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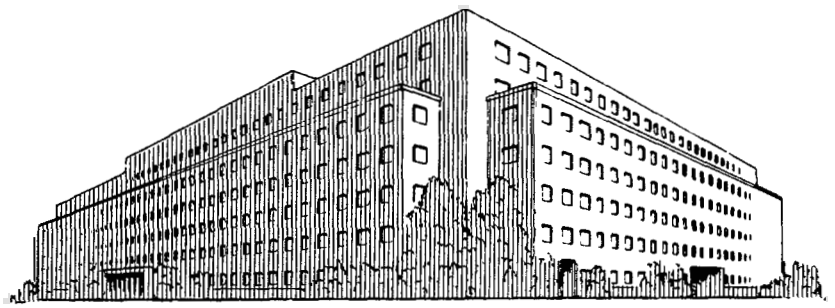
The GAO Review



SPRING 1966

The GAO Review

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contents

Published quarterly for the accounting and auditing staffs of the U.S. General Accounting Office

NEW COMPTROLLER GENERAL

On February 11, 1966, President Johnson announced that he was nominating Elmer B. Staats, then Deputy Director of the Bureau of the Budget, as Comptroller General of the United States.

The Senate Committee on Government Operations held a hearing on this nomination on March 2, endorsed it on the same date, and the Senate officially confirmed it on March 4.

Mr. Staats was sworn in as Comptroller General by the President of the United States on March 8, 1966, at a ceremony at the White House. The Assistant Comptroller General, Frank H. Weitzel, and the heads of GAO divisions and offices in Washington were privileged to attend this ceremony.

We welcome Mr. Staats to his new post and are pleased to present in this issue of the *Review*

A message from Mr. Staats;

A biographical sketch;

A picture of the swearing-in ceremony;

The remarks of President Johnson which preceded the swearing-in.

A MESSAGE FROM THE COMPTROLLER GENERAL

I am pleased to have this opportunity to greet a large segment of the employees of the General Accounting Office.

I was greatly honored by the President's expression of confidence which led him to nominate me for the important post of Comptroller General of the United States. I know it to be a position of great responsibility and importance and one which holds great challenge for me. It is a position which anyone concerned with financial management and efficient and economical operation of the Government should be honored to hold.

I have served many years in the Bureau of the Budget which was created some 45 years ago by the same statute creating the General Accounting Office. In the Bureau of the Budget, I attached great significance to the role of the General Accounting Office as an agent of the Congress in bringing about more economical and effective administration of Federal programs.

Last year I testified before the Subcommittee on Military Operations of the House Government Operations Committee that the President and the Bureau of the Budget regard GAO reports as an important source of assistance in working toward the goal of strengthened agency management.

I know that the Bureau of the Budget has enjoyed close working relationships with the General Accounting Office and the Treasury Department under the Joint Financial Management Improvement Program. This program has been a landmark in executive and legislative branch cooperation and I am pleased that I had a part in the initiation of this effort.

The General Accounting Office and the Bureau of the Budget both serve in part as a critic of agency operations. Both agencies share in the common objectives of economy, efficiency, and integrity of Government operations as set forth in the basic budget and accounting legislation.

Over the years I have come to have great respect for the leadership and staff of the General Accounting Office. For the years ahead, I am looking forward to working with you in making this Office an even greater factor in improved management in the Federal Government and in providing assistance to the Congress.

Elmer B. Staats

Comptroller General
of the United States

ELMER B. STAATS
CAREER FEDERAL FISCAL OFFICIAL

The following sketch about Mr. Staats and his career was published in the St. Louis Post-Dispatch on February 20, 1966. It was written by Raymond P. Brandt, a contributing editor, and is printed in *The Review* with permission.

No one, not even a two-term President, knows as much about the inner working of Government as the high level career officials of the Bureau of the Budget.

For this reason, President Lyndon B. Johnson's appointment of Deputy Budget Director Elmer B. Staats, 51 years old, to be head of the General Accounting Office ranks among the most important of his selections of qualified top officials.

Staats' title will be Comptroller General of the United States. He will supervise the work of 4,300 permanent employes, mostly accountants and investigators, and the annual expenditure of about $41 million, of which $21 million is for field work. The salary is $30,000 a year and the term 15 years. Holders of the office are ineligible for reappointment.

The GAO is an agency of the legislative, not the executive, branch. Other presidents have selected Comptrollers from their political or personal friends. Gen. Dwight D. Eisenhower chose the outgoing Joseph Campbell, a business accountant, treasurer of Columbia University and a member of the Union League (Republican) Club of New York City. Franklin D. Roosevelt nominated Representative Lindsay C. Warren, a North Carolina Democrat, who had been chairman of the old House Accounts Committee.

Staats does not list his political affiliation and is not regarded as one of Mr. Johnson's personal intimates. Beginning with the Budget Bureau in 1939, he has served under five presidents. In 1940, he married the daughter of former Republican Representative Robert F. Rich of Pennsylvania, a textile manufacturer and banker who had a distinctly conservative record in Congress.

As a ranking member of the Committee on Expenditures in the executive branch, Representative Rich persistently included in his speeches on the House floor: "Where are you going to get the money?"

As Comptroller General, his son-in-law will be asking the Government departments and agencies: "What did you do with the money?"

With the Federal cash budget nearing 150 billion dollars a year, the GAO's operations today are a far cry from the earlier days in the 1920s when the Comptroller General issued reports complaining that minor Government workers had used taxicabs instead of streetcars or made unauthorized claims for overtime. After World War II, Comptroller Warren recovered hundreds of millions of dollars from companies which had overcharged the Government on wartime contracts. His reports did much to modify the cost-plus-fee arrangements, which he said had cost the

Government untold billions through waste, fraud, and mismanagement.

* * * * *

Because of his long and varied experience in the Budget Bureau, Staats will be in a position to bring about closer cooperation between the Bureau and the GAO. In addition to his bureau work at the top level, he had almost 5 years at the White House as executive officer of the operations coordinating board of the National Security Council from 1953 to 1958. He was brought into the Eisenhower administration partly at least on the recommendation of Sidney Souers of St. Louis, who had been President Truman's executive secretary of the NSC.

In those years, the coordinating board was responsible for carrying out through the various departments and agencies the international policies determined by the President after consultation with the security council.

At the White House, Staats appointed the interdepartmental committees, mostly from State, Defense, Treasury, and the Atomic Energy Commission, which worked out the details for implementing NSC policies and reporting on their effectiveness. Bromley Smith, who presently holds a similar position with the NSC, told the Post-Dispatch that Staats had been an operational staff officer par excellence in pulling the various groups together, obtaining agreements and reporting back efficiently and precisely. The assignments gave Staats an insight into foreign affairs and acquaintance with officials at the under secretary and assistant secretary levels that he had not had in the Buget Bureau.

Staats returned to the Bureau in 1958 with the Assistant Director title he had given up in 1953 to become research director for Marshall Field & Co., in Chicago, a position that was not to his liking and where he stayed only about 6 months. In 1959 he was promoted to Deputy Budget Director, under Republican Maurice Stans.

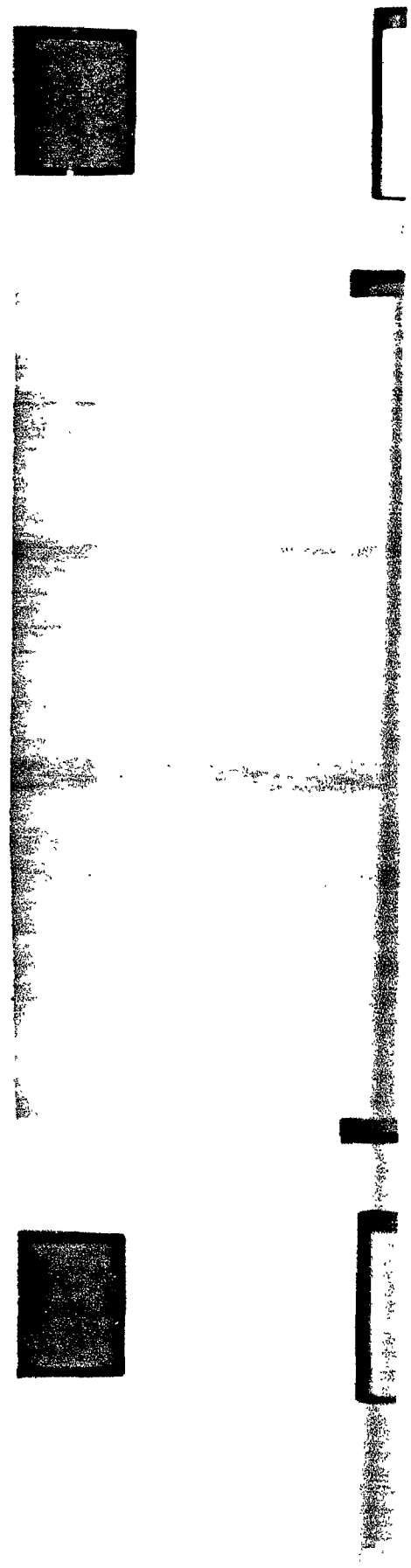
As the Deputy, Staats was primarily responsible for the smooth transition from the Eisenhower administration to that of President John F. Kennedy.

During the summer of 1960, Stans foresaw the possibility, if not the probability, of a Democratic presidential victory in November. He directed Staats to make contingent plans for the outcome. Eisenhower approved the idea but insisted that it must be kept secret within the four walls of the Budget Bureau. Staats, who is discreet to the point of noncommunication with newspapermen, fulfilled the secret assignment.

The day after the election, Eisenhower wired his congratulations to Kennedy, adding that his administration was ready and willing to cooperate with the Democratic administration, particularly on the new budget.

Kennedy named as his liaison man Clark M. Clifford, formerly of St. Louis, who brought in David E. Bell. later named Budget Director. Clifford, Staats, and Bell went to work at once. They had known each other well when Clifford was White House general counsel and the two others were in the Budget Bureau. Stans, while making all information available, declined to participate in policy discussions, saying they involved political affairs.

The 1960 transition was old hat to



Staats. He had participated in a similar operation in 1952 when the Republicans took over from the Truman administration.

The importance of a nonpolitical career service man in the Budget Bureau is proved by the rapid turnover of budget directors under all recent Presidents. Truman and Eisenhower each had four different directors, all appointed for political affiliations as well as their training. There have been three under the present Democratic administration: Bell, now Administrator of the Agency for International Development: Kermit Gordon, now vice president of the Brookings Institution, and the incumbent, Charles L. Schultze. The average tenure for all is 2 years.

The short tenure of Directors forces them to rely on the career officers in the Bureau. In 1953 when Detroit banker Joseph M. Dodge was appointed Director, many of his economy-minded associates expected him to replace the top bureau personnel with officials of his own choosing. Dodge, who had successfully reorganized the fiscal systems in postwar Germany and Japan, retained nearly all of the Bureau's career staff.

As assistant and Deputy Director, Staats has had experiences in all the major branches of the bureau—personnel, legislative reference, White House and congressional liaison. During World War II he was in charge of the budget estimates for the major war agencies. After the war he devoted much of his time to congressional relations. Truman said he was the ideal man for the work because of his family connection with conservative Republican Representative Rich. Part of the Bureau's job is to withstand political pressure. Staats was able to say no to members of Congress and at the same time to maintain cordial relations. He took the heat off the President and the Directors.

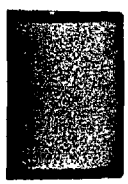
Staats' education was directed to public service. He was born in Richfield, western Kansas; obtained his A.B. degree and Phi Beta Kappa key at the University of Kansas. He won his Ph. D. at the University of Minnesota, where he earned expenses as a student-teacher. Between 1938 and 1939 he was a fellow at the Brookings Institution here.

In 1961, Staats won the Rockefeller public service award which then paid $5,000. The citation read that during his 21 years as a Government official he had held positions of ever-increasing responsibility. It ended:

> One would have to search far and wide to find a better example of a careerist who, while necessarily taking part in the policy-making, keeps himself apart from partisan affairs.

Staats is an active member of various organizations of public officials and business managers and has served as president of the American Society of Public Administrators. His reading is confined mostly to books and reports dealing with governmental affairs. His downtown club is the scholarly Cosmos, his country club is Chevy Chase in Maryland, where he plays golf with his wife.

The Staatses, with their son and two daughters, live in Spring Valley, to which they confine their social activities. The new Comptroller does not smoke and at cocktail parties limits himself to one drink.



Courtesy The Watchdog

Elmer B. Staats, Comptroller General of the United States, was sworn in during ceremonies at the White House on March 8th. From the left are E. Barrett Prettyman, Senior Circuit Judge, Court of Appeals for the D.C. Circuit, who administered the oath; Mr. Staats; Mrs. Staats (who held the family Bible); and President Lyndon B. Johnson.

REMARKS OF THE PRESIDENT OF THE UNITED STATES AT THE SWEARING IN OF ELMER B. STAATS

MARCH 8, 1966.

I understand that Elmer Staats hoped that any complimentary remarks which might be made at this swearing-in be directed to the staff of the Budget rather than to him personally.

Perhaps, when Mr. Staats hears some of the things that will be said about him in the next 15 years, he may want to remember the nice things that were said today.

I am delighted to compliment the staff of the Bureau. The energy, the dedication, the imagination, and uncomplaining hard work of the men and the women of the Bureau of the Budget are a never-ending source of pride to me.

In the first hours of my Presidency, the largest problem that had to be faced was the construction of a new budget. Through long days and longer nights, the Budget people were my prime allies in getting that job done. And in those beginning days, I came to know and respect Elmer Staats.

He has served his Government for 26 years. He has been Deputy Director of the Bureau of the Budget under four Presidents.

Whether they were Democrat or Republican, he served them with equal fidelity and with equal wisdom.

That is why I chose him for this new challenge.

From the first, I was determined to put forward the very best Comptroller General available. He holds a unique and vital position in our Government. While appointed by the President, his ultimate responsibility is to the Congress, to the President, and most important, to the country.

There are 2½ million men and women in the Federal Government who work to advance the progress of this uncommon land. But in any group that large there are a few who are doubters. They lack the vision to anticipate our strength—or the courage to give it purpose. They do not have the faith to lead. They find fault with either our system of government or the men who serve it, or with other branches such as the courts, the services, the legislative, and the executive, and so on.

The doubters do not build government or create strength. It is easy to declare why failure is certain and success is dim.

But what lasts and endures and prospers is the work of builders. This is the hard way, the long journey, the difficult path. But nothing valuable is ever won easily.

Whenever there is a collision with fate, when history stops for a moment of crisis—it is the doubter who runs from the test of courage—and it is the builder who is firm in the face of fear.

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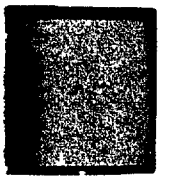
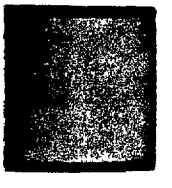
Elmer Staats is a builder, not a doubter.

He believes in our system of government. He has confidence in the wisdom of the Congress. He doesn't dwell on the imperfections that are part of any human system. But he declares his faith in the hopes of this Nation, and in the men who serve it.

So, General Staats, in the presence of your wonderful family, and particularly your distinguished father-in-law, former Congressman Bob Rich of Pennsylvania—you launch a new career. I have full confidence that the entire Nation will reap the profits from your new achievements—as you continue the work of the builder serving all branches diligently without fear, favor, or fuss.





