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GAO

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CASE STUDY EVALUATIONS

Transfer Paper 9

Preface

April 6, 1987

The purpose of this transfer paper is to provide GAO evaluators information on the case study approach and how it can be used in GAO audit and evaluation work. It addresses three questions: What are case studies (Chapter 2)? When are they appropriate for GAO work (Chapter 3)? What distinguishes a good case study from a not-good case study (Chapter 4)?

Six applications of case study methods are described and the methodological features of each, including purposes and pitfalls, are presented in detail in Chapter 3. Applications 1 and 3 are often used in GAO work; applications 2, 4, and 5 are used to some extent; and application 6 is not widely used. The six applications of a case study are:

1. Illustrative. This case study is descriptive in character and intended to add realism and in-depth examples to other information about a program or policy (see pp. 22-24).

2. Exploratory. This is also a descriptive case study but is aimed at generating hypotheses for later investigation rather than illustrating (see pp. 24-26).

3. Critical instance. This examines a single instance of unique interest or serves as a critical test of an assertion about a program, problem, or strategy (see pp. 26-28).

4. Program implementation. This case study investigates operations, often at several sites, and often normatively (see pp. 28-31).

5. Program effects. This application uses the case study to examine causality and usually involves multisite, multimethod assessments (see pp. 31-33).

6. Cumulative. This brings together findings from many case studies to answer an evaluation question, whether descriptive, normative, or cause-and-effect (see pp. 33-36).

Case Study Evaluations is a review of methodological issues involved in using case study evaluations. It is not a detailed guide to case study design. It does, however, explain the similarities and differences among the six kinds of case study, and discusses ideas for successfully designing them. It also gives guidance to the manager who, in reviewing completed case studies, wants to assess their strengths. Finally, it presents an evaluation perspective on case studies, defining them and

determining their appropriateness in terms of the type of evaluation question posed.

The methods and types of case studies outlined here are not definitive. The case study as a research method has evolved over many years of experience but evaluative use of the method has been more limited. Indeed, the history of the case study as an evaluation method is little older than a decade. Therefore, discussion of some of the applications described here is based on relatively extensive field experience (with questions in such domains as justice, education, welfare, environment, housing and foreign aid), while the discussion of some of the other applications is based on more constrained experience.

We have paid particular attention to the conventional wisdom that case studies are always subjective and non-generalizable. In many uses of case studies, there is no need to generalize. However, we find that there are steps that can be taken to generalize from case studies when this is desired. On the other hand, we did not devote any particular emphasis to the popular idea that case studies are inexpensive to conduct (issues of research management common to all designs were outside the scope of our work). However, one thing that should emerge quite clearly from the discussion of design features intrinsic to the case study is that it can be a rather costly endeavor, given the time required, the rich in-depth nature of the information sought, and the need to achieve credibility. This reinforces the importance of weighing carefully the decision to employ the case study method in program evaluation.

In this paper, we have taken positions on many issues, expecting to revise these as experience accumulates and as we receive reactions from evaluators and researchers. This paper is intended to transfer what we believe to be good practice in case studies and to help establish the principles of applying case studies to evaluation. Thus, while the document offers preliminary guidance, it is also a point of departure. For example, we are developing one variation that we call the "cumulative" case study. It can entail prospective and retrospective designs and it permits synthesis of many individual case studies undertaken at different times and in different sites.

In general, this paper discusses a number of methods, techniques, and standards which reinforce existing GAO guidance. Policy guidance may be found in the General Policy Manual, Chapters 3 and 7; the Project Manual, Chapters 10 and 11; the Report Manual, Chapter 6; and the

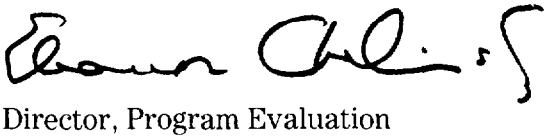
Standards for Audit of Governmental Organizations, Programs, Activities, and Functions (the "Yellow Book").

Finally, Case Study Evaluations is written in a workbook format so readers can compare their ideas with ours, as they proceed through the paper. To assist readability, all references are given in the bibliography, under List of Studies Cited, and are referred to by number in the text. Appendix I is for readers interested in more detailed information on such questions as how researchers see the differences between qualitative and quantitative evidence. It gives an overview of the theory and history of case study methods.

Case Study Evaluations is one of a series of papers issued by the Program Evaluation and Methodology Division (PEMD). The purpose of the series is to provide GAO evaluators with guides to various aspects of audit and evaluation methodology, to explain specific applications and procedures, and to indicate where more detailed information is available. Other papers in the series include Designing Evaluations and its workbook, Causal Analysis, Content Analysis, Using Structured Interviewing Techniques, Using Questionnaires, and Using Statistical Sampling.

We look forward to receiving comments from the readers of this paper. They should be addressed to me at (202/275-1854).

Eleanor Chelimsky



Director, Program Evaluation
and Methodology Division

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Abbreviations

GAO General Accounting Office
OTTR Observe, think, test, and revise

Introduction

At his government-required anti-terrorist training session recently, a captain for a major airline said, "The bits of information were so few and far between that people weren't even paying attention. My instructor for the eight-hour course entered the room only to change videotapes. People were talking; they were doing other things, including reading the paper" (14).

This is a case instance. It is an effective way of drawing attention to a problem such as training quality. Such anecdotes are remembered and they are convincing. What they are not, however, is generalizable: that is, an anecdote doesn't tell whether it is the only such instance or whether the problem is wide-spread. And anecdotes usually don't show the reasons for a situation, and thus are of limited value in suggesting solutions.

The challenge for evaluators is how to use those aspects of an anecdote that are effective for our work—the immediacy, the convincingness, the attention-getting quality—and, at the same time, fulfill other informational requirements for our jobs, such as generalizability and reliability. Case study methods, while not without their limitations in this regard, can help us answer this challenge.

GAO already does a lot of case studies—or at least, what we ourselves call case studies in describing our methods. There are GAO case studies in many areas—urban housing, weapon systems testing, community development, military procurement contracts, influences on the Brazilian export-import balances, how programs aimed at improving water quality are working, and the implementation of block grants—to name only a few.

Most of these case studies are either "illustrative" or "critical instance" applications. The first type of application illustrates findings established by other techniques, supplementing, for example, national findings on clean air from administrative records and other sources, with in-depth description on how funds have been used and with what results in selected cities. The second type of application is in-depth analysis of a case of unique interest, such as whether funds have been awarded and managed properly in a specific community health center or if a certain former government official had done anything improper before or after leaving the government. There are, however, four other applications of case studies which are less often used at present, but which could be appropriate for our jobs.

The quality of case studies can be variable. Some score high on reasonable tests of quality; others have lower scores. Three problems often encountered have to do with matching the question the evaluator set out to answer and the method for selecting the instances examined; reporting the basis for selecting the instances; and integrating findings across several instances when the findings in one were inconsistent with those in another.

The next sections of this paper will first present some new ways of thinking about a familiar method, the case study, and then introduce the six applications, describing what is required, in terms of methodology, to get the benefits case studies can offer. Finally, we turn to two basic questions: what do we need to take into account with regard to the objectivity of case studies and their generalizability.

Chapter 2

What Are Case Studies?

Almost everyone in GAO probably has worked on a case study at one time or another, yet may be unfamiliar with what is meant, methodologically, by a case study. The methodological meaning is important in understanding what differentiates a case study from a non-case study, and a good case study from a not-so-good case study.

What is a case study? The accompanying exercise describes a job we might be asked to do, a design for it, and asks you to decide whether or not this is a case study. Take about 10 minutes to think through this example, and write out your answer. It is important that you try this out yourself, so please do it before continuing.

What Is a Case Study?

Exercise: Suppose GAO has been asked whether the informed consent requirements for experimentation with human subjects are being properly implemented. Suppose further that we visit three sites where humans are used as subjects for research—a hospital, a university, and a clinic—and that we review the informed consent procedures at each site.

Question 1: Is this an application of the case study method? Why?

Question 2: If not, would case studies be appropriate for answering the question we were asked? Why?

Question 3: What is your definition of "case study"?

The answers some GAO evaluators gave may illustrate the range of definitions surrounding case study methods.

To some GAO evaluators, the instance was an application of the case study method, because we were looking at only a few sites or because we could not generalize or because "actual subjects are being used for analysis of a specific question." To some, the instance was clearly not an application of the case study method, because "we do not know if the instances are representative of the universe," and "there doesn't appear to be enough done at each site." To still others, it was not possible to tell whether this was a case study because looking at instances was what we do in all our methods, and there was no differentiation between this job and a compliance audit.

The definitions given also varied greatly. To one person, a case study involves looking at individual people. To another, a case study examines a clearly defined site and reports on that one site, so that multiple site studies would not be case studies. To another, case studies involve getting a great deal of information about a single site or circumstance, when generalizability isn't important. To others, "a random sample is necessary for a case study," "case studies are non-normative research that investigates a situation without prejudice," "where we could look at a limited number of cases which would represent the universe overall," and "a review of relevant conditions in a specific environment with no attempt to project to a larger universe." There were almost as many definitions as people, and few of them had elements in common. While exact uniformity isn't expected or perhaps even possible when people are asked to recall a definition, the extreme variability illustrates that we could be talking about very different things in a proposal or report when we discuss case study methods. Thus a decision to "do case studies" could lead to the collection of irreconcilably dissimilar information from groups working on the same job.

What Is Meant by "A Case Study"?

We have developed a definition of case studies that leads to appropriate uses and says something about how a good case study is conducted. It is somewhat technical, so we turn next to giving this definition, and to discussing each of its elements.

"A case study is a method for learning about a complex instance, based on a comprehensive understanding of that instance obtained by extensive description and analysis of that instance taken as a whole and in its context."

For example, if we were asked to study what caused the Three Mile Island disaster and scoped the job to describe whether required safeguards were complied with, this would not be a case study. If, however, we scoped the job to examine in depth events leading up to the disaster, what went wrong, and why it went wrong, this would be a case study. As a second example, if we were asked to study the safety of nuclear plants in general, we might select as our method a survey of self-reported compliance with safeguards in all existing plants. This would not be a case study. If, however, we scoped the job to examine in depth recent problems in appropriately selected nuclear plants including among others Three Mile Island, seeking to understand why the safeguards either were not complied with or were not sufficient, then we would have selected the case study method to answer the question.

As we will discuss later, several methods can be used in one job; these examples are only intended to highlight what is not, and what is a case study. Examining the elements of the definition also may help make this distinction clear.

"A complex instance" means that input and output cannot be readily or very accurately related. There are several reasons why such a relationship might be difficult. There could be many influences on what is happening and these influences could interact in non-linear ways such that a unit of change in the input can be associated with quite different changes in the output, sometimes increasing it, sometimes decreasing it, and sometimes having no discernable effect.

Table 2.1 gives an example of a less and a more complex instance. "Are U.S. airports following required U.S. and international security procedures for passengers?" is a less complex question because the criterion is fairly clear, the focus is narrow, the influences on compliance are likely to be relatively few, and the relation of input and output is likely to be fairly direct. Staff knowledge of procedures ought to play some role in following these procedures, for instance.

Some questions are more complex, however, such as the question: "Are security procedures in U.S. airports sufficient to protect the safety of passengers and equipment?" This is more complex because the criterion of "sufficient protection" is much less certain; the focus is broader; the influences on actual achievement of sufficient procedures are likely to be many; and the relation of input and output is not only likely to be both direct and indirect, but also difficult to measure.

Table 2.1: Complexity of Questions

Example	Characteristics
A less complex question Are U.S. airports following required U.S. and International security procedures for passengers?	— Criterion is fairly clear "required U S and International security procedures" — Focus is narrow: "passengers" — Influences on compliance are likely to be relatively few: staff knowledge of procedures, staff training in their implementation, functioning equipment, number of staff compared to workflow, degree of supervision, staff screening and selection — Relation of input (influences on compliance) to output (that required security procedures are followed) is fairly direct
A more complex question Are security procedures in U.S. airports sufficient to protect the safety of passengers and equipment?	— Criterion is less clear. what would be sufficient under present conditions and with existing and possible technologies? — Focus is broader: passengers and equipment, although still fairly well specified — Influences on achievement of sufficient procedures likely to be many including the state of the art of detection technologies, number and militancy of potential threats to security, and the willingness of passengers, airline personnel, and airport personnel to accept different costs and forms of protection — Relation of input (influences on security) and output (safety) likely to be difficult to measure and to be both indirect and direct

The second key element in our definition is "a comprehensive understanding." Here the situation is more straight forward. This means that the goal of a case study is to obtain as complete a picture as possible of what is going on in an instance, and why.

The third key element, "obtained by extensive description and analysis," has three components. These are summarized in Table 2.2. Case studies involve what methodologists call "thick" descriptions: rich, full information that should come from multiple data sources, particularly from first-hand observations. The analysis also is extensive, and the method compares information from different types of data sources through a technique called "triangulation". That is, reliability of the findings is developed through the multiple data sources within each type. This is akin to corroboration, as discussed in the General Policy Manual, Chapter 7. The validity of the findings, particularly validity

with regard to cause and effect, is derived from agreement among the types of data sources, together with the systematic ruling out of alternative explanations and the explanation of "outlier" results. Examining consistency of evidence across different types of data sources is akin to verification, discussed in the General Policy Manual, Chapter 7. There are specialized strategies for making these comparisons, namely, pattern matching, explanation building and thematic review. The technical how-tos for these three strategies will be summarized later in this paper. They involve techniques such as graphic data displays, tabulations of event frequencies, and chronological or time series orderings. Generally, data collection and analysis are concurrent and interactive, that is, "yoked" in case study methods.

Table 2.2: Methods of Obtaining Description and Analysis in Case Studies[a]

Technique	Methodology
Extensive or "thick" description	Use of multiple types of data sources such as
	—Interviews with all relevant persons
	—Observations over time
	—Participant observation
	—Documents
	—Archives
	—Physical information
Analysis via triangulation of data	Analysis through
	—Pattern matching
	—Explanation building
	—Thematic review
Comparison of evidence for consistency	Analysis through techniques such as
	—Matrix of categories
	—Graphic data displays
	—Tabulation of event frequencies
	—Chronological or time series ordering

[a]Different types of evidence and standards for them are discussed in the General Policy Manual, Chapter 7

The next element of the definition is, "taken as a whole". As this list indicates, the size of the instance can be as small as one individual or as large as a nation. The instance as a whole can be:

- An individual (Ferdinand Marcos).
- A site (Three Mile Island).
- A function (Joint Test and Evaluation Program[1]).
- An office (program evaluation groups in departments).
- A department or agency (IRS, Census).
- An event (Cuban missile crisis[1]; Challenger tragedy).
- A region, nation, or organization (Chesapeake Bay water clean-up efforts, democracy in Philippines, UNESCO).
- "Nested" units in a large or complex case study (note that the instance or unit must be specified and data appropriate to it collected).

One example of a GAO case study that examines an individual is our examination of whether or not a senior official behaved improperly with regard to influence and accepting money before and since leaving the White House (39). Another example would be a request to examine in detail ex-President Marcos' use of funds intended by the U.S. for military or civilian purposes for his personal benefit. At the other extreme, an instance may be as large as an event, such as the Cuban missile crisis (1) and the swine flu vaccine (12), which have been the subjects of two well known case studies, or the Challenger tragedy. It can be a region (Chesapeake Bay water cleanup programs), a nation (democracy in the Philippines) or an organization (UNESCO). Moreover, it is possible to have questions which require nested case studies. For example, to answer a question about how programs to serve handicapped children are working, we might select the cases of preschool and elementary programs; we might further select within preschool programs, those for the hearing impaired and those for the orthopedically impaired. Each of these nested studies is treated, in terms of specification of the unit of study and collection of data appropriate to it, as any other case study would be.

The last key element of the definition is, "...and in its context." Context means all factors which could affect what is happening in an instance. As an example, in the Challenger tragedy, inquiry began with trying to locate the technology that failed as the reason for the explosion. The right hand booster rocket was identified as the source of the explosion, and within the rocket, technological attention focused on the O-rings. The inquiry expanded very quickly, however, from asking what technology failed to an examination of contextual influences, such as

[1]These instances have been the subject of case studies, listed in the references as 24 and 1, respectively; others are general illustrations.

- decisionmaking on whether or not to go, in relation to the O-rings
- decisionmaking on whether or not to go, in relation to other components, such as tiles
- decisionmaking more generally in NASA with regard to NASA-contractor-astronaut relations and responsibilities
- influences on NASA, such as alleged pressures not to cancel flights
- quality control tradeoffs in NASA generally, and NASA management

That is, the Challenger inquiry could be seen as similar to a case study in some ways. The rapid spread of inquiry from an examination of the technology, to an investigation of decisionmaking on that flight, to inquiry about NASA management as it affected the Challenger disaster generally is what "taking the context into account" means. In case study methods, to understand what happened and why, context always is considered, and it is this consideration of context that gives the case study its strength as a way of understanding cause and effect.

Some Common Benefits Expected From Case Study Evaluations

Doing a good case study is more than just looking at what is happening in a few instances. It is a special systematic way of looking at what is happening, of selecting the instances, collecting the data, analyzing the information, and reporting the results.

There are nine features of case study evaluations which merit special discussion. Each of these features—if carried out—confers certain benefits in terms of the product. Two of the features relate to design; 3 to data collection; 3 to analysis; and 1 to reporting. These features and their benefits are shown in Table 2.3. For example, with regard to design, information over time—the longitudinal feature of the design—provides assurance that the final product is representative of what is happening, and is not registering an atypical situation.

Table 2.3: Some Common Benefits Expected From Case Study Evaluations

Study feature	Benefits expected
Design	
Longitudinal	Assurance that a short-term situation that may be unrepresentative of what is happening isn't inflated in importance
Triangulation	Assurance that reasons given for events properly reflect influences from many different sources
Purposive instance	Ability to match questions asked and later generalization of findings at level appropriate to the questions.
Data collection	
Comprehensive	Assurance that important conditions, consequences, and reasons for these have not been overlooked
Flexible	Broader perspectives, increased assurance that what is important on the scene rather than centrally, will be examined
Multiple data sources	Assurance that a full picture will be obtained and that bias associated with self-protection or self-interests will be reduced
Analysis	
"Yoked" or concurrent with data collections	Assurance of the ability to collect data needed to test alternative interpretations and to make rapid adjustments in design
Search for disproving proving evidence	Assurance that alternative interpretations have been thoroughly searched for and checked; thorough identification of instances which don't fit the general pattern; and, often, understanding of the reasons for the outliers
Chain-of-evidence and pattern matching techniques	Permit fairly direct assessment of how convincingly the evidence and conclusions are related
Reporting	
Actual Instances	Assurance of authenticity through persuasiveness and ease of recall; use of the tendency to generalize from personal experience, but via the substitution of more objective experience for anecdotes of unknown credibility

These features are the price of admission to the expected benefits. One frequent question about case study methods is how rigorously these features have to be followed. Obviously, the more closely the requirements are followed, the more benefits can be expected. It is a judgment call as to how much the features can be compromised before the "case study" becomes a site visit or when it turns into a survey. Probably the most critical features are appropriate instance selection, triangulation and the search for disproving evidence. And of these three, probably the most critical is appropriate instance selection.

Instance Selection in Case Studies

There are three general bases for selecting instances: convenience, purpose, and probability. Each has its function and can be used to answer certain questions. A good case study will use a basis for instance selection that is appropriate for the question to be answered. Using the wrong basis for selecting an instance is a fatal error in case study designs, as in all designs. Such a case study is a not-good case study, and it is irredeemably flawed despite any methodological virtues it may have in terms of data collection, analysis and reporting.

Table 2.4 summarizes the three general bases for selecting instances and the questions each basis can answer. Of particular interest may be the seven varieties of purposive site selection: bracketing, best cases, worst cases, cluster, representative, typical and special interest.

Table 2.4: Instance Selection in Case Studies

Selection basis	When to use and what questions it can answer
Convenience	"In this site, selected because it was expedient for data collection purposes, what is happening and why?"
Purpose	
Bracketing	"What is happening at extremes? What explains such differences?"
Best cases	"What accounts for an effective program?"
Worst cases	"Why isn't the program working?"
Cluster	"How do different types of programs compare with each other?"
Representative	"In instances chosen to represent important variations, what is the program like and why?"
Typical	"In a typical site, what is happening and why?"
Special interest	"In this particular circumstance, what is happening and why?"
Probability	"What is happening in the program as a whole, and why?"

Instance selection is crucial to generalizability and to answering the evaluation questions appropriately. Only rarely will convenience be a sound basis for instance selection; only rarely will probability sampling be feasible. Thus, instance selection on the basis of the purpose of the study is the most appropriate method in many designs.

The match between the question asked and the method of purposive sampling chosen can be tricky. For example, studies which attain "representativeness" by conducting a few case studies in a rural setting, a few in a suburban setting and a few in an urban setting will produce a report in which the three settings receive more or less equal weight. If, however, 90 percent of the clients or sites for the program are rural,

such "representativeness" may appropriately capture the range of site experiences, but be rather unrepresentative of the program as a whole, and care will be needed to generalize only to the range of settings and not to the program as a whole.

To illustrate what each variety means, and how it might be operationalized, consider the information in Table 2.5: this gives hypothetical data about a real situation in designing a study—selecting instances (in this study, sites or locations) for an assessment of the costs and operations of federal detention facilities managed by private contractors under OMB Circular A-76. There are not many such facilities—so the 16 hypothetical facilities represent what we might actually find in such a study. The following paragraphs describe what a sample would look like if it were chosen according to the bases in Table 2.5.

Table 2.5: Hypothetical Data on Instance Selection

Location	Operated by	Number of beds	Clientele served	Years in operation	Funded by	Costs[a]	Problems[b]
1 San Diego, CA	CAIM, Inc.	800	Men and boys	2	INS	25	4%
2 Amarillo, TX	CAIM, Inc.	130	Men and boys	1	INS	30	4
3 El Paso, TX	PIC	75	Families	3	INS	15	7
4 El Paso, TX	CAIM, Inc.	350	Men and boys	1	BOP/INS	60	7
5 Miami, FL	Security	100	Men and boys	1	BOP/INS	150	15
6 Clearwater, FL	CAIM, Inc.	300	Men and boys	5	BOP/INS	100	10
7 Pensacola, FL	Security	100	Families	5	INS/State	70	6
8 Denver, CO	PIC	100	Families	3	INS/State	20	3
9 Salida, CO	Security	200	Men and boys	4	INS	70	9
10 Salinas, CA	CAIM, Inc.	100	Men and boys	2	INS	30	3
11 Los Angeles, CA	Security	300	Men and boys	3	INS	75	5
12 San Francisco, CA	Security	250	Men and boys	3	INS/State	70	7
13 San Francisco, CA	PIC	100	Men and boys	3	INS	25	4
14 New York, NY	ARIVA, Inc.	100	Men and boys	2	INS	55	6
15 Washington, DC	ARIVA, Inc.	300	Families	2	INS	85	5
16 Seattle, WA	Security	100	Men and boys	3	INS/State	60	7

[a]Costs per person per day, charged by contractor to funder (hypothetical data)

[b]Problem rates include all problems considered under contract as serious, such as escape, acts of violence by or toward individuals, vandalism requiring more than $1,000 to repair, and suicides. Rates are number of such instances per 100 days per year (hypothetical data)

Convenience Samples

If our location were the Denver Regional Office, a convenience sample would be sites 8 (Denver) and 9 (Salida). That is, ease of collecting data and minimizing resources required would have driven our choice.

Purposive Sample

Bracketing

If our interests were extreme costs, #3 (El Paso, at $15 per person day) and #5 (Miami at $150 per person day) would bracket the cost extremes. If we wanted the three least expensive and the three most expensive, we could select #3 (El Paso), #8 (Denver, at $20) and #13 (San Francisco, at $25) in comparison to #5 (Miami at $150), #6 (Clearwater at $100) and #15 (Washington, D.C. at $85). Such an addition would also give us a better basis for analysis because it includes not only high cost and low cost sites but also services to men and boys and to families, a difference that in itself might be expected to lead to cost variations.

Best Cases

If our interests were in operating centers with the least problems, we might examine #8 (Denver, 3%) and #10 (Salinas, 3%). Since both are in Colorado, (although operated by different firms and serving different groups), we might want to add sites. Such an addition could show whether we were looking at something about Colorado rather than about low problem centers. We could do this by selecting #1 (San Diego, 4%), #2 (Amarillo, 4%) and #13 (San Francisco, 4%).

Worst Cases

Site #5 (Miami, 15% problems) and #6 (Clearwater, 10%) stand out as worst cases. Selecting an out-of-state comparison, if we wanted it, is harder here. The next highest problem rate (#9, Salida, at 9%) is run by a different company and costs much less. Security has a site in San Francisco, for men and boys, which costs $70 daily with a 7% problem rate. The costs of site #15 (Washington, D.C.) are higher, but this site serves families and has a low problem rate. The best choice probably is #12 (San Francisco): it serves the same group (men and boys) and is run by the same company (Security).

Cluster

We might be interested in administrative arrangements—in how, for example, administration works out when INS alone is the contractor; when responsibility is shared with another federal agency (Bureau of

Prisons); and when responsibility is shared with the state. One cluster of sites (#1, 2, 3, 9, 10, 11, 13, 14, 15) is administered by INS alone; another cluster (#4, 5 and 6) is shared between BOP and INS, and the last cluster (#7, 8, 12 and 16) is run by INS and the state. We could pick one or two sites from each cluster to get a sense of how agency auspices may affect program operations.

Representative

One issue we might need to examine could be efficiencies of operation—particularly in terms of facility size. Here we might select #1 (San Diego, 800 beds), #6 (El Paso, 350 beds) and #6 (Clearwater, 300 beds). All are run by CAIM, and all serve men and boys. We would have to limit our generalizations to facilities for men and boys, but these three sites should give a good sense of the size/operations issue.

Typical

This would be a challenge. In terms of size there is a "typical" bed size (100 beds); in terms of people served there is a "typical" population, (men and boys); and in terms of years of operation, 3 years is "typical" with 2 years a close runner up. In terms of costs, however, the distribution is trimodal—that is, three values appear about equally often—and for percent of problems, it is almost flat with two outliers. Also there is not a single site which matches all three "typical" characteristics well. Miami, for example, has 100 beds and serves men and boys, but it has been in operation only one year, costs $150 per person per day and has a 15% problem rate. The best approach would be to indicate that it is not possible to pick one site which is "typical" of such distributions.

Special Interest

Any one of the 16 sites might be examined as a result of special Congressional interest. Such interest usually would be based on information extraneous to the data in the table: a complaint might be received, for example, about conditions in the San Diego site, or allegations might be made that the high costs of the Miami site were due to mismanagement.

Probability Samples

Probabilistic sampling is the method of choice for answering questions about "how much", or how extensive a problem is in a population. Properly carried out, it provides strong generalizability and assurance of representativeness. A probability sample is one in which all members of the population have a known and equal chance of being selected. If we used a table of random numbers, and selected as the first two sites those corresponding to the first two numbers between 1 and 16 in the table, we

would have selected a probability sample. Each site would have a 1 in 16 chance of selection, and that chance would be equal among sites. A fair objection to this statement is that the laws of probability operate on large numbers, and selecting less than 30 instances does not always provide the generalizability to the population as a whole that probability samples promise. However, in terms of actual operations, which we want to illustrate here, the method just sketched is a probabilistic one, and some case studies have involved 30 or more sites selected on a probabilistic basis. (See PEMD's transfer paper #6, Using Statistical Sampling (37), for more information).

For readers who want to check out their skills in applying different types of purposive selection, Appendix II gives information for a job involving the 50 states (a fairly common situation for GAO), a form for indicating which you would select for each of the 7 kinds of purposive selection, and our answers, for comparison against yours.

In many jobs, what is a "case" and what dimensions are important to consider in selection will be clear. For example, the population of detention facilities supported by INS contracts can be defined legally (by the contract awarded) and the relevant dimensions (length of time in operation, facility size, detainee mix) are straight forward. There are, however, more problematic circumstances. An example would be a study of the extent to which voluntary organizations have taken up any slack in welfare supports. What is a voluntary organization can be defined broadly, as "any non-profit organization," or narrowly, as "a service-oriented group whose members do not receive payment for their work." Dimensions of potential relevance for the outcome of interest are many, and the empirical basis for selecting any one dimension over others few. In such situations, the evaluator can turn to past experience, search of the appropriate theoretical as well as empirical literature, advice of knowledgeable persons, examination of key issues in proposed or pending legislation, customer guidance and similar techniques. That is, while it is important to recognize the difficulties, there are ways of dealing with them in case definition.

