF THE LIFE CYCLE OF SYSTEMS: RESEARCH, DEVELOPMENT, PRODUCTION, PROVISIONING, OPERATION, MAINTENANCE AND LOGISTICS SUPPORT.
- 8 GENERAL FAMILIARITY WITH LOGISTICS SUPPORT FOR OPERATIONAL AND CONTINGENCY PLANNING.
- 9 KNOWLEDGE OF THE CIVIL SERVICE SYSTEM, CAREER PLANNING AND MANPOWER REQUIREMENTS DETERMINATION AS RELATED TO THE FORMULATION AND EXECUTION OF LOGISTICS POLICY.
- 10 UNDERSTAND THE STRUCTURE AND PROCESS OF THE DON, DOD LOGISTICS SYSTEM INCLUDING INTEGRATED LOGISTIC SUPPORT PLANNING.
- 11 GENERAL KNOWLEDGE OF ACQUISITION AND CONTRACT MANAGEMENT.
- 12 KNOWLEDGE OF MANAGEMENT INFORMATION SYSTEMS AND THEIR EFFICIENT AND EFFECTIVE USE IN THE NAVY.

CURRICULUM COURSES AND COURSE OPTIONS IN MATERIAL LOGISTICS

1. IN ADDITION TO THE FUNDAMENTAL AND CORE COURSES, WHICH MUST BE TAKEN OR VALIDATED BY ALL MANAGEMENT SCIENCE STUDENTS, THOSE IN THE MATERIAL MOVEMENT CURRICULUM MUST TAKE THE FOLLOWING CURRICULUM COURSES:

MN 372 MATERIAL LOGISTICS

OR

MN 377 INVENTORY MANAGEMENT (REQUIRED ONLY OF USN SUPPLY CORP OFFICERS)

MN 380 LOGISTICS ENGINEERING

MN 374 PRODUCTION MANAGEMENT

MN 415 OPERATIONAL AUDITING IN THE PUBLIC SECTOR (REQUIRED ONLY OF USN SUPPLY CORP OFFICERS)

2. THE REMAINDER OF COURSES TO MEET THE MS DEGREE AND XX32P SUBSPECIALTY CODE REQUIREMENTS ARE SELECTED FROM THE FOLLOWING CURRICULUM OPTIONS:

MN 371 CONTRACTS MANAGEMENT AND ADMINISTRATION

MN 381 INTRODUCTION TO SYSTEMS ACQUISITION AND PROJECT MANAGEMENT

MN 383 TRANSPORTATION MANAGEMENT

GA 3501 INVENTORY I

MN 385 MATERIAL HANDLING SYSTEMS DESIGN

OS 402 INTRODUCTION TO QUALITY ASSURANCE

OS 401 RELIABILITY, MAINTAINABILITY

3. IN ADDITION TO THE COURSE REQUIREMENTS REFLECTED IN THE COURSE MATRIX ALL STUDENTS MUST TAKE VALIDATE COURSES IN INTRODUCTORY COMPUTERS AND PROGRAMMING