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Our Role in Alaska

By Douglas E. Cameron

What work is like for the GAO staff in Alaska

Alaska, because of its vastness, its emerging state of social and economic development, and its extremes in weather and geography and because of the relative significance of Federal activities in that State, is unique in a variety of ways. As a result, our role in Alaska is also made unique. Most problems encountered by Federal agencies in Alaska are not comparable with problems encountered in the contiguous United States, often making questionable the aptness of solutions accepted elsewhere. All these factors combine to provide excellent opportunities for new experiences, for new solutions, and for intensely interesting, different, and rewarding work.

Today, Anchorage, the largest city in the Nation's largest State, is 9 hours from Washington, D.C., and, with a tailwind, less than 3 hours from Seattle—but it's as far west as Hawaii. Alaska at one point is less than 100 miles from Russia and at another is almost as far south as Paris; if superimposed on the contiguous United States, it would stretch from the east coast to the west coast. Anchorage is two time zones west of Seattle and has not adopted daylight saving time, so in the summer regularly scheduled jets departing from Seattle at 8 a.m. get travelers to Anchorage at 7:50 a.m., or 10 minutes before they left Seattle.

Federal activities, and consequently our interest in the State of Alaska, can best be placed in proper perspective when measured in terms of total State population and economy. Of a total population of 210,000, over 110,000 are Federal employees and their dependents—70,000 associated with civil activities and 40,000 with defense activities.

Some concept of the unique and intensely interesting Alaskan environment can be gained when one realizes that, in an area five times as large as

Mr. Cameron, an audit manager in the Seattle Regional Office, has been with the General Accounting Office since 1953. He has served as president of the Portland FGAA chapter. Mr. Cameron is an active member of the Oregon Society of CPAs and has served the Society as chairman of its Committee on Accounting and Auditing Procedure and as a member of the Ethics and Practice Review Committee.

Texas, there are only 1,200 miles of paved roads but there is the most active private floatplane lake in the United States. The populace's travel requirements are largely met by air transportation, both commercial and private. In regard to the latter, it was calculated that, during the summer of 1965, there was one private plane in Alaska for every 16 persons over 16 years of age.

Recent audit effort, under the cognizance of the Seattle Regional Office, has been concerned largely with activities of the Alaskan Command which has jurisdiction over designated theatre Army, Air Force, and Navy components; the Office of Emergency Planning which has had a widespread program since the March 1964 earthquake in the 49th State; and the Federal Aviation Agency which plays a vital role because of the importance of aviation in Alaska. But it has also been devoted to such other varied Federal activities as the welfare of Indians, railroading, fur sealing, timber management, and reclamation; the latter is primarily concerned not with traditional irrigation for agricultural programs but with the hydroelectric potential of the vast area and the need for a viably priced source of power and energy.

Illustrations of activities of Federal agencies in Alaska and of our experiences there are summarized below.

The Alaskan Command

The Alaskan Command (ALCOM), one of seven unified commands in our Defense Establishment, is responsible for the defense of Alaska and the polar gateway to the heartland of the United States. This mission is accomplished by Army, Navy, and Air Force units in Alaska, which are assigned to and under the operational control of ALCOM. From its headquarters at Elmendorf Air Force Base near Anchorage, ALCOM is responsible for coordinating the actions of these separate services into a unified and smoothly functioning modern defense team.

Communications is perhaps the most interesting example of ALCOM's central direction of an activity beyond the scope, interest, and capability of a single service. ALCOM is responsible for adequate communications to support its own operational mission and that of the component commands. Moreover, as there are no privately owned, long-distance telephone or telegraph toll service companies in Alaska, the civil populace is given access to and is dependent on military circuits.

Although many of the ALCOM defense facilities are located in remote areas several hundred miles from principal military installations, audit work at those sites can be accomplished in a reasonably efficient manner through use of various modes of transportation. For example, on one assignment which necessitated interviewing site personnel and inspecting a defense system being installed at an Aircraft Control and Warning (AC&W) site located about 300 miles from the ALCOM headquarters, the staff was able to accomplish the necessary work in 2 days by (1) flying in a Military Air Transport plane from Anchorage to an air base near Fairbanks, (2) flying in an Air Force helicopter from this base to the remotely located AC&W site, (3) riding on the

return to Fairbanks from the AC&W site in an Air Force four-wheel-drive vehicle, and (4) flying to Anchorage from Fairbanks in a commercial aircraft. The only delay encountered was a 5-hour wait for the commercial aircraft. The biggest surprise encountered by the bundled-up, arctic-geared staff occurred on their way from the remote AC&W site in the Air Force four-wheel-drive vehicle, when, 40 miles northwest of Fairbanks, they met an oncoming sports car bouncing wildly through the snow-splotched mud blithely driven by a lone, petite FAA housewife dressed as if for an afternoon tea in the "South 48" (all the States except Alaska and Hawaii).

Office of Emergency Planning

The Office of Emergency Planning (OEP), which administers the Federal natural disaster assistance program, has played an important role in Alaska during recent years. This program has as its objective the providing of Federal assistance to State and local governments to alleviate suffering and damage resulting from a major disaster. The Good Friday earthquake of 1964 precipitated a major recovery program, which is directed by the OEP Regional Office in Everett, Wash.

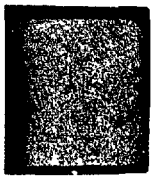
This earthquake was the strongest ever recorded on the North American continent. It killed over 100 persons and did nearly $1 billion worth of destruction throughout south central Alaska. In addition to relief provided by other Federal agencies, OEP, using over $60 million of emergency funds allocated by the President, has been instrumental in making emergency repairs to damaged or destroyed public facilities. An unusual case in point is the seaport city of Valdez, Alaska. Soil studies disclosed that future seismic action could cause the town to slide into the bay. Thus it was decided to move the entire town some 5 miles to a new site. Federal assistance for this purpose will exceed $15 million, or more than $25,000 for each of the 600 residents.

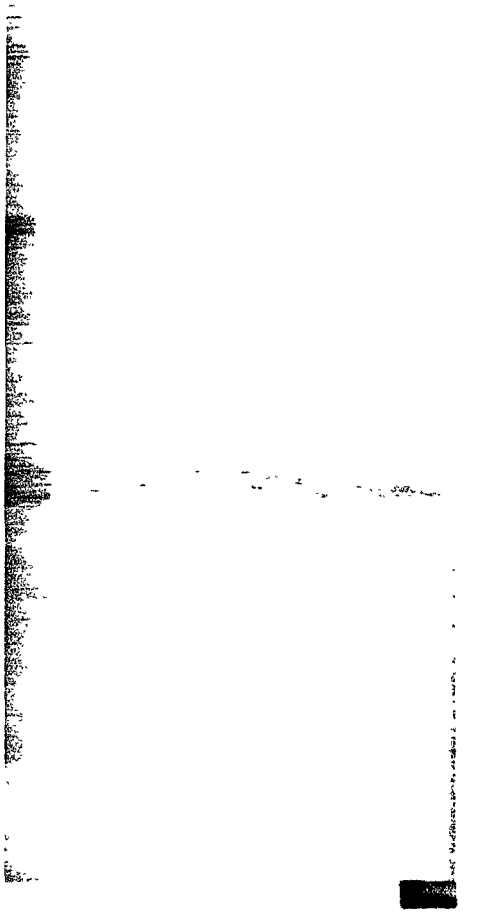
Audit work in connection with the Alaska earthquake has taken our staff by plane, car, and ferry through and over some of the most spectacular and historic country in the Western Hemisphere. Included in the staff members' itineraries have been such names as Kenai, the oil capital of Alaska and home of the world's largest moose; Kodiak, the oldest settlement in Alaska and home of the Kodiak bear; Valdez, termed the Switzerland of America; Anchorage, the State's largest metropolis; Homer; Seldovia; Cordova; Seward; and Whittier.

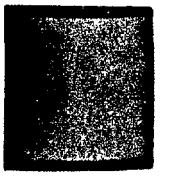
Federal Aviation Agency

Surface transportation in Alaska is extremely limited in comparison with that of the rest of the United States; therefore, Alaskans travel by air to a much greater extent than most other Americans. Accordingly, the Federal Aviation Agency (FAA) provides aircraft safety and airport development activities which are of vital assistance in the development of Alaska.

Most FAA stations in Alaska are located many miles from the nearest community. Between half a dozen and a dozen employees live at each station. Often their only neighbors are at a nearby military base or an Indian village. Some stations have no year-round neighbors; the only







means of access to many of the areas being by air. FAA transports personnel and supplies to and from these stations in its own aircraft when commercial air service is unavailable.

The isolation of most Alaskan communities and the need for reliable air service must be experienced in order to be fully appreciated. For example. just before Thanksgiving, GAO staff members flew on an FAA plane carrying commissary supplies from Anchorage to an FAA station near Nome, a short distance south of the Arctic Circle. Virtually no signs of human habitation were visible during this all-day flight.

Public Health Service

Since 1955, the Public Health Service (PHS) has operated and maintained a hospital complex for Alaska natives at Mount Edgecumbe. These facilities are located on four small islands about 200 yards offshore from Sitka. These islands are also the site of a Bureau of Indian Affairs boarding school for Alaska native children, a Federal Aviation Agency navigation aid. and a Coast Guard buoy tender. In addition to its main duty of operating the hospital, PHS also operates utility services for the Bureau of Indian Affairs and Federal Aviation Agency facilities and provides housing and utilities for the employees of all three agencies. Because of the island location, the services provided by PHS include regularly scheduled ferry service to and from Sitka on converted Navy shore boats.

During audits at the Mount Edgecumbe hospital, staff members live in Sitka and commute daily on the PHS shore boats. The water between Sitka and Mount Edgecumbe is very smooth and the trip takes only 5 minutes. The smooth water in the Sitka area is also used to good advantage by the commercial airline serving the community. Commercial air service to Sitka, which is situated on a mountainous island, is provided by amphibious aircraft—the Grumman "Goose" and the converted Navy PBY of World War II vintage. These aircraft have a maximum speed of only 140 miles an hour, but a feeling of confidence can be derived from the knowledge that they can land on either water or land. The value of this feature was made clear to staff members on one occasion when stormy weather prevented a landing at the scheduled destination. The pilot picked a hole in the clouds and landed on the ocean. He then taxied for half an hour to Ketchikan where he waited out the storm before continuing the flight.

The Alaska Railroad

An important Interior agency in Alaska is The Alaska Railroad. The railroad, with headquarters in Anchorage, provides both freight and passenger service over approximately 480 miles of main line track and 50 miles of branch lines between the southern terminus, the seaports of Seward and Whittier, and the northern interior terminus, Fairbanks.

The railroad, which commenced operations in 1916, played a major role in the early development of Alaska and later provided necessary transportation for military and commercial purposes. Even today, with the advances of air transportation and construction of more highways, the railroad is still a major operation. With an employment totaling about 1,000 persons and with assets valued

at about $125 million, the railroad grosses about $15 million annually, principally in freight revenues.

In addition to operating a rail line, the railroad operates a river barge line between a point near Fairbanks and remote locations on the Tanana and Yukon Rivers. For many homesteaders, native villagers, and personnel at remote Government sites along these rivers and the rail belt, the railroad serves as the only practical link with "the outside."

Trains of The Alaska Railroad will stop on request to unload and load passengers at the many stream and river crossings. trappers' cabins, and "country places" along the main lines. On summer weekends, staff members have caught the morning northbound train from Anchorage, gotten off at a promising stream, and, after a day of communing with nature and pursuing the piscatorial pleasures for which Alaska is so famous, hailed the evening southbound train from Fairbanks for their return to Anchorage.

Bureau of Commercial Fisheries

The Bureau of Commercial Fisheries, also an Interior agency, is responsible for managing the Pribilof Islands. These islands, situated in the Bering Sea about 800 miles west of Anchorage, are the habitat of the world's largest known fur seal herd. The islands became property of the United States when Alaska was purchased from Russia in 1867. Their population consisted mostly of descendants of Russian and Aleuts transported to the two largest of the islands, St. Paul and St. George, by the Russians for fur sealing operations.

Since 1957 and after a number of earlier treaties, the seal kill has been accomplished in accordance with the terms of the Interim Convention on Conservation of North Pacific Fur Seal. The convention provides for sustained herd management and conservation practices by the United States and provides that the United States, Japan, and Canada participate to the extent of 70, 15, and 15 percent, respectively, in the fur seal skins derived from the annual kill of about 50,000 seals. Since 1959 when Alaska became a State, the net excess of United States revenues over expenditures for administration of the islands has been divided, with 70 percent going to Alaska and 30 percent to the Federal Government.

The Bureau of Commercial Fisheries operations on the islands encompass every phase of government and include functions such as observing action of the village councils; managing the annual fur seal kill; conducting research; maintaining sanitation, power, water supplies, roads, and the airport; and operating a store, a hotel, and a supply vessel and a myriad of other functions necessary to sustain a community but often taken for granted.

* * * *

Many of the operations are relatively primitive and sometimes disarmingly intimate. One GAO staff member was recently faced with cancellation of a flight on which he was due to depart from St. Paul Island. He radioed his wife in the "South 48" about the delay, asked her to advise the Office, and, being of staunch Scottish ancestry, he rattled on to complete the 50 words allowed for the minimum charge: "This is Hawaii of the North

[because of geological and social, not climatic, similarities to Hawaii and plantation life] * * * gaining weight steadily * * * film all used * * *." That evening the canteen manager, a native obviously quite proud of his St. Paul heritage and until then a complete stranger, made it a point to advise the GAO representative that he too considered the Pribilofs to be the paradise of the Bering Sea, that weight was a widespread problem during the inactivity of the winter months, and that the canteen stocked a wide variety of film. It seems that communications with the outside are all transmitted twice daily by uncoded, shortwave radio from St. Paul, and most inhabitants have shortwave receivers with which they avidly keep up with island news.

Alaska's economic dependency on Federal programs both now and, as best can be foreseen, in the future, coupled with an evolving economic, a climatic, and a geographic environment that is largely unparalleled, warrants intensive attention by the Office. The very factors that make our role in Alaska a continuing and significant one also work to provide a challenging opportunity for personal growth and a valuable variety of experiences, which cannot fail to be of lasting benefit.

NOTE. To better carry out GAO work in Alaska, a suboffice of the Seattle Regional Office is being established in Anchorage. Staff members who would like to have further information about this suboffice should communicate with the Director, Field Operations Division, through their supervisors.

The Audit Function in the Automatic Data Processing System

By Joe W. Johnson

The purpose of this article is to examine the impact of computer oriented data processing systems on the audit function as performed by financial auditors upon whom third party reliance is placed. The technical complexity of computer systems raises questions as to how the auditor can gain sufficient competence to perform his function which itself is being modified by the powerful tools of the computer world.

The Automatic Data Processing Revolution

Tremendous growth has taken place during the last decade in the field of business data processing by computers. During the forties, the computer was oriented toward military and scientific applications, but applications to business data processing in the early fifties created a vast new market. The value of automatic computers in current use has been estimated at over $6 billion compared to $70 million in 1954.[1]

Basic reasons for the success of the computer are its speed and accuracy in processing data and the resulting economic benefit. Substantial initial investments in ADP equipment are justified on the grounds that unit cost of processed data is considerably lower than that incurred using manual methods. For example, it has been estimated at one installation that it costs one cent to perform the equivalent of three man-days of desk calculator effort even though the computer rents at $575 per hour.[2]

[1] Ned Chapin, *An Introduction to Automatic Computers* (2d edition), Van Nostrand Co., pp. 197—198.