Case Study Applications

As noted earlier, there are six types of applications for case study methods—illustrative, exploratory, critical instance, implementation, program effects and cumulative—but case study reports commonly use only two of the six applications: illustrative and critical instance. Greater use could be made of the other four in selecting alternative ways of answering questions, because these may be able to give information that is more valuable to customers than other techniques. Also, improvements can always be made in how even the two approaches already used frequently are carried out, especially in the area of selecting instances for study. The next sections summarize, for each of the six types, the evaluation questions they can answer, the functions they perform, their design features, and their pitfalls. The last section shows what basis for selecting sites is appropriate for each of the six applications.

Illustrative

As Table 3.1 indicates, illustrative case studies primarily describe what is happening and why, in one or two instances to show what a situation is like. This can help in the interpretation of other data, particularly if we have reason to believe most readers know too little about a program or situation to understand fully the information from surveys or other methods.

Table 3.1: Illustrative Case Studies

Aspect examined	Characteristics
Evaluation questions	Help interpret other data when there is reason to believe that readers know too little about a program; descriptive, often used in conjunction with other methods
Functions	Make the unfamiliar familiar; provide surrogate experience; avoid over-simplification of reality; and give reader a common language about the topic
Design features	Site selected as typical or representative of important variations; small number of cases to keep reader's interest; data often include visual evidence; analysis concerned with data quality and meaning; and reports use self-contained, separate narratives or descriptions
Pitfalls	May be difficult to hold reader's interest while presenting in depth information on each illustration; may not adequately represent situations where considerable diversity exists (in such situations, it may be impossible to represent variety well enough to use illustrative case studies); and may not have time on-site for in depth examination

GAO has many examples of such illustrative use. In 1982, for instance, CED examined housing block grants through a survey supplemented by case studies. The results of the survey were published in the main report

(23). For three of the sites (Pittsburgh, Seattle and Dallas), individual reports described what each city was like with regard to housing, housing related activities, how the money was used in that city, and included before-and-after pictures of what rehabilitation meant for individual neighborhoods and houses (17, 18, 20). In a similar application, HRD described the projects funded under the Emergency Job Appropriations Act of 1983 in communities in Texas, Alabama, California, Georgia and Massachusetts (28, 29, 30, 31, 36).

Illustrative case studies are used by evaluators in other agencies. When the Department of Health and Human Services was trying out delivery of Head Start services to parents and children in their own homes, called Home Start, the Department supplemented a formal assessment of the development of the children before and after the program with case studies (7). These case studies described what services were delivered, the conditions in rural as well as urban areas, what the Home Start teachers did during the home visits, and generally provided a surrogate or vicarious experience for readers who might never have visited a Head Start or a Home Start center. The case studies told, too, of the development of the program over time, and helped give a realistic sense of problems in start-up and implementation, how changes in staffing were accommodated, and the impact of shifting federal guidance on efforts to carry out the program in the field.

Case studies such as these are well accepted as a valid way of amplifying a more systematic presentation via the realism and vividness of anecdotal information. There are, however, pitfalls in presenting illustrative case studies. The most serious is selecting the instances. The case or cases must adequately represent the situation or program. This is relatively easy if the program is small and homogeneous. Where considerable diversity exists, it may not be possible to select a "typical" site, and the diversity may be so great that to represent it adequately would require more case studies than most people would want to read for illustrative purposes. In the example of privately operated detention facilities, an illustrative case study might run the risk of oversimplifying a more complex situation. The example was contrived to illustrate exactly this point: that sometimes we cannot select a site that fits our needs and thus the method is not appropriate.

However, in many real world situations, it is possible to represent diversity adequately for illustrative purposes, and to obtain the benefits of this application: helping readers feel, hear, see, "be there" when this

kind of surrogate site experience is necessary to undo stereotypes or explain a situation otherwise inaccessible for most people.

Such a situation might be a bilingual education class, about which stereotypes can abound; or life aboard a nuclear weapon equipped submarine, a situation few readers will ever experience themselves, but may need to get a feel for in order to understand staff selection, training, and management on modern submarines.

Exploratory

The exploratory case study is a shortened case study, undertaken before launching into a large-scale investigation. Its function is to develop the evaluation questions, measures, designs and analytic strategy for the bigger study. As Table 3.2 indicates, it is most helpful where considerable uncertainty exists about program operations, goals, and results. Also rather than initiate a job requiring 1,000 staff days or more, when we do not have an adequate on-the-shelf set of designs and measures, an exploratory case study can save time and money in implementation as well as improving the confidence we have in our results. We can aim more precisely and hit the target more often.

Table 3.2: Exploratory Case Studies

Aspect examined	Characteristics
Evaluation questions	Usually cause and effect
Functions	Where considerable uncertainty exists about program operations, goals, and results, exploratory case studies help identify questions, select important measurement constructs, develop actual measures for these which can be used later in larger scale tests; formulate expectations; safeguard investment in larger studies (for problems or programs that are not well developed)
Design features	Site selected: needs at least one site that represents each important variation to make a convenience sample acceptable; number of cases sufficient to cover diversity; data focus on program operations and on-site observation, is not longitudinal but need enough time to find out what is going on; analysis is closely concurrent with field work but does not require strong chain of evidence or audit trail; reports are usually internal or parts of larger, longer reports
Pitfalls	Temptation to prolong the exploratory phase; site selection only for convenience, inadequate coverage of diversity; prematurity—exploratory findings released as conclusions; over-involvement in evaluator's own hunches so that initial findings are confirmed rather than tested

Some of our scoping work already may involve exploratory case studies. For example, in GGD, a design study was done as a separate job, culminating in a briefing, prior to an in-depth study of the implementation of

the Bail Reform Act of 1984. The methodology included 90 interviews, observations and data analysis from the population of 94 court districts selected purposively for their characteristics on significant variables. Researchers and experts in the field were also interviewed. An expert panel was used to give feedback at various points to make sure we had a comprehensive picture of the situation. The product of this exploratory case study was a briefing, with the study design choices described, including detailed research questions, outlines of data sources, significant variables, extant data bases and site selection criteria. From this, a larger study was designed to meet the needs of the requester. Other jobs may involve similar efforts which are not, however, reported as separate jobs and thus are less visible as exploratory case studies.

Also reports that include some features of exploratory case studies have been issued by GAO. In 1985, for example, NSIAD examined emerging issues in export competition through a case study of the Brazilian market (33). Combining site visits to Brazil, Japan, West Germany and France, interviews with many officials of appropriate agencies and from the private sector, examination of official government files, and a questionnaire survey of high technology firms active in the Brazilian market, the evaluators amassed a rich array of contextual and focal information, and identified four trade practices considered to be key factors in export competitiveness in Brazilian markets. These were bilateral trade accords, countertrade, export financing, and compliance with trade-related industrial policy. Although to meet the requirements of the job, NSIAD did not need to test these factors for generalizability to other countries through a later study, the product would permit such testing. NSIAD is using the findings in this way, as part of its ongoing work on bilateral initiatives. Of particular methodological note in this report is the detailed explanation of why export competitiveness in Brazilian markets (the instance) was selected for the case study.

The exploratory case study has been used by agencies outside of GAO. The Department of Justice, for example, supported an exploratory case study of the career criminal program (3). The career criminal program aimed at "swift and certain" justice by trying to expedite and strengthen processing of individuals who had long criminal histories at time of apprehension. The exploratory study looked in depth at four of the nine demonstration sites prior to conducting a program effects evaluation. The evaluators identified the key elements of the programs as implemented and what measurable changes were likely to occur and developed measures of the outcomes, as well as designs for testing cause and effect in the subsequent larger study (4).

The greatest pitfall in the exploratory study is prematurity: that is, the findings may seem so convincing that it can be difficult to resist pressures to report on these as if they had the strength of the larger study. Also, care must be taken to scope and sequence the exploratory study so that it yields enough information to be worthwhile and in time for use in the larger study but does not unduly delay answering the questions through the larger study. In addition, it is inappropriate to use the scoping phase as an ad hoc exploratory case study accompanied by an urge to issue the product at the end of scoping, when the necessary procedures for an exploratory case study with regard to such issues as instance selection have not been followed.

Critical Instance

The critical instance is the most frequent application of the case study method in GAO, so much so that it may be seen as a "usual GAO review" rather than recognized as what it can be—a case study (16, 19, 34). The advantage of recognizing the approach as an application of case study methods is that some aspects of the method—such as the close yoking of data collection and analysis—that may not be widely used now, could be applied in a way that increases timeliness without reducing quality. (This technique, discussed in more detail in the section on analysis, can increase efficiency by reducing collection of data and large-scale analyses of these data that subsequently do not prove useful.)

The critical instance case study examines one (or very few sites) for one of two purposes. First, a very frequent application is the examination of a situation of unique interest, such as Three Mile Island, the Challenger disaster, or allegations concerning funding for a specific presidential campaign. There is little or no interest in generalizability. The instance is not "selected" by us, we are rather called to it.

GAO conducts many critical instance studies. One example, already mentioned, was our review of the representation of foreign interests by former very high government officials (39). Another is PEMD's review of the readiness of the Big Eye Bomb for production (38). Yet another is RCED's review of a construction contract award at Jean Lafitte National Historical Park (46) and their examination in a separate report, of the park service actions at Delaware Water Gap National Recreation area in awarding a lease, closing a camp ground, and raising a house rent (47).

A second, rare, application is where a highly generalized or universal assertion is being called into question, and we are able to test it through examining one instance.

In one such study, GGD examined whether national policies, procedures and practices with regard to cargo imports were causing problems in port operations (43). The Port of New York offered a critical test because, given the diversity of imports and the volume of work, if problems were occurring, they would be likely to show up clearly in this site. If no problems were observed, problems in other sites were unlikely. GGD used observations, interviews and document analysis at three sites in the Port of New York, and supplemented these with a small number of less intensive observations at other sites. The method, in this instance, was sufficient to permit recommendations that were system-wide and generalizable, with the single case.

Table 3.3 summarizes the features of the critical instance case study. As noted, the method is particularly suited for answering cause-and-effect questions about the instance of concern. It provides assurance that we have not prematurely overlooked important factors, that we have not been swayed by information from limited or perhaps biased sources, and that we have taken context into account, thus giving a fair and balanced picture of the situation.

Table 3.3: Critical Instance Case Studies

Aspect examined	Characteristics
Evaluation questions	Cause and effect, usually stand alone
Functions	Investigation of specific problem (frequently encountered at GAO), decisive testing of universal assertion; cause-and-effect questions
Design features	Site selects itself in specific problem—for decisive testing, have to assume uniform system with regard to issue and so convenience sample acceptable; number of cases is usually one instance; comprehensive data for specific problem—for decisive testing, need more modeling, hypotheses, and targeting to know what to study; data analysis and collection concurrent and interactive: data feeds new collection, and emphasis on ruling out alternative causes; report describes instances, presents conclusions about cause, gives evidence
Pitfalls	Inappropriate selection of this technique as real issue may not be specific problem (e.g., Ohio Bank failure) but more general questions; premature closure may narrow causal search too early; overgeneralization from evidence

Perhaps the biggest pitfall in this application is insufficient specification of the customer's question. That is, the job may be presented to us as if only that situation is of concern, but the underlying question may call for a broader look at the issue. A request to investigate the reasons for the bank failures in Ohio, for example, may reflect an interest only in Ohio, but it could be a "tip of the iceberg" question. What the customer

may really want to know is whether other states are likely to have similar problems. In such a situation, Ohio might be selected as a site to examine but we would also need to look at other states or use other approaches to achieve the generalizability needed. This then rules out the critical instance method as appropriate for this job. The importance of probing the underlying questions in a request to achieve good specification of the evaluation question is not unique, of course, to the critical instance case study but it is crucial in its appropriate application.

Program Implementation

We frequently are asked whether a program has been implemented, and often, whether implementation is in compliance with congressional intent. The program implementation case study is helpful where enabling legislation offers considerable flexibility. In such cases, a wide variety of expenditures or actions could be consistent with legislation and compliance with intent may be a matter of understanding the process by which decisions were made, who was involved, and whether the actions are meeting local needs. One example is the 1981 legislation consolidating many small categorical grants into larger block grants, the funds for which could be spent very flexibly.

Another situation where program implementation case studies may be called for is when concern exists about implementation problems. In-depth, longitudinal reports of what has happened over time and why can set a context for interpreting a finding of implementation variability: that is, whether there seem to be basic structural problems or if the program understandably requires time for installment, adaptations and building an infrastructure.

In some instances, GAO has been able to follow fairly intensively the implementation of programs or activities. One example is GGD's series of reports on how the 1980 Census was conducted. GAO evaluators, in addition to being "on the scene" due to their location at the major audit site, also accompanied enumerators into the field, and examined, in-depth, Census procedures at field offices. In other instances, we have spent somewhat less elapsed time in the field, with less direct observation, and with greater reliance on interview and documentary evidence. In 1985, for example, RCED was asked how the Department of Interior was implementing the Office of Management and Budget's Circular A-76, dealing with privatization of all appropriate services. The request overlapped with another similar request. This request reflected a Senator's special interest in the Glacier National Park in Montana. The evaluators were

able to combine the jobs in a review that eventually involved information from 8 of 17 National Park Service (NPS) regional offices and 19 of 402 NPS field offices. The report aggregates findings across these sites, and concludes that agencies have been slow to implement the circular, although progress has been made since 1982 (27).

Another example is GAO's review of 23 federal agencies' efforts to implement the Federal Managers' Financial Integrity Act of 1982. A series of case studies, together with an overview report, was produced. Among these, RCED's review of the Department of Commerce implementation, to take one report, examined the actions Commerce took which were intended to improve internal controls, such as training senior financial analysts in evaluating applicants and borrowers in the troubled EDA business loan program, and overhauling the way in which computer resources were used for the National Weather Service. RCED also examined the results of these efforts, and highlighted priority areas for further improvement, such as better information on results for internal management purposes (35).

Table 3.4 summarizes the design, data collection, analysis and reporting features of program implementation case studies. Usually, in such studies, generalization is wanted and care is required to negotiate the question with the customer (best situations? worst? typical?) and to match instance selection carefully with the questions. Unless the program is small and homogeneous, the evaluator faces two possibilities. The first possibility is that the number of instances will need to be fairly large in order to achieve the generalizability wanted, and, as a consequence, skill will be needed to manage data collection with sufficient flexibility to obtain the insights case studies offer and sufficient structure to permit cross-site aggregation of findings. The second possibility is that the diversity will be so great that it would be impossible to have enough instances to meet needs for generalizability and still manage the data collection and analysis.

Table 3.4: Program Implementation Case Studies

Aspect examined	Characteristics
Evaluation questions	Descriptive, normative
Functions	Learn what implementation has been achieved, understand unexpected aspects; understand reasons why implementation looks the way it does, useful when enabling legislation has given flexibility
Design features	Site selection cannot be convenience because usually generalization wanted, and purposive sample can be typical and representative of diversity and best and worst cases, number of cases depends on program diversity since generalization usually wanted; data rely on common instruments, published documents, and observation, reports are varied in theme, site, chronology and narration
Pitfalls	Bias detection methods may be inadequate; may fail to take into account diverse views about program goals and purposes; competence of all on-site observers may not be sufficiently high; can be costly; due to study size; the demands of data management, data quality control, validation procedures and analytic model (within site, cross site, etc.) may lead to cutting too many corners to maintain quality

An important requirement for good program implementation case studies is investment of enough time on site to get longitudinal data and to obtain breadth of information. If the purpose is to report what is happening in a descriptive sense only, short site visits, together with administrative records may provide adequate bases for findings. If, however, the evaluation question requires GAO to report on how satisfactory progress is or the reasons for problems in implementation, the more staff who can be on site over time, with the richest or "thickest" base for examining the situation as the many people involved see it, the sounder our causal conclusions and subsequent recommendations will be.

The multiple sites usually required for program implementation questions impose demands on training and supervision needed for quality control. Because of tight resources, lack of travel funds and the need to use staff with uneven experience and skills, this becomes critical in situations involving many evaluators working in different regions. That is, time is needed to train staff adequately in such case study techniques as the note-taking required for thick descriptions, which is in turn required for the content analysis of themes in the instance. It is possible, for example, for two persons to interview the same informant, and find that one has used a one sentence summary for a detailed, rich, five-minute discourse, while the other captured much more of the complexity and essence of what was said and what was happening. Table 3.5 illustrates such a difference.

Table 3.5: Illustration of Differences in Note Taking

Situation	Technique	Characteristics
In an interview with the Director of the National Science Foundation program for grants to small colleges, the following question is asked: "How does your program inform the eligible colleges of the opportunity to apply for grants?"	Rich notes	"The Director indicated that procedures had changed three times since the inception of the program. In the first four years, announcements were mailed to the individual named as President in the listing, for the same year, of the American Association of Small Colleges. Because applications were very sparse, with about 30% of eligible colleges applying, the procedure was changed to a two-stage mailing, first to the President to find out the name of the official in charge of federal programs and then to the official. This worked well for a five year period, in terms of receipt of applications from over 80% of the eligible colleges, but when overall federal funding for research was reduced, the positions of federal program coordinators were abolished and applications fell to about 40% of eligible institutions responding. Two years ago, the decision was made to mail copies to the persons listed as Chairs of the relevant science departments in each college in appropriate professional association listings. This has increased the cost of outreach by about $15,000 or about 25% more than the prior system. To date, returns are at the 80% rate again."
	Thin notes	"The current system is to mail copies of the announcements to the Chairs of relevant science departments, such as chemistry, biology, physics and computer science."

Program Effects

Case studies can determine the effects of programs and reasons for success (or failures). In 1982, for example, RCED examined the progress made since the 1970's in cleaning up the nation's air, water and land, finding that while strides had been made toward meeting the established goals (cleaner air, properly treated wastewater, more drinkable water), deadlines had been extended and unresolved issues made meeting even these deadlines difficult (22). We pointed to lack of flexibility as a source of cascading problems and delays. The bases for these conclusions were in-depth case studies of three sites (Cleveland, Dallas and

New York City) together with information from reports prepared by six federal agencies and by environmental organizations and public interest groups, and interviews with Environmental Protection Agency officials. Particularly notable methodologically in this report is the integration of case study findings with other sources of information throughout the first volume.

A PEMD report has focused on water quality: the effectiveness of efforts to improve water quality and the reasons for successes and failures. In-depth, very extensive case studies of several water catchment areas were conducted (45), and the final report is based on a synthesis of the findings from the case studies—another example of integration of findings across diverse sites (41, 42). This series of reports also is useful for illustrating the way in which causality is established in case studies: through development of internally consistent explanations of what led to what, and the conscientious use of information from within the site and from contrasting sites to rule out alternative explanations.

As another example, to determine whether actions taken by the states since the mid-1970's to address medical malpractice insurance reduced insurance costs, the number of claims filed and the average amount paid per claim, HRD conducted case studies in six selected states (Arkansas, California, Florida, Indiana, New York and California). Work included obtaining views of organizations representing physicians, hospitals, insurers and lawyers on perceived problems, actions taken to deal with them, results of these actions and the need for federal involvement. Other information came from surveys of nonfederal hospitals about the sources, coverage limits and costs and claims from leading insurers in each state and for comparison, the same type of information from a nationwide company. The results are presented separately in six case study reports and aggregated in the overall report (44).

Other federal agencies have used the case study method successfully in answering program effects questions. The National Science Foundation, for example, assessed the effectiveness of a cooperative science program aimed at increasing innovation and knowledge transfer between university and industry researchers. Ten case studies were undertaken of a carefully selected group of projects which ranged from computer language systems through nuclear science to fisheries biology and chemical engineering. Of note is the methodological detail given on project selection, data collection, analysis and case format. In a companion report, results from a survey of grant recipients are analyzed, giving both a quantitative and a qualitative sense of how the program was working.

Results from the two methods were not integrated; both suggested however, that the program was generally working well (11).

Table 3.6 summarizes key features of program effects case studies. Like the program implementation case study, the evaluative question often requires generalizability and for a highly diverse program, it may not be possible to answer the questions adequately and still have a manageable number of sites.

Table 3.6: Program Effects Case Studies

Aspect examined	Characteristics
Evaluation questions	Cause and effect, can be stand alone or multi-methods, and can be conducted before, during, or after other methods
Functions	Determine impact and give strong inference about reasons for effects
Design features	Site selection depends on program diversity, cannot be used with highly diverse programs; best, worst, representative, typical, or cluster bases appropriate; must keep number of cases manageable or risk becoming mini-survey, can use survey before or after to check generalizability or mix survey with concurrent case studies selected for special purposes; data rely on observation and structured materials, often combines qualitative and quantitative data; analysis uses varying degrees of formalization around emergent or predetermined themes; reports are usually thematic and describe site differences and explain these; variation in degree of integration of data across sites and of findings from different methods
Pitfalls	Not collecting the right amount of data; not examining the right number of sites; insufficient supply of well-trained evaluators; difficulties in giving evaluators enough data collection latitude to obtaining insight without risking bias

There are some methodological solutions to this problem. One solution would be to conduct the case studies first in a set of sites chosen for representativeness, and to verify the findings from the case study through targeted examination of administrative data, prior reports, or a survey. A second solution would be to use these other methods first. After identifying the findings of particular interest, case studies would be conducted in sites selected to maximize ability to get the specific understanding required. Both of these approaches have been used with good effect in program evaluation.

Cumulative

This relatively new and as yet not-widely-used application of case study methods brings together the findings from case studies done at different times. The applications previously discussed which involved multi-site case studies are cross-sectional: that is, information from several sites is

collected at the same time. In contrast, the cumulative case study aggregates information from several sites collected at different and even quite extended times.

The cumulative case study can be retrospective, aggregating information across studies done in the past, or prospective, structuring a series of investigations for different times in the future. The techniques for assuring sufficient comparability and quality and for aggregating the information are what constitutes the "cumulative" part of the methodology.

That is, the cumulative case study is similar to an evaluation synthesis, in that it is a method for aggregating the findings of several studies. It differs from an evaluation synthesis in that special techniques are required to aggregate the qualitative information that often is a feature of case studies, and to maintain the sense of the "instance as a whole" in its complexity that distinguishes case studies from surveys of several sites. For some jobs, both case study and non-case study reports can be aggregated, each using the appropriate techniques, in order to produce capping reports or similar products.

GAO does not appear to have done a cumulative case study using our own case study reports or other case studies. GAO reports have been used with good results, however, in cumulative case studies published by others outside GAO. One example is a book on bureaucratic failures, which is based entirely on GAO reports of management problems in different agencies over a considerable period of time (15). The author began with a set of hunches or hypotheses about what can go wrong in agency management, and what would be evidence supporting—or contradicting—these hypotheses. He reviewed the GAO reports in detail, analyzed the data from each one in terms of his framework, and aggregated the results in his final chapter.

Other examples of cumulative case studies come from two international agencies. A retrospective cumulative case study was conducted by the World Bank in its examination of four in-depth case studies of the effectiveness of educational programs. These case studies were intended initially as stand-alone assessments of the programs, but were brought together to learn about the effectiveness of the evaluations themselves in the context of educational programs (50). A prospective cumulative case study was commissioned by the U.S. Agency for International Development. The purpose was to identify input and process components of economic assistance that could be quantitatively associated

with differences in outcome measures. The method was the specification of a common set of data (both qualitative and quantitative) to be collected over a five-year period as projects were initiated, together with a means of coding the data across the 47 studies eventually completed. The coded results were analyzed quantitatively in the final report (5).

Two features of the cumulative case study, shown in Table 3.7, are the case survey method just described as a means of aggregating findings, (9, 52, 53) and backfill techniques (2). The latter are helpful in retrospective cumulation, as a means of obtaining information from the authors that permit an otherwise unusable case study to be included in the aggregation. Knowing the basis on which the case instances were selected, for example, is crucial in cumulation, otherwise it is not possible to know whether best case, worst case, typical, etc. instances are being aggregated. Some published case studies do not provide sufficient detail on this. In backfilling, the evaluator might call the author, visit the author to review the original data, or contact others who were knowledgeable about the design decisions in order to get adequate information on instance selection.

Table 3.7: Cumulative Case Studies

Aspect examined	Characteristics
Evaluation questions	Cause and effect
Functions	Retrospective cumulation allows generalization without cost and time of conducting numerous new case studies, prospective cumulation also allows generalization without unmanageably large numbers of cases in process at any one time; strengthens inference from new studies by combining with results from older studies
Design features	Uses site selection and usually a large number of cases; data as reported (retrospective); usually on-site observation (prospective); backfill techniques; analysis uses case survey method to cumulate findings; possible to examine interactions directly since number of instances large; reports may resemble evaluation syntheses
Pitfalls	Publication basis may severely limit generalization; inadequate or uncertain quality of original data; quality of data reduction procedures may be very difficult to determine; the effects of changes in many contextual factors over time may be difficult to separate from effects of the programs

Opinion varies as to the credibility of cumulative case studies for answering program implementation and effects questions. One authority notes that publication biases may favor programs that seem to work, which could lead to a misleadingly positive view (2). Other experts are

concerned about the quality of the original data and analyses, and problems in verifying their quality (8, 51). For the cumulative use of GAO reports, these concerns are less important, since we already use the "audit trail" procedures recommended in the policy and report manuals for verification of data collection and analysis quality. We do, however, have the opposite concern: that is, we would need to be sure there was not "bad news" selectivity in a particular area, associated with killing jobs that did not identify problems during scoping.

Design Decisions and Case Study Applications

In earlier sections, we discussed seven bases for purposive selection of instances and six applications of the case study method, each of which was associated with a different evaluation purpose or question. Bringing this information together, Table 3.8 shows the relations among case study applications and design decisions. For example, if the purpose of the study is illustrative, an appropriate basis for site selection could be typical, representative or cluster; the case studies would be conducted concurrently with other methods used in the main study; prestructuring or guidance to the evaluators in the field would be low to moderate to permit the thickness and richness of insights needed; data could be qualitative only or both qualitative and quantitative; the case studies probably would be analyzed within sites only; and the reporting would probably be narrative.

Table 3.8: Some Design Decisions in Case Study Methods

	Type of questions		
Design decision	**Illustrative, exploratory**	**Critical instance**	**Implementation, program effects, cumulative**
Basis for site selection	Typical, representative, cluster	Convenience, unique interest	Best/worst case, bracketing, typical, representative, cluster, probability
If multi-method	Concurrent	Concurrent	Before, concurrent, after
Prestructuring	Low, moderate	Low, moderate	Moderate, high
Type of data	Qualitative only, qualitative/ quantitative	Qualitative only, qualitative/ quantitative	Qualitative only, qualitative/ quantitative, quantitative only
Sequence of analysis	Within sites, then across	Within sites, then across	Within sites, then across; across sites, then within; concurrent
Reporting	Narrative, thematic	Narrative, thematic	Thematic

Chapter 4

Data Collection and Analysis

We have said that the features distinguishing case studies from other methods are how sites are selected, how the data are collected and how they are analyzed. In the last chapter, we covered instance selection. We turn now to other elements which distinguish a case study from a not-case study, and a good case study from a not-good case study. The discussion is an introduction to the approaches.

Data Collection

In earlier transfer papers on program evaluation, we have emphasized the importance of validity. Validity involves measurement and also design. A valid measure—that is, one with construct validity—reflects what it claims to reflect and not something else; for example, whether or not there are active opposition parties may be a more valid measure of whether a country is a democracy than how many people vote in an election. A valid cause-and-effect design—that is, one with internal validity—rules out alternative explanations of results by comparing what happened with an intervention to what happened in the absence of the intervention. For example, in a study of the effects of an employment training program, greater employment of participants after the training than before must be shown to be due to the training and not simply to better economic conditions, which also could increase employment.

Measurement Validity

Case study methods can use two tactics for achieving measurement validity: multiple sources of evidence, and using the chain-of-evidence technique in data reduction.

Multiple Sources of Evidence

Turning first to multiple data sources: case studies require "thick" description in order to get enough information to check for trends, to rule out competing explanations and to corroborate findings. Eight techniques are used—sometimes all of them in the same study—to collect information (12, 51).

1. Collect physical articles.

2. Collect documents such as contracts, memos, and reports.

3. Examine archives such as lists of persons served, computerized order records.

4. Conduct open-ended interviews.

5. Conduct focused interviews.

6. Conduct structured interviews and surveys.

7. Undertake direct observations.

8. Carry out participant observations.

Many of the 8 techniques are discussed in the General Policy Manual, Chapter 7. Of these ways, the approaches which most differentiate case studies from other techniques are direct observation and participant observation.