APPENDIX G

MATERIAL LOGISTICS SUPPORT CURRICULUM AT NPS

NAVAL POSTGRADUATE SCHOOL



DEPARTMENT
OF
ADMINISTRATIVE SCIENCES
MASTER OF SCIENCE
IN
MANAGEMENT
MATERIAL LOGISTIC
SUPPORT
CURRICULUM

ACTIVITY	UTC	Q	PMOS	SMOS	SSC	POSITION	PSUBS	SSUBS	AQD1	AQD2	AQD3	AQD4	AQD5	SSC	SSC	GL
NAVVEDCOM MATCAPREG SFTN	00148	K	0641		20040	EQUIP PGM MCR	18127		6VB							
NAVVEDCOM MATCAPREG SFTN	00148	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM EUNDOFS	68720	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM MIDATLANTIC	68816	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM NORTHWEST	68097	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM NORTHEAST	68092	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM SOUTHEAST	68083	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM SOUTHWEST	68056	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
NAVVEDCOM PACIFIC	68721	Q	0640		10070	ACOS LOGISTICS			6V1	6VB						MM
FLNORPSUPPOFF OAKLAND CA	68610	M	0641	1055	00700	STAFF PLANS/FISCAL	18128	00318	6VQ	6VB	6VA			746		
FLNORPSUPPOFF OAKLAND CA	68610	J	0829	0641	00410	STAFF MSC	18128		6VQ	6VB						
FLNORSP PHL-300 WASH DC	68838	M	2163	0640	00400	DESIG PJ MEDICAL SYS	18127		6V1	6VQ	6VB			408		MM
NAVVEDCLINIC FT RUEBEN	68099	J	0641	1055	19000	MD MATERIAL MANAGEMENT	18128	00318	6VB							
NAVVEDCLINIC QUANTICO	00231	J	0641	1055	19000	MD MATERIAL MANAGEMENT	18128	00318	6VB							
NAVVEDSP BEAUFORT	61337	J	0641		19000	MD MATERIAL MANAGEMENT	18128		6VB							
NAVVEDSP CHERRY POINT	68094	J	0641		19000	MD MATERIAL MANAGEMENT	18128		6VB							
NAVVEDSP UNIDREY IS	68097	J	0641		19000	MD MATERIAL MANAGEMENT	18128		6VB							
NAVVEDMEDRECHLAS PENSCLA	68432	K	0641	1055	05300	MD MATERIAL MANAGEMENT	18128	00318	6VB							
*NAVVEDMEDRECHLAS GROTON	68396	K	0641	1055	10600	MD MATERIAL MGMT/FISCAL	18128	00318	6VB							
VEDRECHINSET BETHEEDA ND	68223	J	0641	1055	17100	MD MATERIAL MANAGEMENT	18128	00318	6VB							

ACTIVITY	UIC	G	PROB	SMOB	ESC	PORTION	PRUSS	SEURS	AQD1	AQD2	AQD3	AQD4	AQD5	ESC	ESC	GL
NAVHOSP SAN DIEGO	00239	M	0641		19020	ND MATERIAL MANAGEMENT	1812P		AVB	AVI						MM
NAVHOSP SAN DIEGO	00239	I	0641		19100	MATERIAL MANAGEMENT/ASST	1812S		AVB							
NAVHOSP SAN DIEGO	00239	J	0641		19160	MATERIAL MANAGEMENT/ASST	1812T		AVB							
NAVHOSP OAKLAND	68097	I	0641		19100	ND MATERIAL MANAGEMENT	1812P		AVB							MM
NAVHOSP PHILADELPHIA	68101	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP GREAT LAKES	68092	I	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP PORTSMOUTH VA	68816	M	0641		19000	ND MATERIAL MANAGEMENT	1812P		AVB	AVI						MM
NAVHOSP P. STEWART VA	68816	K	0641		19100	MATERIAL MANAGEMENT/ASST	1812T		AVB							
NAVHOSP CORPUS CHRISTI	00283	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP WILLINGTON	60002	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP ORLANDO	63492	I	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP GERTON	61726	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP MAPLES	68096	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP GUAM	68096	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP YOKOSUKA	68292	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP SUBIC BAY	63491	J	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
NAVHOSP OKINAWA	68470	I	0641		19000	ND MATERIAL MANAGEMENT	1812S		AVB							
SEMS BETHESDA	0627A	I	3231	0641	14060	INST ACAD GEN/FISCAL SUP	1812S	0031S	AVB	AVI						MM