[2] *Business Week*, McGraw-Hill publications, Feb 29, 1964, p. 75.

Mr. Johnson is a supervisory accountant in the Army Group of the Defense Accounting and Auditing Division. He has been with GAO since 1960 and is a member of the American Accounting Association and the American Management Association. This article is based on graduate studies undertaken by Mr. Johnson at The American University.

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In business applications, the initial use of computers has been in areas characterized by high volume repetitive transactions where a payoff could be demonstrated in reduced personnel costs. Of increasing importance is the use of computers in integrated management information systems. Such systems facilitate the decision-making process by providing management with timely, accurate, and pertinent information. The possibilities for the future appear unlimited as the computer will provide the means of instant access to needed types of historical or current information from immense masses of data. In effect, the computer serves to amplify the intelligence of man.

The Financial Auditor's Function

From ancient times until early in this century the primary objective of the auditor was the detection of fraud. This objective was obtained by detailed verification of transactions with no recognition being given to the extent to which internal control existed in the system being examined. Presently, the primary objective of the auditor is to determine the fairness of reported financial position. This objective is attained by verification of samples of transactions, with the extent of sampling varying inversely with the strength of internal controls.

The financial auditor's objectives and techniques are certain to be modified as business organizations move in the direction of integrated data processing systems. These are systems in which accounting, production, financial, sales, and other functional compartmentalizations are eliminated insofar as data handling is concerned. One recording of a transaction will take place at its inception and all subsequent handlings will be performed automatically. The audit objective will become one of determining the effectiveness, efficiency, and economy with which management has performed. Thus, the audit will be in the nature of a management review rather than an examination restricted to a determination of the extent to which published statements depict a fair picture of a company's financial position.

Audit Standards

Among the auditing standards promulgated by the American Institute of Certified Public Accountants, two are most affected by the advent of electronic data processing.[3] One states that audits are to be performed by persons having adequate technical training and proficiency. The other states that the auditor will study and evaluate the client's system of internal control as a basis for reliance thereon and for determining the extent of testing necessary to fulfill the audit objectives.

Thus, in order to maintain professional standards, the auditor must educate himself in the automatic data processing area. Also involved here are the legal implications of third party reliance. It will not be sufficient to depend on "auditing around" the computer when methods of using the computer exist that will bring to light questionable procedures.

The thinking of the auditor regarding internal control will be modified in the ADP environment. Traditional concepts of internal control

[3] *Auditing Standards and Procedures*, American Institute of Certified Public Accountants, New York, N.Y.

based upon the separation of duties will change in integrated processing systems as functional lines of authority are eliminated. The auditor must consider the adequacy of total management controls rather than restrict himself to an evaluation of financial controls as he has in the past.

ADP Audit Approach and Techniques

System survey.—Survey of an ADP installation prior to detailed audit work requires some new techniques in addition to those undertaken in a more conventional audit. The exact operations performed by the machines must be determined and an assessment made of their relative importance in the total system to be audited. The auditor must be familiar with the origin, conversion, and input procedures of source data and the controls and checks provided to assure against loss or error. Protection of the validity and accuracy of input data cannot be overemphasized, for regardless of the system involved the GIGO (garbage in-garbage out) principle applies with considerable force in an automated system.

In surveying the machine operations, the auditor utilizes flow charts and logic diagrams to determine whether hardware controls, program controls, and procedure controls are such that assurance can be had that the data processing will be done accurately and reliably. An evaluation must be made of the effectiveness of procedures designed to handle error conditions. Failure of operating personnel to follow up properly in this area negates the value of the controls.

Internal control.—Internal control has been defined by the American Institute of Certified Public Accountants as the "methods and measures adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies." [4] The broadness of this definition has given rise to a distinction within the auditing profession between "financial" controls and "administrative" controls with the implication that the auditor is not responsible for an evaluation of "administrative" controls except to the extent that they affect financial matters. Such a distinction, questionable when auditing nonmechanized systems, will not be possible under systems in which functional lines disappear, data is integrated, and machines replace people.

The auditor will still evaluate internal control but he must become aware of the new elements of control which have emerged in automatic data processing and of the disappearance of elements applicable to nonmechanized systems. The following paragraphs describe the types of controls peculiar to computer operations.

Controls can be built into the computer program and it is highly desirable for the auditor to exert influence during the program preparation stage to ensure that these checks are built in. This obviates the need for an audit program that will duplicate a considerable portion of the normal processing. Program checks include record counts, control totals, sequence checks, editing routines, and self-checking numbers.

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[4] *Internal Control*, American Institute of Certified Public Accountants, New York, N.Y.

The computer hardware can be configured or operated to ensure processing accuracy. Hardware checks include parity bits, double track recording and reading, double arithmetic, preventive maintenance, and back-to-back operation. Modern computers in top operating condition rarely malfunction and this reliability coupled with the inherent speed and accuracy of the machines practically eliminates errors of arithmetic and transmission which plague manual systems.

The concept of separation of duties relating to authorization, custody, and accounting for assets and transactions may seem to be weakened in an automatic system in which a computer, without human intervention, cuts across functional lines which have been used in manual systems as control devices. However, procedural controls can be established to ensure that machine operators, programers and input preparation personnel are not allowed access to each other's work to the extent that they could introduce erroneous data.

The audit trail.—A basic audit requirement is the existence of an audit trail which permits the auditor to trace a transaction from any point in the system to its origin or its destination. Conventionally this requirement has been met by the existence of visible records. At first glance it seems that the audit trail disappears in automated systems at the point where data is fed into the computer and doesn't appear again until it emerges in the form of printouts. To map the trail, the auditor must determine what processing paths exist in the system and select key signposts or checkpoints to utilize as benchmarks in the tracing process. Elements making up the audit trail include master tapes, transaction tapes, flow charts, block diagrams, library routines, printouts and procedural lists.

"Auditing around" versus "auditing through" the machine.—There are two extreme approaches to the problem of verifying the accuracy with which data are processed and set forth in the end products of the system.[5] The "around the machine" approach is based on the verification of the output information by tracing to the source data with no consideration being given to the processing operation. The "through the machine" approach operates on the logic that if the source data can be proven correct and the process through which this data passes can be proven correct then the output must be correct. In practice, a combination of these two approaches is used with the audit program tailored to the system under review. To arrive at the correct mix of these two extremes, consideration must be given to the relative weights of a number of factors peculiar to the system being audited.

Factors which tend to favor the "through the machine" approach are: (1) Existence of output format that makes identification of source data difficult, (2) existence of numerous types and large amounts of transactions which make effective sampling impractical, (3) extensive computer activity in relation to human activity, (4) strong internal controls, (5) lack of a visible audit trail, and (6) avail-

[5] *Guide for Auditing Automatic Data Processing Systems*, Department of the Air Force, 1961, p. 8-2.

ability of auditors qualified in automatic data processing.

Factors which tend to favor the "around the machine" approach are: (1) Output format which can be specifically identified with source data, (2) significant amounts of human activity in relation to computer activity, (3) a limited number of types of transactions handled by the system, (4) a visible audit trail, and (5) a lack of auditors trained in automatic data processing applications.

Test decks.—A practical and effective tool available to the auditor is the test deck with which he can ascertain whether or not a computer is functioning as intended. A test deck, regardless of format, is a dummy set of transactions which is fed into the computer in the same fashion as live data. By observation and inspection of the machine output, the auditor can verify whether processing is taking place as set forth in the computer program. A carefully designed test deck should be prepared when the computer program is being written with consideration being given to hardware controls, program controls, transaction types, and error handling procedures. The deck should contain examples of each type of normal transaction, examples of impossible situations, deliberate errors, and control totals of its own.

By proper design, the test deck can be run on a surprise basis as no advance preparation is required on the part of data processing personnel. The deck should be so designed that it will not affect the results of normal processing nor take an undue amount of machine time.

Future Role of Auditing

Until recent years the primary task of the public accountant has been the auditing of a client's records to enable the accountant to express an opinion as to the accuracy of company statements setting forth financial condition and operating results. More recently tax services and management services have come to make up a good portion of the work performed by public accountants. The rendering of management services will become a major effort of the public accountant as the ADP revolution makes possible fully integrated management information systems. The reason for this is that in a fully integrated system, it will be difficult and inefficient to examine only the financial and accounting aspects of operations. The audit function *will be expanded* to allow the auditor to express an opinion as to the manner in which management has performed from the viewpoint of economy, efficiency, and effectiveness.

Education and Training

The performance of the audit function in the ADP environment will require an individual with a background broader than that required to perform a conventional financial audit. The auditor must have considerable knowledge of computers, integrated information systems, and a firm grasp of basic management principles.

In the final analysis, the auditor is responsible for his own professional development and must determine what education and training he will need to remain proficient in his field. Computer training and education come in

the form of college courses, manufacturers' courses, home study, on-the-job training and various combinations of these. The needs and circumstances of the individual auditor will dictate the method he uses to secure the necessary background in ADP.

The rapid impact of ADP on auditing is very real and has caught many auditors unprepared to cope with the problems involved. The proper attitude toward this field should be one of healthy respect, not antagonism. The auditor can harness the power of the computer and reap the benefits of this powerful tool and in so doing his horizon will be broadened.

736230

Articles on Contemporary Financial Management

By Louis W. Hunter

A study of today's corporate financial management procedures would reveal that a revolution is occurring in such procedures which I venture to predict will be ranked by historians in importance with the era of the industrial revolution. This revolution in a real sense has commenced in the last 5 or 6 years, although we had inklings that it was coming as far back as the last half of the 1940s. For example, some of you may recall the debates with respect to the acceptability of statistical sampling as an audit technique in public accounting.

While statistical sampling in auditing and the determination of the reliability of other financial transactions started finding its way into the commercial world shortly after World War II, it has found its way into Government only within recent years. However, the current financial management revolution going on in private industry appears to be developing at an equal pace in Government, if not in advance of private industry as it did with the computer. A great part of this impetus can be traced to the development of the modern electronic data processing equipment. Although the need for the introduction of improved management concepts and tools has long been recognized, only with the use of new electronic data processing equipment has it been economically feasible, both for private industry and Government to accumulate the basic information and effectively use these new tools for decision making purposes.

While everyone is using the term "new tools" or techniques, in a true sense they are not really new. Basically they involve greatly refined existing historical information, more

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refined methods for making projections, particularly the interrelation of factors, and application of human judgments and choices. However, they are being applied to situations in business activities where previously the judgment of the individual was the fastest and least costly method for decision making, but with less effectiveness because of the inability of the human brain to quickly sort out and weigh the numerous alternatives.

As with most new applications those individuals who have become specialists in their field tend to become enamored with their new find to a point that "all you have to do to solve all your problems is to buy their brand of crystal ball." The bitter truth of the matter is that unless you understand the workings and limitations on their particular brand of crystal ball and can effectively handle the problem the way you think it should be done, you may be forced to buy their brand rather than be left behind.

Another characteristic of any developing art is the debate on who is going to plan and direct its use. My view is that generally the group which succeeds are those who have the broadest scope of vision and not the restricted specialist. The success and speed with which we in GAO become active in this area and thus in a sense help direct the application of this new art in Government will depend on how soon we can become knowledgeable and can successfully apply that knowledge.

While it may be too late for some of us older staff members to become *experts* in the subspecialties of this subfield of financial management, we should be able to understand its concepts and perhaps a little of its application, and gain an appreciation of some of the specialties required.

I have prepared the following listing of some articles published during the last couple of years which touch in some way on those newly developing financial management techniques. The publications are those which I had readily available and the individual selections in all probability reflect my personal prejudice.

These articles and related summaries were published in *Management Services*. National Association of Accountants *Bulletin* renamed *Management Accounting, Harvard Business Review, Journal of Accountancy*, and the *Accounting Review*. Copies of the applicable publications are available in the GAO Library and probably in some regional offices. Some of these and similar articles may be reviewed in greater detail in subsequent issues of the *GAO Review*, and it is my hope that we can carry some original articles in a similar vein by GAO staff members.

Articles in Management Services

1. "Decision Making, Art or Science?" (May 1964). Concluding their discussion of mathematical management, the authors explain how high-speed data handling can reduce the role of intuition in some types of business problem solving.
2. "Psychology for the Systems Analyst" (November 1964). The systems analyst should be as skilled in handling people as he is in designing procedures. To induce employees to accept changes in their work routines, he needs to understand motivation and learning.
3. "Responsibility Accounting" (March 1965). Realistic budgets are fundamental to pinpointing cost responsibility and deviations from expected expenses. The

author suggests a four-level pyramid approach to budget construction.

4. "XYZ Outboard Motor Case" (May 1965). Operations research is still a frightening phrase to many. But actually it's merely the application of scientific rules which anyone can understand and use to the logical steps anyone would take in solving a problem.
5. "The Profit Approach to Budgeting" (September 1965). The budget is one of the best devices yet developed for putting an entire organization on the same track and keeping it there. In this article a hypothetical corporation is used.

Articles in Management Accounting

1. "Controllership in a Defense Contracting Business" (April 1965). Defense contracts have had a marked impact on the structure of the companies. To operate effectively, the controller must direct his attention to the particular demands in some specific areas of his activity.
2. "The Cost Side of NASA PERT and Companion Cost" (July 1965). Prime contractors and major subcontractors must develop accounting systems sufficiently flexible to satisfy the NASA requirements while still fully maintaining their vital internal control devices. Presented here is such an installation of the NASA system within an aerospace company's cost system.
3. "Business Use of Linear Programming" (September 1965). A brief general exposition of the linear programing technique is followed by the discussion of its typical applications in business decision making. An example given in the appendix illustrates the graphic method of solving the problems by linear programing.
4. "The Accountant's Analysis of a Budget" (August 1965). A review of the principal methods is blended here with a series of useful pointers as to what and how, so that the budget could evolve into a blueprint for profit.

Articles in the Harvard Business Review

1. "How To Use Decision Trees in Capital Investment" (September 1964). Further discussion of this new analytical technique which gives some practical information.
2. "Buy by a Computer" (March 1964). How to reduce material costs and to free management for decision making.
3. "Interpretations of PERT" (March 1964). The pile of readings on PERT grows ever higher. How can the manager keep up? How can he tell which pieces meet his needs and which do not? Arch R. Dooley, associate professor of business administration at the Harvard Business School, has divided the best of these.

Articles and Discussions in the Journal of Accountancy

1. "Management Controls and Information" (January 1964). Discounted rate of return on capital investments.
2. "Management Controls and Information" (April 1964). Plant layout and space utilization.
3. "Management Controls and Information" (May 1964). What you should know about operations research.
4. "Accounting and Auditing Problems" (June 1964). This case study describes how the auditor used a computer in checking the parts inventory and the work-in-process inventory of a manufacturer producing a large number of complex devices. Prepared by M. J. Gross, Jr., a manager of Price Waterhouse & Co., New York, it emphasizes that the computer may not only save audit time but also enable the auditor to perform his tests more effectively.
5. "Management Controls and Information" (July 1964). Improving productivity by a work sampling study.
6. "Evaluating Internal Controls in EDP Systems" (August 1964). How test decks can help in auditing through the computer.
7. "Management Controls and Information" (August 1964). Cost reduction and the science of probability. A refreshing insight into the theory of probability comes from Robert Straith, CPA. Mr. Straith verifies the opinion of mathematicians such as Jacob Bernoulli who considered probability theory to be

more useful "in a much wider field of human affairs" than it is in wagering.