GAO has used both approaches in its jobs. For example, in NSIAD's study of conditions on submarines, auditors spent time aboard submarines in a variety of situations, getting first-hand knowledge of life in these vessels. Their direct observations form the primary data source for our report. We went to sea in this instance, however, in our GAO role, as auditors and evaluators and so—it could be argued—might have seen what special guests see and not what life would be like for the average sailor.

To get more authentic information, evaluators have sometimes become participants in situations, not identified to the other persons involved as GAO staff. One example of how we have adapted this participant-observer approach was in GGD's study of the services available to taxpayers from IRS after IRS reduced the number of public information agents (26). We developed a set of standard income tax questions about which citizens typically would call IRS, obtained IRS agreement on the correct answers to these questions and, then, on a probabilistic sampling basis, called IRS offices around the country to seek help. We used names such as Gerald A. Office in these conversations, but did not say we were from GAO. We were able to report how long it took to get the phone answered, how long it took to get information, the consistency of information and general helpfulness of the responding agent. Such an approach gave more authentic information than relying only on IRS records of calls received, or a survey of taxpayers. In the first instance, IRS would have no record of time before the person could get through to an agent and of "discouraged callers." In the second, a survey of taxpayers would have to be very large to get a good "hit" rate of individuals who sought assistance, and the diversity of individual questions would have blurred ability to interpret variation in IRS responsiveness. HRD used a similar approach in reviewing the Social Security Administration's telephone inquiry program; over 4,000 calls were made, with

GAO personnel taking the role of an ordinary citizen in asking the randomly selected, prepared questions (40).

One element of data collection which distinguishes case studies from other techniques is that comprehensiveness of interviewing is very important. In order to learn the meaning of events to those involved in them, a key element of case studies, the views of more senior officials are not given greater weight than views of less highly placed persons. In fact, a case study where the only people interviewed were senior officials would be seen as a not-good case study, in contrast to one where the views of individuals at all affected levels was obtained. For example, if we wanted to learn about how non-competitive awards were reviewed in an agency, a good case study would obtain information from the agency head, the head of the procurement division, the Inspector General's office, the contracts officer responsible for selected awards, staff involved in the reviews for these awards, counterpart persons from the contractors' procurement and program operations staff, and the legal divisions within the agency and the contractors. We might shadow several non-competitive procurements, following their life history from initiation through actual awards, sitting in on meetings, and studying, over time, how the awards were handled.

Chain of Evidence

A chain of evidence is the sequence from observation to conclusions. In a strong chain of evidence, an independent second evaluator could follow the first evaluator from original observations, the "raw" or unreduced data, through all the steps of data aggregation and analysis, and conclude that the first evaluator's findings were justified by the evidence and fairly represented it. This requires careful organization of the files of original observations, complete documentation of those conditions of data collection that are relevant to the trustworthiness and credibility of the information, and making transparent and reproducible the manner in which the evaluator moved from phase to phase of the analysis. Some evaluators call such a procedure "building an audit trail," and use procedures similar to indexing and referencing to establish both the construct validity of the measures reported and the convincingness of the causal explanations developed in the case study (6). That is, they have an independent evaluator review the equivalent of their workpapers, rather than providing so much detail in the report itself that a reader can come to the same conclusion.

Some information in a case study is likely to be judgmental, particularly when observer and participant observer modes of data collection are

used. And the collection process involves judgment calls of promising leads and the meaning of initial information. While documenting the basis for judgments can be more difficult than documenting non-judgmental information, overall the chain of evidence or audit trail techniques should not pose any greater difficulty for GAO evaluators than our documentation procedures for other evaluation methods.

Data Analysis

Case studies, obviously, can generate a great deal of data, data which need to be analyzed sufficiently and with appropriate techniques, in order to be useful. Much is qualitative. As Table 4.1 indicates, there are six general features of data analysis. Four are essential to case study methods: iteration, OTTR, triangulation, and ruling out rival explanations.

Table 4.1: Ways of Analyzing Case Study Data

FEATURES	Methodology
Iterative	Data collection and concurrent analysis
OTTR	Observe, think, test, and revise
Triangulation	Comparison of multiple, independent sources of evidence before deciding there is a finding
Rival explanations	Develop alternative interpretations of findings, and test through search for confirming and disconfirming evidence until one hypothesis is confirmed and others ruled out
Reproducibility of findings	Establish through analysis of multiple sites and data over time
Plausible and complete	Data analysis ends when a plausible explanation has been developed, considering completely all the evidence
Specific techniques for handling multi-site data sets	Matrix of categories, graphic data displays, tabulating frequency of different events, developing complex tabulations to check for relationships, and ordering information chronologically for time-series analysis

A unique feature of case studies is that data collection and analysis are concurrent. In most methods, we plan for data collection, then we collect the information, then we analyze it, and then we write the report. In case studies, the data coming in are analyzed as they become available, and the emerging results are used to shape the next set of observations.

The sequence in which this takes place is the OTTR, which stands for "observe, think, test, revise." After observations have been made in the first phase (and during the observations, because that is a natural way for our minds to work), the evaluators think about the meaning of the information: what does it suggest about what is happening and why? What else could explain what is going on? The second or "think" phase ends with specification of what new information would be needed to

rule out alternative explanations or confirm interpretations. This triggers the third phase: test. In this phase, the evaluator collects more information, as required by the specifications from the "think" cycle. The data collected in the third phase are not specified before the first phase: they emerge, often with surprises, from the initial observations. The fourth phase is examination of the second round of data collection, and a revision of initial intepretations and expectations—the "revise" phase. The revise phase may lead to another test phase, if information from the second round of data collection was insufficient to rule out alternatives, or if, during revision, new interpretations emerged. This iterative process ends when a plausible explanation has been developed and, at the end of a "revise" phase, there are no outlier or unexplained data, no further interpretations possible, or it is clear that despite the most diligent search for information, more is not available to further refine description and explanation.

In case study methods, causality is established through the internal consistency and plausibility of explanation, derived additively through the OTTR sequence. This is in considerable contrast to other evaluation methods, where control and comparison groups are used subtractively to rule out other reasons for a finding and establish firm attribution.

Handling Multi-Site Data Sets

Several techniques have been developed recently for handling multi-site case study data sets. These include setting up a matrix of categories; graphic data displays; tabulating frequencies; developing cross tabulations; and time series analysis.

Matrix of Categories

In this technique, a coding scheme is developed prior to data collection. It is modified during data collection and the OTTR process, and finalized after the evaluation team has read through all the case materials. The categories are related to the evaluation subquestions; for example, if a subquestion was "How does the Immigration and Naturalization Service monitor the conditions of confinement in privately contracted detention facilities," coding categories might include who is responsible, how these persons get information, what they do with information received, evidence that minimum standards are met, evidence of shortfalls, changes over time in monitoring, and conflicting guidance or responsibilities. These categories might be put into a matrix by facility size or groups served. The approach is similar to content analysis, and the PEMD transfer paper on Content Analysis gives further how-to information (21).

Graphic Data Displays

This is a family of techniques, some of which have ben adapted for computers and some of which use wall-space. The evaluators immerse themselves in information on a site, following OTTR. Their initial story of what is happening and why is displayed as a flow chart with a series of critical paths for action. Evidence supporting the story is arrayed in the display. The materials then are searched for counter-evidence, and subsidiary or branching paths laid out. As a satisfactory graphic is developed for one site, the evaluators turn to the next site. The evaluators could at this point either modify the first graphic, based on information from the second site, or prepare an independent flow chart. In the second approach, aggregation would come after all the sites have been charted, and the charts would be used as the data base for aggregation.

The graphic techniques can be applied to an instance as a whole, or to sub-components. For example, if an analysis of life threatening or fatal incidents at national parks were needed, the evaluators might develop separate graphics for events leading up to the incidents, the incidents themselves, and post-incident actions. More complex case studies may need several "layers" or graphics; less complex, few.

Tabulating Event Frequencies

Another technique for analyzing multi-site case data is identifying events within each case study ("meeting between Jones and Smith"; "Smith staff prepares recommendations") and tabulating their frequency of occurrence. Such a simple tabulation can draw the evaluator's attention to events which may be significant, to informal networks, and give a sense of actual (as contrasted to on-paper) organizational relationships. Divergences between observed and expected patterns can be examined further to see what happens as a result of these meetings and identify potential problem nodes: for example, when an expected high communication node turns out to be, relatively speaking, a low communication spot.

Complex Tabulations

Cross-tabulations of events can identify interactions and check the developing story more formally. For example, service coordination is a popular remedy for limited funds. An evaluator in the field may observe that coordination among local agencies funded through the same federal agency is more frequent than coordination among local agencies funded by different federal departments. Tabulations of actual meetings and of consequent actions for same-agency funded and different-agency fund services can help check out whether this impression is reliable.

Time Series Analysis

Organization of information within each site by time of occurrence, coupled with a systematic analysis of contextual influences on events, permits a non-quantitative time series analysis for case study data. The flow of events over time for each significant actor and for significant points in the series of events forms the organizing framework for data analysis within each site. Such comparisons of when key actions occurred, how well (or poorly) they were carried out, and what influenced both timing and quality of performance can be particularly helpful in case studies of program implementation.

In some instances, only one component of a case study may be analyzed in this way. For example, a case study of the effectiveness of a job training program might need to take into account general economic trends, such as unemployment rates in the community. A time series comparing local unemployment rates with placement rates for job training program participants could be computed quantitatively, and changes interpreted through the more qualitative time series data about the program.

Basic Models for Data Analysis

Two basic models of data analysis are pattern matching and explanation building. Pattern matching requires using past experience, logic, or theory before the job begins to specify what we expect to find. The analysis then compares actual findings to expectations. When the findings fit, the pattern is confirmed. When the findings don't fit, the evaluator adjusts the expectations or elaborates them, building a subroutine that can explain the unexpected findings. Explanation building is the inverse procedure: starting with the observations, the evaluator develops a picture of what is happening and why. Data are used to fill in the initial hunches, to change them, to elaborate on them. The first strategy matches findings to hypotheses or assumptions. The second uses the data to structure the hypotheses or assumptions.

In either strategy, the evaluator needs to search the full data base thoroughly for disconfirming evidence, in order to avoid the pitfall of premature conclusions and data analysis ends when the best fit possible has been reached between the observations and a statement about what they mean.

In either strategy, expectations and explanations can be expressed as themes: a job dealing with bank failures, for example, might have as themes decisions about credit risks, procedures for reviewing decisions,

or controls over the accuracy and recency of information on bank solvency. A job dealing with employee training might have as themes decisions about training needs, how employees are selected for training, how course quality is monitored, or how employees and supervisors view the purpose of training.

Themes, in turn, can be analyzed within individual sites first, then findings on each theme aggregated across sites. Alternatively, all themes within one site can be analyzed first, then data from the second (and subsequent) sites can be examined. Theme analysis also can proceed in matrix fashion. On the PEMD AFDC study, for example, evaluators were assigned as site managers, responsible for understanding across themes all there was to know about the issues for their site. They also were assigned to individual themes, such as health and employment, responsible concurrently for looking across all sites for information on their topic. This organization proved helpful in assuring that reasons why a site showed up as an outlier for a given theme could be discussed by someone who knew the site as a whole.

Pitfalls and Booby Traps

Case study methods, like any other method, offer plenty of opportunity to go awry. Two frequent concerns are the risks in using other people's studies and in generalizability.

Impartiality

The biggest risk when we use other people's case studies is that GAO standards of impartiality may not have been met. There are three meanings of impartiality, one of which does not create problems. Case studies use as data the impressions and judgments of the evaluator, which are inherently subjective. For a case study methodologist and for GAO, if proper care is taken, this should not be a problem. If we want to illustrate, for example, working conditions for immigrant laborers, we can report what the thermometers registered and we can also report, first hand, how people were sweating and what it felt like to be out in the fields. Such observation is part of the richness, immediacy and "thick" description of a case study. However, as required by the General Policy Manual, Chapter 3, case studies, like any other method GAO uses, have to meet two other criteria of impartiality: accuracy and lack of bias, in the sense that the evaluator's personal, preconceived opinions about a situation do not distort reporting and that the evaluator is scrupulously even-handed in examining all sides of a situation.

Some authorities on evaluation methods believe that case studies reflect the author's values in ways that can be difficult to detect. Other experts conclude that three actions, taken together, are sufficient safeguards for lack of bias and adequate accuracy. These are (1) submitting reports to people from whom data were collected and printing their critiques with the report; (2) use of multiple data collection methods within case studies, and (3) adoption of the audit trail or chain-of-evidence technique. Adequate supervisory controls also are recommended. Complying with these safeguards should give us no major problems in our own jobs. The guidance would mainly expand the range of reviewers. We already conduct exit conferences and, following the Yellow Book and Report Manual, Chapter 6, submit draft reports for agency comments. We often use multiple methods, and the audit trail technique now recommended for case study use was itself adopted from such auditing procedures as workpapers and referencing which are standard practice with GAO. We also require adequate supervisory control through such means as prompt review of workpapers. We would need to assure ourselves, however, that case studies whose results we are going to use have adopted the same procedures for assuring impartiality. Appendix III gives a checklist for reviewing proposed or completed case studies for quality.

Generalizability

We often are asked questions where the customer wants in-depth information which is nationally generalizable, but frequently the issue may not yet be ripe for a national study or we do not have the resources to collect in-depth data from nationally representative samples. Using four, ten or fifteen sites as case studies might be feasible, but we would still need to be concerned about the risks in generalizability. A main point of this paper is that generalizability depends less on the number of sites and more on the right match between the purpose of the study and how the instances were selected, taking into account the diversity of the programs.

An example of an efficient combination of careful specification of the purpose of the study matched with appropriate site selection is the GGD study of the productivity of the Social Security Administration's (SSA's) regional operations. This productivity review examined in depth only one SSA region (Atlanta) (32). The site was selected because it had the best productivity among the ten regions; if GAO could demonstrate opportunities for productivity improvement in the most productive SSA region, then similar improvements might be possible in the less productive regions. Following the case study, an inexpensive (25 staff day) check was made on productivity data and trends from other SSA

regions, and similarities were noted. While other problems might be affecting these less productive regions, the findings from the single site plus the trends were so convincing that SSA concluded the single instance examination had national implications. Subsequent analysis of regional office plans for productivity improvement led to the conclusion that their implementation could save about $60 million annually.

Sometimes, however, it is not possible to answer the evaluation question using case studies, if the program is diverse and the user needs national generalizability. The user may prefer to sacrifice in-depth information for generalizability and we will have to use other methods, such as surveys or secondary analysis of existing data. On the other hand, it often is possible—with appropriate instance selection—to obtain adequate generalizability with a manageable number of instances. In addition, the evaluator can apply the case survey method to increase the generalizability of findings, and can combine case studies with other methods. Taken together, these strategies can permit use of the case study technique with enough generalizability for many users' purposes. That is, for the first three types of case studies (illustrative, exploratory and critical instances) generalizability, if needed, can not be achieved unless they are combined with other methods. Generalizability can be achieved for the other three types, however, even when they are used independently, as long as they are carefully designed in terms of case selection and analytic strategies.

Where to Go for More Information

More detail on data collection and analysis can be found in two books on case study methods: Case Study Research by Yin (51) and Analyzing Qualitative Data by Miles and Huberman (10). More detail on applicable GAO guidance can be found in the Report Manual, Chapters 4, 6 and 7.

Summary

We can summarize this paper in the answers to three questions: What are case studies? When are they appropriately used in evaluation? What distinguishes a good case study from a not-good case study?

What Are Case Studies?

The case study is a method of learning about a complex instance, based on a comprehensive understanding of that instance obtained by extensive description and analysis of the instance taken as a whole and in its context. Applying this definition means learning virtually everything about the instance being studied, including how it operates and what it does, in relation to the extrinsic or contextual events it is part of.

Case studies often use one or only a few instances, because collecting and analyzing comprehensive data are prohibitively difficult for large numbers of sites. However, not all studies of a small number of instances are case studies. Some studies collect data from a small number of sites but have no other features in common with case studies and offer none of their advantages. Thus, the fact that a study involves only one or a few sites does not automatically make it a case study. For example, the evaluators may not have selected the sites appropriately for the generalizability needed or they may have collected minimal information with little depth of inquiry.

When Are Case Studies Appropriately Used in Evaluation?

We discussed six types of case study that differ considerably in their requirements for site selection, data collection, and analysis, among other things. The six types are illustrative, critical instance, exploratory, program implementation, program effects, and cumulative. Together, they cover a wide range of evaluation questions, although clearly not all evaluation questions. For example, case studies are not well suited for answering the question, How often does something happen?

Some applications of the case study to evaluation purposes have been tried fairly extensively—for example, program implementation case studies. Others are relatively untried—for example, cumulative case studies. The latter is a particularly promising method for GAO, because it can capitalize on the large number of case-study-like reports that are available, on the quality of the documentation that supports their findings, and on the general methodological framework that GAO's standards provide. We have not stressed, in our analysis, the costs, feasibility and timeliness of case studies, since these are management criteria that are considered in all designs, rather than issues of particular concern to case studies. However, the implications of the design features discussed here

are that, contrary to what many people think, the case study is not necessarily inexpensive, easy to conduct or quick. It may require in-depth data collection dependent on sensitivity to the setting that takes time to acquire, and involve extended periods for data analysis, interpretation, and reporting.

What Distinguishes a Good From a Not-Good Case Study?

We have addressed quality in two ways. One is prospective and intended to help those who plan evaluation to know the minimum features of the various case study applications. The other is retrospective and intended to help those who review case study reports to assess the quality of completed case studies. Table 5.1 summarizes common pitfalls which we have mentioned throughout this paper.

Table 5.1: Some Common Pitfalls in Case Study Evaluation

Study stage	Common pitfalls
Design	Mismatch between criteria for the specific job and what the case study application can do; insufficient attention to contrasts and comparisons needed for purposes of the study
Site selection	More sites selected than needed; fewer sites selected than needed; inappropriate basis for site selection, for the particular job and evaluation question
Data collection	Reliability jeopardized by lack of common guidance in data collection; findings noncomparable; lack of quality control in data collector roles and responsibilities: impartiality threatened; overly loose relationship between data collected and the evaluation question: inadequacy of information
Data analysis	Insufficient attention to requirements of analytic plan chosen: low plausibility of results; insufficient attention to management and data reduction: inefficiency, lateness, incomplete use of data; inadequate methods of relating findings across sites; inadequate methods for relating qualitiative and quantitative data within sites
Reporting	Overgeneralization, compared to actual basis for site selection, number of sites studied, and requirements for inference in the design; inadequate interpretation, unintegrated narrative, results not adequately related to user questions; inadequate attention to threats to impartiality and the extent to which these have been avoided

Quality and Evaluation Design: Planning

We have presented six types of case study evaluations and for each one described features such as number of sites, site selection, data collection, data analysis, and reporting. Our descriptions represent a "floor" of quality for each evaluation application. The features of the six types of case study are not interchangeable. That is, the features of a case study that are appropriate for answering one kind of evaluation question are

not necessarily appropriate for answering another kind of evaluation question. Evaluators considering the case study as a design for evaluation must first decide what type of evaluation question their specific question is and then examine the strengths and limitations of each type of case study for answering it. The crucial next step is to look at the features of each type and decide whether it will be possible to meet these methodological requirements in the specific situation.

For example, the basis on which instances can be selected differs for the different case study applications. Usually, an illustrative case study site should be typical of the program being examined while exploratory case study sites should bracket the diversity that is likely to be encountered in the program, population, and setting of a larger study. Usually, sites for program effects case studies should be selected with great care for criteria such as whether there is evidence that the program has been implemented at the site, whether the site has been subjected to changes that could have the same effects as the program or that could mask its effects, and how the addition of this site to the group of sites being studied supports the generalizability of the findings.

Quality of Evaluation Design: Reviewing

Turning to ways of assessing the quality of completed case studies, we have provided guidelines for reviewing case study reports in appendix III. These guidelines are intended to apply to all types of case study applications.

On matters of design, the guidelines discuss the clarity of issues, the relationship of the evaluation question to the case study application selected, the basis for case study selection, and the time span of the study. The data-collection guidelines emphasize appropriateness of data-collection methods, evaluator training, and information sources. Guidelines for data-base formation and analysis deal with explicitness of procedures and techniques, interpretation differences, and the relationship of the findings to those of similar studies. With regard to reporting, the guidelines emphasize constraints on the study, arguments for and against various resolutions of the issues, and the role of judgment in reaching conclusions. With regard to impartiality and generalizability, the guidelines emphasize that a good case study report (or, for GAO purposes, job documentation) describes both the evaluators' training and work on related studies, presents comments on the draft report, and supplies adequate information for judging generalizability. Reviewers will need to refer in addition to the features of each special type of case

study application for supplementary guidance on what to look for in individual case studies.

Impartiality and Generalizability

Partiality and—in some instances—the inability to generalize from the findings can limit the utility of case study methods for evaluation. There are three main threats to impartiality: subjectivity, inaccuracy, and bias. The case study method inherently requires subjective and judgmental elements. When proper procedural safeguards are used, these elements alone do not diminish the value of case study methods. However, inaccuracy and bias are unacceptable in any case study. Some ways of detecting and preventing bias, such as the audit trail, have been well developed. Their applicability to case study evaluations outside of settings such as GAO is being explored.

Many evaluation questions do not require a high degree of generalizability; other questions do. Certain case study applications provide high degrees of generalizability with small numbers of instances. When both broad generalizations and in-depth understanding are required, designs that cumulate case studies over a wide number of sites and settings, or that combine case study methods and other methods in one concurrent effort (25), may meet this dual need. However, the diversity of the population to which generalization is required is a limiting factor in case study applications. It is also true that without careful attention to standards, case studies are prone to the kind of overgeneralization that comes from selecting a few instances, assuming without evidence that they are typical or representative the population and then offering national projections. The GAO Project Manual (11-18) cautions against overgeneralization from any method. For case studies in particular, there must be an empirical basis for instance selection and assurance of adequate population homogeneity.

Theory and History

As a research method, the case study originates in the social sciences, particularly in the fieldwork of anthropology and sociology. Within these disciplines, researchers have defined the case study and discussed its critical elements in a variety of ways. In general, six elements appear frequently: purpose, type of data collected, method of data collection, design, method of data analysis, and reporting.

Purpose

The research case study has been defined as a method for learning the "right" questions to ask (8). That is, the purpose of case studies is said by some researchers to be to generate hypotheses rather than to test or confirm them. The method involves an in-depth, longitudinal examination of a single instance. The product is a sharpened understanding of what might be important to look at further in similar situations and what explains why the instance happened as it did. Because such inquiry explores only one situation, it is argued that it cannot contribute directly to the testing of general propositions, although it can contribute powerfully to the invention of hypotheses.

Some other methods have a similar purpose. Exploratory analyses of large data bases are often used to select a smaller number of variables for additional testing, on the basis of interesting patterns that emerged from various combinations of the elements of the large data base. Promising relationships are singled out and those that seem uninteresting are set aside. Like findings from case studies, the result is considered as contributing not answers but a better understanding of what questions to ask and how to ask them.

An analogy might be drawn also to "evaluability assessment." Such assessment may provide information valuable in itself about how completely a program has been implemented. It is undertaken prior to testing the effects of the program, chiefly, however, as an indicator of appropriate evaluation design.

Other researchers regard case studies as not only a different way of knowing but as a better way (48, 49). More specifically, they emphasize the method's unique value in many complex situations of importance, such as studies of school desegregation, or economically distressed communities, or the Challenger tragedy. One reason they give is that skilled observers and interviewers can make judgments and valuations about factors that are otherwise very difficult to assess, such as how much effort a manager made to get information before a key decision was made or how much that person knew about what was going on. Also,

these researchers believe, in complex situations the many persons who are significantly involved have different "realities" in their explanation of events and even in their perceptions of what happened, and this is best matched with a method that gradually represents and reconstructs these multiple realities, rather than a method which assumes a single "truth" exists.

As seen by such scholars, "...there is no single reality on which inquiry may converge, but rather there are multiple realities that are socially constructed, and that, when known more fully, tend to produce diverging reality. These multiple and constructed realities can not be studied in pieces (as variables, for example), but only holistically, since the pieces are interrelated in such a way as to influence all other pieces. Moreover, the pieces themselves are sharply influenced by the nature of the immediate context."

Methodologists who focus on case studies express their criteria of good research in different language, although they may deal with underlying concerns similar to those of researchers from more experiment-oriented traditions. Some criteria, however, are seen as unique to case studies and qualitative approaches. One example is fairness or assurance that a study has presented a balanced view of the many constructions of reality and the values underlying these. Another example is authenticity; another, realism. Each of these criteria are associated, in the literature on case study methods, with performance standards such as triangulation believed useful in assuring—if they are carried out—that the study will be a good one.

Table I.1: Criteria of Good Research

Case study	Other approaches
Truth value; trustworthiness; credibility	Internal validity
Applicability; transferrability	External validity; generalizability
Confirmability of data	Objectivity of observer
Consistency, dependability data; explainable instabilities	Replicability, stability of reliability of data

Type of Data

In some textbooks on evaluation, case studies are synonymous with qualitative data—that is, data that are subjective or judgmental. Such data include narratives of events written by participant observers, accounts of what the participants understood about an event, reports of what was said at a meeting or an interview, observational records of how an event took place, and statements of impressions about what was

going on, why it was happening, and how people felt about it, themselves, or each other.

To illustrate differences among types of information, we might base the conclusion that "the day was hot" on data from an instrument that records the room temperature (numerical and objective), a record of the atmospheric temperature as written down by an observer checking a thermometer (numerical and relatively non-subjective), a survey asking people how hot they felt (non-numerical and subjective), and a "thick" description of what clothes people were wearing, how much they perspired or shivered, whether they turned up the furnace or the air conditioner, and how much energy they seemed to have for work (non-numerical and judgmental). When researchers describe case studies as using qualitative data, they usually mean the "thick" description. If the evaluation question involved an understanding of working conditions for migrant laborers or workers in heavy industry, a thick description, even including information on how exhausted the evaluator felt in the heat, would be more appropriate—according to some case study methodologists—than only recording that the thermometer registered 95 degrees.

Suppose we needed to know about the availability of housing for low-income people. If official records were adequate, good quantitative measures of availability might be the number of low-income persons applying for housing relative to the number of units which met minimum standards and cost within 30% of household income or the number of persons on waiting lists for such housing and how long they had to wait. We might also be able to report the number of applications for housing construction permits and how many units suitable for low-income housing were coming on the market within 12 months. Often, however, the records are not adequate. Here we might rely on qualitative information, such as the estimates of knowledgeable officials of demand and supply, (judgmental, numerical) or of the severity of the problem (judgmental, non-numerical). We might also interview selected low-income families with regard to their experience in seeking housing or we might, as participant-observers, pose as low-income applicants and report our own experiences in finding housing for families of different sizes and within different payment ranges (judgmental, numerical and non-numerical).

Many researchers who write case studies use qualitative data because they believe them to be richer, more insightful, and more flexible than quantitative data. They believe that the meaning of an event is more

likely to be caught in the qualitative net than on the quantitative hook. For example, qualitative data permit dealing fairly directly with values, politics and factors that may be an important part of many situations. A frequency distribution of events—such as a table showing the number of decision points in a community economic development program and a decrease in the probability of action as the number of decision points increases—are about as numerical as qualitative data are likely to be in a research case study, according to some experts.

Method of Data Collection

To some researchers, case studies are synonymous with methods of data collection deriving from anthropology, psychology, and sociology. The techniques include fieldwork, ethnography, observation, and participant observation and have in common that an observer is physically present at a site, stays at the site for a fairly long time, has flexibility in deciding what data to collect from whom and under what circumstances, and can organize the inquiry according to the meaning of events to the participants rather than having to decide beforehand on a closed set of constructs or data elements. In most instances, the observer is the senior investigator and the only researcher: Margaret Mead in Samoa and Oscar Lewis in Puerto Rico are famous examples.

The greatest difference, to some experts, between other methods and case studies is the distinction between the researcher's (1) beginning by presuming, a priori, to know the relevant constructs and variables, measuring their incidence, and finding out how changes in them may be influenced by other events and (2) entering into an event to learn what is significant in it to the participants. As this implies, to researchers, the case study is an intensely personal method, dependent on the investigator's sensitivity, insights, and skill in noticing many things, recording them, and producing a narrative that suggests a pattern of the elements—or that recognizes the pattern that is there in the culture in its own terms. It is a demanding method, requiring specific skills (such as fluency in the language of the participants) and general self-awareness to maintain the fine balance between seeing things as others see them and identifying their perspective wholly with one's own. The researcher must weigh the value of experiencing what it is like to be part of the culture against the hazard of internalizing the experience too fully, which can jeopardize the capacity to see the culture from many perspectives. Nonetheless, some of the best reports have come from observers who entered as fully as possible as participants in the event being investigated.