ACTIVITY	UIC	Q	PMOB	SMOB	BSC	POSITION	PRMS	SRMS	AQ01	AQ02	AQ03	AQ04	AQ05	BSC	BSC	QL
MEMS BETHESDA	0427A	J	0441	1035	12030	ADMIN MED SVC/SUPPLY	18128		6W8							
SEETC BETHESDA	0419A	J	0441		00420	GENERAL SUPPLY/ADDDU TO SS	18127		6W8							
DEF PERS SUPP CEM PHILA	33499	M	0440	0829	21000	CHIEF	1812P		8X1	6W0	6W1	6W8	408	419		MM
DEF PERS SUPP CEM PHILA	33499	I	0441		19200	DEPT LHM OFCR	18128		4W9	6W0						
OPNAV	00011	M	0440	3829		LOGISTICS ANALYST	1812M		8X1	6W0	6W1	6W8	419			MM
OPNAV	00011	M	0440	0829		ASST FOR DEPLOYABLE AYS.	1812M		8X1	6W0	6W1	6W8	419			MM
OPNAV	00011	M	0440	0829		ASST FOR LOGISTICS	1812M		8X1	6W0	6W1	6W8	419			MM
NAVJEDCOM MIDATLANTIC		I	0440		10030	ASST ACOS LOGISTICS	18128		6W8							
NAVI PENSACOLA	0751A	J	0441	1035	19000	MD MATERIAL MANAGEMENT	18128	00318	6W8							
NAVJEDCOM BOSTON	08546	J	0441	1035	19000	MD MATERIAL MGMT/FISCAL	18128	00318	6W8							
NAVJEDCOM NEW ORLEANS	44898	E	0441	1035	19000	MD MATERIAL MANAGEMENT	18128	00318	6W8							
NAVJEDCOM JACKSONVILLE	48093	J	0441		19000	MATERIAL MANAGEMENT/ASST	1812T		6W8							
NAVJEDCOM ORLANDO	43492	E	0441		19000	MATERIAL MANAGEMENT/ASST	1812T		6W8							
1ST FREG PHIPPAC	47446	J	0442	0830	10100	STAFF MSC USMC/SUPPLY OFF	18128		6W8	6W4	6W8					
NAVJEDCOM DEV & ED COMD	00764	M	0442	0830	02330	USMC/MEDICAL SUPPORT OFF.	1812P		6W4	6W7	6W1	6W8	746			MM
NAVJEDCOM DEV & ED COMD	00764	I	0442	0830	02330	USMC/MEDICAL SUPPORT OFF.	18128		6W4	6W0	6W7	6W8				
NAVJEDCOM DEV & ED COMD	00764	I	0442	0830	02400	USMC/FIELD MED EVAL OFF.	18128		6W4	6W0	6W7	6W8				
NAVJEDCOM FT SAN HOUSTON	41620	I	9087	0841	00760	STAFF PLANS. LOGISTICS	1812P		6W0	6W8	6W1					MM
NAVJEDCOM CAMP PENDLETON	48094	I	0441		19000	MD MATERIAL MANAGEMENT	18128		6W8							

ACTIVITY	UTC	Q	PMOB	SNOR	BSC	POSITION	PSUBS	SEURS	AQ01	AQ02	AQ03	AQ04	AQ05	BSC	BSC	GL
DIABETECOLCONCEN ALAMEDA	62989	I	0829	0641	00400	ADMIN MED SVC	1800P	1812S	608							
DIABETECOLCONCEN JAX	62873	I	0829	0641	01200	ADMIN MED SVC	1800P	1812S	608							
FLTHOSP PNL-100 WASH DC	68838	M	0829	0640	00160	MATERIAL CONSULTANT ADDU	1800P	1812S	608	608					408	
MED BSCM UNIT 2 MANILA	62814	J	1055	0641	02000	FISCAL/MATERIAL MGMT	0031S	1812S	608							
NAVDEMCCLINIC BETHESDA MD	66082	I	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC BREHERTON	68443	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC CAMP PEN	62594	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC CHARLESTON	65999	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC GREAT LAKES	68326	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC JACKSONVILLE	68444	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC LONG BEACH	62947	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC NEWPORT RI	66023	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC NORFOLK VA	62753	J	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC OKINAWA	68582	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC ORLANDO FL	68496	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC PARRIS IS	68411	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC PEARL HARBOR	62313	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							
NAVDEMCCLINIC PENSACOLA FL	68441	E	1055	0641	19000	MD MATERIAL MGMT/FISCAL	0031	1812	608							

