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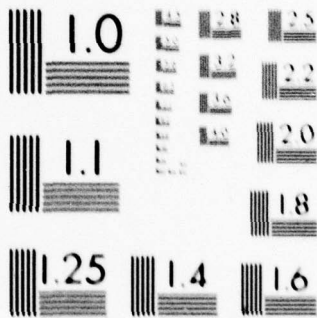
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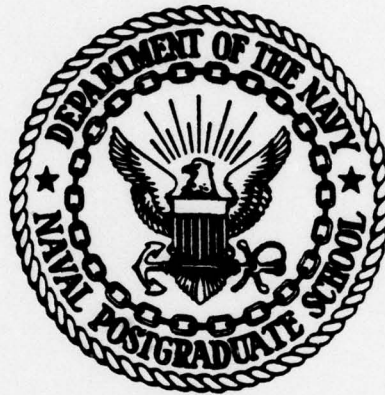
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## THESIS

AN INTERNAL AUDIT MODEL  
FOR THE U.S. COAST GUARD

by

Roy Gene Cook

June 1979

Thesis Advisor: R. B. Cunningham

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An Internal Audit Model for the U.S. Coast Guard

by

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Lieutenant Commander, U.S. Coast Guard  
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Submitted in partial fulfillment of the  
requirements for the degree of

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## ABSTRACT

Internal Audit is an element of internal control within an organization that provides management with information to aid in the achievement of organization goals. The ways in which internal audits help in meeting organization goals is examined, and a method by which the Coast Guard can apply these concepts is presented using the program structure initiated in 1965 for Planning, Programming and Budgeting in the Coast Guard as a basis for an internal audit system. The General Accounting Office has provided specific guidance in this area. Organizationally, it is proposed that internal audit should be in the 'operating administration level rather than the Executive Department level in order to have maximum impact. In conclusion, an organizational model for the implementation of an internal audit function in the Coast Guard is presented.

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## I. INTRODUCTION

"Auditing is an integrated process of accumulating and evaluating evidence by a competent independent person about quantifiable information of a specific economic entity for the purpose of determining and reporting upon the degree of correspondence between the quantifiable information and established criteria."<sup>1</sup>

### A. INTERNAL AUDITS

According to A. A. Arens and J. K. Loebbecke, auditing and internal auditing have the same definition except that the internal auditor is not as independent as the external auditor. Further, internal auditing is a managerial tool that not only assesses past performance but provides information to management about how successful the organization will be in the future. The latter is accomplished by auditors assuring that the system is well designed and functioning properly as contrasted with the traditional view of auditors conducting an exhaustive search for clerical errors. If the organization is, in fact, well designed and functioning properly, then the organization's future success will be more likely. Internal audit provides the information base for a system design that facilitates the internal control necessary to achieve success.

In the U.S. Coast Guard the internal audit function is performed by Coast Guard Inspection staffs located at area and district offices. Appendices A and B outline the

responsibilities of the Inspector General of the Coast Guard and the District Inspector, respectively.<sup>2</sup> Inspection staffs are generally not viewed as auditors and do not view themselves as internal auditors because the scope of their inspection activities are somewhat less comprehensive than an audit as it is defined here. Nevertheless, the goal of the inspection staff corresponds with that of the internal auditor, i.e., provide management with information which can be used in the decision making process. Inspection staffs rely almost totally on the financial and compliance audits. This is the role in which auditors are generally cast. Financial and compliance audits, however, make up only one-third of an auditor's sphere of responsibility. Two other audit areas, efficiency and economy of operation audits and audits of program results will be described and discussed later.

Over the years Congress has promoted the idea of strong internal audit programs through the enactment of various laws, the latest being the Inspector General Act of 1978. Although applicable to some agencies of the Department of Transportation, this act is not applicable to the U.S. Coast Guard. There are, nevertheless, laws that direct or encourage internal auditing as a means of internal control. Thus, internal auditing in the Federal Government, in addition to being a proven aid to effective decision making, has been blessed by congressional action.

"The primary responsibility for establishing and maintaining adequate systems of accounting and internal control, including internal audit, is vested by the Budget and Accounting Procedures Act of 1950 in the heads of Federal agencies."<sup>3</sup> To encourage government agencies to pursue this task, the General Accounting Office has promulgated a statement of the value and need for a system of internal review. Appendix C is a copy of this statement.

A question that any prudent person might raise in evaluating a system for internal audit is 'how much is it going to cost and what are the benefits to be derived?' Obviously the answer to this question will vary with every organization because the need for internal audit and the degree of audit involvement will not be the same for all organizations. The American Institute of Certified Public Accountants (AICPA) uses the concept of reasonable assurance, i.e., the cost of internal control, of which internal audit is an integral part, should not exceed the benefits derived.<sup>4</sup> For both the private and public sectors costs can be measured in dollars spent, however, the benefits which the private sector can measure in terms of profits are not so easily measured in the government sector. Thus, the government sector must make a subjective decision about the value an internal audit program and the extent to which it is utilized. Considering the political nature of the government manager's environment, extreme care must be exercised to safeguard

the public dollars from being lost from lack of adequate control and from being wasted through unnecessary or over control.

#### B. INTERNAL AUDIT'S LOCATION IN THE ORGANIZATION

Typically, internal auditing is a staff function whose findings are reported directly to top level management. This direct line of communication provides the internal auditing staff with the independence necessary to obtain and report relevant information without fear of coercion or reprisal from within the organization. Independence of the auditor is an extremely important facet of the public sector internal audit function just as it is for private sector auditors. The information provided by the auditor to the manager for decision making purposes must be reliable if it is to be of any value.

The Coast Guard's inspection staff is a staff function. It meets the above requirements for maintaining independence.

The current Coast Guard Inspection Staff organization consists of the Inspector General at the Headquarters level, Inspectors at each of two area offices and Inspectors at each district office. The organizational relationship that exists between Coast Guard Headquarters, Area, and District Offices are shown in Appendix D.

### C. TYPES OF AUDITS

As stated, audits encompass every significant aspect of an agency's operation and not only financial accountability. To accomplish these broad spectrum audits the General Accounting Office (GAO) has divided the audit into three segments. These audits closely follow the Program Structure established in the mid-1960's to provide a uniform and systematic procedure for planning, programming, and budgeting in federal agencies. The Coast Guard adopted the Planning, Programming and Budgeting System (PPBS) in 1965. The following audits were developed by the GAO:

#### 1. Audits of Financial Operations and Legal Compliance

The objective here is to determine if the agency is carrying out only those programs authorized by Congress and in accordance with applicable law. Secondly, this audit examines the use and accountability of all funds, property, assets and liabilities that are incurred as the result of agency operation.

#### 2. Audits of Efficiency and Economy of Operations

As its name implies, this audit segment examines how efficiently and economically the agency operates. In particular, the use of resources such as funds, property and personnel in meeting agency objectives is of major concern. Compliance with applicable laws and regulations is also an important criteria in the evaluation of efficiency and

economy of operations. Efficiency is defined here as the amount of output per unit of input or the benefit received per dollar of input.

### 3. Audits of Program Results

This audit attempts to evaluate the success of the agency in achieving the objectives established by Congress. Each agency has the responsibility to continuously evaluate the effectiveness of the programs they administer. Effectiveness is the relationship between the agency's actual output and the results that it wants to achieve.

#### D. COMPARISON OF THE INTERNAL AUDIT FUNCTION IN THE U.S. COAST GUARD WITH OTHER GOVERNMENT AGENCIES AND THE PRIVATE SECTOR

The survey data used by the Institute of Internal Auditors for the purpose of comparing internal auditing emphasis in various organizations compares the total number of auditors in an organization to the total number of personnel. This criteria for comparison is apparently used because the majority of costs associated with internal audit is personnel related, i.e., salary, benefits, travel, training, etc. The relative importance of internal audit is the key issue and that is easily seen in the data presented.