8. "Internal Control and Audit of Real-Time Digital Systems" (April 1965). The only way the auditor can gain the necessary confidence in the operation of the real-time system is by having a basic understanding of how the system operates, how results are produced, and what controls and other safeguards have been instituted and are actually utilized.
9. "Helping a Client Make Up His Mind" (May 1965). The use of a "decision tree" helps a client in planning his estate.
10. "The Accounting Flow Chart" (July 1965). An examination of the flow chart—"a most useful tool in the critical analysis of accounting procedures."
11. "Education and Professional Training" (July 1965). In recent years many business school faculties have examined critically their undergraduate curriculums and as a result have introduced several changes. Nearly a decade ago the School of Business Administration of Tulane University initiated an exhaustive examination of its program and in 1958 instituted a new curriculum substantially different from its predecessor. Dr. Clinton A. Phillips, associate dean, reports on it.

Articles in The Accounting Review

1. "Probability Measures for Estimated Data" (July 1965).
2. "Present-Value Short Cuts" (April 1965).
3. "Auditing EDP" (October 1964).

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Surveying Management Functions in a Government Research Laboratory

By Paul M. Foley and Louis Lucas

The purpose of this article is to provide background information, suggestions, and observations which may be helpful in making surveys of research management functions in Federal laboratories. It is based on experience gained during a pilot survey of the management functions of the Air Force Cambridge Research Laboratories, which are located near Boston. This organization is a medium-sized Government laboratory engaged primarily in research and exploratory development. This survey was conducted by the Boston Regional Office and a report to the Congress was issued on it. Further commentary on this survey appears on page 38.

Nature of Research and Development

Research and development includes a great many diversified activities ranging from matters such as theoretical studies of chemical properties of the upper atmosphere to the full development of a weapons system for the Department of Defense.

For the purpose of reporting program information and for program control, the Department of Defense divides its research and development effort into five major categories. Research, sometimes referred to as basic research, is the process of acquiring new information or increasing the body of knowledge. Operational systems development includes all effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and development. Between these two extremes lies exploratory development, advanced development, and engineering development. These are defined as follows:

Exploratory development—includes all effort directed toward the solution of military (or agency) problems short of major development projects, but including studies, investigations and minor development effort with a view toward developing and evaluating the feasibility and practicability of proposed solution.

Advanced development—includes all effort directed toward projects which have moved into the development of hardware for experimental or operational test. The design of such items is directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual agency use.

Engineering development—includes all effort directed toward those development programs being engineered for agency use but which have not yet been approved for procurement or operation.

A Government laboratory may be conducting work in any one or more of these categories of research and development depending upon its assigned mission. It is important to observe, however, that the more a laboratory is orientated towards research, the more freedom scientists are given in selecting and carrying out projects and the more likely that the results will be of an intangible nature. One reason for this is that the end product of research usually is increased knowledge which may or may not have any known application. The nature of research and exploratory development is such that fruitful results are often not achieved without a long sustaining effort, sometimes lasting for 5 or 10 years or more. Results under advanced engineering and operational systems development, on the other hand, are more apt to become known sooner.

Another difference between the two extremes of research and development is that in research and exploratory development it is considered desirable to have several approaches to solve the same problem. While this may result in some duplication of effort, this is not considered by researchers to be necessarily wasteful because it cannot be known for a certainty what knowledge will be found by means of different approaches to an investigation.

Delegation of Authority

From an auditing viewpoint there are some characteristics of management which tend to be peculiar to research and development in comparison with the management of other Government operations. The Air Force Cambridge Research Laboratories (CRL), where we conducted our pilot study, are divided into small units which are practically autonomous in conducting their technical programs. Research projects are planned at the working levels in these laboratory units, and after being approved by laboratory management and higher levels, the working scientists are free to direct and conduct the research in any manner they see fit. One reason research laboratories are

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decentralized is because of the belief that the judgment of scientists at the working level is the most reliable judgment for making technical decisions.

At CRL, managers (laboratory chiefs, laboratory directors, and higher echelon officials) of research programs rely upon and accept the judgment of scientists at the working level. Their functions accordingly are limited to providing policy guidance and the overall direction of research effort, imposing administrative controls, and allocating resources between projects. The significance of this management concept is that it removes management from the laboratory units and may provide management with little detailed knowledge of the technical aspects of research projects and related technical decisions.

Almost all transactions selected for review in a laboratory involve technical or management decisions made by scientists at the working level of the laboratory. For example, we noted that individual scientists made a variety of decisions during the normal course of their work such as transferring money between projects or contracts, deciding on whether to do work in-house or by contract, deciding whether to finance work under unsolicited proposals received from potential contractors, submitting their own unsolicited proposals to other agencies for possible financial support, etc. Our survey effort therefore necessarily included interviewing laboratory scientists and reviewing their files to obtain as full an understanding as possible of the procedures followed. We noted that laboratory scientists are given considerably more freedom and flexibility in conducting their work and in making decisions than are most other categories of Government employees. Thus, a recurring concept is the insistence by laboratory management on maintaining an atmosphere of freedom and flexibility in making technical decisions. Scientists firmly believe that this concept is conducive to creative thinking and new ideas so important to effective research. This policy can, however, result in less internal control than auditors feel is desirable.

We noted that at CRL scientific personnel had responsibility for management and administrative functions as well as responsibility for conduct of research and development work. Although scientists are primarily con-

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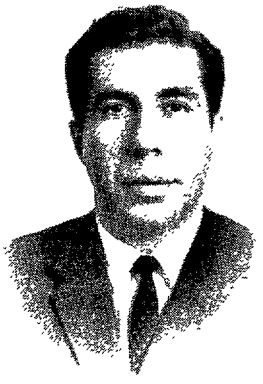

cerned with the technical aspects of their work, they do make nontechnical and administrative decisions. We noted that they are not apt to be well informed on applicable regulations pertaining to decisions and seem to have little knowledge of the importance of internal control. For this reason, in surveying laboratory management functions, it is highly desirable to inquire into the nature of the internal controls and to include limited steps designed to test their adequacy. Moreover, it is important that staff members assigned to such surveys have a good working knowledge of internal control concepts and procedures and be able to explain them and discuss their advantages in the conduct of the Government's business. It is especially important to discuss possible improvements in controls which will still permit the freedom and flexibility that scientists deem essential.

Deemphasis on Certain Managemen Functions

In the organizational structure of CRL, some of the nontechnical administrative personnel, such as those in financial management and equipment management, were subordinate to the scientific personnel involved in conducting the research and development work. We noted that there was a tendency to consider these management functions as a necessary evil. Under these circumstances the accounting and reporting functions as an element of internal control may not be as effective as it is in other Government operations. An evaluation of the organizational structure of a laboratory and how administrative personnel are placed may provide indications of areas where such potential management weaknesses exist.

Evaluation of Research Projects

A major problem in reviewing research operations is to determine how technical results and accomplishments are measured and evaluated. At CRL, we found that although technical programs are documented and justified at the beginning of the fiscal year at the time the budget requests are prepared, no attempt is made at the end of the year to summarize the results achieved under each project or to relate costs to accomplishments.

This is not to imply that the results of research projects at CRL were not available. They were available through technical reports prepared during the year, papers presented, equipment developed, data accumulated and analyzed, etc., and a summary annual report on the technical accomplishments of the entire laboratory. However, the results of the work were not tied into the research projects as initially proposed. We found that projects could overlap one another and that the work actually done under a project might not be the same as initially proposed. An analysis of one project disclosed, for example, that the project scientist proposed that 10 contractual and 5 in-house efforts be performed, but during the year decided to award only 6 contracts and perform 3 in-house efforts. This decision was permissible because of the freedom and flexibility given to the laboratory scientists. Therefore, information concerning the results of research projects and tie-ins with agency objectives were obtainable primarily only

through discussions with the scientists responsible for the projects.

Financial Control

The only financial control exercised by its parent organization (Office of Aerospace Research) over the extent and scope of research and development undertaken by CRL appeared to be the overall budgetary control of determining the amount of money the laboratories should be given each year. In the course of the budgetary process, OAR requires each project scientist to justify his project and the financial resources required for it. After the projects and funding have been approved, however, we noted that CRL may reallocate the funds between the various projects, within certain broad limitations. In effect, the laboratories can undertake almost any research they desire.

We noted, too, that even the overall financial control, however, is not as real as it appears to be on the surface because a laboratory may receive funds from agencies other than its parent organization. For example, a laboratory may receive funds from other Government agencies which request work or which accept proposals voluntarily submitted to them by the laboratory scientists. Some research and development agencies such as the Advanced Research Projects Agency and the Defense Atomic Support Agency have all of their work done by or through other Government agencies and laboratories. Other research and development agencies, such as the National Aeronautics and Space Administration and the National Science Foundation, encourage Government laboratories to submit technical proposals to them for possible financial support. As a result of this practice, the parent organization of a laboratory may not be aware of the work being done for other agencies except on an after-the-fact basis. These practices are in contrast with most other Government activities where the full scope of the activities are indicated in annual budget requests.

Contracting

The actual contracting for a laboratory is the responsibility of procurement specialists who award and administer the contracts. However, the laboratory scientists play an important role in this process because they are responsible for, among other things, such matters as:

- Deciding that the research is necessary;
- Deciding to do the work by contract rather than in-house;
- Identifying sources of supply;
- Justifying sole source suppliers;
- Evaluating some aspects of price proposals;
- Evaluating contractor performance;
- Assisting the contracting officer with technical aspects of contracts.

A laboratory's procurement practices can be reviewed as a function separate from its other activities even though the work under the contracts may be directly related to and supports the in-house research projects.

Research and development contracts may provide for contractor employees to work in the Government laboratories and, in some cases, these employees are integrated with Government employees. Although this almost amounts to having contractor personnel under contract to perform

in-house research, apparently this is not an uncommon practice in research and development organizations. This aspect of a laboratory's operations can be considered for review in terms of whether the practice of using contractor employees instead of Government employees is the most economical method of conducting in-house research, is used as a method of circumventing personnel ceilings, or is a violation of Civil Service regulations.

In order to obtain a reasonably complete understanding of procurement actions at CRL, we found it to be usually necessary to review the laboratory scientists' files as well as the contracting officers' files. We found, however, that on some of the above functions there was often no, or very little, documentation in the scientists' files. Some of this information, therefore, had to be obtained orally.

Necessity of Dealing With Technical Matters

The major problem encountered in reviewing research and development is that we are dealing with highly technical matters carried out by highly skilled scientific and engineering personnel. This difficulty is compounded by the fact that there are seldom, if ever, any ready measures for auditors to use to evaluate the effectiveness of research and development efforts. Moreover, it is difficult if not impossible to determine whether individual research and development efforts are really necessary to achieve the agency's mission. For these and other aspects, we found it to be necessary to rely very heavily upon the technical advice of responsible scientists and engineers.

Sources of Information

Early in the survey a determination should be made as to the type of information that is available, the type of records which are kept centrally, and the information and records that are kept by the scientists in the laboratory units. In this regard it is also important to determine which management practices are prescribed in writing and those that are not in writing. For example, the procedures for coordinating research efforts with other agencies, the policy of submitting unsolicited proposals to other agencies, and the practices of commingling funds of different agencies to support the same research effort are some aspects of research management which may not be reduced to writing. As a result, much of the information on these and other matters will have to be obtained through interviews and confirmed later by a review of selected transactions.

A laboratory may have science administrators on the staff who are responsible for performing administrative duties relating to scientific areas assigned to them. While they do not conduct research themselves or provide any technical direction to the laboratory units, they may participate in formulating long-range plans for their respective scientific areas.

Science administrators are accordingly a good point of contact for obtaining information on technical matters in terms which we can readily understand. They are also knowledgeable about the procedures followed by laboratory units and can provide information on matters which concern more than one laboratory

unit. For example, a science administrator may be able to explain the reason for certain practices, thus making it unnecessary to interview several laboratory scientists.

Central sources of information should also be available for procurement, budgeting, supply management, and many other functions of a research laboratory. However, in reviewing selected transactions at CRL, we found that complete information could only be obtained through visits to the laboratory units.

Some of the more important types of information to be gathered during the survey of a research laboratory are indicated below. The type and extent of information actually obtained in a survey would depend upon the conditions, circumstances and peculiarities of the laboratory itself.

1. A list of all the projects being worked on during a given period of time should be obtained or prepared. The list will serve as a master control sheet of the work being done by all laboratory units and as a control over the survey itself.
2. The funds made available to the laboratory should be identified with the above projects and by the agencies providing the funds. This step should provide information on the full scope of a laboratory's activities.
3. A visit to the laboratory's parent organization should be made to obtain background information on its mission, organization, functions, objectives and to obtain a brief history of its involvement in research and development and that of its laboratories. Other matters to be considered at the parent organization are the budgetary and financial controls exercised over the laboratory, the type of reviews made of the laboratory's technical programs, and how the programs tie into the overall mission of the agency.
4. A laboratory may be conducting experiments or accumulating data at other locations, some of which may be at remote areas. During the early stages of a survey an inventory of buildings and facilities should be obtained or prepared to include such information as a description of each site, value, type of facilities being used, the nature of work being done and the personnel assigned. A tour of some of these sites may be of help.
5. A research laboratory may have unused or seldom-used equipment. The tour of a laboratory should include observing equipment and questioning whether facilities and equipment are being used.
6. A summary of contract awards made during a specific period of time should be obtained during the survey.
7. The relationship between the laboratory and other laboratories, and research and development agencies of the Government should be determined. If some of the laboratory's administrative functions are being performed by another agency, information on this relationship should also be obtained.

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Measurement of Savings

By Raymond Schmitt and Joseph F. Murray

In this short article the authors propose a method for measuring savings that have accrued to the Government since the agency involved followed the policies and procedures advocated in an audit report.

GAO reports quite often involve the measurement of savings that would have accrued to the Government had the agency involved exercised more efficient management in the performance of a particular activity. The auditor must exercise careful judgment in measuring the savings involved.

GAO Comprehensive Audit Memorandum No. 5, Revised, dated March 27, 1964, provides in part that "Amounts to be reported as other benefits will include reductions or elimination of payments, costs, or expenses that would have been made or incurred except for the adoption of recommendations made by the General Accounting Office. The amounts may include possible savings as well as definite, measurable savings."

There are divergent views on what constitutes the amount of measurable savings when certain situations develop during the course of our audit work. Some accountants consider actual cost reductions as the only measurable savings. Others believe that the elimination of a future cost should be considered a cost savings. even though there is no current realized cost reduction.

In order to present the two views on this subject, we will consider a hypothetical situation based on the following premises:

- A particular division of a Government agency is providing a service (program X) which the auditor has concluded to be unnecessary.
- The agency agrees with the auditor that the service is unnecessary and therefore eliminates the service.
- The agency personnel involved had devoted an average of 20 percent of their time to program X and the remainder of their time to programs Y and Z.