ACTIVITY	UTC	G	PMOB	SHOB	SSC	POSITION	PRUMS	SSUBS	AQD1	AQD2	AQD3	AQD4	AQD5	SSC	SSC	Q1
NAVYOSP PENSACOLA	00203	I	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYOSP PENSACOLA	00203	J	0641	19100	19100	MATERIAL MANAGEMENT/ASST	1812Y		6VB							
NAVYMEDATASVCEN BETNESDA	65126	I	0641	0829	01700	TRIMIS SUPP	1812P		6VB							
NAVYMEDCLINIC HAWAII	68098	I	0641	1055	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYMEDCLINIC FTS MN	00105	E	0641	1055	19000	HD MATERIAL MANAGEMENT	18128	00318	6VB							
NAVYMEDCLINIC SEATTLE WA	65575	E	0641	1055	19000	HD MATERIAL MANAGEMENT	18128	00318	6VB							
NAVYMEDMATSUPPCOM PHILA	62645	G	9421	0840	01200	CO ENR ACTY	1812P		8X1	6VI	6VC	6VB	408			MM
NAVYMEDMATSUPPCOM PHILA	62645	H	9436	0840	01400	EO ENR ACTY	1812P		8X1	6VI	6VC	6VB				MM
NAVYMEDMATSUPPCOM PHILA	62645	H	0641	0829	50100	CN C/A PROG SUPT SVC	18128		6VB	6VI						
NAVYMEDMATSUPPCOM PHILA	62645	I	1050	0841	10300	COMPTROLLER	18128	0031P	6VB							
NAVYMEDMATSUPPCOM PHILA	62645	I	0887	0841	20100	CN TECH SUPT SVC	18128	1887P	6VB							
NAVYMEDMATSUPPCOM PHILA	62645	I	0641	0829	30100	CN FAC OUTFIT SVC	18128		6VB							
NAVYMEDMATSUPPCOM PHILA	62645	L	0866	0841	40100	CN EQUIP SUPT SVC	18128	1866S	6VB							
NAVYOSP BERNHETON	68095	J	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYOSP CAMP LEJEUNE	68095	J	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYOSP JACKSONVILLE	68085	I	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYOSP LONG BEACH	68090	J	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							
NAVYOSP NEWPORT	68086	J	0641	19000	19000	HD MATERIAL MANAGEMENT	18128		6VB							

ACTIVITY	UIC	PMOR	SMOR	SEC	POSITION	PSUB	SSUB	AQ01	AQ02	AQ03	AQ04	AQ05	SEC	SEC	CL
COMNAVLOGPAC	37004	M	0640	0829	06400	MED ADMIN OFF	1812P	6W1	6W8				419		MM
2D F88G FWP LANT	51300	M	0642	0830	15100	MEDLOG/CO	1812P	6W8	6W1	6W7	6W8		746		MM
2ND F88G FWP LANT	51300	J	0642	0830	16100	SUPPLY PLA OFF/MEDLOG	1812S	6W8	6W1	6W7	6W8				
2D F88G FWP LANT	51300	K	0642	0830	22200	2ND MEDBATT	1812T	6W8	6W1	6W7	6W8				
1ST F88G FWP PAC	67446	M	0642	0830	09100	MEDLOG/CO	1812P	6W8	6W1	6W7	6W8		746		MM
1ST F88G FWP PAC	67446	J	0642	0830	10100	SUPPLY PLA OFF/MEDLOG	1812S	6W8	6W1	6W7	6W8				
3RD F88G FWP PAC	67436	M	0642	0830	09100	MEDLOG/CO	1812P	6W8	6W1	6W7	6W8		746		MM
3RD F88G FWP PAC	67436	J	0642	0830	10100	SUPPLY PLA OFF	1812S	6W8	6W1	6W7	6W8				
3RD F88G FWP PAC	67436	K	0642	0830	17200	3RD MEDBATT	1812T	6W8	6W1	6W7	6W8				
MDQRTS USMC WASH DC	00027	G	0640	0830	03100	STAFF NSC USMC/LOGISTICS	1812P	6W1	6W1	6W1	6W8	6W8	746		MM
NAVREDCOM WASH DC	00018	G	0640	0829	42020	DIE EQUIP & LOGISTICS DIV	1812M	6W1	6W8	6W1			408	746	MM
NAVREDCOM WASH DC	00018	M	0640	0829	42220	MD LOGISTICS BR	1812S	6W1	6W8						MM
NAVREDCOM WASH DC	00018	I	0641	1033	42120	MD INVESTMENT EQUIP BR	1812S	6W8							
NAVREDCOM WASH DC	00018	I	0641		42320	MD MAINT/REPAIR BR	1812S	6W8							
NAVREDCOM MATCAPREG BETH	00168	M	0641	1033	19020	MD MATERIAL MANAGEMENT	1812P	6W8	6W1						MM
NAVREDCOM MATCAPREG BETH	00168	I	0641	1033	19040	ASST MATERIAL MANAGEMENT	1812S	6W8							
NAVREDCOM MATCAPREG BETH	00168	J	0641		19060	ASST MATERIAL MANAGEMENT	1812T	6W8							
NAVREDCOM MATCAPREG BETH	04984	J	0641		19000	MATERIAL MANAGEMENT OFF.	1812T	6W8							