The major flaw with this data is that it was obtained by a somewhat involved questionnaire where the possibility for misinterpretation of questions was great. Also, the survey

does not take into account sample size that may provide misleading information and it does not take into account the primary activity of the organization questioned.

Additionally, there is the question; what is an internal auditor? In the U.S. Coast Guard there are generally two full-time inspectors assigned to each district office and to each area office but there are many pro-tem inspectors. Pro-tem inspectors are those persons who audit the functions over which they have cognizance. Their efforts are coordinated by the Coast Guard Inspection Staffs. For the purpose of this comparison it is assumed that internal auditor refers to a staff member who has no duties outside the audit function or, in the case of the Coast Guard, outside the inspection function. Thus, the Coast Guard's inspection staffs consist of approximately 30 full-time inspectors. The Coast Guard roughly has 37,000 military personnel and 5,000 civilians. These figures equate to a ratio of auditors to total employees of 1:1400. The following is a data comparison extracted from the 1975 "Survey of Internal Auditing" conducted by the Institute of Internal Auditors.

<u>Industry/Entity</u>	<u>Ratio of Auditors to Total Employees</u>
U.S. Coast Guard*	1:1424
U.S. Navy (includes Marine Corps)*	1:2047
U.S. Army*	1:1587

U.S. Air Force*	1:849
Automotive and Aircraft	1:2703
Banking, Savings and Loan	1:83
Drugs and Chemicals	1:1220
Education	1:1695
Electronics	1:1000
Foods and Beverages	1:1428
General Manufacturing	1:1374
Government - Federal	1:400
Government - State	1:446
Government - Local	1:620
Insurance	1:339
Machinery and Parts	1:1888
Mining and Metals	1:668
Multiple Industry Classification	1:2632
Paper, Rubber, Textiles	1:1301
Petroleum	1:630
Retail and Wholesale	1:663
Transportation	1:1088
Utilities	1:655

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\*Information for these organizations was not included in the 'Survey of Internal Auditing.' It has been included here to provide more insight into the role of internal auditing in organizations similiar to the Coast Guard. Also, military personnel strength and auditor strength is as of February 1979; civilian strength is as of June 1978. No Inspector Staff personnel are included in the Navy, Army, and Air Force figures.

## II. THE U.S. COAST GUARD

The Coast Guard was formed in 1790 and is one of the nations oldest federal agencies. It began as the Revenue Cutter Service under the Treasury Department to enforce laws of the United States relating to the collection of revenues from tariffs. The Revenue Cutter Service subsequently became the U.S. Coast Guard and in 1967 was transferred from the Treasury Department to the Department of Transportation. Today the U.S. Coast Guard is a multimission organization encompassing 13 major programs and 12 support programs. Even though primarily executed on the navigable waters of the United States and its territories, the Coast Guard's missions are carried out on a global basis. Some examples of Coast Guard presence outside the boundaries of the United States and its territories are the Long Range Aids to Navigation (LORAN) system and the International Ice Patrol. The best known of the Coast Guard's missions is its Search and Rescue program because of its high public visibility.

The Coast Guard is composed of approximately 38,000 military personnel and 5,000 civilians.

### A. COAST GUARD PROGRAM STRUCTURE

Every governmental and/or non-profit organization exists to carry out programs.<sup>5</sup> The Coast Guard is no exception,

and in 1965, in order to meet the needs of program budgeting, the Coast Guard was divided into program areas.<sup>6</sup> Missions are the operational activities of the Coast Guard and as used here are synonymous with program categories.

These terms will be used interchangeably throughout this paper. The development of the program structure is also beneficial because it allows for an orderly assignment of costs to a particular program. This is an important factor in the decision making process.

Program structure consists of three tiers. They are defined as follows:

1. Program Categories or Major Programs

The primary purpose of this classification is to assist top management in the allocation of resources. In addition, program categories create a structuring of organization objectives and clearly define goals that are valuable managerial tools.

2. Program Sub-Categories or Support Programs

Support programs are those that support the major programs.

3. Program Elements

The third and final tier of the program structure is the program element. It is a "definable activity or related group of activities that the organization carries on, either

directly in support of program objectives or indirectly in support of other program elements."<sup>7</sup>

The Coast Guard has thirteen major program areas. For each program an objective has been defined. The Coast Guard's major programs and their stated objectives are:<sup>8</sup>

1. Short Range Aids to Navigation Program - "The objective of the Short Range Aids to Navigation (AN) Program is to assist the mariner in determining his position and to warn him of dangers and obstructions so that he may follow a safe course. This is accomplished by providing navigational references such as audio, visual or electronic signals using buoys and lights."
2. Bridge Administration Program - "The objective of the Bridge Administration (BA) Program is to preserve the public right of navigation on the waters of the United States by assuring that all bridges over navigable waters are constructed, maintained and operated so as to provide for the reasonable needs of navigation."
3. Commercial Vessel Safety Program - "The objective of the Commercial Vessel Safety (CVS) Program is to minimize deaths, personal injuries and property loss or damage in the marine environment associated with design construction, and manning of merchant vessels and with their cargoes."
4. Enforcement of Laws and Treaties - "The objective of the Enforcement of Laws and Treaties (ELT) Program is to enforce all Federal laws in the marine environment, except those specifically assigned to other Coast Guard Programs; i.e., vessel safety, marine pollution, vessel traffic control, and port safety and security."
5. Ice Operations Programs - "The objective of the Ice Operations (IO) Program is to facilitate maritime transportation and other activities in the national interest in ice-laden domestic and polar waters. The services provided in the IO program also assist in meeting the needs of marine safety and environmental protection in the ice environment."

6. Marine Environmental Protection Programs - "The primary objective of the Marine Environmental Protection (MEP) Program is to maintain or improve the quality of the marine environment through preventive measures. The secondary objective is to minimize the damage caused by pollutants discharged into the marine environment by providing coordinated and effective response to remove discharges of oil or hazardous substances."
7. Military Operations/Preparedness Program - "The objective of the Military Operations/Military Preparedness (MO/MP) Program is to maintain the Coast Guard as an effective and ready armed force prepared for and immediately responsive to assigned tasks in time of peace, war or national emergency. This includes readiness to function as a specialized service in the Navy in time of war, responding to national disasters and domestic emergencies, and the efficient conduct of peacetime missions. The program unifies both preparedness and operations."
8. Marine Science Activities Program - "The objectives of the Marine Science Activities (MSA) Program are to provide marine science support to all Coast Guard Programs and to support national economics, scientific, defense and social needs.

The specific objectives of the Marine Activities Program are to conduct the International Ice Patrol, provide oceanographic services for the support of Search and Rescue, Marine Environmental Protection, Ice Operations and other Coast Guard Programs and to cooperate with and provide assistance to other government and scientific organizations in support of national marine science objectives."

9. Port Safety and Security Program - "The objective of the Port Safety and Security (PSS) Program is to safeguard the nations navigable waters and adjacent shore areas, including ports and their related facilities, from accidental or intentional harm. By assuring the safety of the ports and waterways and of persons and property nearby, the utilization of these vital marine transportation links is facilitated."
10. Radionavigation Aids Program - "The objective of the Radionavigation Aids (RA) Program is to facilitate the safe and expeditious passage of marine and air traffic by providing a continuous, accurate, all-weather position fixing capability.

The Coast Guard is responsible for providing radionavigation aids and facilities to ensure safe and efficient navigation. Federal law authorizes the Coast Guard to establish, maintain, and operate electronic aids to navigation which are required to serve the needs of the armed forces and the United States commerce in domestic areas and international waters or airspace in response to Department of Defense requirements, or through international agreements."