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- The policy of the agency is not to terminate employment if a job function is deemed unnecessary but rather to redirect manpower to other applicable areas.
- Prior to the elimination of program X, the agency had expressed a need for additional personnel of the same grades and job descriptions as those involved in program X, in order to more effectively discharge its responsibilities in programs Y and Z.
- The cost to the agency in providing service under program X was as follows:

Salary expenditure for personnel directly related to program X	$95,000
Miscellaneous expenditures for costs other than those for personnel, solely attributable to program X	5,000
Total cost of program X	$100,000

The question arises as to what savings occurred as a result of the auditor's disclosure and the subsequent action initiated by the agency. Some accountants would conclude that the only determinable savings to be accrued would be limited to the net reduction of $5,000 by the elimination of the miscellaneous expenditures for costs other than those for personnel that are solely attributable to the eliminated service. These accountants would not regard the $95,000 expended for personnel in program X as a determinable savings because (1) the reduction in the agency's total appropriation would not be $100,000 but only $5,000 since there would not be a reduction in the salaries of the personnel involved and (2) even though additional personnel would be needed for programs Y and Z it could not be speculated as to whether the Congress would grant the agency an increase in its appropriation to satiate the operational needs in programs Y and Z. However, these accountants would agree that there are additional benefits to be derived by the redirection of manpower. The benefits could include the agency's satisfaction of operational needs, reduction of overtime, and possible reduction in use of any contract labor. These accountants would be reluctant to put a price tag on these benefits. This conclusion would therefore support only a $5,000 measurable savings.

Accountants with the alternate view in measuring the savings involved would conclude that a cost savings of $100,000 would result since they would consider an elimination of the total cost of program X as a total measurable savings. Based upon the fact that the agency needed the additional personnel to discharge its responsibilities for programs Y and Z. the personnel could then devote 100 percent of their time, rather than 80 percent, to these programs. This change would preclude the need for the agency's hiring additional manpower to satisfy the additional staff requirements and would eliminate the cost of such manpower from the division's future budgetary expenditures since no funds would be budgeted to program X. These accountants would conclude that the cost savings would be equal to the costs of the eliminated program since funds would no longer be expended for its performance.

Conclusion

To consider the $5.000 in miscellaneous expenditures as the sole

measurable savings seems to be too conservative. However, to consider the $100,000 as a measurable savings fails to consider the other relevant factors involved. In order to conclude that there were measurable savings of $100.000 due to the elimination of program X, the auditor must be able to show that the need for additional manpower in program Y and Z was equal to or greater than the manpower made available as a result of the redirection, while also taking into consideration other variable factors. The cost savings could be proportionately reduced to the extent that the redirected manpower exceeds the operational needs in programs Y and Z.

An oversimplified mathematical formula may be used to illustrate this point. After converting the percentage of redirected time of all employees engaged in program X to "manpower capacity," we find that the additional available capacity for programs Y and Z would equal 20.

Manpower capacity available from redirection	20
Less additional manpower capacity needed in programs Y and Z	15
Manpower capacity excess to agency needs	5
Personnel expenditures related to program X	$95,000
Less overstatement of measurable savings ($95,000 multiplied by 5/20)	23,750
Actual measurable savings related to personnel	71,250
Miscellaneous expenditures saved	5,000
Actual cost savings attributable to the elimination of program X	$76,250

This need-versus-redirection formula, however, must be applied for *each* individual such as a grade 4 secretary, a grade 13 supervisor, and a grade 15 administrator, who was redirected as a result of the elimination of program X. Consideration must be given to the possibility that the redirection of personnel may have oversatisfied the need for administrators in the other programs yet failed to meet the operational need for supervisors. The salary differentials involved in the respective job positions also affects the measurement of cost savings.

Although in some instances it may be impractical to determine the *actual* amounts involved, a close approximation should be made to more accurately measure the applicable savings.

A recommendation to terminate the employment of personnel deemed excessive to needs would, of course, be appropriate where such a condition exists. In our hypothetical situation, however, the agency would probably "phase out" such employees by not hiring additional personnel to replace the employees as they leave the agency. This is due to the fact that one cannot attribute a particular person as excessive to agency needs because only a percentage of each person's time would be excessive, not his entire job function. The above formula would still be applied and the amount of measurable savings would be augmented to the extent of any excess manpower terminated.

In our opinion, it would seem that these factors should be taken into consideration in order to accurately measure the dollar benefits to be derived as a result of the auditor's disclosure.

WJ01000

Joint Economic Committee
Federal Procurement and
Regulation Subcommittee

WS02320

Senate Small Business
Committee: Government
Procurement Subcommittee

WH02800

House Judiciary
Committee: No. 2
Subcommittee

736233

Hearings and Legislation

The first formal congressional appearance by *Mr. Elmer B. Staats* after assuming the position of Comptroller General was on March 24, 1966, before the Subcommittee on Federal Procurement and Regulation of the Joint Economic Committee, chaired by Senator Douglas.

Mr. Staats presented a statement setting forth our views on selected Department of Defense activities such as requisitioning procedures, controls over Government-owned property in possession of contractors, use of proceeds from disposal of surplus personal property, procurement and management of ADP equipment, management of short-shelf-life items, consolidation of common military supply and services activities, need for more effective inventory controls, potential savings through greater utilization of excess material, need for adequate technical data to permit competitive procurement, and effectiveness of supply systems.

Mr. Frank H. Weitzel, Acting Comptroller General, presented a statement before the Senate Committee on Post Office and Civil Service on S. 1995 and H.R. 8030, as passed by the House, identical bills to provide for the discontinuance of the Postal Savings System. GAO first suggested a need for congressional consideration of the question of the continuance of the system in a report to the Congress on March 13, 1952. The legislation was subsequently passed by the Senate and signed into law.

On February 9, 1966, Mr. Weitzel presented a statement before the Subcommittee on Manpower of the House Committee on Post Office and Civil Service on the needs of the Office for an increase in the number of supergrades in GAO. Mr. Weitzel, in urging favorable consideration of the GAO request, stated that the needs of the Office require an increase of 31 such positions from 39 to 70. S. 2393, a bill for additional supergrades throughout the Government, has passed the Senate and is now pending before the House Committee on Post Office and Civil Service.

At the request of the Foreign Operations and Government Information Subcommittee of the House Committee on Government Operations, *Mr. Oye V. Stovall,* Director of IOD, appeared before the subcommittee to discuss matters relating to the audit and control of the U.S. AID program in South Viet Nam. At this hearing. Mr. Stovall stated that:

> * * * By our present approach to the Viet Nam work through a survey and observation of what is or is not being done there by the various agency and departmental auditors, we hope to be able to report our findings to the Congress and at the same time develop on-site information needed for making further plans. We believe this is an orderly way to move into the situation, recognizing both the responsibilities and the practical problems.

The Deputy General Counsel, *Mr. J. Edward Welch,* and *Mr. Robert H. Rumizen,* attorney, Office of the General Counsel, testified before Subcommittee No. 2 of the House Judiciary Committee on H.R. 4497, to amend the Act of

August 24, 1935 (Miller Act) to require Government construction contractors for contracts of $2.000 or less to furnish affidavits with respect to payments to subcontractors, and on H.R. 4580, a related private bill on behalf of a small subcontractor who had not been paid by a bankrupt prime Government contractor. Mr. Welch, as did representatives of other Government agencies, opposed the bill primarily on the basis that the legislation would destroy the long-standing Government policy of not becoming involved in disputes between prime contractors and their subcontractors on the grounds of lack of privity.

The House Committee on Merchant Marine and Fisheries reported out the 1967 appropriation authorization for the Coast Guard (H.R. 12762), including an amendment to authorize the leasing of housing including Government-owned (FHA housing) for military personnel during fiscal years 1967 and 1968. This was a recommendation made by GAO in a report of December 17, 1965, B–146987, to the Congress entitled "Potential Savings Through the Use of Houses Owned by the Federal Housing Administration as Government Quarters for Certain Coast Guard Members in the St. Petersburg and Miami, Florida, Areas."

Considerable assistance was given to the staff of the Senate Judiciary Committee in drafting substitute language in connection with S. 2271, a bill to authorize payment of a per diem allowance to employees assigned to the Nevada Test Site of the Atomic Energy Commission. The GAO report on the legislation was printed in the Congressional Record on the day the legislation was acted on by the Senate (112 Cong. Rec., Mar. 2, 1966, pp. 4452–53). Congressional action on the legislation was subsequently completed and the House bill (H.R. 10722) was approved by the President.

Mr. J. Edward Welch testified before the Senate Small Business Committee's Subcommittee on Government Procurement concerning the operations of boards of contract appeals. Mr. Welch recommended that the Government be afforded the right to appeal from adverse board decisions, the same as contractors may at present.

NEWS and NOTES

Policies for Acquiring Products and Services for Government Use

On March 3, 1966, the Bureau of the Budget (BOB) issued Circular No. A–76, entitled "Policies for Acquiring Commercial or Industrial Products and Services for Government Use" to replace Bulletin No. 60–2 dated September 21, 1959. The circular which became effective on March 31, 1966, states the guidelines and procedures to be applied by executive agencies in determining whether commercial and industrial products and services used by the Government are to be provided by private suppliers or by the Government itself. Representatives of GAO met with and advised BOB representatives on the contents of the circular prior to its release.

The circumstances under which the Government may provide a commercial or industrial product or service for its own use are, in brief, when (a) procurement from a commercial source would disrupt or delay an agency's program, (b) conduct of the activity or service is necessary for purposes of combat support or for individual and unit retraining of military personnel or to maintain or strengthen mobilization readiness, (c) a satisfactory commercial source is not available and cannot be developed in time to provide a product or service when it is needed, (d) the product or service is available from another Federal agency, and (e) procurement from a commercial source will result in higher cost to the Government.

The circular provides that a comparative cost analysis must be prepared when the decision to rely upon a Government activity is based upon reasons involving relative costs. Such analyses are not generally required when the cost to the Government is less than $50,000 each year.

The circular also discusses various costs which should be considered in a comparative cost analysis. Federal tax revenues estimated on the basis of the earnings experience of the industry are to be considered if the product or service is obtained through commercial channels.

Government commercial activities should not be started unless the savings are sufficient to justify the assumption of the risks and uncertainties involved. Ordinarily, a "new start" should not be undertaken unless the Government's cost is at least 10 percent less than the cost from commercial sources. The circular does not provide a similar specific guideline for deciding whether savings are sufficient to justify continuation of an *existing* Government commercial activity. Staff members should refer to the circular for the details of the policies.

Research and Development

Federal expenditures for research and development programs constitute a significant part of the annual budget. For 1966, proposed R&D expenditures

in the administrative budget amount to about $15.5 billion, made up of:

Research:	
Basic	$2.0
Other	3.0
	5.0
Development	9.5
Facilities	1.0
Total	$15.5

The largest programs in this classification of expenditure are those of the Department of Defense (about $7 billion) and the National Aeronautics and Space Administration (about $5 billion). Other departments having important programs in this area include Agriculture, Commerce, HEW. and Interior and independent agencies such as AEC, FAA, VA, and the National Science Foundation.

Our Office has delved into some of these programs in the past and a number of reviews are currently planned or in process. However, as a part of our direction of effort planning, it is contemplated that in the future we will be devoting more time, relatively, to this area than we have in the past.

One effort which has been made to obtain more detailed information on the audit problems involved in examining into Federal laboratory operations was the making of a comprehensive survey of the research management functions at the Air Force Cambridge Research Laboratories at Laurence G. Hanscom Field, near Boston, Mass. This organization is an important Government laboratory engaged in conducting and supporting research and development work in those areas of the environmental and physical sciences of concern to the Air Force. Obligations for 1964 amounted to about $63 million. The survey was conducted by the Boston regional office as a pilot survey under the general direction of the Accounting and Auditing Policy Staff. The primary purpose of the survey was to obtain working knowledge of how a medium-sized Government-operated research laboratory is financed and managed and information on policies, procedures, practices. and controls relating to such operations. This information was specifically needed for use in developing our general audit policies for application to Federal in-house research laboratory operations.

The Cambridge Research Laboratories was selected for this pilot survey because of its medium size, its location convenient to a regional office, and the expressed interest of the Boston Regional Manager, *Joseph Eder*, in carrying out such an assignment. The survey was begun in November 1963. Before it was completed, the conclusion was reached that there were enough unusual features about these operations and the related management functions to warrant a summary report to the Congress describing them along with such preliminary observations as we were in position to make. Such a report was submitted to the Congress on February 4, 1966 (B–146981).

Observations recorded in the report relate to such management functions as control over in-house and contracted research and development work, budgeting, funding, personnel. equipment, accounting, and internal auditing. The transmittal letter for this report stated that—

Because of the growing importance of research and development operations in the Federal Government, we plan to devote more attention to these activities in future years.

In addition to the main survey report to the Congress, separate reports were prepared on the following matters which were encountered during the survey:

- Report to the Congress on "Questionable Need for Purchase of Commercial Computer Time by the Air Force Cambridge Research Laboratories, Bedford, Mass." (B–146981, dated Aug. 9, 1965).
- Report to the Secretary of Defense on review of overhead costs charged by Wentworth Institute, Boston, Mass., to the Department of the Air Force under cost-type contracts for research and development (B–157897, dated Oct. 29, 1965).

Other review assignments still in process which grew out of the basic survey include inquiries into extended use of contractor personnel performing research work at the Laboratories; controls over costs incurred by contractors; computer utilization at the Hanscom Field complex; and use of overseas research and development contracts.

Additional follow-on work growing out of the basic survey will be scheduled in the future. This issue of the *Review* includes a brief commentary by the top supervisors engaged in this survey on some of the features of interest in inquiring into management functions of a scientific laboratory.

Communication Tip for Use on a Foreign Assignment

Sam Pines, supervisory auditor, Kansas City Regional Office, recounts his experience during an assignment in Chile, in maintaining fairly regular contact with his relatives in Kansas City. The method may be usable by other GAO travelers on overseas assignments.

Before I left Kansas City my cousin, a ham radio operator, told me about a contact of his who operated a ham station in the Santiago area. My cousin gave me his call letters and suggested Sunday afternoon as a good time to establish communications.

I found my cousin's contact living on a ranchero south of Santiago, in Les Condes, and the Sunday following Memorial Day and almost every Sunday thereafter during my stay in Chile, I went to the ranchero. We succeeded in establishing radio contact with my cousin and it was a pleasure to chat with the folks at home who would go to my cousin's home at a prearranged time. Many different groups of Americans working in the Santiago area would visit the ranchero on Sundays for their turn in contacting relatives in the United States. Those having relatives in the eastern time zone would make the first contacts, with relatives in other time zones being contacted in turn. In some instances the ham operator in the States would reach the relative through a long-distance call arrangement, thus enabling a comparatively inexpensive means of communicating as the long-distance call would generally be less than 100 miles. I was fortunate in that my family lived near my cousin which afforded me a means of free communication. Aside from the pleasure of chatting with my family on Sunday afternoons, I had the opportunity to meet a number of interesting Americans in that part of Chile and to learn about their experiences.

Improving Communications and Contacts With the Public

Mr. Arthur Schoenhaut, Deputy Director, Civil Accounting and Audit-

ing Division, has been designated by the Acting Comptroller General as the office liaison with the executive departments and agencies to assist within the area of our Office's responsibility and competence in effecting improvements wherever needed in Government service to the public. This designation was made pursuant to a program initiated by the President of the United States to improve Government communications and contacts with the public.