ACTIVITY	UIC	Q	PMOR	SMCB	SSC	POSITION	PRBS	SSONS	AQD1	AQD2	AQD3	AQD4	AQD5	SSC	SSC	Q1
NAVDEMCCLINIC PHILA PA	67842	E	1055	0841	19000	ND MATERIAL MGMT/FISCAL	0031	1812	6VB							
NAVDEMCCLINIC SAN DIEGO CA	68072	J	1055	0841	19000	ND MATERIAL MGMT/FISCAL	0031	1812	6VB							
NAVDEMCCLINIC SAN FEAN	68400	E	1055	0841	19000	ND MATERIAL MGMT/FISCAL	0031	1812	6VB							
NAVDEMCCLINIC SUBIC BAY	68446	J	1055	0841	19000	ND MATERIAL MGMT/FISCAL	0031	1812	6VB							
NAVDEMCCLINIC YOKOSUKA	68495	J	1055	0841	19000	ND MATERIAL MGMT/FISCAL	0031	1812	6VB							
NAVDEMCCLINICEN MORFOLK	68546	M	1055	0841	07100	FISCAL/MATERIAL MGMT	00318	18128	6VB	6VI						
NAVHOSP GUANTANAMO BAY	61564	I	1050	0841	17100	FISCAL/MATERIAL MGMT	00318	18128	6VB							
NAVHOSP LENOORE	68095	J	1055	0841	06000	ND FISCAL/MATERIAL MGMT	00318	18128	6VB							
NAVHOSP PATUZENT RIVER	68098	J	1055	0841	06000	ND FISCAL/MATERIAL MGMT	00318	18128	6VB							
NAVHOSP ROOSEVELT ISLAND	63428	I	1055	0841	17100	FISCAL/MATERIAL MGMT	00318	18128	6VB							
NAVHOSP ROTA	68101	I	1055	0841	17100	FISCAL/MATERIAL MGMT	1800	18125	6VB							
NAVHOSCOM SOUTHWEST	68056	I	0822	0841	10060	NEDEAC LIAISON/SUPSHIPS	1800P	18125	6VB	6VI	6VA	6VG				
NAVHOSCOM WASH DC	00018	M	0840	0829	02140	ASSISTANT TO IG	1800P	18125	6VI	6VB	6VI					
NAVHOSCOM WASH DC	00018	M	0829	0840	41220	ND READINESS OPS BR	1800P	18125	6VI	6VB				408	746	
NAVHOSCOM WASH DC	00018	M	9930	0841	40120	EXECUTIVE ASST TO OA	1800P	18125	6VI	6VB						
NAVHOSCOM WASH DC	00018	I	0830	0841	41120	ND READINESS PLANS/ANAL	1800P	18125	6VI	6VB	6VI					
NAVHOSCOM WASH DC	00018	I	0620	0841	22060	SHIP DESIGN LIAISON	1867P	18125	6VA	6VB	6VG					
NAVHOSCOM WASH DC	00018	I	0620	0841	22080	SHIP DESIGN LIAISON	1800P	18125	6VG	6VB	6VA					

SERVICE SCHOOL CODE (SSC)

408	Industrial College of the Armed Forces
419	Naval War College
746	Marine Corps Command and Staff College

GRADUATE LEVEL EDUCATION (GL)

MM	Material Management or Logistics Management
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SUBSPECIALTY CODES - Primary (PSUBS)
Secondary (SSUBS)

0031	Financial Manager
1800	Professional Health Care Administrator
1812	Medical Logistics Administrator
1862	Industrial Hygienist
1866	Medical Technologist
1877	Pharmacist, General

SUBSPECIALTY SUFFIXES

E	Baccalaureate level of education in a field applicable to the subspecialty
P	Master level of education
S	Significant experience
T	Training billet
H	Master level of education within subspecialty desired but not required

ADDITIONAL QUALIFICATION DESIGNATOR (AQD)