11. Recreational Boating Safety Program - "The objective of the Recreational Boating Safety (RBS) Program is to reduce the risk of loss of life, personal injury, and property damage associated with the use of recreational boats in order to provide boaters with maximum safe use of the nation's waterways."
12. Reserve Forces Program - "The primary objective of the Coast Guard Reserve Forces (RT) Program is to provide trained units and qualified persons for active duty in the Coast Guard in time of war or national emergency. In addition, the Reserve augments the active Coast Guard in its normal and peak period operations in times of domestic emergency."
13. Search and Rescue Program - "The objective of the Search and Rescue (SAR) Program is to minimize loss of life, injury, and property damage by rendering aid to persons and property in distress in the marine environment, including inland navigable waters."

Support Programs of the Coast Guard fall in the following twelve categories:

1. Communication Services Support Program (GAC) - "The objective of the Communications Services Support (GAS) Program is to provide efficient, rapid, reliable, and secure communications to meet the needs of all Coast Guard programs, and to provide the basic maritime telecommunications networks for the non-military agencies and departments of the Federal Government."
2. Public and International Affairs Support (GAA) - This support program "coordinates participation in international matters involving the Coast Guard and keeps the public informed of the Service's objectives and activities."

3. Engineering Support (GAE) - "The objective of the Engineering Support (GAE) Program is to provide efficient and effective engineering assistance to all Coast Guard activities. This assistance includes the design, construction, and maintenance of shore stations, cutters, boats, aircraft, equipment, and aids to navigation."
4. Financial Management, Personal, Supply and Automated Information Support (GAF) - "Provides the financial data, automated information, supply, personal support needed to perform Coast Guard missions."
5. Civil Rights Support (GAH) - "Assures implementation of the civil rights and equal opportunity precepts within the Coast Guard."
6. Medical Support (GAK) - "Provide comprehensive health care to active duty personnel and limited health care services to dependents and retirees."
7. Legal Support (GAL) - "Provides the legal services required in performing Coast Guard missions."
8. Intelligence and Security Support (GAI) - "Provides intelligence, personnel and criminal investigative data, and technical and physical security support to all Coast Guard programs."
9. Personnel Support Program (GAP) - "Recruits and trains sufficient numbers of capable and motivated personnel, military and civilian, to carry out the various programs of the Coast Guard."
10. Safety and Health Support Program (GAS) - "Ensure maintenance of safe and hygienic conditions of employment through application of loss control management principles and provision of guidance and direction."
11. Research, Development, Test and Evaluation Support Program (GRD) - "Develops and obtains acceptance of technological advancements which improve the Coast Guard's ability to perform its missions."
12. Retired Pay (RP) - "Pay retirees accurately and on time. Budget in advance of required funds."

There are numerous program elements in the Coast Guard as is obvious from the definition. Because of the Coast Guard's multiple mission and the fact that all Coast Guard

units may be called upon to perform in any of these mission areas, most Coast Guard units fall into the area of program elements. Examples are floating units, Air Stations, bases, stations, marine inspection offices, etc.

## B. COAST GUARD ORGANIZATION STRUCTURE

The Coast Guard's organizational framework is depicted in Appendix D. As this abbreviated chart shows, there are 18 headquarters units that report directly to the office of the Commandant (Coast Guard Headquarters). Within these headquarters units, which correspond to program elements, sole responsibility is to perform functions in support of major programs, support programs, and other program elements. Headquarters units are the only program elements in the Coast Guard whose efforts are dedicated to one or two functions. Also under the direct cognizance of the

Commandant are the Area and District Offices. Area offices are an intermediate echelon between the Commandant and the Districts established for uniformity and coordination of specified operational, inspection and training matters. District Offices have the responsibility for managing and controlling the bulk of the Coast Guard's activities. The most important of the program elements, district units, carry out the major programs and subprograms for which the Coast Guard is responsible. District units consist of the units under the operational and administrative control of a District Commander. Throughout this thesis three levels of

the organization will be of primary interest. They are the Headquarters level which corresponds with the office of the Commandant of the Coast Guard, the district office level, and the district unit level at the bottom of the organizational heirarchy.

III. AUDITING RELATIONSHIPS WITH THE DEPARTMENT  
OF TRANSPORTATION (DOT) AND THE GENERAL  
ACCOUNTING OFFICE (GAO)

The auditing relationships that exist with the Department of Transportation and the General Accounting Office must be examined to put the total audit picture for the Coast Guard in perspective. Because of differences in interpretation of the entity for which the internal audit program should be developed, the DOT approach to internal auditing and the tack of this thesis differ from an organizational point of view. Procedurally the approaches deviate very little.

A. THE DEPARTMENT OF TRANSPORTATION APPROACH TO INTERNAL AUDITING

The Department of Transportation has established itself as the entity around which the internal audit organization operates. In 1971 DOT consolidated all internal audit staffs of the Department's 'operating administrations.' Authority for this action is contained in the Budget and Accounting Procedures Act of 1950 which required that the head of each agency establish and maintain systems of accounting and internal control. Internal auditing is recognized as an integral part of internal control. This DOT consolidation was given further credibility in September 1973 when the General Services Administration's Office of

Federal Management Policy issued Federal Management Circular (FMC) 73-2 defining 'agency,' provided for in the Budget and Accounting Procedures Act of 1950, as being synonymous with 'department.' Department refers to the executive level departments that make up the Cabinet of the President of the United States. The Department of Transportation is one of these.

While this approach does provide DOT with internal audit information for use by management, it is external to the Coast Guard's management processes and any audit results are likely to be viewed as such by the Coast Guard. Rather than having the opportunity to internally evaluate and debate audit results, there are external forces that force decisions to be made, in some cases, before they are ready to be made. For these reasons this thesis approaches the internal auditing as being wholly internal to the Coast Guard as far as reporting and decision making processes are concerned. DOT should coordinate their internal audit requirements with the Coast Guard's rather than totally supplant the Coast Guard internal auditing function.

#### B. THE GENERAL ACCOUNTING OFFICE

Although it is a government organization, the GAO as representative of the Congress has audit responsibilities for government agencies akin to external auditors in the private sector. The GAO, in addition to performing external

audits, publishes guidelines and requirements for auditing to improve overall performance and internal review of government agencies.

#### IV. AUDIT OBJECTIVES, STANDARDS, AND PROCEDURES

##### A. AUDIT OBJECTIVE

The Coast Guard general audit objective should be to assist top level management at each juncture in the organization structure by providing timely and accurate information to assist in the decision making process. Development of specific objectives are also important, and should coincide with the accomplishment of the organization goals. In this regard it is important that a plan be established outlining those areas where audit attention should be directed and when the audit should be performed. The scope of the plan should be broad enough to consider all potential audit areas.

In the Coast Guard, internal audit requirements vary with the activity being audited. For instance, Unit commanders, while being interested in accomplishment of overall program objectives, are primarily interested in complying with those directives issued from above that are promulgated for the purpose of achieving program objectives. In themselves these requirements do not make or break a program, but individually they build it. For this reason compliance with directives is necessary by all who have a responsibility in this area. Here the compliance audit is what is needed. The bulk of the audit effort should be focused on compliance as it is now with the Coast Guard Inspection program.

The need for audit information can be described organizationally as follows:

1. Unit - Unit commanders have traditionally been required to conduct periodic audits, usually of the financial and compliance type, as part of property and cash accountability. Examples include:

a. The inventory of Damage Control equipment to meet minimum requirements for safety.

b. Accountability for personal property to insure against pilferage and loss.

c. Usage of morale funds to determine compliance with directives.

All organizational units have a requirement for operating in an economical and efficient manner, although at the unit level the areas in which economics are possible are more limited than for segments higher up the organizational chart. This is true because the unit managers do not exercise the requisite managerial authority to fully control the economic functioning of the unit. This is to say that many costs incurred by a unit are fixed and therefore not controllable by unit commanders. At this level the impact of the individual unit on the major programs is minimal.