The case study method is further distinguished by the researcher's self-conscious effort to understand what the observed events mean to the participants. No observer can enter a scene without preconceived ideas, but they can be set aside. Thus, a study of how a group is organized economically might begin with finding out what is valued in that group and how items of value are exchanged. They might not be goods or services, and exchanges might not be equal.

For example, in a basic research study of 40 low-income women, Belle and her colleagues lived for many months among them as observers, confidantes, and friends, listening to what they said and noting what they did. The researchers found that turning to someone for even modest help (like minding a child for an hour) had the cost of later demands for a return of the favor and that this cost was nearly intolerable. The researchers found expected stresses like the loss of a check in the mail and the illness of loved ones. They found also, unexpectedly, that any change at all was stressful: being promoted to a higher-paying job, the graduation of a child from school, falling in love, even the restoration to health of the loved one who had been ill. In terms of the purposes of the study—finding out what was stressful to the women and why the incidence of mental health problems among them was so high—the case study method disclosed the importance of any change in life circumstances as a source of stress rather than merely confirming change that the observers might have thought stressful a priori.

Design

Case study methods have been defined by some researchers as designs that focus on a single instance or a few instances. They also are identified with designs that are nonexperimental in the sense that the investigator is not deliberately manipulating some variable to see its possible effects on the system being studied. Two classic aims of inquiry are to understand the nature of events and to understand their causes. Since case study designs center on one or a few cases and lack the controls usually thought necessary to an understanding of causal relationships, knowledge that results from case studies is controversial with regard to generalizability and causality.

With regard to generalizability, some methodologists see case studies as above all particular, seeking to describe and understand the aspects of an instance without much concern for knowing whether they arise in or are characteristic of a larger population. The focus is on this school, this emergency room, this military base, or this nuclear power plant.

Researchers can choose relatively freely which instance to study on any one of several bases, depending on the questions to be examined.

Thus, in a case study design, an instance may be selected because it is a unique event of national interest, such as the Cuban missile crisis or the distribution of the swine flu vaccine, both subjects of research case studies. The instance may be selected because it has been affected by events of interest, such as the desegregation of schools. It may be selected as an unusually effective or unusually ineffective instance. However, whenever the purpose is an understanding of the particular, the relationship of the instance to the various populations that it is part of is less important than the assurance that the selected instance can be fully examined.

With regard to causality, researchers using case study methods cannot rely on familiar ways of ruling out alternative explanations. Case studies do not compare individuals or groups to others randomly assigned to different treatments. Case studies do not use statistical adjustments to facilitate comparison. Case studies do not estimate statistically the influence of the many variables on the instance being examined. To understand a single case, the researcher must develop hunches about what is happening in the instance under study and systematically seek within it evidence consistent or inconsistent with the hunches. As evidence accumulates, a second tier of evidence is looked for that would be consistent or inconsistent with alternative explanations for why the hunches did or did not take the shape of a coherent pattern. That is, a very high standard of inferential logic is needed.

When this method produces a coherent, plausible story, the researcher can assert a relationship between cause and effect. When conflicting evidence cannot be resolved, the careful investigator indicates that causality cannot be established. The standard for making this judgment requires the diligence of the investigator in formulating alternative explanations of what is happening, in specifying the kind of evidence that would be supportive or nonsupportive, in searching intensively for evidence that would rule out initial hypotheses, and in thoroughly considering the reasons for inconsistent patterns of evidence in the second tier. These techniques, of course, have parallels in other research traditions.

The ability of the case study to capitalize on insight, to shift focus as the data demand, and to let disparate pieces of evidence fall into place in ways that are not always easy to describe or command is believed to

yield a richer, fuller, and truer explanation of why things look the way they do than the more limited number of tests of a priori hypotheses that other methods use. In case studies, the criterion for deciding whether casuality has been established is the coherence of the evidence, its consistency with the patterns ascribed to it, and its inconsistency with other explanations. In research designs based on statistical inference, the criterion for establishing casuality is whether the findings are likely to have occurred by chance following appropriate comparisons to eliminate alternative interpretations. In both instances, comparisons must be appropriate if alternative explanations are to be ruled out.

Method of Data Analysis

Still another distinguishing feature of case studies, according to some researchers, is a nonstatistical approach to data analysis. The elements of analysis are familiar: the identification of regularities, patterns, and relationships and the assessment of their importance of meaning. In quantitative methods, the regularities are identified by manipulating numbers to produce indicators agreed on as sensible descriptions of the patterns. For example, an average is a convention that creates a single number to represent the collection of all the numbers in a set. Importance or meaning is assessed in part by estimating the variability within the set of numbers to obtain a probability that the regularity represents the characteristics of the population of instances.

The logic of analysis in case studies is the same; the techniques for identifying regularities and assessing their meaning are different. Consider first the regularities. The case study analyst is trying to build an accurate description and explanation of events as both the observer and participants frame them. There would be little point in trying to identify a single number as an accurate representation of something this complex.

The analyst searches for clusters or paths in the data, using verbal notes and graphic aids, reviewing field data and other records of observations, until a pattern is evident. Then the data base is searched for further evidence that confirms or conflicts with the pattern. When the evidence is more inconsistent than consistent, the pattern is rejected. When the evidence is more consistent than not, the analyst confirms the pattern and looks for others related to it. When all the evidence is consistent, no further examination is needed. An array of techniques such as graphic displays has been developed to help standardize case study analysis.

A key element of case study analysis is the selection and organization of material to account for the complexities and interactions of the events.

The rules are judgmental, not probabilistic. Have all the pieces of pertinent information been considered? Has adequate attention been given to the outliers? Does the pattern seem plausible or forced? Have inconsistencies been sensibly resolved?

Using an analogy, we can say that the case study analyst seeks to explain 100 percent of the variance by relying on a data base that includes more variables than most quantitative studies can accommodate, over more points in time, and on a method that draws on the integrative powers of the mind, which computers do not have. The method inherited from sociology and anthropology entails early immersion in the setting, recorded observations, reflections on the spot, and analysis that occur throughout fieldwork, as data are being collected. Analysis is infused throughout the research process in case studies; it is not a step after the completion of data collection.

Reporting

Case studies are usually reported as narratives that read like chronologies of what led up to an event and what happened during and after it. They have been called "then-they-did-this" studies. In order to be comprehensive and cohesive, the researchers provide a great deal of detail and description and quote directly from the participants' own words and vignettes in the observers' field records.

To some proponents of case studies, the credibility of the method depends on what they call "naturalistic generalizability." By this they mean that readers compare their own observations, experience, and belief to the narrative and regard the parts of the investigation that are consistent with these as confirmed. What is inconsistent tends to be examined more closely and may be rejected as less credible, unless—so the argument runs—there is enough detail that readers can "see it with their own eyes." For readers who know a handicapped child or have an aging parent, for example, a case study report of conditions in residential care for the severely handicapped or the aged may compare dramatically with vivid personal experiences. The case study report can provide an organizing framework for thinking about these and other experiences.

The usefulness of case study reports, therefore, depends to some degree on how well the investigator has portrayed the participants' ways of thinking about what happened and on how divergent the investigator's analysis is from the reader's ways of thinking about the subject. The credibility and authenticity of the case study report may depend on the

writer's having provided extensive detail and description, making unexpected conclusions as difficult to deny as if the reader had been part of the event. In this respect, the narrative mode is not a stylistic choice; it is inherent in the purpose of case studies and the nature of their inquiry. It becomes an obstacle only when authors seek publication through outlets whose customers generally ask for brief details.

The Case Study Adapted for Evaluation

The traditional case study belongs to research, not evaluation. To apply case study methods to evaluation, evaluators have had to adapt what derived largely from sociological and anthropological fieldwork (13). Before 1970, however, evaluation case studies were similar to research case studies. They were longitudinal, were made by on-site observers who sought participant-observer roles, and constituted an inquiry structured from an evolving understanding of events and their meaning to the persons involved in them. There was usually only one research investigator, and the data consisted of descriptions, observations, impressions, unstructured interviews, and existing materials gathered at the site that were organized intuitively and informally. The case study report was a narrative whose purpose was to illustrate or portray what a program was like, how it was being implemented, and how those who were part of it both affected it and were affected by it.

In these early uses of the case study method, evaluators wrote their reports to stand alone. Little effort was made to integrate two or more sources of data, even when the evaluation design included them, although simple references might be made to the number of times a feature of other sites was also characteristic of the site reported in the study. The case study was useful for readers interested in what a particular program was like or what happened to a typical beneficiary.

Early in the 1970's when evaluators wanted to design studies that would capture some implementation or outcome features that were different or expensive to measure reliably on a large scale—for example, the way a large organization handled a complex innovation or the effect of an education program on motivation to learn or growth in self-confidence—they felt caught between risking considerable effort in trying to quantify qualitative variables and risking the criticism that they were ignoring really important things because they could not be measured. The case study seemed a way out. It offered a relatively inexpensive, low-risk supplement to the large-scale collection of other information that could be measured more cheaply and reliably than with large-scale studies. By and large, investigators commissioned to carry out the early

case study evaluations had been trained in the academic disciplines with the strongest fieldwork traditions, and they had to struggle with the extent to which their research method could be adapted to evaluation, retain its integrity, and yield positive benefits. The struggle is not yet fully over.

The Study Questions

The first adaptation was a shift of the specification of study question from the principal investigator during the period of study performance to the persons who commissioned the study in advance of data collection. For example, those who supported an evaluation of a training program might want the researchers to find out whether the development of the participants' self-concepts, self-esteem, task orientation, work habits, and personal and social traits seemed associated with the program or with something else.

Researchers from fieldwork traditions would have argued that they could provide the most useful information by spending some time at the site of the training program, trying to understand what the program meant to those who were involved in it, and reporting on what was happening from the perspective of those who were making it happen. Since this might have everything to do what the participants' chance to socialize with friends in a nonthreatening environment and nothing to do with self-esteem or work habits, it seemed to these researchers that it was therefore logical not to decide on the evaluation questions until their appropriateness could be determined.

The compromise that has developed is to include in the evaluation the questions of interest to the customer and to permit the researchers to determine what data elements are relevant to these questions and from whom and how they should be collected. It allows the evaluator to remain alert to other questions that might prove more salient if allowed to emerge.

How satisfactory is the compromise? The final reports of some non-GAO case studies show little or no resemblance between the final questions and those in the approved study proposal, and a number of issues about this have not been resolved. We do not know whether the discrepancy is more frequent in case studies than in other methods. It may be that the final questions are the ones the investigators wanted to look at all along, so that the methodology is vulnerable to subterfuge. Possibly the emergent questions were those that should reasonably have been expected to come into focus—and whose emergence may be why case studies rather

than surveys are used. From the perspective of the authenticity and integrity of results, the larger public interest may have been served. If the method is highly susceptible to this kind of internal change, the appropriate scope for case studies should be examined. When the case study involves one site and modest expense, the price for identifying better questions early may seem affordable.

This is not to say that all case study evaluations show divergence between the questions that were asked and those that were answered or that an appropriate balance between the evaluator's and the customer's needs is never reached. However, applying the case study methods of research to evaluation requires dealing with matters of control, power, and responsibility that were less visible in the work of academic researchers before their methods were adapted to evaluation.

The Number of Sites

The demands of evaluation led to other adjustments in ethnographic methods. One such demand was that a method developed for understanding the particular had to be modified for learning about the general. Another was the need for something more adequate than "naturalistic generalization" for evaluation purposes. A third was the problem of site variation, which in the mid-1970's was identified in quantitative studies as an ill-understood source of greater differences in a program's outcomes than the program itself.

The case study method seemed born to help, but the forces of time and cost associated with making multisite evaluations led to considerable adaptation. First, since evaluators often needed simultaneous study at several sites, they needed several observers, which created issues of coordination and interpretation. Second, the cost of maintaining a trained full-time field worker at a site runs high, so that evaluators had to settle for shorter observations or untrained field workers or both.

All these changes—to multiple observers, professionally supervised but not professionally trained observers, and shorter observation times—led to others. The across sites data base got much larger as the number of sites in a study rose. The within sites data bases became less extensive as observation times were shortened. It became a challenge to integrate the work of different observers if they focused their attention on different topics from site to site. And this much larger, much less extensive, probably less reliable data base had to be analyzed and reported in a much shorter time than that of fairly leisurely academic research. Not surprisingly, analysis has become a major methodological concern, and

more structured and perhaps more efficient approaches to analysis have been developed.

Quantitative Methods

To these adaptations, another was added. The case study was given a purpose—program evaluation—beyond that of illustration, exploration, or generation of hypotheses. As the examination of program implementation and program effectiveness became more central to the case study, so did the ability to generalize findings. In turn, quantitative methods in case studies expanded.

Quantitative methods were incorporated in the case study in two ways. The first was in triangulation: the use of several forms of data within a single case study in order to give many reference points for verifying patterns and ruling out alternative explanations in order to achieve what evaluators call "internal validity." The second was in the combination of case study methods with other methods, particularly surveys, in order to achieve the generalizability that evaluators called "external validity." These adaptations created the need for a better understanding of the relationship between case study techniques and other techniques and between quantitative and qualitative approaches within case studies.

Summary

Adapting the research case study to the evaluator's needs has entailed a number of changes. Less time is spent at sites. Information is collected by junior staff working under the supervision of an investigator trained in case study methods. More time is allowed for training and monitoring quality. Data are combined from several sites to allow generalization; and data collection has been given greater structure. Methods of assessing the reliability of observations, techniques for transforming very large amounts of qualitative data, and methods for aggregating qualitative data or findings from several sites have been developed. The ability to generalize has become a matter of design and analysis. Reporting methods have changed.

Case studies in evaluation today have made these adaptations in different degrees. Some studies have not only generalized but also tested hypotheses. Some case studies rely wholly on quantitative data. Some rely wholly on information collected by others, not trained as sociologists or anthropologists, rather than on firsthand observation. Some aim for uniformity or comparability of data both within a site with multiple observers and across several sites. Some use inferential statistics as well

as descriptive statistics. Some present findings and conclusions in forms closely resembling those of other methods.

These adaptations are not uniformly valued. Some case study methodologists work with structured evaluation questions, structured data collection, and observers untrained as anthropologists or sociologists, but they believe that case studies offer a qualitative way of knowing that should not be merged with quantitative results. Others believe that case studies cannot be used for making the kind of generalizations that probabilistic models are used for, so that little is to be gained and so much is to be lost from increasing the number of sites. Still others believe in using many sites in case studies for evaluations and see the next step as establishing more explicit procedures for analyzing data and reviewing quality. Table I.2 summarizes the changes that have been made to adapt the research case study to evaluators' needs.

Table I.2: Evaluation Adaptations of the Research Case Study

Case study element	Research	Evaluation
Design specifications		
Study questions	Researcher asks	Sponsor asks
Variables	Emerge from observation	Sponsor specifies
Site selection	Of specific interest	Representative
Instances	One	Many
Data	Researcher specifies	Sponsor or sponsor and researcher specify
Design	Trends at one site	Comparison of many sites
Methods	One	Several
Costs	Usually inexpensive, time-consuming	May be very expensive and time-consuming, particularly in studies with many sites
Data collection		
Type of data	Quantitative	Quantitative and qualitative
Time span studied	Long	Short; may be cross-sectional
Time at sites	Long	Short
Sources	Informants, observation	Informants, documents, administrative data
Collection method	Researcher specifies	Sponsor or sponsor and researcher specify
Role of insight	Central	Supplementary
Collector	Researcher	Staff
Analysis		
Analyst	Researcher	Staff
Researcher's role	Comprehensive	Supervisory
Data reduction	Minimal, original data	Considerable; codification, content analysis
Multiple data	Triangulate within site	Triangulate across and within sites
Analysis techniques	Nonformalistic, pattern recognition	Formalistic; graphic and content analysis techniques
Procedure	Intuitive, thematic	Formal, comparative, thematic
Establishing causality	Coherent, plausible story	Greater emphasis on design elements in addition to internal coherence
Reporting	Narrative, descriptive, detailed building of coherent story	Conclusion-oriented, use of vignettes for examples

"Case study" means different things to different methodologists, who reach different conclusions about how to do case studies, how to report them, and their overall appropriateness for answering a specific question. If case studies can vary so greatly, how can we assess their usefulness for evaluation? One way is to develop a working definition of the case study that embodies its essential methodological features and then to examine the strengths and limitations of case studies for different evaluation questions. This is the approach taken in this paper in developing the definition we give on page 9.

Site Selection Example

Imagine that in 1987, as part of an effort to estimate extent of tax revenues lost or delayed due to failure of businesses to file returns, the General Accounting Office examined revenue shortfalls to individual states. Imagine we found 170,076 such instances (a national projection based on a sample), and estimated that cumulatively, over $500 million was lost to the states. Our report attracted much Congressional interest. Variation among states in the rate of such "missing returns" was of particular concern. Imagine we now have been asked to examine in more detail, what explains differences among states in "missing returns", since cumulatively, the effect is to make states look poorer than they actually would be if they collected revenues authorized by their own legislatures. (Hypothetical data for this example are given in table 2.1.)

Question 1: Instance Selection

Using the hypothetical data in Table II.1, identify states for each type of purposive selection that we might consider.

Bracketing

Best case

Worst case

Cluster

Representative

Typical

Special interest

Table II.1: Hypothetical Data on Unfiled Corporate Income Tax Returns for 1986 State Income Tax Returns

State	Number unfiled	Rate unfiled
AL	6,100	5
AK	610	2
AR	4,391	2
AZ	3,475	9
CA	28,841	3
CO	3,012	2
CT	2,738	3
DE	995	5
DC	1,562	3
FL	13,372	4
GA	8,887	5
HI	1,197	<1
ID	732	2
IL	16,103	3
IN	6,077	3
IA	2,096	1
KS	2,125	<1
KY	3,724	3
LA	8,462	4
MA	4,427	2
ME	1,032	1
MD	6,292	3
MI	8,849	3
MN	3,074	2
MS	6,002	5
MO	5,886	3
MT	770	1
NB	1,324	2
NV	781	5
NJ	7,985	3
NM	2,394	3
NY[a]	19,349	<1
NC	7,460	10
ND	539	1
OH	12,088	6
OK	3,593	6
OR	2,246	3
PA	11,774	2

State	Number unfiled	Rate unfiled
RI	856	3
SC	5,529	4
SD	736	1
TN	5,734	2
TX	18,061	15
UT	1,152	2
VT	463	2
VA	8,032	4
WA	3,806	2
WV	1,760	3
WI	4,559	2
WY	442	3

[a]In 1984, New York implemented a "corporate responsibility" law that made CEOs personally liable for timely filing of corporate tax returns.

Answer to Question 1

Bracketing	Given the size differences among states, a double bracket might be considered. New York and Texas might form one pair; Kansas and Arizona a second pair.
Best Case	Three states have missing returns (unfiled) rates of less than 1 percent. These are Hawaii, Kansas and New York. Hawaii and Kansas are relatively small states and New York has implemented a special initiative. Adding states with 1 percent unfiled rates to the pool would not add larger states, however, since these are Iowa, Maine, Montana, North Dakota and South Dakota. It may be that the correlation between "smaller" states and very low rates of unfiled returns is a "real" phenomenon which should be examined and the initial cut of less than 1 percent should stand.
Worst Case	Texas is an outlier, with a 15 percent unfiled rate. North Carolina had a 10 percent rate, and Arizona, 9 percent. The next closest states were Ohio and Oklahoma, with 6 percent each. Selecting Texas, North Carolina and Arizona would be a reasonable worst case choice.
Cluster	Except for New York, no information is given about programs or state initiatives. Using only the data in the table, several bases for clustering could be considered. One frequently used basis is "size of the problem": that is, 7 states account for about 45% of all unfiled returns (California, Florida, Illinois, New York, Ohio, Pennsylvania, and Texas). This basis for selection should be ruled out, however, for this job because there is no meaningful cluster from the group, except that the states are all among the larger states. The rationale for the job is bolstering each individual state's revenue, not the national pooled aggregrate. Since there are more smaller, semi-rural states than big states, the well-being of individual states would not necessarily be best served by examining what happens in the few larger states. Another basis might be a cross-tabulation of state size and rate of unfiled returns; here selection of six states could give a reasonable fix on reasons for the problem but would essentially reproduce the strategy used in the representative sample. We would conclude that data in the table are not sufficient for drawing a cluster sample.

Representative	The distribution of unfiled rates is positively skewed, which means that instances are piled up at the low end and scattered out over the high end. With such a distribution, "representative" in terms of unfiled rates would sensibly mean at the low (1 and less than 1 percent), lower middle (2 and 3 percent) and upper middle (4, 5 and 6 percent) and high (9, 10, and 15 percent) points. Assuming state size would be a "second cut" variable, New York (1 percent), California (3 percent), Ohio (6 percent) and Texas (15 percent) could be one group to study, while Kansas (less than 1 percent), Massachusetts, (2 percent), Oklahoma (6 percent) and Arizona (9 percent) could form a second group of smaller states. Together, the 8 states also would provide reasonable geographic representativeness, as well as industralized versus more rural spreads.
Typical	A frequency distribution of unfiled rates shows that 14 states had rates of 3 which turns out to be both the mode and the median for this distribution. States in this category include California, Connecticut, Illinois, Indiana, Kentucky, Maryland, Michigan, Missouri, New Jersey, New Mexico, Oregon, Rhode Island, West Virginia and Wyoming. With no other information (for the purpose of this exercise), if fewer than 14 case studies were to be made, selecting states typical in size such as Maryland, Michigan, New Jersey and Indiana would make sense.
Special Interest	New York would be of special interest as a large state with a very low rate of unfiled returns. New York also was unique in implementing relevant legislation that might have some national potential.

Question 2

While it might be possible, given the data in Table II.1, to select states on 6 of the 7 purposive bases, would the evaluation question itself present a situation when we would want to consider case studies at all?

Answer

Yes, but not as a stand-alone method. We have been asked to examine the reasons for state variation in unfiled returns. One plausible reason is that the differences are the result of how states solicit returns, monitor compliance, and penalize failure to file. We could obtain tax codes and procedures for each state, examine these, interview selected officials and generate some plausible patterns. However, understanding reasons for behavior as complex as not filing is well suited for case studies. Explanations could range from (for example) failures of managing returns actually filed, which are quite susceptible to improvement to

economic cycles which affect business circumstances and which may be less susceptible to change. Since the underlying concern is that many states may be asking for federal assistance when they would have resources to handle more of their own needs if they collected revenues owing to them, case studies of a representative sample of states coupled with examination of the special interest state could be an efficient strategy for assuring we had a comprehensive understanding of what was happening and why. To provide the generalization desirable, the case studies could be followed by a national survey of state officials, checking out the findings from the in-depth studies. Such a sequence could be quite efficient, since the national survey would not be a fishing expedition but targetted to verify initial findings. It also would offer considerable assurance that we had accurately determined reasons affecting most states.

Guidelines for Reviewing Case Study Reports

There are at least six different types of case study application in evaluation, and their strengths and limitations are different. Choosing an appropriate method depends on understanding the evaluation question. What is technically right for one question is not necessarily right for another. However, there are standards that can be applied to all case studies in evaluation. Studies that fail to meet them have questionable merit. These quidelines present the minimum standard of quality in case study evaluation, taken in conjunction with the guidance in the "Yellow Book", Policy Manual and Report Manual.[1]

Design

1. Are the evaluation questions stated clearly and explicitly? A good study informs the reader early in the report about the questions that were answered and the issues that were investigated.

2. Is the case study application clearly described? Is it appropriate? A good case study describes the case study application that was used. It explains why this application is appropriate for the kind of evaluation questions that were answered (descriptive, normative, cause-and-effect). Where several methods were used, the relationship of the case study to the other methods is clear and appropriate.

3. Was the time span of the study long enough to address the core issues fairly? A good case study reports how much time the investigation covered in relation to the history of the instance or program. Case studies aiming at a comprehensive analysis of an event as a whole begin as early as possible in its history and continue through its completion or stabilization. Evaluation case studies have covered shorter periods and involved less on-site investigation than research case studies characteristically do. Readers should recognize, however, that as time shortens, so may the value of the method as a way of presenting a comprehensive understanding of the event as a whole.

4. Is the basis for case selection presented? Is it appropriate for the purpose of the case study? A good case study presents the reasons for selecting the instances that were examined. The reasons are appropriate for the case study application, an issue of particular concern if a generalization of the findings is intended. For assessing the study's adequacy, the kind of site selected is as important as the number of sites selected.

[1]These guidelines have been adapted from "Guidelines for Reporting Large Case Studies" by John R. Gilbert in David C. Hoaglin et al., Data for Decisions: Information Strategies for Decisionmakers (Cambridge, Mass.: Abt Books, 1982), pp. 138-39, and Robert K. Yin, Case Study Research: Design and Methods (Beverly Hills, Calif.: Sage, 1984), pp. 140-45.

Attention should be paid to the physical setting, to the people who are served by the program, and to variations in treatment.

Data Collection

1. Are the methods of data collection presented? Are they appropriate for the purpose of the case study? Unstructured methods may be appropriate for illustrative and exploratory applications. Semistructured approaches may be appropriate for critical instance case studies involving multiple sites, particularly if more than one investigator was responsible for collecting data for several sites.

2. If more than one investigator collected the data, how were the other evaluators selected, trained, and supervised? There is considerable agreement that the consequence of the many variants in data collection for multiple sites is uncertain, but providing detailed information on the procedures that are used and an explanation of the reasons for the approach are essential to a good case study.

3. Are information sources described clearly and fully? Are they appropriate? A good case study presents in detail the sources of evidence. The detail is greater than that required in other methods. A good case study report gives the numbers and positions of the persons interviewed and the evidence that they were appropriate for the evaluation. The reader should be able to judge from the information that is given in the case study report how credible the conclusions are in terms of the appropriateness and completeness of information sources.

Data Base Formation and Data Analysis Techniques

1. Are the procedures for the formation of the data base described? A good case study describes how the data bases were formed and presents a justification for decisions that were made about the qualification, precision, and detail of information in the data base at each site.

2. Are the techniques of data-gathering and data-processing explicitly described? Readers of a good case study should know how the data were collected and, step by step, how they were analyzed. If semistructured packets of directions were used to guide field workers through the issues, a good case study describes them or includes them in technical appendixes. All the steps of data reduction and coding are described, along with the basis for transformations in these steps. The analytic techniques are explicitly described. What data sources were used in triangulation? In what order? How were discrepant findings resolved? The validity of case study methods partly depends on the resolution process.

At each step, safeguards should have been taken for completeness and the reduction of the threat of bias.

3. Were there interpretation differences, and if so how were they resolved? A good case study is explicit about differences in the interpretation of evidence and events between members of the investigative team and the reviewers of the draft report. The case study method often uses data that are more judgmental, interpretive, and subjective than other methods. The data are often less accessible to secondary analysis. Thus, a good case study states the argument and evidence more plainly than most reports have to.

4. If other studies, investigations, or experiments relevant to the issue are available, have their results been presented and reconciled with the case study findings? A good case study presents the findings and conclusions for other studies on the same issue. When the findings do not converge, the case study reconciles or explains the differences as far as possible. Completeness of information requires this step.

Reporting

1. Are methodological strengths and limitations identified clearly? A good case study reports methodological strengths and limitations for answering the evaluation questions and explains the tradeoffs that were considered and who influenced the decisions. When several decisionmakers were involved, a good case study describes the types of decisions each one made and the constraints on those decisions.

2. Are the arguments for various resolutions of the evaluation question presented? Most case studies are on topics about which some kind of opinion has been formed. In a good case study, the conceptual framework for organizing the inquiry is quite explicit about expectations. A good case study identifies the elements of the issue that was examined and presents the initial arguments in favor of the various resolutions and the findings of the study that support these resolutions.

3. Are the arguments against various resolutions of the issue presented? A good case study presents the initial arguments against the various resolutions of the issue that was considered. Case study investigators are supposed to seek evidence that confirms and evidence that contradicts the observations and conclusions. Explicitly stating the initial arguments for and against various resolutions helps readers know how thoroughly the investigators considered the issues and how thoroughly they sought evidence on both sides.

4. Does the case study identify the factors explaining the phenomena that were observed and state clearly whether the identification of these factors was based on insight and recognition or on quantitative techniques? Case studies are undertaken for their explanatory power and their superior ability to identify the reasons for problems and the nature of events. A good case study explicitly identifies alternative explanations, lays out the chain of reasoning, and makes clear which conclusions rest primarily on the investigators' insightful recognition of patterns of evidence and which have been recognized in other ways.