The Acting Comptroller General advised heads of divisions and offices on December 8, 1965, that, during the course of making reviews and examinations of Federal programs, the Office should endeavor to identify areas of potential improvement in dealings with the public and, wherever warranted, to bring these matters promptly to the heads of the departments and agencies for their consideration and action. The Acting Comptroller General stated that the Office's efforts in this program should be in keeping with our primary objective of improving the efficiency, economy, and effectiveness of Government operations and that any suggestions should result in improved services to the public with reductions in cost or with any increases in cost offset by other benefits.

The notice included an attachment listing 25 ways that had been suggested to improve communications with the public. The Acting Comptroller General expressed confidence that, with the exercise of imaginations and resourcefulness by the staff, these and many other means of improving communications and service to the public in specific situations can be proposed to executive departments and agencies on a regional, agency, or governmentwide basis. Copies of all correspondence dealing with such suggestions are to be forwarded to Mr. Schoenhaut for dissemination on a governmentwide basis.

Any suggestions for improving the Office's own communications and services to the public should be forwarded to the Comptroller General for consideration.

Use of Predetermined Rates for Indirect Costs in Grants to Nonprofit Institutions Other than Educational Institutions

Pursuant to a request from the National Science Foundation for a decision concerning whether it may develop predetermined rates for indirect costs for use in making grants to nonprofit institutions other than educational institutions, the Comptroller General ruled that, when determined to be in the best interest of the Government, the use of such procedures would seem appropriate, at least on a trial basis (B–157584, Nov. 26, 1965).

Bureau of the Budget Circular No. A–21, dated March 3, 1965, in implementing Public Law 87–638 (76 Stat. 437), provided for the negotiations of predetermined fixed rates for indirect costs in cost-type research and development contracts with educational institutions in order to simplify the administration of such contracts. The foundation inquired whether the concept of predetermined indirect cost rates may be applied to grants made to nonprofit institutions as well.

The decision by the Comptroller General expressed the opinion that, generally, indirect costs paid by the Government should be actual allowable costs determined by after-the-fact audit but that the Office recognized the desirability of easing the administrative burden that would be imposed upon the Foundation if it could not apply the predetermined fixed indirect cost rates to the nonacademic institutions as in the case of the educational institutions. The Office would not object to the Foundation's proposed procedures, provided that they are used only for basic research project grants which are fixed in amount with the Foundation having no responsibility for making additional funds available regardless of what the total cost may be and provided that the grantees will be required to share some portion of the cost of each research project in accordance with guidelines to be established by the Bureau of the Budget.

Air Force Project FIRM

The Air Force has a major project in process for the improvement of its financial managment system. The project bears the label FIRM—Financial Information for Resource Management. Its purpose is to develop, test, and evaluate a wing/base level financial information system and to determine the feasibility and merit of basing financial planning and financial control of operations primarily on expense data. The basic premise to be followed is that the primary source of data for financial planning and financial control of operations will be a system of expense accounting which will provide the cost of resources consumed, both locally funded and centrally funded, identified by organizational unit, program element, and expense classification.

The objectives of the project were outlined and explained by top officials of the Air Force at a meeting held in Washington on February 23, 1966, with the Acting Comptroller General, *Mr. Frank H. Weitzel,* and other officials of the General Accounting Office and officials of the Bureau of the Budget.

Four specific design objectives have been laid down:

1. Conformity to statutory requirements of the Budget and Accounting Procedures Act of 1950 and Public Law 84–863.
2. Approval of the system by the General Accounting Office.
3. Operability of the system by skill levels generally available at wing/base level.
4. No increase in manpower requirements as a consequence of the new system.

The underlying motivation of the Air Force in undertaking this constructive project is of interest. It appears to stem, in large part at least, from the Comptroller General's letter dated May 19, 1964, which was addressed to the heads of 48 Federal departments and agencies, expressing concern about the lag in accounting systems development in the Government. The letter urged the head of each department and agency "to arrange for an appropriate review of the status of financial management improvement work within his organization and to make effective provision for such further progress as is necessary to translate these efforts into workable systems that are efficient,

economical, and, as to the accounting functions, in consonance with the basic policies and objectives laid down by the Congress and the related principles and standards prescribed by our Office." In July 1964, the House Government Operations Committee held hearings on the subject matter of this letter at which the Comptroller General, the Chairman of the Civil Service Commission, and representatives of the Bureau of the Budget and the Treasury Department testified.

On August 1, 1964, the Secretary of the Air Force sent a memorandum to the Chief of Staff, USAF, directing that a study be made at wing/base level to ensure that the best possible systems for meeting the needs of Air Force management at all levels are in use or that the necessary changes are developed to accomplish this objective. The initial study was made at the Seymour Johnson Air Force Base in North Carolina in 1965. The public accounting firm of Arthur Andersen & Co. participated in this study and is being utilized by the Air Force to assist in carrying out the objectives of Project FIRM.

GAO Representatives Present Views on Pacific Northwest Bidding Procedures Involving the Sale of Federal Timber

On December 21, 1965, Messrs. *Henry Eschwege*, assistant director, and *Stanley S. Sargol*, supervisory accountant, Civil Accounting and Auditing Division; *William N. Conrardy*, regional manager, Seattle Regional Office; and *L. Fred Thompson*, Office of the General Counsel met in Portland, Oreg., with the Committee on Sealed vs. Oral Bidding which had been appointed by the Oregon and California Advisory Board to study methods of bidding on Federal timber. The board advises the Department of the Interior on timber management activities.

In addition to hearing extensive testimony from industry representatives, the committee called for discussion of two GAO reports pertaining to certain aspects of bidding for Federal timber. The GAO representatives advocated the objective of attaining a healthy climate of competition in bidding procedures.

The committee plans to submit its report to the O. & C. Advisory Board which in turn will make a report to the Department of the Interior.

Recovery in a Contract Overpricing Case

We reported to the Congress in July 1964 (B–152600) on the results of our review of the pricing of F–4 aircraft survival kit components supplied by a second-tier subcontractor. In sole-source procurement of these components totaling $1.5 million, the first-tier subcontractor repeatedly accepted prices proposed by the second-tier subcontractor without benefit of cost data or other evidence of the reasonableness of the prices. This review was conducted as a part of our examination of the F–4 program undertaken at the request of the Chairman of the Committee on Appropriations, House of Representatives. Regions participating in this review were Los Angeles, New York, Philadelphia, and Kansas City.

We concluded that if the first-tier subcontractor had obtained information on its supplier's most recent production costs before negotiating prices, it would have been in a posi-

tion to negotiate a reduction of about $208,000. Such action, after allowing for administrative charges and profit, added by the prime contractor and the first-tier subcontractor, would have reduced the cost to the Government for these procurements by about $317,000. In addition, in awarding a subcontract to the second-tier subcontractor in 1963, the first-tier subcontractor violated Public Law 87–653, as well as the terms of a contract it held with the prime contractor, by failing not only to obtain a required pricing certification, but also to include a contract provision giving the Government the right to recover any overpricing. We stated our belief that to the extent that the second-tier subcontractor's price was unreasonable, and because of the first-tier subcontractor's failure to comply with statutory and contractual requirements, recovery in behalf of the Government should be made.

Later in 1963, in connection with a subsequent order, the first-tier subcontractor obtained cost data from the second-tier subcontractor including a certification that such data were complete and current. However, no review was made of the reliability of the cost data. Such a review would have revealed that the second-tier subcontractor had no real support for the cost data certified and furnished to the first-tier subcontractor and that current production costs of the items were substantially less. It was our opinion that this action constituted misrepresentation. We recommended, therefore, that action to recover damages sustained by the Government, as a result of the second-tier subcontractor's part in this transaction, be considered under the legislation which imposes penalties for false claims against the Government (31 U.S.C. 231).

In a letter dated October 20, 1965, the Department of Justice advised us that they had accepted a payment of $207,700 from the second-tier subcontractor as a compromise offer in settlement of all claims against the company arising from the alleged overpricing of survival kit equipment. The Department of Justice later informed us that it has made demand on the first tier subcontractor for $89,500. The Department of Defense has informed us that recovery of the prime contractor's profit of $19,900 would be negotiated during final pricing of its contract.

Distribution of Selected Audit Reports

The following audit report was selected for distribution to interested college and university faculty members during *February 1966:*

Possible Savings from Improving the Management Control of Projectile Fuze Covers and Other Reusable Ammunition Components, Department of the Navy, B–146917, January 28, 1966.

This report dealt with our review of the management of reusable MF4 projectile fuze covers. We found that, for the 3-year period ended June 30, 1964, the Navy incurred costs of as much as $218,000 because significant quantities of these fuze covers were not returned by the user activities and other quantities, although returned, were lost or sold as scrap. The report pointed out that, since there was a continuing need for these covers, possible savings of as much as $595,000 could

be realized during the next 5 years by establishing effective controls over the return and reuse of these covers.

The report was sent to the Congress to invite attention to the basic problem of the absence of an adequate system of responsibility, accountability, and surveillance over reusable ammunition components in the Navy and to the potential savings which may accrue through improvements in inventory management procedures and practices.

In *March 1966* the following audit report was selected for distribution to interested college and university faculty members:

Need to Reexamine Planned Replacement and Augmentation of High-Endurance Vessels, Western Area, U.S. Coast Guard, Treasury Department, B-114851. February 18, 1966.

This report set forth our conclusion that the Coast Guard's plans for acquiring 14 new high-endurance vessels in its western area to replace 11 such vessels was questionable. We expressed the opinion based on our review that the agency's stated requirements could be reduced with a savings of about $45 million in construction costs and about $3.6 million annually in operating costs. The reason stated for issuing this report to the Congress was the significant reduction of costs which may be effected and the interest expressed by the Congress in the Coast Guard's vessel procurement plans.

Revision of the Armed Services Procurement Regulation

The February 1, 1966, revision of the Armed Services Procurement Regulation (ASPR) contains an important revision to Section 3-811. It provides as follows:

> If cost or pricing data was submitted and a certificate of cost or pricing data was required (3-807.4), the memorandum shall reflect the reliance placed upon the factual cost or pricing data submitted and the use of this data by the contracting officer in determining his total price objective. Where the total price negotiated differs significantly from the total price objective, the memorandum shall explain this difference.

It is still a much mooted question whether "reliance" on certified data is a necessary element of entitlement to a price reduction. The revision in the regulations, if properly implemented, should go far in protecting the Government's rights in cases where proof of "reliance" is required in "defective pricing" actions under the clause prescribed in ASPR 7-104.29.

Accounting Articles

A new monthly publication of Commerce Clearing House, Inc., entitled "Accounting Articles," contains capsule summaries of articles that were published recently in various accounting and accounting-related periodicals. The February 1966 issue of "Accounting Articles" contains 321 summaries covering a great variety of subjects, including data processing, statistical sampling, Department of Defense audit operations, budgeting, information systems and systems analysis, and mathematical techniques applied to accounting and auditing.

The articles are indexed by subject matter and by author. Information concerning the addresses of the publishers and the cost of the periodicals is provided. This new publication does not duplicate the format of the "Accountants' Index" (published by

the American Institute of CPAs) since the "Index" is published biannually and does not contain summaries of the articles, books, and other publications indexed.

GAO staff members who wish to research current literature on a subject will find this new publication particularly helpful. It is available in the GAO library for staff use.

Proposed Revision of District of Columbia CPA Law

On January 19, 1966, Subcommittee No. 2 of the House Committee on the District of Columbia held hearings on two bills to completely revise the CPA law of the District of Columbia. The two identical bills, H.R. 7624 and H.R. 9815, were drafted and sponsored by the D.C. Institute of Certified Public Accountants. Representatives of the General Accounting Office had several discussions with the members of the Institute committee which drafted the proposal and the Institute committee adopted and included in its proposal a rather indefinite provision that purported to recognize Government experience as qualifying for the CPA certificate.

Representatives of GAO testified at the hearings and strongly urged the committee to amend the bill to include a provision specifically recognizing GAO experience as qualifying for the CPA certificate. Because of the difference in views between the D.C. Institute of CPAs and the GAO representatives, the committee chairman requested the two groups to get together and try to work out an acceptable amendment. This was done and the D.C. Institute and the GAO concurrently recommended to the committee an amendment that would specifically recognize Government auditing experience in terms that applied almost directly to GAO.

The subcommittee has recently reported out the bill with the proposed amendment. As of this writing, the bill has not been reported out by the full committee to the House. We are hopeful that this bill will eventually be enacted into law and thus afford GAO accountants and auditors who reside in the District of Columbia an opportunity to obtain the CPA certificate.

Review Guide for Part I, Comprehensive Audit Manual

The following excerpt from a letter from *Mr. C. H. Moore*, regional manager, Detroit, relates to the review guide for part I of the Comprehensive Audit Manual:

> It has always been our firm belief that our effectiveness as an Office in fulfilling our responsibilities is directly proportionate to the degree of understanding each staff member has of our basic operating policies, standards, and requirements. Since our primary authoritative source for these policies, standards, and requirements is the Comprehensive Audit Manual, it has been our practice to emphasize, at every opportunity, the responsibility of each staff member for acquiring a thorough understanding of its content. In this respect, we have found the subject quizzer particularly helpful as a supplement for systematic study and review. As a training tool, the quizzer provides a clearer understanding of the basic material, whether used for indoctrination by the trainee or for "brushing up" by the more experienced staff member.

From the President's 1967 Budget Message

"I expect each Government employee to spend the public dollar with the same care and concern he would

exercise if it came out of his own paycheck."

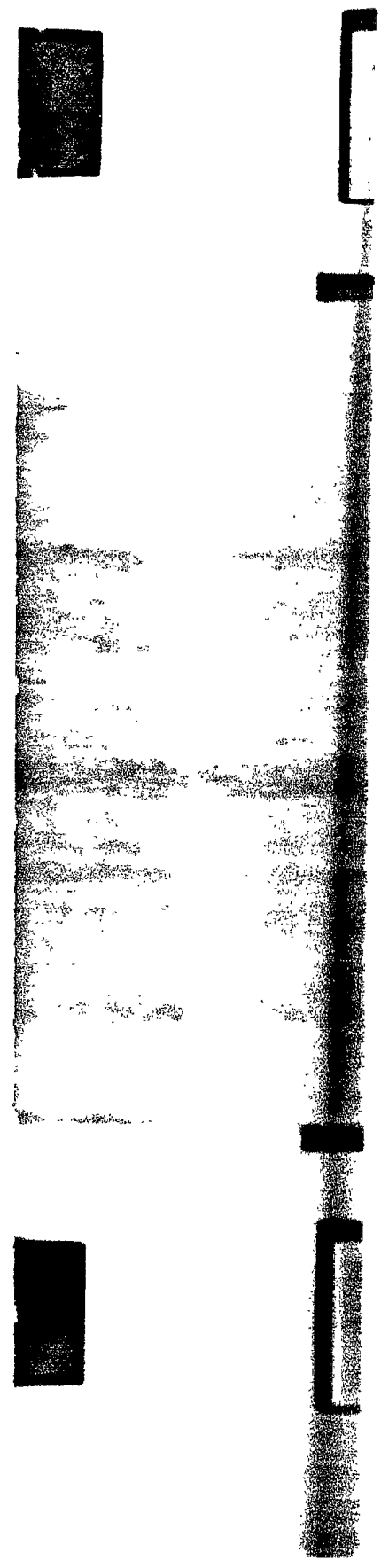
* * * * *

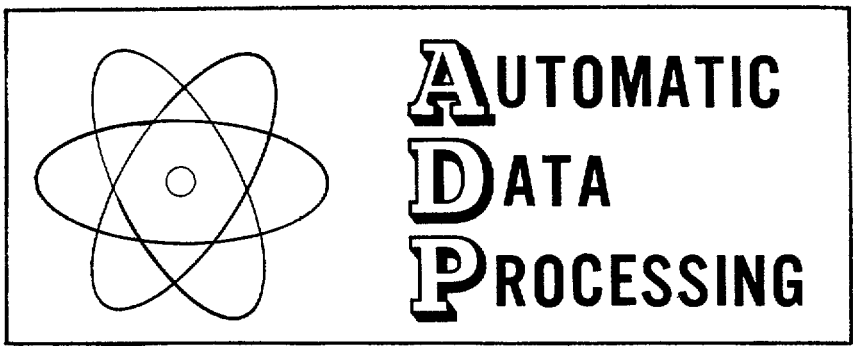
"There are many ways to reduce costs and eliminate unnecessary spending:

By curtailing or eliminating activities of declining importance.
By closing marginal branch offices or installations.
By pooling common services.
By simplifying organization.
By increasing productivity.
By installing up-to-date systems and equipment.
By interagency coordination of plans and operations.
By stringent budgetary reviews."