2. District and Headquarters Units - As movement is made upward from the lower levels of the organization, the need for financial and compliance audits take on less significance. Economy and efficiency become more important because the opportunities to be economical and efficient

are greater. This is partly true because districts promulgate many of the guidelines under which the district units operate. An example: In addition to ensuring compliance with district directives, the audit staff should evaluate the effect of district requirements on the overall performance of a unit by asking questions of the following type: Does the unit have the resources to meet the requirement? Is there a need for the requirement? Is training required? The internal auditor must make an overall evaluation of the affect of increases or decreases in responsibility.

3. Headquarters - Of primary concern here are program results. Once programs are authorized by legislation, the policy decisions necessary to meet established goals are formulated. Headquarters' policy decisions translate into directives which are eventually carried out at lower echelons. Economy and efficiency are important here as are financial responsibility and compliance with applicable laws and regulations, but the achievement of programs ranks first. It is at this level that program goals are further defined based on authorizing legislation. These goals form the basis on which the success or failure is judged.

The foregoing statements are not definitive statements of where audit emphasis should be directed, but they indicate the reasoning process that is required by the auditor in determining the type of audit or audits that are applicable in any given situation. As stated in Chapter 1, the scope of every audit does not require all three types of audits

but must be based on the need. It is for this reason that the audit objective must be clearly defined before beginning the audit.

## B. AUDIT STANDARDS

The General Accounting Office in fulfilling its legislated responsibility for auditing federal government activities has established comprehensive audit standards that are applicable to all government auditing. These standards are "general measures of the quality and adequacy of the work performed."<sup>9</sup> The standards have three parts: (1) General Standards; (2) Examination and Evaluation Standards; (3) Reporting Standards. Because paraphrasing can not adequately define these standards they are provided here as presented in the GAO's Comprehensive Audit Manual.<sup>10</sup>

### 1. General Standards

- a. The full scope of an audit of a governmental program, function, activity, or organization should encompass:
  - (1) An examination of financial transactions, accounts, and reports, including an evaluation of compliance with applicable laws and regulations.
  - (2) A review of efficiency and economy in the use of resources.
  - (3) A review to determine whether desired results are effectively achieved.

In determining the scope for a particular audit, responsible officials should give consideration to the needs of the potential users of the results of that audit.

- b. The auditors assigned to perform the audit must collectively possess adequate professional proficiency for the tasks required.
- c. In all matters relating to the audit work, the audit organization and the individual auditors shall maintain an independent attitude.
- d. Due professional care is to be used in conducting the audit and in preparing related reports.

2. Examination and Evaluation Standards

- a. Work is to be adequately planned.
- b. Assistants are to be properly supervised.
- c. A review is to be made of compliance with legal and regulatory requirements.
- d. An evaluation is to be made of the system of internal control to assess the extent it can be relied upon to ensure accurate information, to ensure compliance with laws and regulations, and to provide for efficient and effective operations.
- e. Sufficient, competent, and relevant evidence is to be obtained to afford a reasonable basis for the auditor's opinions, judgements, conclusions, and recommendations.

3. Reporting Standards

- a. Written audit reports are to be submitted to the appropriate officials of the organizations requiring or arranging for the audits. Copies of the reports should be sent to other officials who may be responsible for taking action on audit findings and recommendations and to others responsible or authorized to receive such reports. Unless restricted by law or regulation, copies should also be made available for public inspection.
- b. Reports are to be issued on or before the dates specified by law, regulation, or other arrangement and, in any event, as promptly as possible so as to make the information available for use by management and by legislative officials.

c. Each report shall:

- (1) Be as concise as possible but, at the same time, clear and complete enough to be understood by the users.
- (2) Present factual matter accurately, completely, and fairly.
- (3) Present findings and conclusions objectively and in a language as clear and simple as the subject matter permits.
- (4) Include only factual information, findings, and conclusions that are adequately supported by enough evidence in the auditor's working papers to demonstrate or prove, when called upon, the bases for the matters reported and their correctness and reasonableness. Detailed supporting information should be included in the report to the extent necessary to make a convincing presentation.
- (5) Include, when possible, the auditor's recommendations for actions to effect improvements in problem areas noted in his audit and to otherwise make improvements in operations. Information on underlying causes of problems reported should be included to assist in implementing or devising corrective actions.
- (6) Place primary emphasis on improvement rather than on criticism of the past; critical comments should be presented in balanced perspective, recognizing any unusual difficulties or circumstances faced by the operating officials concerned.
- (7) Identify and explain issues and questions needing further study and consideration by the auditor or others.
- (8) Include recognition of noteworthy accomplishments, particularly when management improvements in one program or activity may be applicable elsewhere.
- (9) Include recognition of the views of responsible officials of the organization, program, function, or activity audited on the auditor's findings, conclusions, and recommendations. Except where the possibility of fraud or other compelling reason

may require different treatment, the auditor's tentative findings and conclusions should be reviewed with such officials. When possible, without undue delay, their views should be obtained in writing and objectively considered and presented in preparing the final report.

- (10) Clearly explain the scope and objectives of the audit.
  - (11) State whether any significant pertinent information has been omitted because it is deemed privileged or confidential. The nature of such information should be described, and the law or other basis under which it is withheld should be stated.
- d. Each audit report containing financial reports shall:
- (1) Contain an expression of the auditor's opinion as to whether the information in the financial reports is presented fairly in accordance with generally accepted accounting principles (or with other specified accounting principles applicable to the organization, program, function, or activity audited), applied on a basis consistent with that of the preceding reporting period. If the auditor cannot express an opinion, the reasons therefore should be stated in the audit report.
  - (2) Contain appropriate supplementary explanatory information about the contents of the financial reports as may be necessary for full and informative disclosure about the financial operations of the organization, program, function, or activity audited. Violations of legal or other regulatory requirements, including instances of non-compliance, and material changes in accounting policies and procedures, along with their effect on the financial reports, shall be explained in the audit report.

Although the GAO audit standards were developed for use in GAO audits, they are generally applicable to all governmental audits whether internal or external. In addition to the standardization provided for internal audits

these standards represent the criteria on which the Coast Guard would be audited by the GAO. This commonality in audit approach is advantageous to both the agency being audited and the auditing agency. The agency being audited by evaluating itself using the GAO criteria is more likely to be in agreement with the GAO than would be likely otherwise. For the GAO, the audited agency may not require as extensive an examination as might be required if individually developed criteria were used.

#### C. AUDIT PROCEDURES

Audit procedures relate directly to the stated audit objectives. They are "the specific acts performed in achieving the objectives." To reiterate, the objective of the internal audit process is to provide management with the information required so that management can insure compliance with law and regulation in an efficient and economical manner so as to achieve the stated program objectives. The vehicles for achieving the audit objectives are the three audit types already discussed.

In the area of program results, Mr. Darryl Enstrom and Mr. Alfred Cancellieri in their article "The Expanded Scope of Governmental Auditing" have developed a flowchart (Appendix E) illustrating a logical decision process for such an audit. The advantage of this approach is that it provides uniformity in the evaluation of program results thereby reducing the likelihood of substantially divergent

audit results when auditing similiar entities. To lay the groundwork for a 'program results' audit, top level management must define goals of the program and the criteria that is to be used in evaluation. This information must be collected and made available to the auditor. These actions and others on the part of management are necessary in order that the program can function and evaluate itself, thus, there is little in the way of special preparation that need be done for an audit. On the other hand, if these actions have not already been taken there is a good chance that the program to be audited is not working properly. This model has not been applied to Coast Guard programs, but its application would enhance the achievement of program results and provide a better basis for evaluation.

Economy and efficiency audits go by many names such as: operational controls review, operational audit, management audit, performance audits, etc. There are many approaches to conducting operational audits, some of which flow naturally from the audits for compliance and program results audits; i.e., the relationship between these audits is so close that it is difficult to draw a dividing line between them. Other approaches are the walk-through audit, flow-charting of responsibilities and documents, and the system approach.<sup>11</sup> Briefly these audits entail:

1. Walk-Through Audit - The primary purpose of this approach is to observe the condition of tangible assets. Questions generated by this approach

lead to a more indepth review then might otherwise be possible.