Impartiality and Generalizability

1. What is known about the competence and impartiality of the investigators? A good case study provides information about the experience of the investigators with case study methods and what they have written previously about the questions that were answered. The more evidence there is that the investigators have had appropriate training in case study methods, and that they have addressed related issues in ways that seem impartial and are intended to reduce bias, the greater confidence the reader can have in the quality of the work. For GAO reports, the job documentation should contain evidence that the evaluation team as a group possessed the skills required and assurance that there were no impediments to impartiality among individual team members. For reports conducted by others we plan to use in our studies, we should seek similar assurance in the report itself or from knowledgeable persons.

2. Are comments on the draft report available? Perhaps because case studies require more detail than other methods, case study reports are sometimes criticized for failing to be convincing about their impartiality. One way that a good case study counters this criticism is by the inclusion of a technical appendix that gives the full comments of the informants who reviewed the draft.

3. Is there adequate information for judging generalizability? The basis for claiming generalizability is explicit in a good case study. It provides the evidence, of whatever type and detail, that is needed for assessing this claim. In a good case study, generalizations do not exceed the basis for these, considering program diversity and how the cases studied were selected.

We provide a checklist of the guidelines discussed in this appendix in table III.1

Table III.1: Checklist for Reviewing Case Study Reports

	Yes	No
Design		
1. Are the evaluation questions stated clearly and explicitly?		
2. Is the case study application clearly described?		
3. Was the time span of the study long enough to address the core issues fairly?		
4a. Is the basis for case selection presented?		
b. Is it appropriate for the purpose of the case study?		
Data collection		
1a. Are the methods of data collection presented?		
b. Are they appropriate for the purpose of the case study?		
2. If more than one investigator collected the data, were the other evaluators properly selected, trained and supervised?		
3a. Are information sources described clearly and fully?		
b. Are they appropriate?		
Data base information and data analysis technique		
1a. Are the procedures for the formation of the data base described?		
b. Are they appropriate?		
2a. Are the techniques of data gathering and data processing explictly described?		
b. Are they appropriate?		
3a. Were there interpretation differences?		
b. If so, how were they resolved?		
4. If other studies relevant to the issue are available, have their results been presented and reconciled with the case study findings?		
Reporting		
1. Are methodological strengths and limitations identified clearly?		
2. Are the arguments for various resolutions of the evaluation question presented?		
3. Are the arguments against various resolutions of the issue presented?		
4a. Does the case study identify the factors explaining the phenomena that were observed?		
b. Does the study state clearly whether identification of these factors was based on insight and recognition or on quantitative techniques?		
Impartiality and generalizability		
1. Have proper safeguards to assure the competence and impartiality of the investigators been taken?		
2. Are comments on the draft report available?		
3a. Is there adequate information for judging generalizability?		
b. Have appropriate limitations to generalizations been observed?		

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Glossary

Backfill Techniques	Techniques used in cumulative case studies to collect information needed if the study is to be usable for aggregation; these techniques include, for example, obtaining missing information from the authors on how instances studied were identified and on the bases for instance selection.
Bias	The extent to which a measurement or an analytic method systematically underestimates or overestimates a value.
Case Study	A method for learning about a complex instance, based on a comprehensive understanding of that instance, obtained by extensive description and analysis of the instance, taken as a whole and in its context.
Convenience Sample	Instances selected where the only basis is feasibility or ease of data collection. Rarely useful in evaluation and usually is hazardous.
Construct	An attribute or concept, usually unobservable, such as educational attainment or democracy, that is represented by an observable measure.
Construct Validity	The extent to which a measurement method accurately represents a construct and produces an observation distinct from that produced by a measure of another construct.
External Validity	The extent to which a finding applies (or can be generalized) to persons, objects, settings, or times other than those that were the subject of study.
Focused Interview	An interview organized around several predetermined questions or topics, but providing some flexibility in the sequencing of the questions and without a predetermined set of response categories or specific data elements to be obtained.
Generalizability	Used interchangeably with "external validity."

Internal Validity	The extent to which the causes of an effect are established by an inquiry.
Longitudinal Data	Sometimes called "time series data," observations collected over a period of time; the instances may or may not be the same each time but the population remains constant.
Matrix of Categories	A method of displaying relationships among themes in analyzing case study data that shows whether changes in categories or degrees along one dimension are associated with changes in the categories of another dimension.
Normative	A type of evaluation question requiring comparison between what is happening (the condition) to norms, expectations and standards for what should be happening (the criterion).
Open-Ended Interviews	An interview in which, after an initial or lead question, subsequent questions are determined by topics brought up by the person being interviewed; the concerns discussed, their sequence, and specific information obtained are not pre-determined and the discussion is unconstrained, able to move in unexpected directions.
Outliers	Instances which are aberrant or don't fit with other instances; instances which, compared to other members of a population, are at the extremes on relevant dimensions.
Program Effectiveness Evaluation	The application of scientific research methods to estimate how much observed results, intended or not, are caused by program activities. Effect is linked to cause by design and analyses that compare observed results with estimates of what might have been observed in the absence of the program.
Program Evaluation	The application of scientific research methods to assess program design, implementation, and effectiveness.

Purposive Sample	Instances appropriately selected to answer different evaluation questions, on various systematic bases, such as best or worst practices; a judgmental sample. If conducted systematically, can be widely useful in evaluation.
Qualitative Data	Information based on judgments, (such as the estimated speed of a UFO) which may be expressed in numerical or non-numerical ways and data which may not be based on judgments (such as state of birth) but which are not meaningfully expressed numerically. The data sources are often textual and observational, and expressed in words.
Quantitative Data	Information based on measures that do not rely on judgments, and which are also meaningfully measured. These are usually expressed numerically, and often use continuous rather than discrete or categorical levels of measurement and scales with interval or ratio properties.
Reliability	The extent to which a measurement can be expected to produce similar results on repeated observations of the same condition or event.
Representative Sample	A sample that has approximately the same distribution of characteristics as the population from which it was drawn. Usually results from a statistical sample.
Structured Interview	An interview where questions to be asked, their sequence, and the detailed information to be gathered are all predetermined; used where maximum consistency across interviews and interviewees is needed.
Simple Random Sampling	A method for drawing a sample from a population such that all samples of a given size have equal probability of being drawn.
Triangulation	The combination of methodologies in the study of the same phenomenon or construct; a method of establishing the accuracy of information by comparing three or more types of independent points or view on data sources (for example, interviews, observation, and documentation; different investigations; different times) bearing on the same findings.

	Akin to corroboration, and an essential methodological feature of case studies.
Yoked	Concurrent with; for example, data collection and analyses in case studies are iterative and concurrent, that is, are yoked.

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EVALUATIONS

GAO

United States
General Accounting Office
Washington, D.C. 20548

Accounting and Financial
Management Division

March 16, 1987

The U.S. General Accounting Office has drafted proposed revisions to the Standards for Audit of Governmental Organizations, Programs, Activities and Functions. The standards are being revised in order to:

-- Expand and clarify explanations of standards in response to questions and recommendations received from users of the standards.

-- Expand and clarify the responsibilities of the auditor relative to certain standards.

-- Add requirements for quality control.

As part of the project to revise the standards, the Comptroller General appointed an Auditing Standards Advisory Council to provide advice on the drafting of the proposed revisions. The council members include representatives from all levels of government, public accounting, and academia.

This draft of the proposed revised standards is being sent to audit officials at all levels of government, the public accounting profession, academia, professional organizations, public interest groups, and interested nations.

For your convenience, the attached draft identifies the proposed additions to the standards with **bold type** and lines in the left margin. A separate draft showing not only the additions, but also the deleted material is available upon request. The major proposed revisions to the standards:

o Incorporate references to the Single Audit Act of 1984.

o Include guidance on the procurement of audit services.

o Clarify the types of assignments that a government audit organization might perform.

o Expand the requirements for continuing professional education and training.

o Include a requirement for an internal quality control system and the participation in an external quality control review program.

- Expand on audit risk and materiality in governmental auditing.

- Clarify the auditor's responsibility for followup on findings and recommendations.

- Clarify the auditor's responsibility for detecting and reporting on fraud, abuse and illegal acts.

- Clarify the auditor's responsibility on the study and evaluation of internal controls and reporting thereon.

- Clarify the auditor's responsibility when auditing computer-based systems and/or using computer-processed data in an audit.

- Include guidance for relying on the results of other's work.

Your comments on the proposed revisions are encouraged. In order for your comments to be considered in preparing the final revised standards, please send them by June 30, 1987 to:

W. A. Broadus, Jr.
Accounting and Financial Management Division
U.S. General Accounting Office
441 G Street, NW., Room 6106
Washington, D.C. 20548

If you need additional information, Mr. Broadus can be reached on (202) 275-9425.

Sincerely yours,

Frederick D. Wolf
Director

Attachment

DRAFT OF PROPOSED REVISIONS

GOVERNMENT AUDITING STANDARDS

Standards For Audit Of Governmental Organizations, Programs, Activities, And Functions

By the
Comptroller
General
of the
United States

1987 Revision

Note: Departures from applicable standards in this statement, including related interpretations, by those required to follow this statement must be disclosed.

Contents

INTRODUCTION CHAPTER I

Purpose

This statement contains audit standards that are to be followed by federal auditors for audits of federal organizations, programs, activities, functions, and funds received by contractors, nonprofit organizations, and other nonfederal organizations. Federal legislation requires that the federal inspectors general comply with audit standards established by the Comptroller General for audits of federal establishments, organizations, programs, activities, and functions. The legislation further states that the inspectors general should ensure that any work performed by nonfederal auditors of federal organizations, programs, activities, and functions complies with these standards.[1] The Office of Management and Budget (OMB) included these standards as basic audit criteria for federal executive departments and agencies in OMB Circular A-73.[2]

Federal legislation further requires that the standards be followed by state and local governments receiving federal financial assistance when conducting audits under the Single Audit Act of 1984.[3]

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[1]See Inspector General Act of 1978, as amended, 5 U.S.C.

[2]See section 6 of OMB Circular No. A-73 Audit of Federal Operations and Programs.

[3]See the Single Audit Act of 1984 (31 U.S.C. 7501-7507), OMB Circular A-128, Audits of State and Local Governments, and AICPA Audit and Accounting Guide for Audits of State and Local Governmental Units. The act and circular establish audit requirements for state and local governments, and indian tribal governments that receive federal financial assistance. The act and circular require that audits of these entities be made in accordance with the standards in this statement. However, the

The audit standards set forth in this statement are **also** recommended for **other** audits of state and local government organizations, programs, activities, and functions performed by state or local government auditors or by public accountants.

Auditors performing audits under certain agreements or contracts also may be required to comply with the audit standards under the terms of the agreement or contract. The standards **in this statement** relate to the scope and quality of audit effort, to the characteristics of professional and meaningful audit reports**, and to the auditor's professional qualifications.**

The American Institute of Certified Public Accountants (AICPA) has **issued** standards, that are applicable to **and generally accepted for** audits performed to express opinions on the fairness with which an organization's financial statements present the financial position, the results of operations, and changes in financial position, if applicable, **or to attest to written assertions by management.** [4]

The AICPA standards for field work and reporting have been incorporated into this statement **for financial audits.** As additional "statements on auditing standards" (SAS), are issued by the AICPA, they **will** be adopted and incorporated into these standards unless GAO excludes them by formal announcement. GAO

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act includes specific audit requirements that exceed the minimum audit requirements set forth in the standards in this statement. (See chapter V for additional comments).

[4]**The standards are included in Statements on Auditing Standards, issued by AICPA, including standards jointly issued by the Auditing Standards Board. The AICPA also issues interpretations and audit guides to provide guidance on the application of standards. These pronouncements do not have the authority of a standard issued by the AICPA, however, auditors may have to justify departures from them if the quality of their work is questioned.**

has also established a formal system for issuing government auditing pronouncements, interpretations, and guidance to the audit community. However, the interests and needs of many users in government are broader than those that can be satisfied by financial audits. To fulfill these broader interests and needs, the standards in this statement include those standards prescribed by AICPA and additional standards for expanded scope auditing.

These standards, as originally issued in 1972, were reviewed by an AICPA committee. The committee's report stated:

> "The members of this Committee agree with the philosophy and objectives advocated by the GAO in its standards and believe that the GAO's broadened definition of auditing is a logical and worthwhile continuation of the evolution and growth of the auditing discipline."[5]

In 1977, AICPA's Management Advisory Services published guidelines for certified public accountant participation in government audit engagements.[6] The guidelines indicated that public accountants engaged to perform a government audit in accordance with governmental standards may be expected to do far more than in the past. Public accountants will be called upon to use not only their financial auditing and accounting skills, but a variety of other skills as well. Further, the standards had been written for government audit agencies as well as public accounting firms.

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[5]Auditing Standards Established by the GAO--Their Meaning and Significance for CPAs, A Report, AICPA Committee on Relations with the General Accounting Office, New York, 1973, P. 12.

[6]Guidelines for CPA Participation in Government Audit Engagements To Evaluate Economy, Efficiency, and Program Results, AICPA Management Advisory Services, Guideline Series No. 6, 1977. See also Operational Audit Engagements, AICPA Special Committee on Operational and Management Auditing, New York, 1982.

Several state and local audit organizations, and several nations have also officially adopted these standards. The Institute of Internal Auditors and the American Evaluation Association (formerly the Evaluation Research Society) have also issued related standards.[7]

Scope

Our system of government today rests on an elaborate structure of interlocking relationships among all levels of government for managing public programs. Those officials and employees who manage the programs must render a full account of their activities to the public. While not always specified by law, this accountability is inherent in the governing processes of this Nation.

The requirement for accountability has caused a demand for more information about government programs. Public officials, legislators, and private citizens want and need to know not only whether government funds are handled properly and in compliance with laws and regulations, but also whether government organizations **and programs** are achieving the purposes for which programs were authorized and funded and are doing so economically and efficiently.

These standards provide for expanded scope **auditing in government** to help ensure full accountability and assist government officials and employees in carrying out their responsibilities.

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[7] **Standards for the Professional Practice of Internal Auditing, The Institute of Internal Auditors, Inc., copyright 1978; and New Directions for Program Evaluation: Standards for Evaluation Practice, no. 15. San Francisco: Jossey-Bass, September 1982.**

Expanded scope auditing in government should encompass, but is not limited to, the following:

Financial Audits[8]

1. Financial **statements**--determines (a) whether the financial statements of an audited entity present fairly the financial position, and the results of operations **or changes in financial position** in accordance with generally accepted accounting principles,[9] and (b) whether the entity has complied with laws and regulations **for those transactions and events** that may have a material effect on the financial statements.

2. Financial related - audits funds, elements, accounts and items of the financial statements, financial systems, financial information, internal control systems, computer-based systems, and specific financial compliance requirements covered by the specific audit engagement.

Performance Audits

1. Economy and efficiency **audits--includes** determining (a) whether the entity is managing and utilizing its resources (such as personnel, property, space) economically and efficiently, (b) the causes of inefficiencies or uneconomical practices, and (c) whether the entity has complied with laws and regulations concerning matters of economy and efficiency.

2. Program **audits--includes (a) determining the extent to which** the desired results or benefits established by the legislature or

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[8]**See footnote 3.**

[9]**The Governmental Accounting Standards Board and the General Accounting Office establish accounting and financial reporting standards for governmental entities.**

other authorizing body are being achieved, **(b) assessing the effectiveness of the organization, program, activity, or function, and (c) determining compliance with specific requirements of program laws and regulations.**

Relevance of Standards

The audit standards are more than the codification of current practices, tailored to existing audit capabilities. They include concepts and areas of audit coverage which are still evolving and are vital to the accountability objectives sought in auditing governments and their programs.

Auditors may perform audits that are a combination of the above or audits that include only some aspects of one of the above. It is not intended, or even feasible or desirable that every audit include all of the above.

The above expansion of **governmental** auditing highlights the importance of a clear understanding of the audit scope by all interested parties. This takes on added importance when **contracting and/or arranging for audits.** The engagement agreement should specify the scope of the work to be **performed** to avoid misunderstandings.

While this is not an audit standard, it is important that a sound procurement practice be followed to help assure that those engaged to conduct the audit are fully qualified. When contracting for audit services, it is important that sound contract award and approval procedures, including the monitoring of contract performance, be in place. The scope of the audit should be made clear. In addition to price, several other factors should be considered. They include the responsiveness by the responder to the request for proposal; the past experience of the responder; availability of responder staff with professional

qualifications and technical abilities; responder participation in training and continuing professional education in auditing governmental programs, functions, and activities; whether the responder organization has a quality control system in place; and whether the responder organization participates in an external quality review program. If the responder organization's work is referred to a professional organization for review, the responder organization should be required to waive its right to confidentiality to permit the professional organization to inform the referring government agency of its findings.

Basic Premises

The following premises underlie these standards and were considered in their development.

1. The term "audit" is used to describe not only work done by accountants and auditors in conducting financial audits but also work done in reviewing (a) compliance with applicable laws and regulations, (b) economy and efficiency of operations, and (c) effectiveness of the program.

2. Public officials have the responsibility to apply resources efficiently, economically, and effectively to achieve the purposes for which the resources were furnished. This responsibility applies to all resources, whether entrusted to public officials by their own constituency or by other levels of government.

3. Public officials are accountable both to other levels and branches of government and to the public for the resources provided to carry out government programs. Consequently they should provide appropriate reports to those to whom they are accountable. Unless legal restrictions or ethical considerations prevent them from doing so, audit organizations should make audit

findings available to the public and to other levels of government that have supplied resources.

4. Financial auditing is an important part of the accountability process since it provides independent opinions on whether **an entity's** financial statements present fairly the results of financial operations **and examines related financial matters. Performance** auditing **is also an important part of the accountability process because it provides an independent view on the extent to which government officials are efficiently and effectively carrying out their responsibilities.**

5. The interests of individual governments in many financially assisted programs often cannot be isolated because the resources applied have been commingled. Different levels of government share common interests in many programs. Therefore, an audit should to the extent practicable be designed to satisfy the common accountability interests of each contributing government.

6. Cooperation by federal, state, and local governments in auditing programs of common interest with a minimum of duplication benefits all concerned and is a practical method of auditing intergovernmental operations.

7. Auditors should rely upon the work of other auditors to the extent feasible if they satisfy themselves as to the other auditors' independence, capability, and performance by appropriate tests of their work or by other acceptable methods.[10]

An assumption underlying all the standards is that governments will cooperate in making audits in which they have mutual

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[10]**See chapter V, section B.1.c. for guidance the auditor should follow for relying on other auditors work.**

interests. This is especially true when one government receives funds from several others and each has a continuing need for a basic financial audit. In these circumstances, **financial statement** audits **generally** should be made on an organizationwide basis, rather than on a grant-by-grant basis, and in a manner that will satisfy the **reasonable financial** audit needs of the participating governments.[11]

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[11]See footnote 3, on page 1-1.

Summary of Standards

CHAPTER II

Chapter II, Summary of Standards will be revised as necessary in the final revision.

The scope of audit work standard for government auditing is:

o Expanded scope auditing of government organizations, programs, activities, and functions should encompass, **but is not limited to,** the following.

Financial Audits[1]

1. Financial **statements**--determines (a) whether the financial statements of an audited entity present fairly the financial position, and the results of operations **or changes in financial position** in accordance with generally accepted accounting principles,[2] and (b) whether the entity has complied with laws and regulations **for those transactions and events** that may have a material effect on the financial statements.

2. Financial related--audits funds, elements, accounts and items of the financial statements, financial systems, financial information, internal control systems, computer-based systems and specific financial compliance requirements covered by the specific audit engagement.

Performance Audits

1. Economy and efficiency **audits--includes** determining (a) whether the entity is managing and utilizing its resources (such as personnel, property, space) economically and efficiently, (b) the causes of inefficiencies or uneconomical practices, and (c)

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[1]**See footnote 3, chapter I.**

[2]**The Governmental Accounting Standards Board and the General Accounting Office establish accounting and financial reporting standards for governmental entities.**

whether the entity has complied with laws and regulations concerning matters of economy and efficiency.

2. Program **audits--includes (a) determining the extent to which** the desired results or benefits established by the legislature or other authorizing body are being achieved**, (b) assessing the effectiveness of the organization, program, activity, or function, and (c) determining compliance with specific requirements of program laws and regulations.**

Understanding the Scope of Audit work in a Specific Audit

Auditors may perform audits that are a combination of the above or audits that include only some aspects of one of the above. The expansion of "auditing" highlights the importance of a clear understanding of the audit scope by all interested parties.

This standard places on audit officials or entity officials, who authorize and prescribe the scopes of government audits, the responsibility for providing audit work that is broad enough to **help** fulfill the **reasonable** needs of potential users of the audit **results.**

Compliance with Laws and Regulations

The nature, purpose**, and scope** of the review of compliance with laws and regulations varies with the audit being performed.

Financial **Audits**

The auditor **should** determine whether there is compliance with laws and regulations that could materially affect the entity's financial statements **or specific financial compliance requirements.**

Performance Audits

Economy and efficiency--The auditor **should assess conformity** with laws and regulations that could significantly affect the acquisition, management, and utilization of the entity's resources.

Program --The auditor **should assess conformity** with laws and regulations **that are applicable to the audit objectives.** In government audits the compliance aspect **has** added significance because **generally** there are more compliance requirements **than in audits of non-governmental entities.** Therefore, it is important in planning audit coverage that the compliance requirements to be included are determined prior to the start of the audit. This is especially true in financial audits since the entity's financial position and statements could be affected. (See chapter V for further discussion.)

Objectives of Expanded Scope Auditing

The general objectives of expanded scope auditing are:

Financial Audits

1. Financial **statements. One of the main objectives of the financial audit is to express an opinion on an entity's financial statements. The financial audit, conducted by an auditor who is independent of the entity, provides external users of the financial statements with an independent opinion on whether the financial statements fairly present the financial position and the results of financial operations.** An **audit is to** include sufficient work to determine whether:

a. The financial statements present fairly the financial position and the results of operations **or changes in**

financial position.

b. The entity is complying with laws and regulations which if not followed could materially affect its financial statements.

2. Financial Related. In addition to the above audit of the financial statements, auditors may audit and report on such items as:

. Segments of the financial statements (e.g. funds, elements accounts, and items).

. Internal control systems (e.g. integrity reviews).[3]

. Financial systems (e.g., payroll systems).[3]

. Computer-based or transaction processing systems.[3]

. Financial information (e.g., statement of revenue and expenses, statement of cash receipts and disbursements, and statement of fixed assets).

. Specific financial compliance matters (e.g., compliance with aspects of contractual agreements or regulatory requirements).

. Review of reports and schedules.

The audit standards in this statement apply to all aspects of financial audits.

Performance Audits

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[3]Performance audits may also be conducted in these areas.

1 | 1. Economy and efficiency. The auditor **should**, where
2 appropriate, consider whether the entity:

3 a. Is following sound procurement practices.

4 b. Is following proper procedures to ensure that the needed
5 type, quality, and amount of items are available and are
6 properly used and maintained.

7 c. Avoids duplication of effort by employees.

8 d. Avoids work that serves little or no purpose.

9 e. Avoids overstaffing.

10 f. Uses efficient operating procedures.

11 | **g. Uses assets, equipment and facilities efficiently.**

12 | **h. Is complying with laws and regulations that could**
13 | **significantly affect the acquisition, management and**
14 | **utilization of the entity's resources.**

15 Because "economy" and "efficiency" are both relative terms, it is
16 | not **practicable** for an auditor to express an opinion on whether
17 an entity has reached the maximum level of either. Therefore
18 these standards do not contemplate that the auditor will be
19 called upon to give an opinion on this. Rather, the auditor
20 should report findings and conclusions on specific processes,
21 methods, or activities that can be made more efficient or
22 economical and should recommend improvements.

23 | 2. Program. **These audits may also apply to organizations,**
24 | **activities, and functions as well as programs. The auditor**

should, where appropriate:

a. Assess whether the program objectives are proper and suitable.

b. Assess to what extent the objectives of the program are still relevant.

c. Assess the adequacy of management's system for measuring effectiveness.

d. Determine the extent to which a program achieves a desired level of program results.

e. Assess the effectiveness of the program and/or of individual program components.

f. Identify factors inhibiting satisfactory performance.

g. Determine whether management has considered alternatives that might yield desired results more effectively or at a lower cost.

h. Assess conformity with laws and regulations that are applicable to the audit objectives.

i. Determine whether the program complements, duplicates, overlaps or conflicts with other related programs.

j. Identify ways of making programs work better.

The objectives, scope and methodology for program audits vary widely. Auditors should exercise sound professional judgment in determining the objectives and scope for these audits, and in selecting the methodology and techniques that will achieve the

audit objectives.

For these audits, the auditors should state their conclusions along with any recommendations. They should also describe in the report, the audit objectives, the effectiveness measurement system, performance indicators, performance standards, data sources, data collection methods and analytical techniques used.

Auditors also conduct audits that cannot be clearly included in one of the areas defined above. For example, auditors conduct audits of government contracts and grants with private sector organizations as well as government and nonprofit organizations. These are commonly referred to as "contract audits," or "grant audits." Other examples include specific audits of internal control and computer-based or transaction processing systems. These may include some aspects of each of the above areas. Auditors should follow the standards in this statement when conducting these audits.

Auditors may also be asked to perform services other than audit. For example, the auditor might be asked to gather information and data to help management carry out its duties. The head of the audit organization should establish policy on what audit standards in this statement should be followed by the auditors in performing such services. However, as a minimum, auditors should collectively possess adequate professional proficiency and exercise due professional care and objectivity.

An audit organization may also perform investigative work. The head of the audit organization should establish policy on whether the audit standards in this statement, or some other appropriate standards, should be followed by the staff performing this work.

Employees of an audit organization may also perform within the audit organization nonaudit activities, such as legal,

administrative, and computer processing functions. The head of the audit organization should establish policy on what standards in this statement should be followed, or whether some other appropriate standard, should be followed by the employees.

For all audits, auditors need to consider whether audit scope impairments will adversely affect their ability to perform the audit in accordance with the standards in this statement. Audit scope impairments are factors external to the audit organization and can restrict the auditor's ability to render objective opinions and conclusions. The auditor should attempt to remove the impairment or, failing that, report the impairment. An example is the denial of access to sources of information by the auditee, such as books, records, and supporting documents, or denial by the auditee of opportunity to obtain explanations by officials and employees of the organization, program, or activity under audit. Under these conditions an audit will be adversely affected and the auditor will not have complete freedom to make an objective independent judgment unless alternative sources of information can be obtained to satisfy the audit objectives.

GENERAL STANDARDS CHAPTER IV

The general standards apply to both government and nongovernment audit organizations unless excluded in the specific general standards which follow.

A. Qualifications

The first general standard for government auditing is:

- The auditors assigned to perform the audit **should** collectively possess adequate professional proficiency for the tasks required.

This standard places upon the audit organization the responsibility for ensuring that the audit is conducted by personnel who collectively have the skills necessary for the **scope** of audit to be **performed, and a thorough knowledge of the government environment and government auditing.**

To meet this standard, the auditor and the audit organization should maintain their professional proficiency through a program of continuing education and training. To satisfy this requirement, auditor's should have completed within the last two years at least 80 credit hours of continuing education and training that contributes directly to the auditor's professional proficiency to perform the audit. At least 24 of the 80 hours should be directly related to the government environment and to government auditing.[1] This education and training may include

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[1]This requirement should be met starting January 1, 1990. However, for employees with less than two years with the audit organization, a fewer number of hours would be acceptable, e.g. an employee with six months with the organization should have 20 hours.

current developments in auditing methodology, procedures and techniques, such as accounting, study and evaluation of internal controls, financial management, statistical sampling, and evaluation design and data analysis. The audit organization should also have an internal quality control system in place, and participate in an external quality control review program.[2]

Audits vary in purpose and scope. Some require opinions on financial statements; others require reviews of efficiency and economy or effectiveness of the program's performance; still others require assessing a program's impact on some social or economic sector of society. Meeting these requirements calls for a wide variety of skills.

The qualifications mentioned herein should apply to the skills of the audit organization as a whole and not necessarily to individual auditors. If an organization possesses personnel, or hires outside consultants, with acceptable skills in such areas as accounting, statistics, law, engineering, audit design and methodology, automatic data processing, public administration, economics, social sciences, and actuarial science, each individual member need not possess all these skills.

Qualifications for staffs performing government audits are as include:

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[2]External quality control review programs, such as those conducted through the American Institute of CPAs, National Association of State Auditors, Intergovernmental Audit Forum, U.S. General Accounting Office, and the Institute of Internal Auditors, would be acceptable. An external review should be conducted at least once every three years beginning January 1, 1988. For public accounting firms conducting a limited number of governmental audits (i.e. one or two) each year, quality reviews conducted by external organizations of the results of one or more of these audits during a 3-year period would also satisfy this requirement.