* * * * *

"No agency, regardless of size or importance, is exempted from the duty to save the taxpayer's money by better management and alert business methods."





Professional Development and ADP

The following comments were submitted by *E. H. Morse, Jr.*, Director, Accounting and Auditing Policy Staff.

The accounting profession is giving concentrated attention to the impact of computers on future operations of accountants and auditors. The AICPA, for example, has engaged the System Development Corp. to study this impact. A large part of the annual meeting of the AICPA in Dallas last October was devoted to this subject. (See recent issues of the Journal of Accountancy and The CPA.)

The importance of electronic data processing systems in the management systems of Federal agencies and their contractors and their impact on how we discharge our audit responsibilities is also receiving increased attention in the General Accounting Office. The GAO accountant and auditor of the future will have to be well versed in ADP systems "know-how" so that he can utilize the efficiency of this technology in reaching his specific audit objectives and be able to evaluate the effectiveness, efficiency, and economy with which Federal agencies use these systems.

All of our formal training programs sponsored by the Office of Staff Management include sessions devoted to ADP problems as they relate to the purposes of each training program. Plans are now being made to develop a new training course to be devoted solely to audit aspects of ADP with primary emphasis on the policies and practices we may apply in carrying out our accounting and auditing assignments.

Formal training programs presented within our Office are not the sole answer to our needs, however. All staff members have to recognize that for ADP, as well as for many other technical and professional subjects, the real impetus to individual development of needed capabilities and talents must be provided by the individual himself. This means that no staff member should rely solely on the organized efforts of our Office for his continued professional development.

This very important tenet is appropriately emphasized in the paper on the audit function in ADP systems by *Joe W. Johnson* of our Army Group published in this issue (page 17). He points out that the auditor is re-

sponsible for his own professional development and must determine what education and training he will need to remain proficient in his field. He mentions the availability of computer training and education in the form of college courses, manufacturers' courses, home study, on-the-job training, and various combinations of these.

It can be said for ADP, as for other matters, that those who move the fastest and the farthest are those who look to the future, identify the needs, and then invest that extra effort in continued growth and preparation to do a better job for the organization they serve.

From the President's 1967 Budget Message

"The Federal Government has obtained great benefits from the use of electronic computers. With the direct annual cost of acquiring and operating this equipment now in the range of $2 billion, I intend to make sure that this huge investment is managed efficiently—through such means as research, equipment sharing, careful purchasing, and coordinated governmentwide utilization policies."

Selected Readings in Automatic Data Processing

Periodically the Accounting and Auditing Policy Staff arranges for the compilation and distribution of selected ADP articles and other ADP material for use by GAO staff members. The latest set of selected material was distributed in February 1966. The following items were included in this release:

Title and source

"The Impact of ADP on Audit"—Bulletin, The U.S. Army Audit Agency, December 1965.

"The Payout on Computers: What Management Has Learned about Planning and Control"—Management Review, December 1964.

"Computers: Brains or Problems?"—The Sunday Star, Aug. 9, 1964.

"The Manager and the Computer"—The Journal of Accountancy, January 1965.

"Automated Auditing"—The Journal of Accountancy, May 1964.

Copies of this material are distributed throughout the Washington office and field offices with the suggestion that it be circulated among interested staff members. Staff members are encouraged to utilize the material to help in keeping informed of current developments and activities in the ADP field. If copies are not readily available at decentralized locations, they may be requested by writing to the Director, Accounting and Auditing Policy Staff, Washington, D.C.

Development of Standards for Data Processing Systems

As part of the AAPS study of compatibility and standardization of ADP systems (see *GAO Review*, winter 1966, p. 40), it is planned to obtain information on the efforts currently being made by Government agencies and the American Standards Association to develop standards. The following comments explain in general the approach being taken in developing standards for use throughout the data processing community.

The principal U.S. body engaged in standardization for information processing is the American Standards Association Sectional Committee X3, "Computers and Information Proc-

essing." The American Standards Association is a privately supported group acting as the national clearinghouse and coordinating agency for voluntary standards in the United States.

An American standard is a voluntary standard arrived at by consensus and available for use on a voluntary basis. It is a standard that has been approved through the procedures of the American Standards Association (ASA). The standard can be proposed by a committee established under the auspices of ASA or through trade associations and professional societies which have developed their own standards.

The Sectional Committee X3 is the primary body in the United States for development of standards related to information processing. The sectional committee method consists of the formation of a committee to develop standards under an assigned scope.

One or more organizations principally concerned with the work assigned to a sectional committee may be designated to give administrative support to it. These are called sponsors. The sponsor organization is responsible for the administration and direction of the various standard projects undertaken by the committee.

The sponsor of the X3 Committee is the Data Processing Group of the Business Equipment Manufacturers Association (BEMA). The Data Processing Group is composed of 21 manufacturers of information processing systems, components, and devices. As sponsor under the current organization of X3, BEMA has 12 members on this committee representing the views of the producing industry. The remaining 24 members are divided into two groups identified as consumers and general interest groups. The Department of Defense and the General Services Administration have representation on the consumer group. The National Bureau of Standards has membership on the general interest group.

Under this arrangement, the following American standards have been established:

1. Signaling speeds for data transmission, approved August 8, 1962.
2. Print specifications for magnetic ink character recognition, approved November 7, 1963.
3. Bank check specifications for magnetic ink character recognition, approved November 7, 1963.
4. Code for information interchange, approved December 28, 1965.
5. Perforated tape code for information interchange, approved July 9, 1965.
6. Flowchart symbols for information processing, approved July 19, 1965.

The following proposed American standards are presently under development:

1. Specification for general purpose paper cards for information processing.
2. FORTRAN.
3. Basic FORTRAN.
4. Recorded magnetic tape (200 CPI, NRZI).
5. Vocabulary for information processing.

6. Character set for optical character recognition.
7. Parallel signaling speeds for data transmission.
8. Bit sequencing of the American Standard Code for information interchange in serial-by-bit data transmission (low order).
9. Character structure and character parity sense in serial-by-bit data communication in the ASCII.
10. One-inch perforated paper tape for information interchange.
11. Recorded magnetic tape (800 CPI, NRZI).
12. Twelve-row punched card code for information interchange.
13. $^{11}/_{16}$-inch perforated tape for information interchange.

Standards for Computer Feasibility Studies

Over the years much has been written about how to plan for an effective and efficient computer installation. An article entitled "Standards for Computer Feasibility Studies" in the December 1965 issue of *Management Review* lists the following 12 items which the author believes should be covered by a computer feasibility study:

1. The computer feasibility proposal must demonstrably be the work of company or company-oriented personnel.
2. The proposal must indicate which procedures and operations are to be computerized and demonstrate the physical feasibility of doing so.
3. It must demonstrate the physical capability of the equipment selected.
4. It must properly detail the physical facilities required to house the computer.
5. It must properly present the cost position of acquiring the computer.
6. It must properly present the personnel problems of designing, implementing, and operating a computer system.
7. It must present the personnel-relations problems stemming from computer installation.
8. It must demonstrate that the system and computer selected are capable of expansion and change.
9. It must frankly acknowledge that problems will occur during the installation and indicate the nature of them.
10. It must give evidence of support from other functional areas within the company.
11. It must show evidence of solid planning for the computer installation.
12. It must present, effectively, all the benefits to be derived from the computer installation.

Chapter 8 of part IV of our Comprehensive Audit Manual sets forth our audit policies relating to what we should consider when reviewing feasibility studies. The above article notes a number of additional factors to be covered.

Information Retrieval Systems

One of the approaches being used by major U.S. concerns to satisfy the need to keep technical staff employees currently apprised of technical developments in their field is to develop an ADP information retrieval system which contains a master file of ab-

stracts of such developments and other pertinent reference material. A profile is prepared for each technical employee and is introduced into the system. As new technical information becomes available, it is screened by the computer against the profiles of the technicians and, where there is an interest, the individual is notified of the new information available. Also, when technicians need technical information by subject matter, individual requests can be submitted for screening against the technical library for retrieval of the desired information.

Professional Activites

Office of the Comptroller General

The Assistant Comptroller General, *Frank H. Weitzel,* addressed the following groups in recent months:

The Silver Anniversary Meeting of the Academy of Management in New York City on December 28, 1965, on "Financial Management in Governmental Administration."

The D.C. Chapter of the Army Finance Association on January 13, 1966, on "Measures Required to Improve the U.S. Army's Financial Systems in Meeting General Accounting Office Guidelines."

Civil Service Commission Mid-Management Conference on January 19, 1966, on "Economy Role of the General Accounting Office."

Brookings Institution Conference for Business Executives on Federal Government Operations on January 25, February 8, and March 8, 1966. Mr. Weitzel spoke on "The Role of the General Accounting Office."

Brookings Institution Public Affairs Fellowship Program on February 14, 1966, on "The Role of the General Accounting Office."

The Barristers Inn, Phi Delta Phi legal fraternity, at the Lawyers Club on March 15, 1966, on "Functions of the Comptroller General and the General Accounting Office."

Briefing Conference on Government Contracts sponsored by the Federal Bar Association and The Foundation of the Federal Bar Association in cooperation with The Bureau of National Affairs, Inc., in Philadelphia on March 17, 1966. Mr. Weitzel discussed recent changes in GAO contract auditing and reporting.

Lawrence J. Powers, Assistant to the Comptroller General, spoke on "Internal Auditing as an Effective Element of Management Control" at the HEW Regional Auditors Conference held in Washington from January 17 through 27, 1966. *Mr. Gregory J. Ahart,* assistant director, CAAD, also participated in this discussion.

Accounting and Auditing Policy Staff

E. H. Morse, Jr., director, conducted a half-day session on the roles of the General Accounting Office on February 3, 1966, in connection with the Civil Service Commission's seminar on Federal Program Management held at the Executive Seminar Center, Kings Point, N.Y.

An article by Mr. Morse entitled "Accounting Principles and Standards for Federal Agencies" appears in the fall 1965 issue of *The Federal Accountant.*

Ted M. Rabun has an article entitled "Accounting and Labor Relations" appearing in the January 1966 issue of *Management Accounting.*

Office of Staff Management

During the first quarter of the year, *Leo Herbert,* director, in company with the regional manager or a se-

lected audit manager in the region involved, visited with faculty members and gave talks before accountancy clubs or other business orientated organizations or professional societies at the following universities or colleges: Xavier University, New Orleans, La.; University of Southern Mississippi, Hattiesburg, Miss.; Southern University, Baton Rouge, La.; University of Southwestern Louisiana, Lafayette, La.; Louisiana Polytechnic Institute, Ruston, La.; Grambling College, Grambling, La.; and Florida A&M College, Tallahassee, Fla.

On February 15, 1966, Mr. Herbert addressed the Baton Rouge Chapter of the National Association of Accountants on "Training for Audit of Management Performance."

During the months of February and March 1966, five 2-day faculty programs were conducted during which 50 faculty members from as many different colleges and universities visited our offices to become acquainted with our accounting and auditing operations. The following offices were hosts for these programs: Washington headquarters, San Francisco, Norfolk, Philadelphia, and Detroit.

Civil Accounting and Auditing Division

Donald T. Bucklin, who is attending the Washington College of Law of the American University, has received a number of awards for his scholastic achievements there. These include:

John W. Davis Senate, Delta Theta Phi Scholastic Award—A plaque awarded to the outstanding student for the highest scholastic average in both the part-time and full-time programs at the end of the first year of study. The student's name is also inscribed on a plaque retained at the law school.

American Law Book Company Award—A volume of Corpus Juris Secundum awarded to a full-time student for the highest scholastic average at the end of the first year of study.

Lawyers Co-operative Publishing Company and Bancroft-Whitney Company Award—Specially bound titles from American Jurisprudence awarded to the student receiving the highest grade in each subject. Awarded for: Torts; contracts; procedure.

In addition, Mr. Bucklin was appointed to the staff of the American University Law Review and has had an article published in a recent edition.

Defense Accounting and Auditing Division

Charles M. Bailey, deputy director, participated in the Conference for Federal Executives on Business Operations as a part of an educational program conducted by the Brookings Institution, Washington, D.C., October 17–29, 1965. The purpose of the conference, held in Chicago, St. Louis, and Peoria, was to provide—through first-hand exposure to principal areas of business activity—an educational experience to sharpen the sensitivity of participants to the operations and problems of major U.S. corporations; to the day-to-day responsibilities and motivations of corporate executives; to business-Government relationships; and to the role of business in our national life.

Seminars were held with presidents, vice presidents, board chairmen and

other high officials of corporations and institutions representing a variety of businesses, including Inland Steel Co., Sears, Roebuck & Co., Continental Illinois National Bank and Trust Co., Arthur Andersen & Co., Illinois Bell Telephone Co., Bell & Howell Co., U.S. Gypsum Co., Brown Shoe Co., Caterpillar Tractor Co., Pet Milk Co., Missouri Pacific System, and the University of Chicago.

Meetings with officials of the business concerns visited provided participants the opportunity for give-and-take discussions on such topics as management controls, personnel policies, labor relations matters, and Government-business relationships. Mr. Bailey considers this to have been a very valuable experience.

Charles M. Bailey, deputy director. and *Richard W. Gutmann*, associate director, attended the senior seminar in the Management Sciences, held March 14–18, 1966. The seminar was conducted by the ADP Management Training Center, Office of Career Development, U.S. Civil Service Commission, Washington, D.C.

John F. Flynn, assistant director, Army group, spoke on March 2, 1966, to the Army Logistics Management Class, Fort Lee, Va., on "General Accounting Office Audit Findings in the Area of Army Materiel Management."

Henry W. Connor, supervisory accountant, Army group, addressed on March 10, 1966, the joint meeting of the U.S. Army Reserve Units, Designation Detachment 24, Office of Chief of Finance, USAR, and Designation Detachment 26, Office of the Comptroller, USAR. His subject was "The General Accounting Office and Its Activities with Respect to the Department of the Army."

Robert G. Rothwell, assistant director, Navy group, is attending the 49th session of the Advanced Management Program at the Harvard University Graduate School of Business Administration.

Regional Offices

Joseph Eder, regional manager, Boston office, spoke in January 1966 to the Air Force Cambridge Research Center Branch of The Scientific Research Society of America on "The Role of the General Accounting Office."