2. Flowcharting - This approach organizes the entity being audited into a form that can be easily read. Inconsistencies, overlaps, and duplications that reduce economy and efficiency are more visible.
3. Systems Approach - External and internal factors that influence operation of a system are viewed together. From this vantage point the effect of specific actions on the systems can be judged in view of economy and efficiency. The result is that some activities that appear uneconomical or inefficient on the surface may in fact exist for good reason.

In private sector auditing audits for compliance and financial auditing constitute two separate audit areas. These have been combined in the public sector. Financial audits, because they have traditionally been the center of the audit process, have been relatively well defined and there are generally very few problems in this area. Compliance auditing, on the other hand, can mean different things to different people. For instance, an audit to insure compliance with existing law and regulations would be straightforward even though the process of determining what laws and regulations were applicable would be difficult especially for an external auditor. For an internal auditor the source of this information would be more apparent because searches

for data would be continuing and most need be done only once. The greatest challenge to the internal auditor would be to determine the reasonableness of existing law and regulation not only individually but for cumulative impact on units responsible for implementation.

In summary, Table I provides a convenient guide indicating how resources should be allocated in order to achieve the audit objectives in an efficient manner.

Audit procedures can be more narrowly defined than is presented here. A good source of additional information relating to audit procedures and techniques can be found in LCDR R.C. Samuelson's Masters Thesis, "Internal Controls and Internal Review Module of the Practical Comptrollership" Short Course listed in the bibliography.

TABLE I

GUIDE TO ALLOCATION OF INTERNAL AUDIT RESOURCES

Audit Type Organizational Unit	Financial and Compliance Unit	Economy and Efficiency Audit	Audit of Program Results
Headquarters	3	2	1
District/HQ Unit	2	1	3
District Units	1	2	3

- 1 - Primary Audit Area
- 2 - Secondary Audit Area
- 3 - Tertiary Audit Area

## V. AN INTERNAL AUDIT MODEL FOR THE U.S. COAST GUARD

The proposed model for internal audit in the Coast Guard must avoid costs that exceed potential benefits. Since nearly all costs of internal audit are personnel related, the audit staffs must be kept to a minimum. This is made more difficult for an organization the size of the Coast Guard because the core of auditing expertise located at the headquarters level is likely to cause the ratio of auditors to employees as presented in Chapter I to exceed the ratios of larger organizations before field auditors are added. This model was developed with these factors in mind.

### A. INTERNAL AUDIT IN THE COAST GUARD

Every manager relies to some extent on internal evaluations to insure that the unit is in fact meeting all operational and administrative requirements. At the Coast Guard unit level, periodic inventories of spare parts and commissary items and the cash counts in non-appropriated and morale funds which are required on a regular basis, are two examples. Throughout the organizational structure the results of these evaluations are used by the person responsible to determine how well his job is being done and what should be done next. The internal audit model that is being developed here is focused to assist management at the

District level then subsequently the Headquarters level of the Coast Guard organization. While the information gathered and reported will be beneficial to the unit commander, the purpose of the internal audit is to assist the District Commander in determining whether or not the organization is functioning properly and, if not, where corrective action is needed.

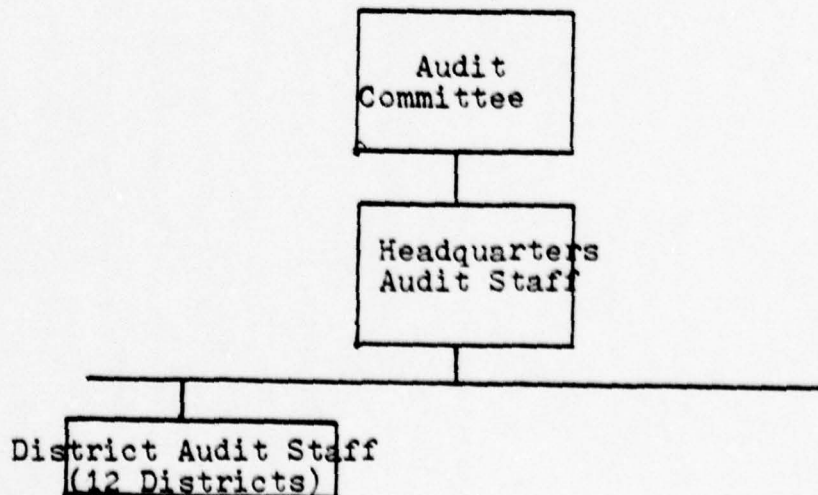
The model to be developed here is two tiered, it places the bulk of the audit effort at the District level as is currently the case with the Coast Guard's District Inspection Staffs. A majority of the District auditors efforts should be focused on financial and compliance audits and economy and efficiency audits. Because the District's primary efforts are carried out through the district units, previously defined as program elements, most audits will be directed here. Other District staff components are also subject to audit. A second tier is located as a staff component at the Headquarters level. The Program Results audit is of primary importance at this level, however, it cannot be divorced from other audit types. Headquarters auditors must evaluate the total picture in order to properly assess the Coast Guard's performance in achieving program objectives. This includes evaluation of District audit staffs and the results of their audits. Only by standardization of auditing procedures can results be adequately evaluated. This standardization extends from district to district and from audit to audit within each district. Chapter IV outlines

standards developed by the General Accounting Office to assist agencies in achieving the desired standardization.

This model does not purport to provide a step-by-step guide to auditing a Coast Guard activity. Such a guide is beyond the scope of this thesis. The development of a framework within which guides for auditing classes of activities whether by program, support program or program element is the intent.

#### B. THE AUDIT ORGANIZATION

This model consists of three major components; an audit committee, a headquarters audit staff and a district audit staff. The Area Inspection staffs will have no audit responsibilities, but will maintain military and operational related inspection functions. The District Inspector General will manage a combined inspection/audit organization. The following chart depicts the suggested audit organization:



Further explanation of the audit components presented in the chart follows.

1. Areas of Primary Audit Responsibility

Where auditable activities extend beyond the limits of a District's authority, Headquarter's auditors will perform the audits. This narrows the extent of District audit activity since many activities that require auditing are not restricted by organizational boundaries. The major organizational components of the Coast Guard will be audited by the audit components shown below.

a. Headquarters Audit Staff

- (1) Headquarters Offices
- (2) Headquarters Units
- (3) Area Offices
- (4) District Offices

b. District Audit Staff

- (1) District Units
- (2) Other District Staff Components

2. Major Functions of Each Audit Component in the Organization

a. Audit Committee

The concept of an audit committee for profit oriented enterprises was first proposed in 1939 and has since become a way of life in the corporate community. Sixty-eight percent of the companies in a Coopers and Lybrand

survey had audit committees in 1967, a number that had risen steadily since 1939. In the private sector "the principal function of the Audit Committee, as the representative of the corporate directors, is to accentuate the independence, objectivity, and thoroughness of a company's financial disclosures."<sup>12</sup>

Although the Coast Guard, as other government organizations, does not have a counterpart to the corporate Board of Directors, the Audit Committee concept is a good idea. Because of the diversity of the Coast Guard's mission areas and the use of generalists as opposed to specialists to carry out those missions, there is no single source of data available to guide auditors outside areas of financial responsibility. The audit committee should consist of a senior military or civilian from each Office of the Commandant and should be a direct representative of the Commandant. The Committee should meet once annually to perform the following functions:

1. The committee should examine the scope of the internal audits of the Headquarters Audit Staff to determine if audits conducted are likely to provide useful managerial information.
2. The committee should review the proposed schedule of Program Audits and make recommendations, if required.
3. The Coast Guard committee should review the independence and objectivity of the audits conducted.

4. Define and refine those areas to be audited using the cost/benefit analysis approach to determine the extent of audit coverage.
5. Insure that areas audited by the Coast Guard are not also being audited by the Department of Transportation or the General Accounting Office.

b. The Headquarters Audit Staff

The Headquarters auditing staff should consist of a sufficient number of qualified professional auditors who can provide the technical expertise needed to implement a credible audit policy. The objective of staffing an effective audit organization should be to obtain an optimal mix of specialists and generalists. The generalists should be senior military personnel, officer and enlisted, with a wide range of experience.