1. A knowledge of **the methods and techniques applicable to expanded scope** auditing and the education, ability, and experience to apply such knowledge to the **scope** of audit being **conducted.**

2. A knowledge of government organizations, programs, activities, and functions which may be acquired by education, study, or experience.

3. The ability to communicate clearly and effectively orally and in writing.

4. The skills necessary for the audit.

   a. For financial audits which lead to an opinion on financial statements:

      - The auditor **should** be proficient in **governmental** accounting and auditing.

      - When public accountants are to perform the audits, only **licensed** certified public accountants, or public accountants licensed on or before December 31, 1970, or persons working for a **licensed** certified public accounting firm, or a public accounting firm licensed on or before December 31, 1970, should be engaged.[3]

        (When engaging auditors from other nations to conduct audits in that nation, the auditors should meet the professional qualifications to practice under that nation's laws and regulations. Also see the International Federation of Accountants, International

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[3]**Accountants and/or accounting firms meeting this requirement should also be properly licensed in the jurisdiction where the audit is being conducted.**

Auditing Guideline 3.)

b. The skills of the audit staff **should** also be appropriate for **the scope** of audit work **being performed.** For instance:

- o If the work requires use of statistical sampling techniques, the staff or consultants to the staff **should** include persons with statistical sampling skills.

- o If the work requires extensive review of computerized systems, the staff or consultants to the staff **should** include persons with computer audit skills.

- o If the work involves review of complex engineering data, the staff or consultants to the staff **should** include persons with engineering skills.

- o **If the work involves the use of nontraditional audit methodologies, the staff or consultants to the staff should include persons with the necessary skills.**

B. Independence

The second general standard for government auditing is:

o In all matters relating to the audit work, the audit organization and the individual auditors, whether government or public, **should** be free from personal or external impairments to independence, **should** be organizationally independent, and **should** maintain an independent attitude and appearance.

This standard places upon auditors and audit organizations the

responsibility for maintaining independence so that opinions, conclusions, judgments, and recommendations will be impartial and will be viewed as impartial by knowledgeable third parties.

Auditors should consider not only whether they are independent and their attitudes and beliefs permit them to be independent, but also whether there is anything about their situation that might lead others to question their independence. All situations deserve consideration since it is **essential** not only that auditors be, in fact, independent and impartial but also that knowledgeable third parties consider them so.

Government Auditors need to consider three general classes of impairments to independence: personal, external, and organizational. If one or more of these affect their ability to do their work and report their findings impartially, they should decline to perform the audit. **However, in those situations when the auditors can not decline to perform the audit, they should report the impairment in a prominent place in the audit report. In addition, if** the auditors are employees of the audited entity, they should state that in a prominent place in the audit report.

Nongovernmental auditors also need to consider those personal and external impairments that might affect their ability to do their work and report their findings impartially. If their ability is adversely affected, they should decline to perform the audit. Public accountants should also follow the AICPA code of professional ethics.

Personal Impairments

There are circumstances in which auditors **may not** be impartial because of their view or personal situation. **Auditors are responsible for notifying the appropriate official within their audit organization if they have any personal impairments.** While

these impairments apply to individual auditors, they may also apply to the audit organization. These circumstances include, but are not limited to, the following:

1. Official, professional, personal, or financial relationships[4] that might cause the auditor to limit the extent of the inquiry, to limit disclosure, or to weaken audit findings in any way.

2. Preconceived ideas toward individuals, groups, organizations, or objectives of a particular program that could bias the audit.

3. Previous involvement in a decisionmaking or management capacity that would affect current operations of the entity or program being audited.

4. Biases, including those induced by political or social convictions, that result from employment in, or loyalty to, a particular group, organization, or level of government.

5. Subsequent performance of an audit by the same individual who, for example, had previously approved invoices, payrolls, claims, and other proposed payments.

6. Subsequent performance of an audit by the same individual who maintained the official accounting records.[5]

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[4]**When auditing state and local governments, the public accountant should be familiar with AICPA Professional Ethics Interpretation 101-10. This interpretation establishes specific rules on financial relationships that impair the public accountants independence.**

[5]For example, an individual performs a substantial part of the accounting process or cycle, such as analyzing, journalizing, posting, preparing adjusting and closing entries, and preparing the financial statements, and later performs an audit. **In**

7. Financial interest, direct or substantial indirect, in the audited entity or program.

External Impairments

Factors external to the audit organization **may** restrict the audit or interfere with an auditor's ability to form independent and objective opinions and conclusions. For example, under the following conditions an audit **may** be adversely affected and the auditor **may** not have complete freedom to make an independent and objective judgment:

1. Interference **external to the audit organization** in the assignment, **appointment, and promotion** of audit personnel.

2. **Interference or influence external to the audit organization that improperly or imprudently limits or modifies the scope of an audit.**

3. **Interference external to the audit organization with the selection or application of audit procedures or the selection of transactions to be examined.**

4. **Unreasonable restrictions on the time allowed to competently complete an audit.**

5. Restrictions on funds or other resources **provided** to the audit organization **that would adversely affect the audit**

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instances when the auditor acts as the main processing center for transactions initiated by the auditee, **but** the auditee acknowledges responsibility for the financial records and financial statements, the independence of the auditor is not necessarily impaired.

organization's ability to carry out its responsibilities.

6. Authority to overrule or to influence the auditor's judgment as to the appropriate content of an audit report.

7. Influences that jeopardize the auditor's continued employment for reasons other than competency or the need for audit services.

Organizational Impairments

Auditors' independence can be affected by their place within the structure of the government entity to which they are assigned and also by whether they are auditing internally or auditing other entities.

Internal auditors

A federal, state, or local government auditor**, or an auditor employed by other governmental entities, such as a publicly owned college, university, or hospital,** may be subject to **administrative** direction from persons involved in the government management process. To help achieve maximum independence, the audit function or organization should report **the results of their audits and be accountable** to the head or deputy head of the government entity and should be organizationally located outside the staff or line management function of the unit under audit.

Auditors should also be sufficiently removed from political pressures to ensure that they can conduct their audits objectively and can report conclusions objectively without fear of **political repercussion.** Whenever feasible, they should be under a personnel system where compensation, training, job tenure, and advancement are based solely on merit.

If the above conditions are met, and there are no personal or external impairments, the audit staff should be organizationally independent to audit internally and free to report objectively to top management. The main objective of an internal audit staff is to serve the entity. Therefore, internal auditors **are** not independent of the entity while auditing within **the entity.**[6] While the internal auditor **is** not independent **of the entity,** the external auditor, in auditing the entity, should use the internal auditor's work to the extent feasible after appropriate tests are performed.[7]

When organizationally independent internal auditors perform audits external to the government entity to which they are assigned, they **should** be considered independent of the audited entity and**, assuming there are no personal or external impairments,** should be free to objectively report the findings.

External auditors

Government auditors **within audit organizations** whose **heads** are elected and legislative auditors auditing executive entities usually are free of organizational impairments when auditing outside the government entity to which they are assigned.

Government auditors may be presumed to be independent of the audited entity, assuming there are no personal or external

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[6]An exception might be the **federal statutory** inspectors general within the federal government. The inspectors general, by law, have certain reporting responsibilities to the Congress, including reporting the results of in-house audits. This removes some of the organizational impairments.

[7]**See chapter V, section B.1.c. for guidance the auditor should follow for relying on internal auditors' work.**

impairments, if the entity is:

1. A level of government other than the one to which they are assigned (federal, state, or local).

2. A different branch of government within the level of government to which they are assigned (legislative, executive, or judicial).

Government auditors may also be presumed to be independent assuming there are no personal or external impairments if **the audit organizations heads** are:

1. Elected by the citizens of their jurisdiction.

2. Elected or appointed by and report **the results of their audits to and are accountable** to the legislative body of the level of government to which they are assigned.

3. Appointed by the chief executive **but** confirmed by and report **the results of their audits to and are accountable** to the legislative body of the level of government to which they are assigned.

C. Due Professional Care

The third general standard for government auditing is:

o Due professional care is to be used in conducting the audit and in preparing related reports.

This standard places upon the auditor and the audit organization the responsibility for employing professional standards in auditing government organizations, programs, activities, and functions. **Audits of federal organizations, programs,**

activities, functions, and funds received by contractors, nonprofit organizations, and other nonfederal organizations should be made in accordance with the generally accepted government auditing standards set forth in this statement. Auditors should exercise due professional care and use sound professional judgement in determining the standards that are applicable to the work to be performed, and therefore should be followed. Occasionally, however, situations may occur where the auditors did not follow a standard that should have been followed. In these situations the auditors should disclose, in the appropriate sections of their report, the fact that an applicable standard was not followed, the reasons therefore, and the effect not following the standard had or may have on the results of the audit.

This standard does not imply unlimited responsibility; neither does it imply infallibility on the part of either the audit organization or the individual auditor. The standard does require professional performance of a quality appropriate for the audit assignment undertaken.

The standard requires the auditor to be alert for situations or transactions that could be indicative of fraud, abuse, or illegal expenditures or acts, inefficiencies, or ineffectiveness. The standard does not, however, require that the auditor give absolute assurance that no impropriety exists; nor does it require that all transactions be audited.

Auditing is not a substitute for an internal control system. Management is responsible for instituting adequate procedures and controls to provide reasonable assurance against irregularities and improprieties and encouraging adherence to adopted policies and prescribed requirements. **The auditor should rely on the system of internal control in determining the nature, extent, and timing of audit tests, if an appropriate study and evaluation is**

made to ensure that the system is adequate and that it is functioning as designed.

Exercising due professional care means using sound judgment in choosing audit tests, procedures, and methodology, and in preparing reports. As a minimum the choice of tests, procedures, and methodology requires consideration of:

1. What is necessary to achieve the audit objectives.

2. Materiality of matters to which the tests, procedures, and methodology will be applied.

3. Effectiveness of internal controls.

4. Cost versus benefits of the audit work being done.

The quality of audit work and related reports depends upon the degree to which:

1. The scope of the audit work and the tests, procedures, and methodology utilized are adequate to ensure that material and significant matters are reasonably likely to be detected and evaluated.

2. Audits are properly designed to achieve planned objectives and are performed by competent persons. Where appropriate, statistical sampling, standardized data collection, statistical inference, quantitative techniques, and other aspects of quantitative analysis should be used.

3. Findings and conclusions are based on an objective evaluation of all pertinent evidence.

4. Findings and conclusions in reports are fully supported by

evidence obtained or developed during the audit.

5. The audit process conforms with the **field work** standards and the reporting standards in chapters V, VI, and VII, respectively.

6. A review is **made** of the work **performed** and of the judgment exercised by those assisting in the **audit.**

Due professional care also includes obtaining a mutual understanding of the audit scope and objectives with the audited entity as well as those who authorized the audit. It also includes obtaining a working understanding of the operations to be audited and **when necessary,** available performance measurement criteria (including laws and regulations). When the criteria are vague, the auditors should seek interpretation. If interpretation is not available, auditors should strive to agree on the appropriateness of these measures with the interested parties, or **if applicable,** indicate that they were unable to report upon performance because of the lack of definitive criteria.

The auditor should consider materiality in planning the audit and in designing auditing procedures as well as in deciding whether a matter requires disclosure in an audit report. The criteria to be considered in a materiality decision includes the dollar amount of the item. However, the significance of the item should depend not only on its relative size but also on qualitative as well as quantitative factors, the cumulative effect and impact of immaterial items, the objectives of the work undertaken, the use of the information of which the item is a part, and the effect which the reported information is likely to have upon the user or groups of users of the information. Decisions on these criteria are based on the auditor's professional judgment. In government audits, the materiality level may be lower than in similar-type

audits in the private sector, because of the stewardship responsibility of the entity and the various legal and regulatory requirements. Thus in the audit of governmental organizations, programs, activities, and functions, materiality and/or risk may have to be considered for such factors as:

-- the amount of expenditures,

-- the newness of the activity or changes in its conditions,

-- the adequacy of internal control systems,

-- the results of prior audits,

-- the level and extent of review or other form of independent oversight,

-- the adequacy of the internal controls for ensuring compliance,

-- the expectation of adherence to applicable laws and regulations, and

-- the users' expectations.

In governmental audits, the auditor may face additional risks beyond those of some commercial audits because of the stewardship responsibility of the entity, the various legal and regulatory requirements to be complied with, and the visibility and sensitivity of government programs, activities, and functions.

The risk is that certain matters not included in the scope of audit because they are immaterial to the audit objective may be considered significant by knowledgeable users of the audit report. Not reporting such matters might reflect unfavorably on

the quality of the audit. This risk should be considered in planning the audit.

There is a body of technical knowledge on specific audit scopes, tests, procedures and methodology; some generalized and some specific to certain industries, types of audits, or special circumstances. The auditor should have an understanding of this body of knowledge sufficient to apply it to the audit being undertaken. This is necessary in order to ensure that the scope and selected tests, procedure, and methodology are appropriate.

Due professional care also includes follow-up on known findings and recommendations from previous related audits that could affect the audit objective to determine whether prompt and appropriate corrective actions have been taken by entity officials. In subsequent audits, the auditor's report should disclose the status of previous known unresolved significant or material findings and recommendations from prior related audits that affect the audit objective. As a minimum, government auditors should normally establish a system that enables them to track the status of their previous significant or material findings and recommendations.

FIELD WORK AND REPORTING STANDARDS FOR FINANCIAL AUDITS

CHAPTER V

The standards for field work and reporting for government financial audits include the AICPA auditing standards **for field work and reporting.** However, to satisfy the unique needs of government, additional standards and requirements are added **below.**

A. AICPA Statements on Auditing Standards

AICPA auditing standards for field work and reporting are adopted and incorporated in this statement for government financial audits. **The AICPA's basic standards of field work and reporting are as follows:**

Standards of Field Work

1. The work is to be adequately planned and assistants, if any, are to be properly supervised.

2. There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted.

3. Sufficient competent evidential matter is to be obtained through inspection, observation, inquiries, and confirmations to afford a reasonable basis for an opinion regarding the financial statements under examination.

Standards of Reporting

1. The report shall state whether the financial statements are presented in accordance with generally accepted accounting principles.

2. The report shall state whether such principles have been consistently observed in the current period in relation to the preceding period.

3. Informative disclosures in the financial statements are to be regarded as reasonably adequate unless otherwise stated in the report.

4. The report shall either contain an expression of opinion regarding the financial statements, taken as a whole, or an assertion to the effect that an opinion cannot be expressed. When an overall opinion cannot be expressed, the reasons therefore should be stated. In all cases where an auditor's name is associated with financial statements, the report should contain a clear-cut indication of the character of the auditor's examination, if any, and the degree of responsibility he is taking.

These standards are set forth and expanded on in the AICPA's statements on auditing standards. Future statements, will be adopted and incorporated unless GAO excludes them by formal announcement.

B. Additional Standards and Requirements

To satisfy the unique needs of government, additional standards and requirements are added. These are discussed below.

1. Standards on Field Work

The following areas under **field work** need additional attention in government financial audits.

a. Planning

- Planning **should** include consideration of the requirements of all levels of government.

In many instances, audits of the same organizations, programs, activities, or functions may be required by federal, state, and local laws, regulations, and ordinances.[1]

When this situation exists, the auditor should ascertain what governments are to be served by the audit, and to the maximum extent practicable, plan the audit so that it will fulfill the **reasonable financial audit** needs of potential users.

b. Legal and Regulatory Requirements

- A review is to be made of compliance with applicable laws and regulations.

In government auditing, compliance with laws and regulations is significant because government organizations, programs, activities, and functions are usually created by law and have more specific rules and regulations than **are required in the private sector.**

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[1]**When auditing state and local governments that receive federal financial assistance, the auditor should be familiar with the Single Audit Act of 1984 (31 U.S.C. 7501-7507), OMB Circular A-128, Audits of State and Local Governments, and AICPA audit and accounting guide, Audits of State and Local Governmental Units. The act and circular include specific audit requirements that exceed the minimum audit requirements set forth in the standards in this statement (see B. 1. b. and e.).**

This standard places upon the auditors the responsibility for determining whether the audited entity has complied with the laws and regulations **that are applicable to the specific audit objectives.** Auditors should consult with legal counsel when questions arise concerning the interpretation of laws and regulations. In financial auditing, the auditors are to test the financial transactions of the audited organization, program, activity, or function to determine whether there is compliance with **those** laws and regulations that **if not followed could** materially affect the entity's financial statements, **and/or specific audit objectives.**[2] Specifically, the auditors are to satisfy themselves that the entity has not incurred significant unrecorded liabilities (contingent or actual) through failure to comply with, or through violation of, laws and regulations.

Also, in government audits, more in-depth transaction testing may be required than in **some** commercial audits, to provide reasonable assurance of compliance with laws and regulations. For example, when transactions selected for testing include grant transactions, the auditors should determine whether costs were charged to the proper grant and allocated equitably among grants and other benefiting activities.

c. Working Papers

- A written record of the auditors' work **is to** be retained in the form of working papers.

Working papers are the link between field work and the auditors'

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[2]**The Single Audit Act [31 U.S.C. 7502 (d) (2) (C)] also requires the auditor to determine and report on whether the entity has complied with laws and regulations that may have a material effect upon each major federal assistance program as defined in the act. Other similar requirements may exist in other government jurisdictions.**

report. They serve as a record of the results of the examination and the bases of the auditors' opinions. **The AICPA standards also provide that the auditor should prepare and maintain working papers.**

Procedures should be adopted to ensure the safe custody and retention of working papers for a time sufficient to satisfy legal and administrative requirements.

One premise underlying the audit planning is that federal, state, and local governments cooperate in auditing programs of common interest so that auditors may use each other's work and avoid duplicate efforts. Auditors should rely on other auditors' work to the extent feasible once they satisfy themselves as to the other auditors' capabilities, independence, and performance by appropriate tests of the work or by other acceptable methods. **Therefore, in determining whether to rely upon the work of others the auditor should follow the guidance discussed below:**

(1) When the other auditors are external auditors such tests include making inquiries into their professional reputation, qualifications, and independence. The auditor should consider whether to (a) perform additional tests and procedures such as reviewing the audit procedures followed and results of the audit performed by the other auditor; (b) review the audit programs of the other auditor; and (c) review the working papers, including evaluation of internal controls, compliance, and conclusions reached by the other auditor. The auditor may review the documentary evidence in the other auditor's working papers or make supplemental tests of the work performed.

(2) When the other auditors are internal auditors such tests include (a) determining whether they are competent and qualified, (b) determining whether they are properly located

in the organization in order to provide them with sufficient objectivity to conduct the audit, (c) determining whether each internal auditor's work is acceptable by examining on a test basis, the documentary evidence of the work performed, and (d) performing tests of the work by either (i) examining some of the transactions, balances or work that internal auditors examined or (ii) examining similar transactions, balances or work, but not that actually examined by internal auditors. Based upon this review, the auditor would decide what additional work, if any, would have to be done in order to accept the work of the internal auditors.

(3) When relying upon the work of nonauditors (consultants, experts, specialists, etc.), the auditors should satisfy themselves as to their professional reputation, qualifications, and independence from the organization, program, activity or function under audit. The auditor should consider whether to (a) perform additional tests and procedures such as reviewing the procedures followed and the results of the work performed; (b) review the work program; (c) review the working papers; and (d) make supplemental tests of the work performed.

(4) Determine whether the organization has an internal quality control system in place and whether the organization participates in an external quality control review program. Several organizations have developed quality assessment guidelines for organizations which might be used.

To do this, the auditors **should** have access to the working papers of the other auditors. For working papers containing restricted information, the pertinent regulations should be followed.

Arrangements should be made to ensure that working papers will be made available upon request to other government audit staffs and

individual auditors whose work follows theirs. All contractual arrangements for government audits should provide for access to working papers.

As a general guideline, working papers should:

(1) Contain a written audit program.

(2) Contain the **scope and results** of the **audit.**

(3) Not require detailed, supplementary, oral explanations.

(4) Be legible **with adequate indexing, cross-referencing and summaries.**

(5) Restrict information included to matters that are materially important and relevant to the objectives of the **audit.**

(6) Permit a review by an independent reviewer to determine the adequacy of the scope and results of the audit.

Chapter VI, section F. of this statement contains general guidelines for preparing working papers. These guidelines should be followed by the auditor in conducting financial audits.

d. Fraud, Abuse, and Illegal Acts

o Auditors **should** be alert to situations or transactions that could be indicative of fraud, abuse, and illegal expenditures and acts and if such evidence exists, extend audit steps and procedures to identify the effect on the entity's financial statements**, or specific audit objectives.**

In making audits in accordance with the standards in this statement, the auditors choose and perform auditing tests and

procedures, that in their professional judgment are appropriate in the circumstances, to achieve the audit objectives. To achieve the audit objectives the auditors perform tests and procedures designed to obtain sufficient, competent and relevant evidence that will provide a reasonable basis for their opinions, judgments and conclusions regarding the audit objectives.

In planning and performing audits, the auditor should design steps and procedures to detect situations or transactions that could be indicative of fraud, abuse, or illegal expenditures and acts that could materially or significantly impact on the audit.

When audit tests and procedures indicate that fraud, abuse, or illegal expenditures and acts may have occurred, the auditor needs to consider the potential impact of these acts on the audit objectives. If these acts could have an impact on the audit objectives, the auditor should extend the audit steps and procedures, as necessary, to determine whether they exist and the extent to which these acts materially impact on the audit objectives.[3] To protect the government's interest and to avoid unnecessary audit work, it is important that auditors exercise due professional care and caution in extending audit steps and procedures so as not to interfere with potential future investigations and/or legal proceedings. Due care would include obtaining legal counsel and advice of the cognizant law enforcement organization, where appropriate, to make this judgment. If the auditor or audit team does not possess the necessary qualifications and skills needed to effectively extend audit steps and procedures, after obtaining legal counsel they should promptly consult with knowledgeable persons before

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[3]If an audit contract does not permit the auditor to unilaterally extend steps and procedures, the auditor should obtain written approval to perform the necessary additional work. If such approval is not given to the auditor, a scope impairment generally exists which should be reported by the auditor.

extending audit steps and procedures.

Circumstances may exist where laws, regulations, or policies require auditors to promptly report indications of fraud and illegal acts to legal or investigatory authorities before extending audit steps and procedures. The auditor may also be required to withdraw from or defer further work on the audit or a portion of the audit in order not to interfere with an investigation. This requirement would not be inconsistent with the standards. However, the auditor should consider whether this would restrict the completion of the remaining portion of the audit or interfere with the auditor's ability to form objective opinions and conclusions. If it restricts or interferes the auditor should discontinue further action until completion of the investigation or terminate the audit.

Most auditors are not trained to conduct criminal investigations. This is the responsibility of the investigator or law enforcement authorities. However, auditors are responsible for knowing the characteristics of, techniques used to commit, and the types of fraud, abuse, and illegal expenditures and acts associated with the area being audited to be able to identify indications that these acts may have occurred.

An audit made in accordance with the standards in this statement will not guarantee the discovery of all fraud, abuse, or illegal acts that might have been committed. Nor does the subsequent discovery of fraud, abuse, or illegal acts committed during the audit period necessarily mean that the auditors' performance was inadequate, provided the audit was made in accordance with these standards.

e. <u>Internal Control</u>

- There is to be a proper study and evaluation of the

existing system of internal controls as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted.

Both the AICPA standards and these standards require as a minimum a preliminary review of the system of internal control as a part of the audit. If a study and evaluation is completed, it establishes a basis for determining the extent to which auditing procedures are to be restricted, and it is an intermediate step in forming an opinion on the financial statements. The AICPA's statements on auditing standards provides guidance on the auditor's study and evaluation of internal control.

For financial audits the auditor is primarily concerned with internal controls relating to accounting and financial matters. However, if other internal controls could have a material impact on the reliability of the financial statements they should also be studied and evaluated if controls are to be relied upon in selecting substantive tests.[4]

In government, compliance with laws and regulations is significant because government organizations, programs, activities, and functions are usually created by law and have more specific rules and regulations than are required in the private sector. In establishing and maintaining control systems, management should establish internal controls to ensure that they are complying with laws and regulations.

Thus as part of the auditors study and evaluation of internal

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[4]The Single Audit Act [31 U.S.C. 7502 (d) (2) (B)] also requires (no option) the auditor to study and evaluate whether the entity has internal controls that provide reasonable assurance that it is managing federal financial assistance programs in compliance with applicable laws and regulations.

control, made as part of a financial audit, the auditors should also include the internal controls that ensure compliance with laws and regulations which could materially impact the financial statements, as a basis for reliance on the internal control system.

There are a number of reasons why a study and evaluation of internal control may be limited to a preliminary review of the system. They include:

(1) An adequate internal control system does not exist for reliance thereon because of the size of the entity.

(2) The auditor may conclude that the audit can be performed more efficiently by expanding substantive audit tests, thus placing very little reliance on the internal control system.

(3) The existing internal control system may contain so many weaknesses that the auditor has no choice but to rely on substantive testing, thus virtually ignoring the internal control system.

The above circumstances may justify not completing a study and evaluation of internal controls. However, the auditors should document in their working papers why a study and evaluation did not extend beyond the preliminary review phase, and should report why the study and evaluation did not extend beyond the preliminary review phase.[5]

2. Standards on Reporting

The following additional requirements in the reporting area exist

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[5]See footnote 4.

for government financial audits:

a. Distribution

- Written audit reports are to be submitted to the appropriate officials of the organization audited and to the appropriate officials of the organizations requiring or arranging for the audits unless legal restrictions or ethical considerations prevent it. Copies of the reports should also be sent to other officials who **have legal oversight authority or who** may be responsible for taking action and to others authorized to receive such reports. Unless restricted by law or regulation, copies should be made available for public inspection.[6]

Audit reports should be distributed to as many interested officials as is practicable. In some cases, the subject of the audit may involve material that is classified for security purposes or is not releasable for other valid reasons. Generally, however, the report should be distributed to officials directly interested in the **results.** Such officials include those designated by law or regulation to receive such reports, those responsible for taking action, legislators, and those of other levels of government that have provided funds to the audited entity. Also, unless restricted by law or regulation, copies should be available for distribution to or for inspection by the public.

When public accountants are engaged, the engaging organization must ensure that appropriate distribution is made. If the public accountants are to make the distribution, the engagement

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[6]See the Single Audit Act of 1984 [31 U.S.C. 7502 (f)] and section 13 (f) of OMB Circular A-128 for the distribution of reports on single audits of state and local governments.

agreement should indicate what officials or organizations shall receive the report.

Internal auditors should follow their entity's own arrangements. Usually, they report to their entity's top management and the entity is responsible for distribution of the report.

In addition to the auditors' report on the entity's financial statements, the auditors should also prepare written reports on compliance (see subparagraph c below) and internal control (see subparagraph d below). The auditors' report on the entity's financial statements, the report on compliance, and the report on internal control, if separate reports, should normally be bound together so that the three reports are issued together in one bound document.

If the three reports are not issued together in one bound document, the auditors' report on the entity's financial statements should include a statement that reports on compliance and internal control were also issued.

b. Statement on Auditing Standards Followed in the Audit

- A statement in the auditors' reports that the examination was **or was not** made in accordance with generally accepted government auditing standards **is required.**[7] (The AICPA requires that public accountants state that the examination was made in accordance with generally accepted auditing standards. They **should** also state that their examination was performed in accordance with those additional standards and

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[7]The audit standards set forth in this publication, "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions," **subsequent revisions, and interpretations and guidance.**

requirements set forth in this chapter.)