6WA	Graduate of USMC Amphibious Warfare School
6WE	Graduate of FSMTC at NSHS
6WF	Graduate of Field Medical Service School
6WG	Fleet Marine Force experience
6WI	Graduate of Advanced Health Policy and Planning Course
6WS	Graduate of USMC Ground Supply School
Bx1	Graduate of Armed Services Staff College

APPENDIX F
 MEDICAL MATERIAL MANAGEMENT BILLET QUALIFICATION
 REQUIREMENTS

REFERENCE INDEX FOR CODING

GRADE (G)

G - Captain/O-6
 H - Commander/O-5
 I - Lieutenant Commander/O-4
 J - Lieutenant/O-3
 K - Lieutenant(JG)/O-2
 L - Ensign/O-1

NAVAL OFFICER BILLET CODES - Primary (PNOB)
 Secondary (SNOB)

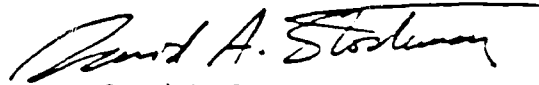
0640	Health Care Logistics Officer
0641	Medical Material Logistics Officer
0642	Field Medical Material Logistics Officer
0800	Administrative Officer, Medical Service
0829	Staff Medical Service Corps Officer
0830	Staff Medical Service Corps Officer (with Marines)
0866	Medical Technologist
0887	Pharmacist
0899	Advanced Medical Service Education Officer
1055	Fiscal Officer
2163	Manager Designated Project Functional Element
3251	Instructor Academic
3289	Student Officer
9421	Commanding Officer, Shore Activity
9436	Executive Officer, Shore Activity

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that obligations and costs are in accordance with applicable law; funds, property, and other assets are safeguarded; and revenues and expenditures are properly recorded and permit the preparation of reliable financial and statistical reports; reporting the material weaknesses, if any, in the agency's system of internal control, however identified; and containing a plan for correcting any weaknesses. Procedures to be followed in preparing this report are contained in the Internal Control Guidelines.

Agencies are also required to submit information to OMB on the progress made in evaluating and improving internal controls as part of the Reform '88 Tracking System.

13. Effective Date. This Circular is effective on publication.
14. Inquiries. All questions or inquiries should be addressed to the Finance and Accounting Division, Office of Management and Budget, telephone number 202/395-3122.
15. Sunset Review Date. This Circular shall have an independent policy review to ascertain its effectiveness three years from the date of issuance.



David A. Stockman
Director

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MATERIAL LOGISTICS SUPPORT

MANAGEMENT FUNDAMENTALS	QTR 1	MN 2150 FINANCIAL ACCOUNTING	MN 2031 ECONOMIC DECISION MAKING	MN 3333 MANAGERIAL COMMUNICATION SKILLS	MN 2300 MATHEMATICS FOR MANAGEMENT
	QTR 2	MN 3161 MANAGERIAL ACCOUNTING	MN 3140 MICRO-ECONOMIC THEORY	MN 3105 ORGANIZATIONAL SYSTEMS	OS 3105 PROBABILITY AND STATISTICS
GRADUATE PROGRAMS	QTR 3	MN 3372 MATERIAL LOGISTICS	MN 3172 PUBLIC POLICY PROCESSES	CURRICULUM OPTION	OS 3106 PROBABILITY AND STATISTICS
	QTR 4	MN 4155 AUDITING IN THE PUBLIC SECTOR	MN 4145 POLICY ANALYSIS	IS 3183 MANAGEMENT INFORMATION SYSTEMS	OS 3006 OPERATIONS RESEARCH
	QTR 5	THESIS	THESIS	MN 3374 PRODUCTION MANAGEMENT	CURRICULUM OPTION
	QTR 6	MN 4105 MANAGEMENT POLICY	THESIS	CURRICULUM OPTION	MN 4310 LOGISTICS ENGINEERING

APPENDIX HPROPOSED CURRICULUM FOR LOGISTICS MANAGEMENT FOR MSC
OFFICERSCURRICULUM COURSES AND COURSE OPTIONS IN MATERIAL LOGISTICS