The Headquarters Audit Staff should be responsible for:

1. Coordinating the annual Audit Committee meetings and preparing the agenda and other information.
2. Keeping abreast of current trends in the area of internal auditing through whatever means are available and communicating findings to appropriate officials for review and implementation where warranted.
3. Performing Program Results audits and other audits as indicated under audit responsibility.

The Headquarters Audit Staff will essentially be composed of two groups, those personnel responsible for

making and implementing audit policy and those responsible for performing audits.

c. District Audit Staff

The District Audit Staff will function administratively much the same as the current District Inspection Staffs. Audits would be based on additional criteria and analysis of results by an audit professional should enhance the quality of audits at the district level. At this level the major changes will be in the training of personnel assigned to the audit staff and the use of standardized audit procedures for each separate class of unit in order to maintain consistency. Consistency is important so that audit results can be compared on a like unit basis and on a year-to-year basis.

The two primary areas of concern for the District Staff Auditors will be financial and compliance audits and economy and efficiency audits. The format of these audits will be guided by Headquarters directives to ensure uniformity throughout the districts and to facilitate the program results audits to be carried out from the Headquarters level.

C. THE AUDITORS - GENERALISTS OR SPECIALISTS

A key to the success of any auditing program is the auditors who will be conducting the audits. Should they be specialists or generalists? Professor J. R. Fritzmeier,

Chairman of the Accounting Department at Arizona State University, looked at this question in his paper in The Internal Auditor, "Should Internal Auditing be Performed by a Staff of Specialists or by a Specialized Staff?" He concluded that generalists should be in the majority and that specialists should supplement them where necessary. Generalists used in this context are persons trained in accounting and auditing with general skills in related disciplines.

The Coast Guard currently has no qualified audit personnel on the District Inspection Staffs. This is a major weakness if the inspection staff system is to be used as a management tool, and creates a wide credibility gap in the eyes of external auditors no matter how conscientious the Inspection Staff personnel are. It is not practical to train Coast Guardsmen to be auditors or auditors to be Coast Guardsmen. The greatest loss besides cost would be objectivity on the part of the auditor. In the model presented here the professional auditor would direct the activities of Coast Guard personnel in the performance of audits so as to maintain an element of consistency for evaluation purposes. The advantage here is that the expertise of the Coast Guardsmen is not lost and the insight and training of the auditor are utilized.

#### D. ALTERNATIVE METHOD OF INTERNAL FINANCIAL AUDIT

In these times when qualified personnel or just personnel in general are difficult to obtain, whether due to market conditions or government imposed personnel ceilings, a viable alternative for conducting financial audits is to contract for this service. This is proposed for major financial systems such as inventory, non-appropriated funds, travel and transportation, and public works. The major advantages to this approach is that it gives the Coast Guard manager insight from professionals who are more likely to be in step with the 'state of the art' in the area being audited. It further reduces the expertise required by Coast Guard Auditors in the financial areas and frees them for conducting those audits that are inherently government related; i.e., audit of program results, economy and efficiency audits, and compliance audits. This is reasonable since the internal auditor must have a detailed understanding of the objectives of management and the various conditions essential to their achievement.<sup>13</sup>

#### E. THE INSPECTOR GENERAL FUNCTION

The Inspector General is a function that has traditionally been associated with military organizations. Although their primary area of concern is operational readiness and compliance with military related requirements, their duties in all of the military services have been expanded beyond

these areas. Today with the broadening of the internal audit functions away from strictly financial related auditing to management or operational audits, there is an overlap between the duties of the Inspector General and the Internal Audit Staff in those armed services where both exist. This should be avoided if an internal audit staff is formed by narrowing the 'scope' of the Inspector General's duties to include only military functions.

The Coast Guard will always be a militarily oriented organization and there will always be a need for an Inspector General. The role of the Inspector General should be twofold especially because of the high rank that this position requires. He should continue to perform his duties relating to operational readiness and military requirements and he should manage the internal audit staff.

## V. SUMMARY AND CONCLUSIONS

### A. SUMMARY

It has been the intent of this thesis to provide a framework for and to develop some requirements for a useful and credible Coast Guard audit system. Currently acceptable audit techniques were described along with GAO promulgated standards. The use of the Coast Guard's program structure as a basis for more meaningful audit information was suggested. The hoped for result is an internal audit function that provides comprehensive audit coverage in a form similiar to a GAO audit.

This model recognizes that audit needs are different at each organizational level. Suggestions for the performance of audits at each level are presented. Additionally, this model outlines a streamlined audit organization that incorporates such audit innovations as the audit committee. The goal is to provide reasonable audit information for the Headquarters and District Office managers at minimal cost. Reasonable audit information being pertinent and understandable information relating to program results, efficiency and economy, and financial and legal compliance.

What this model does not purport to do is be all-inclusive and provide lower level management with all the formal audit information needed to fulfill its management responsibilities.

However, the framework for gathering such information does exist. The scope of the audit objectives decided upon will indicate the extent to which audit information can be provided to lower level management. This will, of course, be in addition to the information received immediately following a unit audit and when recommendations resulting from an audit are received by the unit.

## B. CONCLUSION

The major changes suggested by this model are:

1. the relocation of internal audit functions from DOT to the Coast Guard;
2. the inclusion of qualified audit staff personnel where there are currently only Inspection Staff personnel;
3. the incorporation of 'state-of-the-art' auditing standards and techniques into a Coast Guard audit staff;
4. the formation of an audit committee; and,
5. utilization of the Inspector General in each district to coordinate and manage audit staff.

Without these changes internal audit as a management tool is not being fully exploited. Aside from the organizational changes suggested, 1, 4, and 5 above, the real impact of a trained and experienced audit team will be that meaningful information will be made available on which management decisions can be based. Rather than receiving a collection

of individual facts from an inspection, an auditor should possess the skills to analyze facts to determine the root of a problem where one exists. Management, whose time is already at a premium, frequently does not have the opportunity to analyze 'the facts' as provided by an inspection. For example, it is possible that a unit may be operating well within the financial boundaries established for it and it may be complying with all regulations, but it may not be operating efficiently or economically. Under the current inspection system it is likely that this latter situation would not be identified. It is the job of the auditor not only to gather data in an audit but to correlate with the 'big picture' and make recommendations for corrective actions where required. Thus, the auditor must first be knowledgeable in the methods and procedures of performing an audit, and secondly, he must be capable of analyzing a problem and formulating an acceptable solution. The bottom line is that auditing is more than data collection, and a successful audit organization must be built around a core of audit professionals. This model suggests such an organization and describes some means for achieving the audit goals.

APPENDIX A\*

INSPECTOR GENERAL (IG)

Under the general direction and supervision of the Commandant, the Inspector General shall:

1. Develop, implement and monitor a Coast Guard-wide inspection and evaluation system aimed at keeping the Commandant and District Commanders advised as to : (a) compliance with established policies and procedures; (b) ability of Coast Guard units to perform assigned tasks efficiently and effectively; (c) the state of military readiness of Coast Guard units; and (d) potential remedial measures to improve mission effectiveness.

2. Plan, develop and implement an inspection system for the Coast Guard which will provide uniform standards, procedures and guidelines to be applied by field inspection staffs in their inspection and evaluation of Coast Guard units ashore and afloat (covering the operational and administrative areas, as well as the Safety Program).

3. Make a continuing appraisal and analysis of the effectiveness of the inspection system and install improved measures as necessary.

4. Provide advisory services to field inspection staffs concerning interpretation of policies and the inspection process in general.

5. Coordinate inspection activities throughout the Service, and take steps to balance inspection workload with personnel requirements.