The above statement refers to all the applicable standards that the auditors should have followed during their audit. The statement need not be qualified to indicate that standards which were not applicable were not followed. However, the statement should be qualified in situations where the auditors did not follow a standard that should have been followed during their audit. In these situations the auditors should modify the statement, and disclose in appropriate sections of their report, that a required standard was not followed, the reasons therefore, and the effect not following the standard had or may have on the results of the audit.

c. Reports on Compliance and Fraud, Abuse, or Illegal Acts

- **The auditors should prepare a report on their review of compliance with applicable laws and regulations. This may be included in** either the auditors' report on the **financial audit** or a separate report **and should** contain a statement of positive assurance on those items of compliance tested and negative assurance on those items not tested. It **should** also include material instances of noncompliance. **All** instances or **apparent** indications of fraud, abuse, or illegal acts found during or in connection with the audit **should also be reported.**[8]

Positive and Negative Assurances

Positive assurance consists of a statement by the auditors that the tested items were in compliance with applicable laws and

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[8]**The Single Audit Act [31 U.S.C. 7502 (d) (3)] also requires the auditor to report all instances of noncompliance with laws and regulations found during the audit.**

regulations. Negative assurance is a statement that nothing came to the auditors' attention as a result of specified procedures that caused them to believe the untested items were not in compliance with applicable laws and regulations.[9]

Noncompliance

Material instances of noncompliance should be reported **in relation to the program, award, claim, fund, or group of accounts selected for testing. However, several instances of noncompliance which by themselves may not be material could have a cumulative material effect and should be reported.** Minor **instances of** noncompliance **should also be reported if illegal. Other minor noncompliance need not be disclosed in the audit report, but should be reported in a separate communication to the auditee.[10]**

In reporting noncompliance, the auditors should place their findings in proper perspective. The extent of noncompliance should be related to the number of cases examined to give the reader a basis for judging the prevalence of noncompliance. In presenting the findings, the auditor should **to the extent practicable follow the appropriate report contents standards and the report presentation standards discussed in** chapter VII, sections D and E of this statement.[11]

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[9]**See footnote 2.**

[10]**See footnote 8.**

[11]**Audit findings have often been regarded as containing the elements of condition, criteria, cause and effect. However, the elements needed for a complete finding depend entirely on the objectives of the audit. Thus, a finding or set of findings is complete to the extent that the audit objectives are satisfied and the report clearly relates those objectives to the finding's elements. It is recognized that material internal control**

Fraud, Abuse, and Illegal Acts

If, during or in connection with an audit of a government entity, external government auditors become aware of fraud, abuse, or illegal acts or **apparent** indications of such acts affecting the government entity, they should promptly notify the top official of that entity (unless the official is believed to be a party to such acts or otherwise implicated) and the appropriate law enforcement authorities. If the acts involve funds received from other government entities, auditors should also promptly notify **the proper government** officials**, including the audit organization,** of those entities.

Internal government auditors auditing a government entity that is external to the government entity to which they are assigned should promptly notify officials and authorities in accordance with the preceding paragraph.

Public accountants performing government audits will discharge their responsibility by promptly notifying the entity arranging for the audit. **However, if the acts involve funds received from other government entities, public accountants should also promptly notify the proper government officials, including the audit organization, of those entities.**

Internal government auditors **auditing within the government entity to which they are assigned** should notify the top officials

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weaknesses and noncompliance found by the auditor may not always have all of these elements fully developed, given the scope and objectives of the specific financial audit. But at least the auditor should identify the condition, criteria and possible asserted effect to provide sufficient information to federal, state and local officials to permit them to determine the effect and cause in order to take timely and proper corrective action.

of the entity under audit.

It will be the responsibility of ~~the~~ **an** entity, **both auditee and funding entity,** receiving the information, **from the various auditors,** to notify appropriate law enforcement authorities and other government entities whose funds may be involved.

In the case of an audit of government funds received by a nongovernment entity, the auditors should promptly notify the appropriate **governmental** entity **requiring or** arranging for the audit **and such other officials designated by law or regulation to receive the audit reports.**

All fraud, abuse, or illegal acts or **apparent** indications of such acts, whether material or not, that auditors become aware of should normally **not be included in the other required audit reports, but** be covered in a separate written report and submitted in accordance with the preceding paragraphs, thus permitting the overall report to be released to the public. However, auditors **generally** should not release reports containing information on such acts, or reports with references that such acts were omitted from reports, without consulting with legal counsel, since this could interfere with legal processes or subject the implicated individuals to undue publicity, **or might subject the auditor to potential legal action.**

d. Report on Internal Control

- The auditors **should prepare a** report on their study and evaluation of internal controls made as part of **a** financial

audit.[12] **This may be included in either the auditors' report on the financial audit or a separate report. The auditor's report should** identify as a minimum: (1) the entity's significant internal accounting **and other controls, including controls established to assure compliance, that have a material impact on the financial audit objectives,** (2) the controls identified that were **studied and** evaluated, (3) the controls identified that were not **studied and** evaluated (controls which were limited to a preliminary review), and (4) the material weaknesses identified as a result of the **study and** evaluation.

Material weaknesses in internal control should be described in the auditors' report on internal control. In reporting weaknesses, the auditors should to the extent practicable follow the appropriate report contents standards and the report presentation standards discussed in chapter VII, sections D and E of this statement. Also see discussion of presenting findings in footnote 11 on page 5-16.

When the study and evaluation of internal controls was limited to a preliminary review of the system, the auditors should describe in their report why the study and evaluation did not extend beyond the preliminary review phase. (See last two paragraphs of subsection 1 e above.)

The AICPA's statements on auditing standards, and interpretations thereof, give guidance on reporting on internal control.

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[12]This standard does not require any additional audit effort other than that required as part of a normal financial audit described in this statement. **However, the Single Audit Act [31 U.S.C. 7502 (d) (2) (B)] requires the auditor to study and evaluate and report on whether the entity has internal controls that provide reasonable assurance that it is managing federal financial assistance programs in compliance with applicable laws and regulations.**

However, the additional requirements **for reporting on internal controls** stated in the above standard **should** be included in the report.

e. Other Reporting

- **If not included in** the auditors' report on the financial **audit ~~or~~, then** a separate report **should** contain any other material deficiency findings identified during the audit not covered in subparagraphs **2** c **and** d above.

In presenting the findings, the auditors should **to the extent practicable follow the appropriate report contents standards and the report presentation standards** discussed in chapter VII, sections D and E of this statement.[13]

Nonmaterial weaknesses in internal controls or nonmaterial instances of noncompliance not reported in the required reports, should be reported in a separate communication to the auditee. The auditor should refer to this communication in the required reports.

f. Privileged and Confidential Information

- If certain information is prohibited from general disclosure, the report **should** state the nature of the information omitted and the requirement that makes the omission necessary.

Certain information may be prohibited from general disclosure by federal, state, or local laws or regulations. Such information may be provided on a need-to-know basis only to persons authorized by law or regulation to have it.

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[13]**See footnote 11 on page 5-16.**

If the auditors are prohibited by such requirements from including pertinent data in the report, they should state the nature of the information omitted and the requirement that makes the omission necessary. The auditor should obtain assurance that a valid requirement for the omission exists, **and where appropriate consult with legal counsel.**

Auditors should consult with legal counsel before releasing reports with references that fraud, abuse, or illegal acts or apparent indications of such acts were omitted from reports.[14]

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[14]**See last paragraph of subsection 2 c above.**

FIELD WORK STANDARDS
For PERFORMANCE AUDITS

CHAPTER VI

A. Planning

The first **field work** standard for government **performance** audits is:

- Work is to be adequately planned.

Planning is important to ensure that the audit results will satisfy the objectives of the audit. Adequate planning is especially important in **performance audits**, because the **steps, procedures, and methodologies** employed in such audits are varied and complex.

This standard places upon the auditor or audit organization the responsibility for thoroughly planning an audit. This should include planning how the audit objectives can be attained while establishing a balance between audit scope, time frames, and staff-days to be spent to ensure optimum use of audit resources. The auditor should see that necessary or desired auditing **steps, procedures, and methodologies** are systematically laid out so that they can be understood by the assigned audit staff.

Planning is extremely important in intergovernmental auditing because, in many instances, the audit work performed at one level of government should be correlated with work **performed** at the same level or different levels. All or some may have an interest in, or a statutory requirement to review, the discharge of financial, management, or program accountability of a single organization, program, activity, or function. When such coordination is necessary, planning **should** be done by some

central audit agency which will establish the audit objectives and scope so that the participatory audits **performed** at individual sites will be comparable and the results can be consolidated.

There is a body of technical knowledge on specific audit scopes, tests, procedures and methodology; some generalized and some specific to certain industries, types of audits, or special circumstances. The auditor should have an understanding of this body of knowledge sufficient to apply it to the audit being undertaken. This is necessary to ensure that the scope and selected tests, procedures, and methodologies are appropriate.

Adequate planning should include consideration of:

1. The audit objectives, scope and methodologies.

2. Coordination with other government auditors, when appropriate, including work already **performed** and other work that may be intended in the future.

3. Personnel to be used on the assignment.

4. Use of consultants, experts, and specialists.

5. Work to be **performed.**

6. The format and general content of the report to be issued.

7. Materiality and audit risk.

Audit Objectives, Scope and Methodologies

Determining and explaining the rationale for selecting an audit's objectives, scope and methodologies requires logical and

systematic thinking.

In developing audit objectives, it is important to be clear about the aspect(s) of the program, activity, function, or organization to be audited.

The objectives set for an audit extend throughout every other aspect of the audit, from the selection of scope, methodologies and staff to the timing and nature of reports. Time invested in determining an audit's precise objectives is usually time well spent because an audit without clear objectives is likely to result in wasted resources, delays, and poor quality reports. In analyzing possible audit objectives, auditors need to bring to bear on the decision all that they know about the significance of an issue, the contribution they can make, and the availability of data and resources.

Decisions about audit scope should be based on such factors as audit objectives, what the auditors or others already know about the subject, user needs, the priority which should be given to providing users with particular kinds of information, the availability and recency of data, the ease and appropriateness with which particular analytic techniques could be applied, and the time and resources available.

"Methodology" refers to the process used to gather and analyze data and to reach conclusions and recommendations. The methodology selected must provide evidence that will achieve the objectives of the audit.

Coordination

In government auditing, a central audit agency, such as a federal or state audit organization, may be responsible for audits involving work at several different locations by its field office

staff. The central agency **should** carefully plan these audits to ensure that they will be **performed** effectively and efficiently.

Planning for such audits must be tailored to the specific audit objectives. Ordinarily the central audit agency should specify the compliance requirements to be considered by the auditor, the aspects of economy and efficiency to be included in the audit, and the program goals and objectives and measurement criteria to be used in reviewing **an organization, program, activity and function.** Unless such planning is carefully done and communicated to the participating staffs, the audit results may not meet the needs and expectations of the central audit agency. Unplanned audit effort will make it difficult to compare and consolidate the **results** from various locations.

Furthermore, a coordinated audit can be planned more efficiently and economically at the central audit agency level. For example, researching the program laws and regulations and establishing clear and concise audit objectives are time consuming. To have each participating staff do this would create excessive duplication and cost. Some audits require even closer coordination because a given event may be audited at more than one location by different staffs. The preparation of detailed audit programs for such audits is an integral part of the standard for planning.

Multiple-Use Audits

In many instances, audits of the same organizations, programs, activities, or functions may be required by federal, state, and local laws, regulations, and ordinances. **When this situation exists, to avoid duplicate efforts, auditors in planning their work should, to the maximum extent possible, coordinate with other government auditors to determine whether they have any audit work planned, in process, or completed that may be used to**

satisfy some or all of their planned work. Whenever practicable, an audit should be made that includes the requirements of other levels of government.

Personnel

Staff planning should include:

1. Assigning qualified staff having education and experience commensurate with the work to be performed.

2. Assigning enough experienced staff and supervisors to the audit. Consultants should be used when necessary.

3. Providing on-the-job training for staff.

Work To Be Performed

Written audit programs should be prepared for each audit and are essential to conducting audits efficiently and effectively. Audit programs provide:

1. A systematic series of audit steps, procedures, and methodologies which can be communicated to the assigned staff members.

2. A systematic basis for assigning work to supervisors and assistants.

3. The basis for a summary record of work performed.

However, a written audit programs should not be used merely as a checklist of steps to be performed. Effective work on performance audits requires that the staff understand the objectives of the audit and use their own initiative in

determining the appropriateness of steps in the audit program and in assessing the results of the work performed.

The information needed by the auditor to prepare audit programs varies with the audit objectives and the entity to be audited. In many instances, a survey of the entity may be made before preparing detailed audit programs. The audit survey is an effective method to help identify specific audit areas. It is a process for quickly gathering information, without detailed verification, on the organizations, programs, activities, and functions.[1]

A survey will provide information about the size and scope of the entity's activities and areas in which there may be weaknesses in internal controls, uneconomical or inefficient operations, lack of effectiveness in achieving goals, or lack of compliance with laws and regulations. However, tests to determine the significance of such matters are generally performed in the detailed audit work as specified in the audit programs.

Audit programs should generally include the following information:

1. Introduction and background - Information should be provided about the legal authority for the audited organization, program, activity, or function; its history and current objectives; its principal locations; and similar information needed by the auditor to understand and carry out the audit program.

2. Scope of the audit - The scope of the audit should be clearly

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[1]The concepts and procedures of the audit survey are discussed in GAO Audit Standards Supplement No. 11 entitled, The Audit Survey - A Key Step in Auditing Government Programs.

identified.

3. Objectives of the audit - The specific **objectives** of the audit should be clearly stated.

4. Definition of terms - Any unique terms or abbreviations used by the audited entity should be defined or explained.

5. Special instructions - The auditors must clearly understand and reach early agreement on the responsibilities in each audit. This is especially important when the work is to be directed by a central audit organization with work to be performed at several different locations. This section may be used to list the responsibilities of each audit organization, such as preparing audit programs, **performing audit work,** supervising audit work, drafting reports, handling auditee comments, and processing the final report.

6. Audit procedures - For most audits, it is desirable to prescribe **steps,** procedures, **and methodologies including any sampling plans** for the auditors to follow. The central audit organization planning the work should ordinarily prescribe **steps, procedures, methodologies, and any sampling plans** to be followed in the **audit** to be sure that the data obtained from participating locations will be comparable. However, this should be done in a manner that does not restrict the auditors' professional judgment. Audit programs should never be used as a blind checklist in a way that stifles initiative and thoroughness.

7. Report - The audit program should set forth the general format **(if not included in organization audit policy and procedures)** to be followed in the audit report and discuss the types of information desired to be in it.

Reliance On Others

One premise underlying the audit standards is that federal, state, and local governments cooperate in auditing programs of common interest so that auditors may use each other's work and avoid duplicate efforts. Auditors should rely on other auditors' work to the extent feasible once they satisfy themselves as to the other auditors' capabilities, independence, and performance by appropriate tests of the work or by other acceptable methods. **Therefore, in determining whether to rely upon the work of others, the auditor should follow Chapter V, Section B.1.c.**

To do this, the auditors **should** have access to the working papers of the other auditors. For working papers containing restricted information, the pertinent regulations should be followed.

Arrangements should be made to ensure that working papers will be made available upon request to other government audit staffs and auditors who perform audits at later dates. All contractual arrangements for government audits should provide for access to working papers.

B. Supervision

The second **field work** standard for government **performance** audits is:

o Assistants are to be properly supervised.

This standard places upon the auditor or audit organization the responsibility for seeing that staff, **including outside consultants and specialists,** receive appropriate guidance in performing their work to ensure high quality work and effective on-the-job training.

The most effective way to ensure the quality and expedite the progress of an assignment is by exercising proper supervision from the start of the planning to the completion of the report draft. Supervision adds seasoned judgment to the work performed by less experienced staff and provides necessary training for them.

Assigning and using assistants is important to satisfactory achievement of objectives. Since training, experience, and other qualifications vary among auditors, work assignments must be commensurate with abilities.

Supervisors should satisfy themselves that assistants clearly understand their assigned tasks before starting the work. Assistants should be informed of not only what work they are to do and how they are to proceed, but why the work is to be performed and what it is expected to accomplish.

With experienced staff, the supervisors' role may be more general. They may outline the scope of the work and leave details to assistants. With a less experienced staff, the supervisor may have to handle many details and specify to the staff what to do and how to do it.

Supervisory reviews should determine whether (1) conformance with audit standards is obtained, (2) the audit programs are followed, unless deviation is justified and authorized, (3) the working papers adequately support findings and conclusions and provide sufficient data to prepare a meaningful report, and (4) the audit objectives are met. Supervisory reviews should be documented and retained in the working papers.

C. Legal and Regulatory Requirements

The third field work standard for government performance audits

is:

- A review is to be made of compliance with applicable laws and regulations **that are applicable to the specific audit objectives.**

In government auditing, compliance with laws and regulations is significant because government organizations, programs, activities, and functions are usually created by law and have more specific rules and regulations than **are required in private sector.**

This standard places upon the auditors the responsibility for determining whether the audited entity has complied with the laws and regulations **that are applicable to the specific audit objectives and could significantly affect the entity's operations, programs, activities, or functions under audit.** Auditors should consult with legal counsel when questions arise concerning the interpretation of laws and regulations. The nature, purpose, **and scope** of the review of legal and regulatory requirements varies with the **specific audit objectives.**

Economy and efficiency - The auditors **should assess conformity with** laws and regulations that could significantly affect the acquisition, management, and utilization of the entity's resources.

Program - The auditors **should assess conformity with** laws and regulations pertaining to the objectives of the entity's programs, activities, **and functions** to gain an understanding of the results expected from the programs, activities, **and functions.** They **should** also do sufficient testing to determine whether the programs, activities, **and functions** are being carried out in conformity with these laws and regulations.

Auditors also conduct audits of specific compliance issues.

Auditors are responsible for determining which laws and regulations are to be considered in the audit. When funding from another level of government is involved, legal and regulatory requirements for that level should be made available to the auditors **by the funding level of government.**

The auditors should review those laws and regulations that have a direct bearing or a significant impact upon the auditee**'s operations, programs, activities, and functions under audit.** The laws and regulations that may apply to a specific government organization, program, activity, or function are often so numerous that the auditors cannot be expected to review every one that might in some way have an impact. Consequently, such a review requires considerable judgment. Some sources of information on legal and regulatory requirements follow.

1. Legal or legislative data, including:

    a. Basic legislation.
    b. Reports of hearings.
    c. Legislative committee reports.
    d. Annotated references from reference services covering related court decisions and legal opinions.
    e. Historical data relate**d** to the authorizing legislation.
    f. State constitutions, statutes, resolutions, and legislative orders.
    g. Local charters, ordinances, and resolutions.

2. External administrative requirements, including:

    a. **Correspondence** from federal, state, or local administrative agencies.

b. Federal, state, or local guidelines and other administrative regulations affecting program operations.

3. Grant and contract arrangements, including:

a. Proposals from grantees.
b. Correspondence from grantors and grantees.
c. Memorandums of meetings held to discuss the grants and contracts.
d. Grant and contract documents, including amendments.
e. Grant and contract regulations and OMB management circulars.
f. Grant budgets and supporting schedules.

D. Internal Control

The fourth **field work** standard for government **performance** audits is:

- During the audit a study and evaluation **should** be made of the internal control system**s of** the organization, program, activity, or function under audit **that are applicable to the audit objectives.**

The lack of administrative continuity in government units because of continuing changes in elected legislative bodies and in administrative organizations increases the need for an effective internal control system.

Internal controls can be defined as the plan of organization and methods and procedures adopted by management to ensure that resource use is consistent with laws, regulations, and policies; that resources are safeguarded against waste, loss, and misuse; and that reliable data are obtained, maintained, and fairly disclosed in reports.

The focus of the review of internal control varies with the objective of the audit being performed.

Economy and efficiency - The auditors are to review those policies, procedures, practices, and controls applicable to the programs, functions, and activities, under audit to the extent necessary, as determined by the audit objectives.

Program - The auditors are to review those policies, procedures, practices, and controls which have a specific bearing on the attainment of the goals and objectives specified by the law or regulations for the organization, program, activity, or function under audit to the extent necessary, as determined by the audit objectives.

Internal Controls - Federal, state and local laws and regulations may require a study and evaluation of the adequacy of internal control systems, separate and apart from studies and evaluations made as a part of other audits.[2] Auditors may be required or contracted to perform such studies and evaluations, and if so, the studies and evaluations should be made in accordance with the standards in this statement.

Internal auditing is an important part of internal control, and the auditors should consider this in performing the audit. External auditors should consider the extent to which the work of the internal auditors can be relied upon to help provide

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[2]Examples include the Federal Managers' Financial Integrity Act of 1982, (Public Law 97-255) and the laws of several states.

reasonable assurance that internal control is functioning properly.[3]

In reviewing internal control in economy and efficiency audits it is common practice to identify problem areas first and then review controls that relate to the area in which the problem exists.

In view of the wide range in the size and nature of government organizations programs, activities, and functions and in view of their organizational structures and operating methods, no single pattern for internal audit **and review** activities can be specified. Many government entities have **these** activities identified by other names, such as inspection, appraisal, investigation, organization and methods, or management analysis. These activities assist management by reviewing selected functions. To prevent duplication of effort, all auditors should use, to the maximum extent practical, the work of internal **audit and review** personnel **who are independent of the area under audit.**[4]

E. Auditing Computer-Based Systems

The fifth **field work** standard for government **performance** audits is:

- **When computer-based systems are the primary objective of the audit, the auditors should perform a review of the general and application controls in the computer-based systems.**

- **When computer-processed data are an important integral part**

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[3]**See Chapter V, section B.1.c. for guidance the auditor should follow for relying on the work of others.**

[4]**See footnote 3 above.**

of the audit and its reliability is crucial to accomplishing the audit objectives, the auditors should perform a review of the general and application controls in the computer-based systems, or perform other tests and procedures to determine the reliability of the data.

- When computer-processed data used in the audit report are not significant, reference to the data and their source is sufficient for conformance with this standard.

The audit work necessary to satisfy this standard should be based on the audit objectives and the auditor's professional judgment.

Review of General and Application Controls In Computer-Based Systems

The auditor should distinguish between general and application controls. General controls are normally applicable to the majority of data processing being carried out within the installation, while application controls may vary among applications and are therefore reviewed on an individual application basis. The auditor is to consider the effectiveness of those general controls applicable to the system under review in performing the review of individual application controls.

Review of General Controls In Computer-Based Systems

The auditor should review the general controls in data processing systems to determine whether (i) the controls have been designed according to management direction and known legal requirements and (ii) the controls are operating effectively to provide reliability of, and security over, the data being processed. Audit work done in adhering to this standard has four objectives, discussed below.

Organizational controls

The auditor should review the organization, delegation of authority, responsibilities, and separation of duties in the entity. The goal is to determine whether lines of authority are designed to meet the organization's objectives and whether the separation of duties provides for strong internal control.

Physical facilities, personnel, and security controls

The auditor should determine whether the entity has adequate resources to meet its needs.

The auditor should evaluate **personnel** management policies and practices to ascertain whether the necessary policies exist and determine whether they are properly followed.

The auditor should determine whether provisions for security of the computer hardware, computer programs, data files, data transmission, input and output material, and personnel have been adequately considered. In reviewing physical security of computer hardware, the auditor should consider the adequacy of a contingency plan for continued processing of critical applications in the event of a disruption of normal processing.

The auditor should also review the physical security of data files.

Operating systems controls

The auditor should be aware of the controls the operating systems can exercise and should ascertain the extent to which they have been implemented, as well as how they can be bypassed or overridden.

Hardware controls

The auditor should be aware of how (1) the installation relies on hardware controls, (2) the operating systems use them, and (3) the detected hardware errors are reported within the installation as well as the procedures for taking corrective action.

Review of Application Controls In Computer-Based Systems

The auditor should review the application controls upon which the auditor is relying to assess their reliability in processing data in a timely, accurate, and complete manner. Audit work done in adhering to this standard has two objectives discussed below.

Conformance with standards and approved design

The **auditor should** determine whether the installed applications/systems conform to applicable standards and the approved design specifications. This **objective** provides reasonable assurance that the approved specifications, with all built-in internal controls (such as input, processing, output), have been installed as intended, properly documented, and adequately tested. When the auditor tests data reliability, the test should include examining documentation for selected transactions, testing the clerical accuracy of the entry and summarizing of transactions, and testing compliance with control procedures. In addition, the auditor may wish to test selected data files to identify possible exception conditions and accuracy of data conversion or capture.

Tests for control weaknesses

The **auditor should** test internal controls and the reliability of the data produced. In addition to evaluating adequacy of controls, such tests may disclose possible weaknesses in the

installed applications/systems. The auditor should review the installed applications/systems for adequacy as well as for weaknesses, changed circumstances affecting risk exposure, and so forth. Also, the auditor must be mindful, when conducting tests, that there are no guarantees that the application systems will continue to operate in accordance with the latest approved specifications.

Other Audit Tests and Procedures to Determine the Reliability of Data

Auditors should satisfy themselves that computer-processed data are relevant, accurate, and complete, for its intended use. This is important regardless of whether the information is provided to the auditor or the auditor independently develops it.

When computer-processed data is an important integral part of the audit and its reliability is crucial to accomplishing the audit objectives, the auditors should perform a review of the general and application controls in the computer-based systems, or perform other tests and procedures to determine the reliability of the data. The auditor should have reasonable assurance that the scope and nature of the tests and procedures selected are sufficient to provide reasonable assurance that the computer-processed data are relevant, accurate, and complete for its intended use.

When computer-processed data are used only for background or informational purposes, and are not significant to the auditor's report, the auditor may cite the data and their source in the report to satisfy the requirements of this standard.

F. Evidence and Working Papers

The sixth field work standard for government performance audits

is:

- Sufficient, competent, and relevant evidence is to be obtained to afford a reasonable basis for the auditors' judgments and conclusions regarding the organization, program, activity, or function under audit. A written record of the auditors' work is to be retained in the form of working papers.

Types of Evidence

Evidence may be categorized as (1) physical, (2) testimonial, (3) documentary, and (4) analytical.

Physical Evidence

Physical evidence is obtained by direct inspection or observation of (1) activities of people, (2) property, or (3) events. It may be in the form of memorandums summarizing the matters inspected or observed, photographs, charts, maps, or actual samples.

Testimonial Evidence

Testimonial evidence is obtained from others through statements received in response to inquiries or through interviews. The statements critical to the audit should be corroborated when possible by checks of the records and physical tests.

Documentary Evidence

Documentary evidence consists of letters, contracts, accounting records, invoices, and so forth.

Analytical Evidence

Analytical evidence includes computations, comparisons, reasoning, and separation of information into components.

Tests of Evidence

The evidence should meet the basic tests of sufficiency, competence, and relevance. The working papers should reflect the details of the evidence and disclose how it was obtained.

Sufficiency

Sufficiency is the presence of enough factual, adequate, and convincing evidence to lead a **user of the audit report** to the same conclusion as the auditor's. Determining the sufficiency of evidence requires judgment. When appropriate, statistical methods may be used to establish sufficiency.

Competence

To be competent, evidence should be reliable and the best obtainable through the use of reasonable audit methods. In evaluating the competence of evidence, the auditors should carefully consider whether there is any reason to doubt its validity or completeness. If there is, the auditors should obtain additional evidence.

The following presumptions are useful in judging the competence of evidence; however, these presumptions are not to be considered sufficient in themselves to determine competence:

1. Evidence obtained from an independent source is more reliable than that secured from the audited organization.

- Auditors **should** be alert to situations or transactions that could be indicative of fraud, abuse, and illegal acts, and if such evidence exists, extend audit steps and procedures to identify the effect on the entity's operations and programs.

In making audits in accordance with the standards in this statement the auditors choose and perform audit steps and procedures that, in their professional judgment, are appropriate in the circumstances to achieve the audit objectives. To achieve the audit objectives the auditors perform audit steps and procedures designed to obtain sufficient, competent, and relevant evidence that will provide a reasonable basis for their judgments and conclusions regarding the audit objectives.

In planning and performing audits, the auditor should design steps and procedures to detect situations or transactions that could be indicative of fraud, abuse, or illegal acts that could significantly impact on the audit objectives.

When audit steps and procedures indicate that fraud, abuse, or illegal acts may have occurred, the auditor needs to consider the potential impact of these acts on the audit objectives. If these acts could have an impact on the audit objectives, the auditor should extend the audit steps and procedures, as necessary, to determine whether they exist and the extent to which these acts significantly impact on the audit objectives. If an audit contract does not permit the auditor to unilaterally extend steps and procedures, the auditor should obtain written approval to perform the necessary additional work. If such approval is not given to the auditor, a scope impairment generally exists which should be reported by the auditor. To protect the government's interest and to avoid unnecessary audit work it is important that auditors exercise due professional care and caution in extending audit steps and procedures so as not to interfere with potential

future investigations and/or legal proceedings. Due care would include obtaining legal counsel and advice of the cognizant law enforcement organization, where appropriate, to make this judgment. If the auditor or audit team does not possess the necessary qualifications and skills needed to effectively extend audit steps and procedures, after obtaining legal counsel they should promptly consult with knowledgeable persons before extending audit steps and procedures.

Circumstances may exist where laws, regulations, or policies require auditors to promptly report indications of fraud and illegal acts to legal or investigatory authorities before extending audit steps and procedures. The auditor may also be required to withdraw from, or defer further work on, the audit or a portion of the audit in order not to interfere with an investigation. This requirement would not be inconsistent with the standards. However, the auditor should consider whether this would restrict the completion of the remaining portion of the audit or interfere with the auditor's ability to form objective opinions and conclusions. If it restricts or interferes, the auditor should discontinue further action until completion of the investigation or terminate the audit.