1. IN ADDITION TO THE FUNDAMENTAL AND CORE COURSES, WHICH MUST BE TAKEN OR VALIDATED BY ALL MANAGEMENT SCIENCE STUDENTS, THOSE IN THE MATERIAL MOVEMENT CURRICULUM MUST TAKE THE FOLLOWING CURRICULUM COURSES:

- * MN 3372 MATERIAL LOGISTICS
- OR
- MN 3377 INVENTORY MANAGEMENT (REQUIRED ONLY OF USN SUPPLY CORP OFFICERS)
- * MN 4310 LOGISTICS ENGINEERING
- MN 3374 PRODUCTION MANAGEMENT
- * MN 4155 OPERATIONAL AUDITING IN THE PUBLIC SECTOR (REQUIRED ONLY OF USN SUPPLY CORP OFFICERS)

2. THE REMAINDER OF COURSES TO MEET THE MS DEGREE AND XX32P SUBSPECIALTY CODE REQUIREMENTS ARE SELECTED FROM THE FOLLOWING CURRICULUM OPTIONS:

- * MN 3371 CONTRACTS MANAGEMENT AND ADMINISTRATION
- MN 3301 INTRODUCTION TO SYSTEMS ACQUISITION AND PROJECT MANAGEMENT
- * MN 3373 TRANSPORTATION MANAGEMENT
- OA 3501 INVENTORY I
- * MN 3375 MATERIAL HANDLING SYSTEMS DESIGN
- OS 3302 INTRODUCTION TO QUALITY ASSURANCE
- OS 4301 RELIABILITY, MAINTAINABILITY

3. IN ADDITION TO THE COURSE REQUIREMENTS REFLECTED IN THE COURSE MATRIX ALL STUDENTS MUST TAKE, VALIDATE COURSES IN INTRODUCTORY COMPUTERS AND PROGRAMMING.

- * REQUIRED FOR MSC OFFICERS

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MATERIAL LOGISTICS SUPPORT

MANAGEMENT FUNDAMENTALS	QTR 1	MN 2150 FINANCIAL ACCOUNTING	MN 2031 ECONOMIC DECISION MAKING	MN 3333 MANAGERIAL COMMUNICATION SKILLS	MN 2300 MATHEMATICS FOR MANAGEMENT
	QTR 2	MN 3161 MANAGERIAL ACCOUNTING	MN 3140 MICRO-ECONOMIC THEORY	MN 3105 ORGANIZATIONAL SYSTEMS	OS 3105 PROBABILITY AND STATISTICS
GRADUATE PROGRAMS	QTR 3	MN 3372 MATERIAL LOGISTICS	MN 3172 PUBLIC POLICY PROCESSES	CURRICULUM OPTION	OS 3106 PROBABILITY AND STATISTICS
	QTR 4	MN 4155 AUDITING IN THE PUBLIC SECTOR	MN 4145 ** POLICY ANALYSIS	IS 3183 MANAGEMENT INFORMATION SYSTEMS	OS 3006 OPERATIONS RESEARCH
	QTR 5	THESIS	THESIS	MN 3374 ** PRODUCTION MANAGEMENT	CURRICULUM OPTION
	QTR 6	MN 4105 MANAGEMENT POLICY	THESIS	CURRICULUM OPTION	MN 4310 LOGISTICS ENGINEERING