6. Assure that the Commandant or other appropriate Headquarters official(s) is informed of major or unusual problems arising from inspections which cannot be reconciled at the field level.

7. Provide for the cyclical or special inspection and evaluation of district offices and Headquarters units, assisted as necessary by specialists temporarily assigned by the Commandant.

8. Direct field inspection staffs to make special inspections or investigations as may be requested by the Commandant or responsible official on his staff.

9. Establish a reporting system designed to keep the Commandant and his Headquarters staff generally informed as to the mission effectiveness of field units.

10. Direct and supervise the activities of the Director of Safety and have ultimate responsibility for the Coast Guard Safety Program.

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\*SOURCE: U.S. Coast Guard Organization Manual

APPENDIX B\*

DISTRICT INSPECTION STAFF (di)

Under the direction and supervision of the District Commander and the Chief of Staff, the Chief, Inspection Staff shall:

1. In accordance with inspection schedules approved by the District Commander, carry out inspections of District Units (augmented as necessary by specialists temporarily assigned by the District Commander), consistent with policies, standards and guidelines promulgated by the Inspector General. (This includes compliance reviews for the safety program). Inspection teams will:

a. Review and evaluate the readiness of units inspected to fulfill their authorized missions in terms of organization, management, utilization of resources, and operational sufficiency.

b. Ascertain compliance of inspected units with applicable laws, regulations, directives and policies.

c. Develop recommendations for improvements relating to those areas inspected.

d. Submit reports on results of inspections to the District Commander, and follow up on progress made by responsible officials to remedy deficiencies and to implement recommendations which are approved.

e. Carry out special investigations and inspections as may be directed by the Commandant or District Commander.

f. Prepare and submit such periodic or special reports on the Inspection Program as may be directed by higher authority.

2. In close coordination with the District Civil Rights Officer, gather facts relating to equal opportunity matters (exclusive of specific complaints) and furnish findings to the District Civil Rights Officer for analysis and appropriate action.

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\*SOURCE: U.S. Coast Guard Organization Manual

## APPENDIX C\*

### INTERNAL REVIEW

Another important mechanism for providing management officials with information as a basis for management action is a system of independent internal review of operations, methods, systems, procedures and practices.

Some form of independent internal review, such as internal auditing, is needed by management to provide an appraisal of all other elements of control. It also may supplement and reinforce other controls which, for practical reasons, may not contain desirable automatic checks and balances.

Some basic principles and policies pertaining to an agency's internal review system are:

1. Top management should devise an internal review system and organization that will best suit its needs. The responsibilities need not be vested solely in an internal audit group if other organizational segments of a staff nature can satisfactorily perform review and appraisal functions.

2. All types of review activity within an agency, such as inspections and internal audits, should be coordinated and the work done by each clearly defined to prevent duplication of effort and jurisdictional disputes.

3. Agency needs for internal review vary. Therefore, the scope of the work cannot be standardized, and should be set by each agency management. It may include:

a. Reviewing compliance with and appraising performance under agency policies and procedures.

b. Examining and verifying financial transactions.

c. Testing the reliability and usefulness of agency accounting and other financial and statistical data, and related internal and external reports.

d. Reviewing the effectiveness with which agency manpower and property are used.

e. Determining whether all assets are properly accounted for and safeguarded to prevent or minimize waste or loss of assets.

4. Top management should define the nature and scope of the internal reviewers' work so that their duties, responsibilities, and stature will be adequately recognized within the agency.

5. To promote adequate consideration and action on its findings, the internal review organization should be responsible to an official at a reasonably high level. It should be independent of the officials directly responsible for the operations reviewed so that appraisals can be more objective.

6. Operating officials are primarily responsible for properly doing and continuously supervising their jobs. The internal review operation should not replace established authority and responsibility.

7. Internal reviewing is a staff or advisory function and should not include the supervision or performance of line operations. The internal reviewers should not control or direct action; their function is to assist management by providing information which may become the basis for action.

8. The agency should develop a manual outlining the scope, objectives, and performance standards of its internal audit or review function.

9. Forward planning of review work is desirable to identify areas to be covered, and permit systematic scheduling and orderly use of manpower. But plans should be flexible enough to permit special examinations.

10. All internal review work should meet professional standards of competence, reliability, and objectivity. Timely reporting should be stressed constantly.

11. Internal reviewers should place primary emphasis on promoting improvement of operations.

12. Findings should be discussed with the responsible operating officials whose activities are being reviewed, except where the possibility of fraud may require different treatment. Reports giving recognition to these views will give top management the full story, and lead to greater cooperation and more effective action.

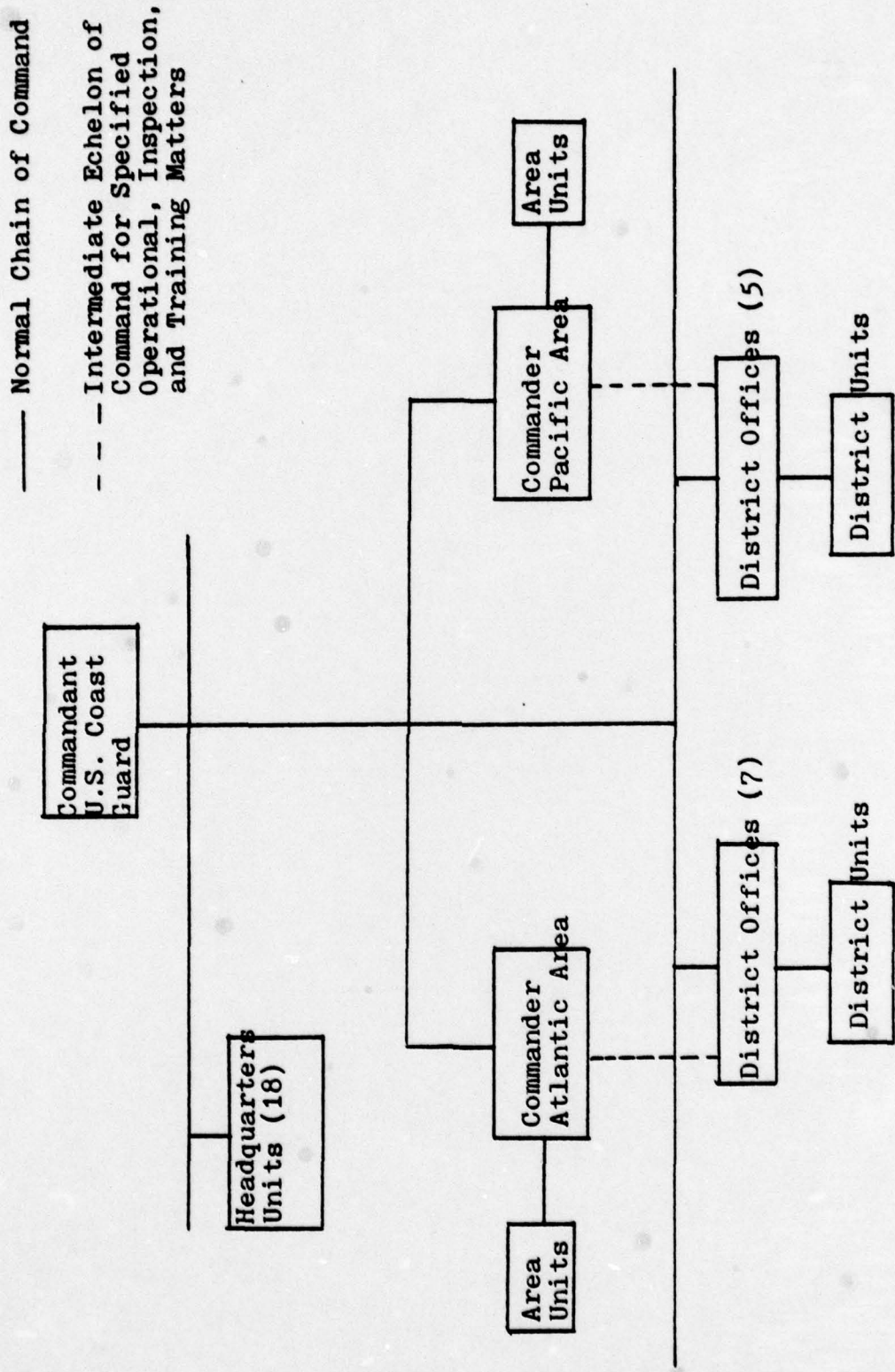
13. Suitable follow-up procedures should be established to determine whether recommendations based on internal review work have been considered, corrective action taken, and

whether the results were satisfactory. The internal review work will only be effective in the management makes use of its results.