Forrest Browne, regional manager, Kansas City office, participated recently as a "Professor for a Day" at the University of Missouri School of Business and Public Administration. Mr. Browne was commended by a faculty member of the school for an effective presentation which was a learning experience for himself as well as for the students.

John J. Reese, supervisory auditor in charge of GAO work in Houston, Tex., has been appointed to serve as Director of Education, Houston Chapter, Federal Government Accountants Association, for 1966.

The following members of the Denver regional office staff were recently admitted as Fellow Members of the Colorado Society of CPAs: *J. Frank Lykins, Earl D. McCartney, John E. Murphy, Herman H. Velasquez*, and *John R. Williamson.*

Howard Cohen, audit manager, Boston regional office, and *David Kelley*, supervisory auditor, Norfolk regional office, are attending the 11th

session of the Program for Management Development at the Harvard University Graduate School of Business Administration.

Transportation Division

On March 16 and 17, 1966, *T. E. Sullivan*, director, and *T. C. McNeill*, assistant to the director, attended the spring meeting of the freight revenue committee of the Association of American Railroads in Philadelphia, and discussed audit and claim problems of mutual concern. *E. B. Eberhart*, chief of the passenger audit branch, attended the meeting of the passenger revenue committee meeting on March 16, 1966, for the same purpose.

On March 23, 1966, *J. P. Normile*, associate director, and *E. B. Eberhart* addressed the semiannual meeting of the revenue accounting-passenger committee of the Airline Finance and Accounting Conference in Washington and discussed the impact of recent tariff changes on the manner in which the Government should order passenger services.

On March 23, 1966, *Paul Lynch*, chief of the transportation management review branch, and *C. C. Loomis*, chief of the motor audit branch, lectured at the Defense Traffic Management School, Fort Eustis, Va., on GAO's role in the audit of transportation payments and the review of traffic management activities.

New Assistant Directors

Courtesy The Watchdog

Frank P. Chemery

Frank P. Chemery of the Air Force group, Defense Accounting and Auditing Division, was designated as assistant director, effective December 19, 1965.

After working several years in public accounting in New York City, Mr. Chemery joined the staff of the Philadelphia Regional Office in 1953. He transferred to the Defense Accounting and Auditing Division in Washington in 1956.

Mr. Chemery received a bachelor of business administration degree from St. John's University in 1946 and became a CPA (District of Columbia) in 1955. He is a member of both the District of Columbia and the American Institutes of CPAs. During World War II, Mr. Chemery served with the U.S. Army.

Johan DeLeeuw

Johan DeLeeuw of the Army group, Defense Accounting and Auditing Division, was designated as assistant director, effective December 19, 1965.

Mr. DeLeeuw was educated in the Netherlands where he lived until September 1948. He worked for several years in public accounting in New York until he joined the General Accounting Office in 1952. He has served on the staff of the New York Regional Office, the European branch, and the Defense Accounting and Auditing Division. He is a CPA (New Jersey) and a member of the American Institute of CPAs.

Frank Medico

Frank Medico was designated as an assistant director in the Civil Accounting and Auditing Division effective January 30, 1966. Mr. Medico's current assignment is with the Treasury audit group.

Mr. Medico entered Government service in 1942 and served with the U.S. Navy in World War II. He joined the General Accounting Office in 1956. He received a degree in accounting at Benjamin Franklin University and in 1952 was awarded a masters degree in fiscal administration from Columbus University. Mr. Medico is a certified public accountant in the State of Massachusetts and is a member of the National Association of Accountants. In 1965 he received a meritorious award for superior performance.

Courtesy The Watchdog

Gilbert F. Stromvall

Gilbert F. Stromvall was designated as an assistant director in the International Operations Division, effective February 13. 1966. Mr. Stromvall's current responsibility is in connection with interagency program activites of an international character.

Mr. Stromvall joined the General Accounting Office in 1954 and has served in the Los Angeles Regional Office, the Far East branch, and in Washington. Mr. Stromvall received a bachelor of science in business degree, with high honors, from the University of Idaho in 1954. He served in the U.S. Army from 1946 to 1949.

Courtesy The Watchdog

Allen R. Voss

Allen R. Voss was designated as an assistant director in the Accounting and Auditing Policy Staff, effective March 13, 1966.

Mr. Voss was graduated from the University of Florida in 1956 with a degree of bachelor of science in business. He is a certified public accountant in the State of Florida and a member of the American Institute of Certified Public Accountants. Mr. Voss joined the General Accounting Office in 1958, and was assigned to the Civil Accounting and Auditing Division until early in 1963 when he was transferred to the Accounting and Auditing Policy Staff.

Before joining the General Accounting Office, Mr. Voss was associated with the public accounting firm of Arthur Young & Co. in Atlanta. From 1948 to 1952, he served in the U.S. Air Force.

Successful Candidates—November 1965 CPA Examination

Regional Offices

Name	*Regional office*	*State*
Larry W. Aldrich	Atlanta	California.
W. A. Deadmond	San Francisco	California.
Elton L. Epley	Los Angeles	California.
Jack E. Hamilton	Atlanta	Georgia.
V. A. Magliano	San Francisco	California.
David Marshall	Boston	Massachusetts.
Gary A. Palmquist	Los Angeles	California.
Marvin F. Permann	Denver	Colorado.
William E. Sanchez	Los Angeles	California.
W. T. Stevens	San Francisco	California.
Bill W. Thurman	Dallas	Texas.
Pierre Titard	New Orleans	Louisiana.

Washington

Name	*Division*	*State*
Donald R. Baiardo	CAAD	Virginia.
N. B. Cheatham	OSM	Texas.
Paul Koval	CAAD	Maryland.
John F. McNamara	IOD	Virginia.
Fred Principe	CAAD	West Virginia.
Gerald D. Skinner	CAAD	Virginia.
Stephen J. Varholy	CAAD	Virginia.

New Accounting and Auditing Professional Staff Members

The following professional staff members joined the accounting and auditing divisions and reported for work during the period October 16, 1965, through March 15, 1966.

Civil Accounting and Auditing Division	Baiardo, Donald R.	Benjamin Franklin University
	Goodrich, Richard E.	East Central State College
	Hammons, Robert G.	Central State College
	Janik, Chester F.	Bryant College
	Kushner, Ronald A.	Gannon College
	Marshall, David F.	Pennsylvania State University
	Moore, Fritz C., II	Morris Harvey College
	Sloboda. William P.	Gallaudet College
	Tasca, Edward R.	Providence College
	Thomson, John A., Jr.	Columbia Union College
	Treese, Matthew A.	Bloomsburg State College
	Varady, John S.	Lehigh University
Defense Accounting and Auditing Division	Thomas, Albert H.	East Central State College
Atlanta Regional Office	Byrne, Edith J. (Miss)	University of Tennessee
	Stewart, Charles C.	Alabama College
Boston Regional Office	Donahue, Morgan J.	Providence College
Chicago Regional Office	Motelet, Philip H.	Milton College
	Seman, Stewart O.	University of Dayton
	Wilson, Barry D.	University of Illinois
Dallas Regional Office	Carpenter, Gerald W.	Texas College of Arts and Industries
	Worthen, Winston K.	Arlington State College
Detroit Regional Office	Fennell, Kenneth L.	Findlay College
Kansas City Regional Office	Ashley, David E.	University of Oklahoma
	Gregory, Arlen S.	Kansas State Teachers College
	West, Douglas H.	Arkansas State College

Los Angeles Regional Office	Anderson, Larrie C.	Utah State University
	Dion, Joseph P., Jr.	San Diego State College
	Dobbs, Kenneth	California State College
	Reich, Harold D.	San Fernando Valley State College
New Orleans Regional Office	Austin, Jeffery D.	Northwestern State College
	Corley, Mary Ann (Miss)	Louisiana Polytechnic Institute
	Dorman, James I., Jr.	Mississippi State University
	Fincher, William B.	Northwestern State College
	Leperi, Dominic T., Jr.	University of Southern Mississippi
	Porretto, John P.	Sam Houston State Teachers College
New York Regional Office	Hornung, John M.	Muhlenberg College
Norfolk Regional Office	Novosel, Joseph	Indiana State University
San Francisco Regional Office	Eichmann, Alexander	Golden Gate College
	Grigsby, Ronald J.	Sacramento State College
	Moriyama, Roy O.	Armstrong College
	Pico, Thomas P., Jr.	San Francisco State College
	Staal, Donald E.	San Jose State College
	Swartzlander, Philip J.	Brigham Young University
Seattle Regional Office	Dichter, Harry M.	Linfield College
	Johnson, Harold J., Jr.	Portland State College
	Kiuchi, Frank R.	University of Washington
Washington Regional Office	Lynard, Louis G.	American University
	Morrison, Phillip L.	Morris Harvey College
	Nygaard, Richard E.	American University

Recommended Reading

The reviews of books, articles, and other documents in the *Recommended Reading* section represent the views and opinions of the individual reviewers, and their publication should not be construed as an endorsement by GAO of either the reviewers' comments or the books, articles, and other documents reviewed. The items reviewed are those which the reviewers recommend for reading by the professional staff.

Accounting for Management

By Eric L. Kohler; Prentice-Hall. Inc., Englewood Cliffs, N.J., 1965; 275 pp., hardback, $7.95.

Mr. Kohler's book provides an excellent insight into and review of the area of financial management; therefore it fits right in with the increased emphasis of the GAO on this area. The author's stated objective is "to set forth the principal features of the accounting art with which management ought to have more than a passing acquaintance." The book is not directed specifically to accountants, managers, or students but is directed to anyone who is required to be associated with accounting in any manner. The book generally deals with the employment of accounting in the formulating of a firm's managerial policies and stresses the increasing role of accountants in the making of management decisions.

It is not surprising that Mr. Kohler, the author of *A Dictionary for Accountants*, began his book with a discussion of the accountant's vocabulary and of the definitions of accounting techniques and terms. The early chapters are devoted generally to a discussion of accounting concepts.

Mr. Kohler stresses throughout the book the internal uses of accounting in providing management with a variety of control devices and emphasizes the need for a carefully conceived integrated accounting system to carry on a successful business. The book provides a few illustrations to aid understanding the source and meaning of certain items but generally shys away from textbook-style formats and methodologies.

The chapters pertaining to the conventional financial statements, i.e., the balance sheet and the income statement, review various principles and practices. Mr. Kohler states that the whole can be greater than its parts because, when the components of financial statements are displayed together, a "central effect" is created that becomes a distinct and separate impression. He warns, however, against putting too much reliance on the financial statements as they furnish historical data on past performance and give only an indication of what to expect in the future.

There are four chapters devoted to the consideration of use-aspects of accounting data that deal with cost accounting, managerial accounting,

budgeting. and flow statements. The author emphasizes that cost accountants are now turning away from widely divergent theories of overhead distribution to devices, such as standard costs and direct costing, for exercising cost controls by higher levels of management in line with management's expanding control function. He affirms that the intricate decisions and judgments required of management are possible only through an allocation of costs coordinated with planning and forecasting and a deeply concentrated operating authority. He places emphasis on the flow of costs through the accounts and on the principal methods of disposition of expenses.

The chapter entitled "Accounting & Management" is an exceptionally interesting one that ties the functions of the accountant in with management. The chapter explains that the accounting functions, which consist of classifying transactions, reporting, analyzing. budgeting projections, and instituting internal control, have provided a framework of financial information and control upon which it has been possible to expand the realm of management to any desired operating level of an organization. It gives cognizance to the importance of the controller because of his ability to look forward as well as backward. The controller advises management on a wide variety of matters in an objective manner that is highly respected and his advice is considered in the establishment of top managerial policies.

The chapter on *forward accounting* explains the types of budgets and the significance of careful budget planning. It states that forward accounting provides a major mechanism for planning, instituting, and controlling an organization's activities.

To provide operating standards by which performance may be measured, communication should be established between the various levels of management. Before budgets can be effective, however, it is necessary that detailed planning be accomplished and authority be delegated in accordance with the budgetary goals. In addition, effective controls and meaningful reports must be employed.

The chapter on flow statements presents an illustration of a budget projection using a flow statement. Three types of flow statements are illustrated, discussed, and compared. These statements are: (1) Statement of sources and application of funds, (2) funds-flow statement, and (3) cash-flow statement.

The function of auditing is defined as "preventive accounting" or "preventive management" and as an instrument for testing and correcting management polices. The book describes and discusses the specific functions of preaudit, internal audit, and external audit.

The final chapter, entitled "End-products," is concerned with the importance of obtaining a proper interpretation of accounting information presented on financial statements, through a thorough study of the interrelations of various financial and operating ratios. There is a brief, but excellent, discussion of national income accounting, an area in which the author recommends that greater emphasis be placed. The book concludes that the accounting process

provides (1) an everyday operating essential, (2) a tool of management, (3) a basis for external reporting, and (4) a model for assembling economic data.

Mr. Kohler has presented his ideas in this book with a free-flowing writing style that is clear and concise. The book presents an interesting approach to accounting that is up to date but not radical. It is recommended reading for GAO personnel as a review of basic accounting concepts and applications or as an insight into the modern employment of the functions of financial management. It is available in the GAO Washington library and in each regional office.

Earl M. Wysong, Jr.,
ARMY GROUP,
DEFENSE ACCOUNTING AND
AUDITING DIVISION.

Defining Objectivity in Accounting

By John W. Wagner, The Accounting Review, July 1965.

Objectivity is a basic requirement for GAO reports, yet the term has a variety of meanings to different people. Without defining objectivity in a manner that will permit the reconciling of varying points of view, there can be little hope of understanding or applying the concept. The article by Prof. John W. Wagner proposes a point of view for defining and applying objectivity and proceeds to demonstrate the acceptability of the view and the definition when related to the needs of the accounting profession.

The author expresses the view that after meeting the minimum educational requirements prescribed for admittance to the profession, an accountant must continue to mature by testing results of his perceptions against the experience of other accountants and nonaccountants. The mutual influences of these tests of experiences can eventually lead to the development of a generally accepted definition of objectivity.

The opinion of whether an event is objective or subjective depends on our perception. This is a major limitation which must be recognized in formulating definitions of objectivity and subjectivity.

When a person deals with matters beyond his range of experience, his opinions or conclusions are likely to be faulty and little objectivity can be expected. After a person spends many years dealing with particular types of situations, he begins to perceive more clearly what is happening and why; as his experience becomes broader and deeper, his competence increases in terms of providing more realistic and reliable reports about these situations. As ways are developed to enhance competence, greater objectivity is obtained.

Negatively defined, objectivity is a lack of bias. Bias can be defined as a deviation (a slanting or one-sidedness) of results from some accepted standard or criterion. Thus a bias is a defect in the results. It may be present to the extent that the individual or the group is lacking in either competence or ethics. Positively defined, objectivity represents the attainment of results which satisfy accepted standards.

Objectivity can be thought of as a quality that emerges with the development of perception, and specific ele-

ments can be identified as contributing to objective results. The author concludes that "As our effective knowledge increases through practice, education, research, and other types of experience, greater objectivity can be obtained by expanding the number and properties of the known elements. By concentrating our attention on these elements, we will be able to determine more readily why an action lacks objectivity and thereby gain greater insight to what we might do about it. Refinement of our concept of objectivity, and the means to its attainment, can then be made a more conscious part of our continuing professional development."

Andrew F. McCall,
ATLANTA REGIONAL OFFICE.

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