** MSC OFFICERS SUBSTITUTE MN 4652 MICRO HEALTH SYSTEM ANALYSIS AND MN 4161 FINANCIAL MANAGEMENT CONTROL SYSTEMS.

LIST OF REFERENCES

1. U. S. Office of Management and Budget, Memorandum A-123 (revised), Internal Control Systems, Government Printing Office, Washington, D. C., 16 August 1981.
2. U. S. General Accounting Office, Standards for Internal Controls in the Federal Government, Government Printing Office, Washington, D. C., 1983.
3. U. S. Department of Defense, Directive Number 7040.6, Internal Control Systems, Government Printing Office, Washington, D. C., 24 March 1982.
4. Department of the Navy, SECNAVINST 7510.8A, Internal Review in the Department of the Navy, Government Printing Office, Washington, D. C., 7 December 1982.
5. NAVMEDCOM INSTRUCTION 7510.1, Government Printing Office, Washington, D. C., 7 March 1984.
6. North American Institute of Certified Public Accountants, Statment on Auditing Standards No. 1, 1973.
7. Arthur Anderson and Company, Guide for Studying and Evaluating Internal Controls in Federal Government, 1982.
8. Defense Logistics Studies Information Exchange, LD 56236A, Implementation of the Federal Manager's Financial Integrity Act of 1982 in the Air Force, by Kenneth E. Marler, Air University, United States Air Force, Maxwell AFB, Alabama, January 1984.
9. Defense Logistics Studies Information Exchange, LD 5532AA, Internal Control Reviews- A MAJCOM Perspective, by Reginald G. Hargett, Air University, United States Air Force, Maxwell AFB, Alabama, September 1983.
10. Defense Logistics Studies Information Exchange, LD 56262A, The Impact of Implementing an Internal Control on a Navy Field Activity, by Jo Ann Wright, Air University, United States Air Force, Maxwell AFB, Alabama, January 1984.
11. Defense Logistics Studies Information Exchange, LD55343A, Internal Control Reviews in Department of Navy by Martha B. Martin, Air University, United States Air Force, Maxwell AFB, Alabama, September 1983.

12. Defense Logistics Studies Information Exchange, LD6222A, AFCCMS-The First Year with OMB Circular A-123 and Internal Control Review, by Lamar S. Gillian, Air University, United States Air Force, Maxwell AFB, Alabama, January 1984.
13. Merchant, K. A., "Control in Business Organizations", Unpublished working paper, Graduate School of Business Administration, Harvard University, 1983.
14. Ansari, Shahid L., "An Integrated Approach to Control System Design", Accounting, Organization, and Society, V. 2, Pergamon Press, 1977.
15. Ouchi, William G., "A Conceptual Framework for the Design of Organizational Control Mechanisms", Management Science, September 1979.
16. Lawler, E.F., and Rhode, J.G., Information and Control in Organizations, Goodyear Publishing, 1976.
17. Euske, K.J., Management Control: Planning, Control, Measurement, and Evaluation, Addison-Wesley, 1984.
18. Anthony, Robert N., and Dearden, John, Management Control Systems Richard D. Irwin Inc., 1980.
19. "The Task Force Report", The Government Accountants Journal, v. XXIX, no. 3, Fall 1980.
20. Kerr, Steven, "On the Folly of Rewarding A, While Hoping for B," Academy of Management Journal, v. 18, 4 December 1975.
21. Anthony, Robert N., "Characteristics of Management Control Systems", in Management Control Systems-Cases and Readings, by Robert N. Anthony, John Dearden, and Richard F. Variel, Richard D. Irwin Inc., 1981.
22. "Inspector General Findings Anger Hill", Congressional Quarterly, 21 February 1981.
23. U. S. Congress, Senate, Committee on Governmental Affairs, Hearings To Amend the Accounting and Auditing Act of 1950 to Require On-Going Evaluation and Reports on the Adequacy of the Systems of Internal Accounts and Administrative Control of each Executive Agency, Government Printing Office, Washington, D. C., 13 November 1981.
24. "Cutting Waste, Fraud, Abuse Still High Reagan Priority But Not Balanced Budget Key", Congressional Quarterly, 21 February 1981.

25. U.S. General Accounting Office, Standards for Audit of Government Organizations, Programs, Activities and Functions, Government Printing Office, Washington, D. C., February 1981.
26. Leshko, Thomas J. Audit Services-Navy Audit Services, lecture presented at Naval Postgraduate School, Monterey, California, 6 June 1984.
27. NAVMEDCOM INSTRUCTION 5450.1, Government Printing Office, Washington, D. C., 23 May 1983.
28. Naval School of Health Sciences, Course Syllabus, Financial and Supply Management Training Course, Bethesda, MD., 28 September 1984.
29. Ebert, Tom, Lieutenant Commander, Fiscal and Supply Management Training Course, Bethesda, Md. Interview, 28 September 1984.
30. U.S. Naval Postgraduate School, Catalog for Academic Year 1984, Monterey, California, 1984.
31. Little, Tommy J. and Taylor, John P., The Uniform Chart of Accounts and its use in Management Control, M. S. Thesis, Naval Postgraduate School, Monterey, California, October 1982.
32. Hussain, Donna and Hussain, K. M., Information Processing Systems for Management, Richard D. Irwin, Inc., 1981.

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