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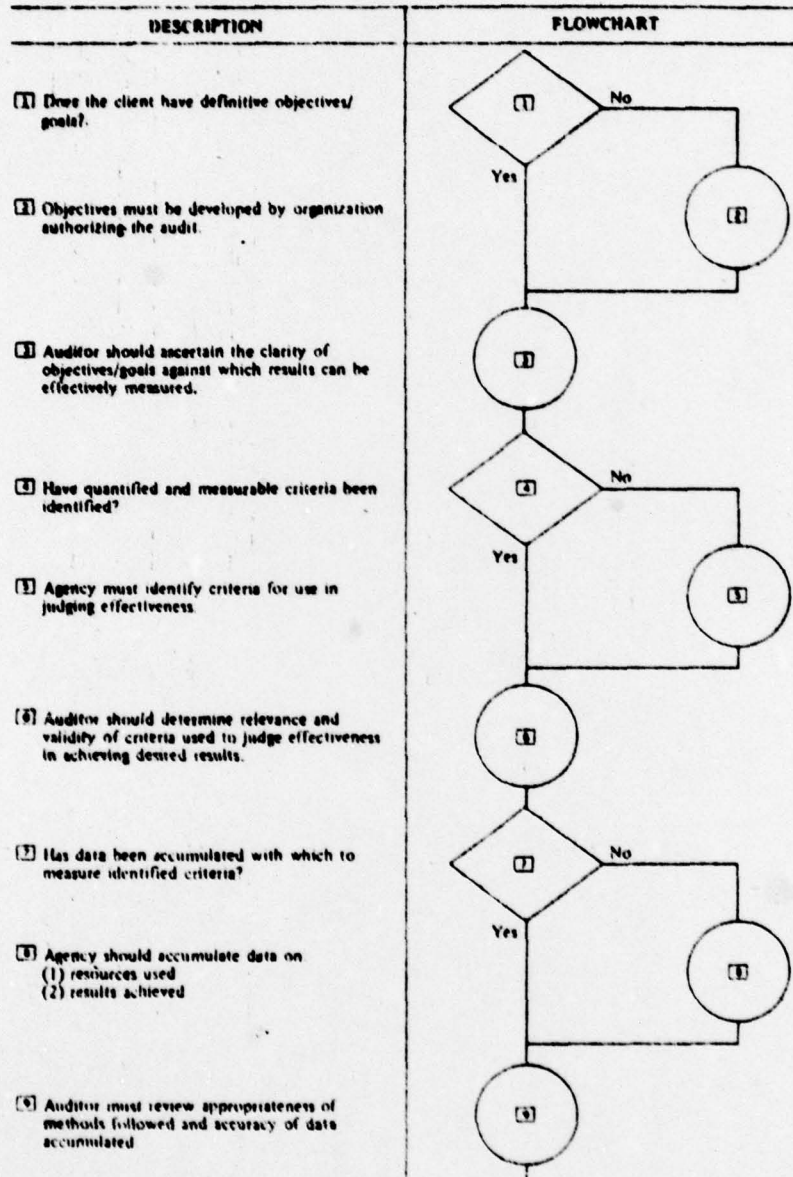
\*SOURCE: General Accounting Office Comprehensive Audit Manual








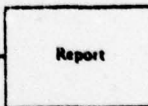
APPENDIX D - ABBREVIATED U.S. COAST GUARD ORGANIZATION CHART



APPENDIX E\*

FLOWCHART ILLUSTRATING DECISION TABLE FOR PROGRAM RESULTS



DESCRIPTION	FLOWCHART
<p>10 Is work to be done on a coordinated basis (i.e., where there are various program sites)?</p>	
<p>11 Are evaluation techniques uniformly prescribed?*</p>	
<p>12 Agency should prescribe uniform evaluation techniques.</p>	
<p>13 Agency personnel at various sites should accumulate data for auditor review and comparison to prescribed measures.</p>	
<p>14 Auditor should analyze and evaluate all data in relation to objectives.</p>	
<p>15 Auditor should review findings with client personnel.</p>	
<p>16 Auditor should prepare his report.</p>	 
<p>*In the absence of uniform evaluation techniques, wide variations in the measurements applied to similar projects by different auditors may result in inefficiencies in determining the effectiveness of the program as a whole.</p>	

\*SOURCE: "The Expanded Scope of Government Auditing" by D. Enstrom and A. J. Cancellieri.

## APPENDIX F

### GLOSSARY OF TERMS

AUDIT OBJECTIVE - A statement or determination made prior to the beginning of an audit that states what the audit is expected to accomplish.

AUDIT PROCEDURE - Specific act or acts performed in achieving the objectives of an audit.

AUDIT STANDARDS - General measures of the quality and adequacy of the work performed.

COOPER AND LYBRAND - A nationally known public accounting firm.

ECONOMY - The efficient use of resources.

EFFECTIVENESS - The relationship between actual output and expected output.

EFFICIENCY - The amount of output per unit of input or the benefit received per dollar of input.

EVIDENCE - The specific information obtained during the audit process through observing, interviewing and examining records.

FLOWCHART - A diagram illustrating the flow of activity or information in performing a particular task.

INTERNAL CONTROLS - The organization's plans and activities that are undertaken for the purpose of safeguarding assets, assuring compliance with management policy, and checking the accuracy and reliability of accounting data.

OPERATING ADMINISTRATIONS - Those agencies of the Federal Government that make up an Executive Department such as the Department of Transportation.

PROGRAM CATEGORY - A categorization of an agency's missions for the purpose of allocating resources through the budget process.

PROGRAM ELEMENT - A definable activity or related group of activities that the organization carries on, either directly in support of program objectives or indirectly in support of other program elements.

SUPPORT PROGRAM - Those programs that support the major programs.

FOOTNOTES

<sup>1</sup> Arens, A. A. and Loebbecke, J. K., Auditing: An Integrated Approach, p. 3, Prentice Hall, Inc., 1976.

<sup>2</sup> U.S. Coast Guard, U.S. Coast Guard Operations Manual, pp. 2-14 and 4-12a, 1972.

<sup>3</sup> United States General Accounting Office, Comprehensive Audit Manual, p. 2-2, 1978.

<sup>4</sup> American Institute of Certified Public Accounts, Inc., SAS No. 1, 1973.

<sup>5</sup> Anthony, R. N. and Herzlinger, R. E., Management Control in Nonprofit Organizations, p. 86, Richard D. Irwin, Inc., 1975.

<sup>6</sup> Department of Transportation, The U.S. Coast Guard: Its Missions and Objectives, U.S. Government Printing Office, 1977.

<sup>7</sup> Anthony, Management Control in Nonprofit Organizations, p. 94.

<sup>8</sup> DOT, The U.S. Coast Guard: Its Missions and Objectives.

<sup>9</sup> GAO, Comprehensive Audit Manual, p. 3-1.

<sup>10</sup> Ibid., p. 3-2 through 3-5.

<sup>11</sup> Knighton, L. T., "A Practical Audit Approach," The Internal Auditor, v. 34, p. 44, June 1977.

<sup>12</sup> Colegrove, R. L., "The Functions and Responsibilities of the Corporate Audit Committee," The Internal Auditor, v. 33, p. 17, June 1976.

<sup>13</sup> Ibid. p. 19.

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