Most auditors are not trained to conduct criminal investigations. This is the responsibility of the investigator or law enforcement authorities. However, auditors are responsible for knowing the characteristics of, techniques used to commit, and the types of fraud, abuse, and illegal acts associated with the area being audited to be able to identify indications that these acts may have occurred.

An audit made in accordance with the standards in this statement will not guarantee the discovery of all fraud, abuse, or illegal acts that might have been committed. Nor does the subsequent

2. Evidence developed under a good system of internal control is more reliable than that obtained where such control is weak or unsatisfactory.

3. Evidence obtained through physical examination, observation, computation, and inspection is more reliable than evidence obtained indirectly.

4. Original documents are more reliable than copies.

Auditors should, when they deem it useful, obtain written representations from officials of the organization under audit.

Relevance

Relevance refers to the relationship of evidence to its use. The information used to prove or disprove an issue must have a logical, sensible relationship to that issue. Information that does not is irrelevant and therefore should not be included as evidence.

Working Papers

Working papers are the link between field work and the audit report. They should contain the evidence to support the findings, judgments, and conclusions in the report. Procedures should be adopted to ensure the safe custody and retention of working papers for a time sufficient to satisfy legal and administrative requirements. **Working papers also may be in the form of data and information stored on tapes, films, discs, or other media.** General guidelines for preparing working papers follow.

1. Completeness and accuracy - Working papers should be complete

and accurate to provide proper support for findings, judgments, and conclusions, and to enable demonstration of the nature and scope of work **performed.**

2. Clarity and understandability - Working papers should be understandable without detailed supplementary oral explanations. They should also be complete and yet concise. Anyone using them should be able to readily determine their purpose, their source, the nature and scope of the work **performed,** and the preparer's conclusions. Conciseness is important, but clarity and completeness should not be sacrificed just to save time or paper.

3. Legibility and neatness - Working papers should be legible and as neat as practicable. Otherwise time will be wasted in reviewing them and in preparing reports. Sloppy working papers **lack clarity and therefore** may lose their worth as evidence.

4. Relevance - The information in working papers should be restricted to matters that are materially important and relevant to the objectives of the assignment. There are no substitutes for a working understanding of the audit objectives, the reasons for performing a specific task, and its relationship to the objectives. This understanding comes from well-planned and well-organized work programs and effective instructions by supervisors. The practice of having all working papers contain clear statements of purpose is very helpful in ensuring that information accumulated is properly tied to audit objectives and reporting.

G. Fraud, Abuse, and Illegal Acts

The seventh **field work** standard for government **performance** audits is:

discovery of fraud, abuse, or illegal acts committed during the audit period necessarily mean the auditors' performance was inadequate, **provided** the audit was made in accordance with these standards.

REPORTING STANDARDS FOR **PERFORMANCE** AUDITS

CHAPTER VII

A. Form

The first reporting standard for government **performance** audits is:

- Written audit reports are to be prepared giving the results of each government audit.[1]

This standard is not intended to limit or prevent discussion of findings, judgments, conclusions, and recommendations with persons who have responsibilities involving the area being audited. On the contrary, such discussions should be encouraged. However, a written report should be prepared regardless of whether such discussions are held.

Written reports are necessary (1) to communicate the results of audits to officials at all levels of government, (2) to make the findings and recommendations less susceptible to misunderstanding, (3) to make the findings available for public inspection, and (4) to facilitate follow-up to determine whether **prompt and** appropriate corrective **actions** have been taken **by entity officials.**

When an audit is terminated prior to completion, the auditor should prepare a memorandum for the record briefly summarizing the results of the work performed, and explaining why the audit was terminated. The auditor should also notify the auditee and other appropriate officials, preferably in writing, that the audit has been terminated.

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[1]Audit findings not included in the audit report should be reported in a letter to management.

B. Distribution

The second reporting standard for government **performance** audits is:

- Written audit reports are to be submitted to the appropriate officials of the organization audited and to the appropriate officials of the organizations requiring or arranging for the audits unless legal restrictions or ethical considerations prevent it. Copies of the reports should also be sent to other officials who may be responsible for taking action on audit findings and recommendations and to others authorized to receive such reports. Unless restricted by law or regulation, copies should be made available for public inspection.

Audit reports should be distributed to as many interested officials as is practicable. In some cases, the subject of the audit may involve material that is classified for security purposes or is not releasable for other valid reasons. Generally, however, the report should be distributed to officials directly interested in the **results.** Such officials include those designated by law or regulation to receive such reports, those responsible for taking action on the findings and recommendations, legislators, and those of other levels of government that have provided funds to the audited entity. Also, unless restricted by law or regulation, copies should be available for distribution to or inspection by the public.

When **outside organizations** are engaged, the engaging organization must ensure that appropriate distribution is made to interested parties. If the **outside organizations** are to make the distribution, the engagement agreement should indicate what officials or organizations shall receive the report.

Internal auditors should follow their entity's own arrangements. Usually, they report to their entity's top management and the entity is responsible for distribution of the report.

C. Timeliness

The third reporting standard for government **performance** audits is:

- Reports are to be issued promptly so as to make the information available for timely use by management and by legislative officials.

To be of maximum use, the report must be timely. A carefully prepared report may be of little value to decisionmakers if it arrives too late. Therefore the auditors should plan and conduct the audit with this in mind. **In the planning phase of an audit, the auditor should plan for the timely issuance of the audit report.**

The auditors should consider interim reporting of significant matters to appropriate officials during the audit. Such communication is not a substitute for a final written report, but it does alert officials to matters needing immediate attention and permits them to take corrective action before the final report is completed.

D. Report Contents

The fourth reporting standard for government **performance** audits is:

- The report **should** include, **where appropriate:**

  1. A description of the objectives, scope, **methodology, results, and conclusions of the audit.**

2. A statement that the audit was **or was not** made in accordance with generally accepted government auditing standards.

3. **A statement identifying the significant internal controls that were studied and evaluated during the audit and a description of the significant weaknesses found in the internal controls.**

4. **All** significant instances of noncompliance and **all** instances or **apparent** indications of fraud, abuse, or illegal acts found during or in connection with the audit. However, fraud, abuse, or illegal acts normally should be covered in a separate report, thus permitting **an audit** report to be released to the public.

5. Recommendations for actions to improve problem areas noted in the audit and to improve operations.

6. The underlying causes of problems reported should be included to assist in implementing corrective actions.

7. Pertinent views of responsible officials of the organization, program, activity, or function audited concerning the auditors' findings, conclusions, and recommendations.

8. A description of **significant** noteworthy accomplishments, particularly when management improvements in one area may be applicable elsewhere.

9. A listing of any **significant** issues needing further study and consideration.

10. A statement as to whether any pertinent information has

been omitted because it is deemed privileged or confidential. The nature of such information should be described, and the law or other basis under which it is withheld should be stated.

Objectives, **Scope and Methodology**

The objectives, **scope and methodology** of the audit should be described in the audit report. **The statement of objectives should explain why the audit was made and state precisely what the report is to accomplish. This is essential to give the reader the proper perspective--a background against which reported findings may be considered.**

The statement of scope tells the reader what the auditors did and did not do. **Explaining the depth and coverage of the audit work enables the reader to place the report's message in the proper perspective and understand any significant limitations. Every effort should be made to avoid any misunderstanding by the reader concerning the work that was or was not done to achieve the audit objectives, particularly when the work was limited by relying on internal controls or because of constraints on time or resources.**

The statement on methodology should clearly explain to the reader how the auditors went about accomplishing the audit's objectives, and disclose any serious data limitations.

Results and Conclusions (Where Applicable)

Reports should contain sufficient information about findings and conclusions to promote adequate understanding of the matters reported and to provide convincing, but fair, presentations in proper perspective. Sufficient background information should also be included.

Readers should not be expected to possess all the facts that the auditor has, and therefore reports should not be written on the basis that the bare recital of facts makes the conclusions inescapable. Conclusions should be specified, rather than left to be inferred by readers.

Statement on Auditing Standards

A statement in the auditors' report that the audit was or was not made in accordance with generally accepted government auditing standards is required.

The above statement refers to all the applicable standards that the auditors should have followed during their audit. The statement need not be qualified to indicate that standards which were not applicable were not followed. However, the statement should be qualified in situations where the auditors did not follow a standard that should have been followed during their audit. In these situations the auditors should modify the statement, and disclose in appropriate sections of their report, that a required standard was not followed, the reasons therefore, and the effect not following the standard had or may have on the results of the audit.

Statement on Internal Control

The auditors' report should identify the significant internal controls that were studied and evaluated during the audit, and should describe the significant weaknesses found in the internal controls. Weaknesses should be reported if they are significant in relation to the audit objectives.

Compliance Statement

Compliance with laws and regulations, in many instances, assumes

importance since recipients of the reports want to know whether funds were spent for authorized purposes.

The auditors' report should include all significant instances of noncompliance **found during or in connection with the audit,** even those not resulting in a legal liability of the entity. **Minor instances of noncompliance should also be reported if illegal. Other** minor noncompliance need not be disclosed **in the audit report, but should be reported in a separate communication to the auditee.**

In reporting noncompliance, the auditors should place their findings in proper perspective. The extent of noncompliance should be related to the number of cases examined to give the reader a basis for judging the prevalence of noncompliance.

Fraud, Abuse, or Illegal Acts

If, during an audit or in connection with an audit of a government entity, external government auditors become aware of fraud, abuse, or illegal acts or **apparent** indications of such acts affecting the government entity, they should promptly notify the top official of that entity (unless the official is believed to be a party to such acts or otherwise implicated) and the appropriate law enforcement authorities. If the acts involve funds received from other government entities, the auditors should also promptly notify **the proper government** officials, **including the audit organization,** of those entities.

Internal government auditors auditing a government entity that is external to the government entity to which they are assigned should promptly notify officials and authorities in accordance with the preceding paragraph.

Outside organizations performing government audits will discharge

their responsibility by promptly notifying the entity arranging for the audit. **However, if the acts involve funds received from other government entities, they should also promptly notify the proper government officials, including the audit organization, of those entities.**

Internal government auditors **auditing within the government entity to which they are assigned** should notify the top officials of the entity under audit.

It will be the responsibility of ~~the~~ **an** entity**, both auditee and funding entity,** receiving the information **from the various organizations** to notify appropriate law enforcement authorities and other government entities whose funds may be involved.

In the case of an audit of government funds received by a nongovernment entity, the auditors should promptly notify the appropriate **governmental** entity **requiring or** arranging for the audit **and such other officials designated by law or regulation to receive the audit reports.**

All fraud, abuse, or illegal acts or **apparent** indications of such acts, whether significant or not, that auditors become aware of should be covered in a written report and submitted in accordance with the preceding paragraphs. Such information should normally be covered in a separate report, thus permitting **an audit** report to be released to the public. Auditors **generally** should not release reports containing information on such acts, or reports with references that such acts were omitted from reports, without consulting with legal counsel, since this could interfere with legal processes or subject the implicated individuals to undue publicity**, or might subject the auditor to potential legal action.**

Recommendations

The audit reports should contain recommendations whenever significant improvement in audited entities is possible. Also, recommendations should be made to effect compliance with laws or regulations when significant instances of noncompliance are noted. **If significant weaknesses are found in internal controls, the recommendations should contain constructive suggestions for improvement.** Reports which contain constructive recommendations can encourage improvements in the conduct of government programs and activities.

Management is primarily responsible for directing action and follow-up on recommendations. **In subsequent audits, the auditor's report should disclose the status of unresolved significant findings and recommendations from prior related audits that affect on the audit objective. To facilitate follow-up and reporting, government auditors should normally establish a system that enables them to track the status of their previous significant findings and recommendations.**

If the auditors cannot make appropriate recommendations because of limited audit scope or for other reasons, they should state in the report why they cannot and what additional work is needed to formulate recommendations.

Views of Responsible Officials

One of the most effective ways to ensure that a report is fair, complete, and objective is to obtain advance review and comments by officials of the audited entity. **The auditor should request that the responsible officials' views be submitted in writing.** This produces a report which shows not only what was found and what the auditors think about it but also what the responsible persons think about it and what they plan to do about it.

Advance comments should be objectively evaluated, and the report presentations and conclusions should recognize them. The comments and an analysis of them should be fairly presented in the report. A promise of corrective action should be noted but should not be accepted as justification for dropping a significant point or a related recommendation.

When the comments oppose the auditors' findings or conclusions and are not, in their opinion, valid, the auditors should state their reasons for rejecting them. Conversely, they should modify their position if they find the comments valid.

Recognition of Noteworthy Accomplishments

Significant management accomplishments identified during the audit, **which were within the scope of the audit necessary to accomplish the audit objectives,** should be included in the audit report, along with deficiencies. Such information is necessary to fairly present the situation the auditors find and to provide appropriate balance to the report. In addition, inclusion of such accomplishments may lead to improved performance by other government organizations that read the report.

Issues Needing Further Study

If during the audit, the auditor identifies significant issues that warrant further audit work, the auditor should:

(1) pursue the issues which are directly related to the audit objectives, or

(2) if not directly related, the auditor should consider changing the scope of the audit to pursue those issues identified[2] or refer

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2See Footnote 3, Chapter V.

the issues to the appropriate auditors within the audit organization responsible for planning future audit work, or

(3) if the auditor decides not to pursue or refer the issues, and in the auditor's opinion the issues could have a significant effect on the entity's programs, activities, and functions, the auditor should disclose these issues in the report and the reasons why they believe they need further study.

Privileged and Confidential Information

Certain information may be prohibited from general disclosure by federal, state, or local laws or regulations. Such information may be provided on a need-to-know basis only to persons authorized by law or regulation to **have** it.

If the auditors are prohibited by such requirements from including pertinent data in the report, they should state the nature of the information omitted and the requirement that makes the omission necessary. The auditors should obtain assurance that a valid requirement for the omission exists, **and where appropriate consult with legal counsel.**

Auditors should consult with legal counsel before releasing reports with references that fraud, abuse, or illegal acts or indications of such acts were omitted from reports.[3]

E. Report Presentation

The fifth reporting standard for government performance audits is:

3See fifth paragraph on page 7-9.

o All reports **should:**

1. Present factual data accurately and fairly. Include only information, findings, and conclusions that are adequately supported by sufficient evidence in the auditors' working papers to demonstrate or prove the bases for the matters reported and their correctness and reasonableness. **Audit findings have often been regarded as containing the elements of condition, criteria, cause, and effect. However, the elements needed for a complete finding depends entirely on the objectives of the audit. Thus, a finding or set of findings is complete to the extent that the audit objectives are satisfied and the report clearly relates those objectives to the findings elements.**

2. Present findings and conclusions **in** a convincing manner.

3. Be objective.

4. Be written in language as clear and simple as the subject matter permits.

5. Be concise but, at the same time, clear enough to be understood by users.

6. Present factual data completely to fully inform the users.

7. Place primary emphasis on improvement rather than on criticism of the past **(use constructive tone)**; critical comments should be presented in a balanced perspective considering any unusual difficulties or circumstances faced by the operating officials concerned.

Accuracy and Adequacy of Support

The need for accuracy is based on the need to be fair and impartial in reporting and to assure readers that what is reported is reliable. One inaccuracy in a report can cast doubt on the validity of an entire report and can divert attention from the substance of the report.

Conclusions should be clearly identified and all facts, findings, and conclusions should be supported by sufficient objective evidence. Except as necessary to make convincing presentations, detailed supporting data need not be included. In most cases, a single example of a deficiency is not sufficient to support a broad conclusion or a related recommendation. All that it supports is that there was a deviation, an error, or a weakness.

Convincingness

Findings **should** be presented in a convincing manner and conclusions and recommendations **should** follow logically from the facts presented. The information in reports **should** be sufficient to persuade the readers of the importance of the findings, the reasonableness of the conclusions, and the desirability of their accepting the recommendations. Reports designed in this manner can do much to focus the attention of responsible officials on the matters in reports which warrant attention and to stimulate corrective actions.

Objectivity

Findings should be presented objectively and should include sufficient information on the subject to give readers a proper perspective. The audit report should be fair and not misleading and should place primary emphasis on matters needing attention. The auditor should guard against the tendency to exaggerate or overemphasize deficient performance noted.

The information needed to provide proper report balance and perspective should include:

1. Why the audit was made.

2. The size and nature of the activities or programs audited.

3. Correct and fair descriptions of findings. To avoid misinterpretations, the size of the sample of items tested and the methods of selecting the items should be ~~given~~ **stated.**

Clarity and Simplicity

Reports should be written in language as clear and simple as practicable. Logical organization of material and accuracy and succinctness in stating facts, and in drawing conclusions are essential to clarity and understanding. Visual aids (such as pictures, charts, graphs, maps) should be used when appropriate to clarify and summarize complex material. Use of straightforward, nontechnical language is essential to simplicity of presentation. If technical terms and unfamiliar abbreviations are used, they should be clearly defined.

Conciseness

The reports should be no longer than necessary. Too much detail detracts from a report, may even conceal the real message, and may confuse or discourage readers.

Although there is room for considerable judgment in determining the content of reports, those that are complete, but still concise, are likely to receive attention.

Completeness

Although reports should be concise, they should also be complete. Reports should contain sufficient information about findings, conclusions, and recommendations to promote adequate understanding of the matters reported and to provide convincing, but fair, presentations in proper perspective. Sufficient background information should also be included.

Readers should not be expected to possess all the facts that the auditor has, and therefore reports should not be written on the basis that the bare recital of facts makes the conclusions inescapable. Conclusions should be specified, rather than left to be inferred by readers.

Constructiveness of Tone

The tone of reports should encourage **the acceptance of the** recommendations. Titles, captions, and the text of reports should be stated constructively. Although findings should be presented in clear, forthright terms, the auditors should keep in mind that their objective is to obtain **acceptance of their recommendations** and that this can best be done by avoiding language that unnecessarily generates defensiveness and opposition. Although criticism of past performance is often necessary, the report should emphasize needed improvements rather than criticism.

Glossary

Abuse	Furnishing excessive services to beneficiaries; violating program regulations; and performing improper practices, none of which involves prosecutable fraud.
Audit	A term used to describe not only work done by accountants and auditors in **conducting** financial **audits,** but also work done in reviewing (1) compliance with **applicable** laws and regulations, (2) economy and efficiency of operations, and (3) effectiveness **of the** program.
Audit objective(s)	**A precise statement of what the audit intends to accomplish; the question(s) the audit will answer.**
Audit program	The detailed steps and procedures to be followed in conducting the audit and preparing the report. A written audit program should **generally** be prepared for each audit and it should include such information as the scope of the audit, **objectives of the audit, and** background information.
Auditor	The term as used in this statement refers to the auditor as well as the audit organization unless otherwise indicated in this statement.
Auditor's opinion	An expression in the auditor's report as to whether the **financial** information of the entity is presented fairly in accordance with generally accepted accounting principles (or with other specified accounting principles applicable to the auditee) applied on a basis consistent with that of the preceding reporting period.
Competence	A term pertaining to evidence; it should be valid and **reliable.**
Compliance	A determination of whether (1) there is compliance with laws and regulations that could materially affect the entity's financial statements **or specific financial compliance requirements,** (2) there is

	compliance with laws and regulations that could significantly affect the acquisition, management, and utilization of the entity's resources, and (3) programs, **activities and functions** are being carried out in conformity with laws and regulations **that are applicable to the audit objectives.**
Computer-based system	**That part of an overall information system which utilizes automated equipment and associated methods and procedures to process the data and information.**
Computer-processed data	**Data that is collected, classified, and stored, and subsequently compiled and produced as data or information, through use of a computer.**
Conclusions	The auditor's interpretations of the evidence stated in relation to the objectives.
Contract audit	An **audit** of government **contracting** for goods and services with **profit** as well as nonprofit organizations.
Due professional care	The third general standard for government auditing. **Conducting audits and preparing reports in accordance with generally accepted government auditing standards including:** **. Competently and adequately carrying out the audit steps and procedures which are necessary in order to achieve the audit objectives.** **. Being alert for fraud, and abuse.** **. Possessing skill and knowledge appropriate for the audit.** **. Using sound judgment in choosing audit tests and procedures.** **. Exercising integrity and objectivity in conducting the audit and preparing the report.** **. Followup on findings from previous audits to determine whether appropriate corrective actions have been taken.**

Evidence	The data and information an auditor obtains during audit field work to support opinions, judgments, and conclusions. A written record of the auditor's work and evidence should be retained in the form of working papers.
Examination	An audit engagement with the objective of expressing an opinion on an entity's financial statements.
Expanded scope auditing	Auditing that goes beyond the traditional financial statement audit.
External impairments	One of the three general classes of impairments. These are external factors that may restrict the audit or interfere with an auditor's ability to form independent and objective opinions and conclusions.
External quality control program	A review of an audit organization by an organization not affiliated with the audit organization being reviewed to determine: (1) whether its internal quality control system is in place and operating, and (2) whether established policies and procedures and applicable audit standards are being followed in its work.
External quality control review of a specific audit	A review of a specific audit by an organization not affiliated with the audit organization that performed the audit to determine whether the audit was conducted in accordance with appropriate auditing standards and satisfied applicable audit requirements.
Financial statements	A presentation of financial data and information, including accompanying notes, derived from accounting records to communicate an entity's financial position at a point in time, and the changes in financial position and results of operations for a period of time.

Financial **statement** audits	Audits which determine (a) whether the financial statements of an audited entity present fairly the financial position and the results of operations **or changes in financial position** in accordance with generally accepted accounting principles and (b) whether the entity has complied with laws and regulations **for those transactions and events** that may have a material effect on the financial statements.
Findings/results	The result of information development; a logical pulling together of information and arriving at conclusions on the basis of the sum of the information about an organization, program, activity, function, condition, or other matter which was analyzed or evaluated and considered to be of interest, concern, or use to the entity. It need not be critical or be concerned only with deficiencies or weaknesses. Purely informational findings need not include conclusions. A finding could be the basis for recommendations for action by the entity, but a recommendation is not part of a finding.
Fraud	The obtaining of something of value, unlawfully, through willful misrepresentation.
Generally accepted accounting principles	Rules and procedures established by authoritative bodies or conventions that have evolved through custom and common usage.
	The Governmental Accounting Standards Board (GASB) establishes accounting and financial reporting standards for activities and transactions of state and local governmental entities. These standards are set forth in pronouncements issued by GASB.
	The Financial Accounting Standards Board (FASB) establishes standards for activities and transactions of nongovernmental entities.
	The General Accounting Office (GAO) establishes accounting principles, standards, and related requirements for

	federal departments and agencies. These principles, standards, and related requirements are set forth in title 2 of the GAO Policies and Procedures Manual for Guidance of Federal Agencies.
Generally accepted auditing standards (GAAS)	Those audit standards set forth in the AICPA's Statements on Auditing Standards.
Generally accepted government auditing standards (GAGAS)	Those audit standards set forth in the Standards for Audit of Governmental Organizations, Programs, Activities, and Functions, issued by GAO.
General standards	A term pertaining to (1) the qualifications of the assigned audit staff, (2) the audit organization's and the individual auditor's independence, and (3) the exercise of due professional care in conducting the audit and in preparing related reports.
Government activity	A specific and distinguishable line of work performed within an organizational component of a government entity for the purpose of discharging a function or subfunction.
Government entity	Generally means a: -State department. -Municipality (ie., a city or town with its own incorporated government for local affairs). -County, independent school district, special district, or authority. -Nonprofit government agency. -Government regional planning agency, commission, authority, or corporation. -Federal agency.
Government function	The purpose for which a government organization is responsible.
Government organization	A government entity or component of a government entity.
Government program	Generally defined as an organized set of activities directed toward a common purpose, or goal. In practice, however, the term program has many uses and thus does not have a well-defined meaning.

1	Illegal acts	Violations of laws.
2	Independence	The second general standard for government auditing. In all matters relating to the audit work, the audit organization and the individual auditors, whether government or public, **should** be free from personal or external impairments to independence, **should** be organizationally independent, and **should** maintain an independent attitude and appearance.
11	Internal control	**Internal control is defined as follows:**
12		**(1)** According to the AICPA, SAS No. 1, Section 320:
14		"Administrative control includes, but is not limited to, the plan of organization and the procedures and records that are concerned with the decision processes leading to management's authorization of transactions. Such authorization is a management function directly associated with the responsibility for achieving the objectives of the organization and is the starting point for establishing accounting control of transactions.
25		"Accounting control comprises the plan of organization and the procedures and records that are concerned with the safeguarding of assets and the reliability of financial records and consequently are designed to provide reasonable assurance that:
31		"a. Transactions are executed in accordance with management's general or specific authorization.
34		"b. Transactions are recorded as necessary (1) to permit preparation of financial statements in conformity with generally accepted accounting principles or any other criteria applicable to such statements and (2) to maintain accountability for assets.
41		"c. Access to assets is permitted only in accordance with management's authorization.

"d. The recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences."

(2) According to the GAO's Standards for Internal Controls in the Federal Government:

"The plan of organization and methods and procedures adopted by management to ensure that resource use is consistent with laws, regulations, and policies; that resources are safeguarded against waste, loss, and misuse; and that reliable data are obtained, maintained, and fairly disclosed in reports."

Internal quality control system	The system established by the audit organization to provide reasonable assurance that it: has established, and is following, its audit policies and procedures; and has adopted, and is following, generally accepted auditing standards.
Materiality and/or significance	The weight that evidence plays in influencing the auditor's decision concerning: the selection of issues and areas for audit; the nature, timing, and extent of audit tests and procedures (methodology); and the auditor's audit opinion, judgment, or conclusion.
Organizational impairments	One of the three general classes of impairments. They concern the auditor's being sufficiently removed from political pressures within the organizational structure of a government.
Performance Audits	(1) Economy and efficiency audits--includes determining (a) whether the entity is managing and utilizing its resources (such as personnel, property, space) economically and efficiently, (b) the causes of inefficiencies or uneconomical practices, and (c) whether the entity has complied with laws and regulations concerning matters of economy and

	efficiency.
	(2) Program audits--includes (a) determining the extent to which the desired results or benefits established by the legislature or other authorizing body are being achieved, (b) assessing the effectiveness of the organization, program, activity, or function, and (c) determining compliance with specific requirements of program laws and regulations.
Personal impairments	One of the **three** general classes of impairments. They involve circumstances in which auditors **may not** be impartial because of their views or personal situations.
Planning	The first **field work** standard for government auditing. This standard requires that the work is to be adequately planned. Adequate planning should include consideration of **the audit objectives, scope and methodologies,** coordination with other government auditors, personnel to be used, **use of consultants and specialists,** work to be **performed,** and the format and general content of the report.
Program effectiveness evaluation	**The application of methods to estimate the extent to which observed results, intended or unintended, are caused by program activities. Cause is linked to effect through use of design and analysis methods which compare results observed after implementation to estimates of results which would have been observed in the absence of the program.**
Program evaluation	**The application of methods to the assessment of program conceptualization, implementation, and effectiveness.**
Qualifications	The first general standard for government auditing. The assigned staff **should** collectively possess (1) a knowledge of **the methods and techniques applicable to expanded scope** auditing and be able to apply it, (2) a knowledge of government organizations, programs, activities, and

functions, **(3) the ability to communicate clearly and effectively, and (4) the skills necessary for the audit.**

Qualifications of public accountants

When public accountants are engaged for assignments requiring a professional opinion on financial statements, only qualified public accountants should be engaged. Qualifications are deemed to be met by **licensed** certified public accountants, or by public accountants licensed on or before December 31, 1970, or persons working for a **licensed** certified public accounting firm, or a public accounting firm licensed on or before December 31, 1970.

Recommendations

The auditor's recommendations in the audit report for actions to improve problem areas noted in the audit and to improve operations.

Relevance

A term pertaining to evidence; the relationship of the information to its use.

Report (audit)

(1) The auditor's report in a financial audit-the medium through which an auditor expresses an opinion or, if circumstances require, disclaims an opinion.

(2) The auditor's report in other than financial audits-the medium through which an auditor communicates the results (findings) of the audits. The report contains conclusions, positions, and recommendations based on the audit.

(3) Other special auditor's reports-the medium through which **an** auditor communicate**s** information required by the audit engagement-include "**Report** on Compliance," "**Report** on Internal Control," and so forth.

Review

To study specific activities or operations to the extent necessary to achieve the objectives of the audit. This includes exploring and developing all pertinent and significant information necessary to properly consider, support, and present

	findings, conclusions, and recommendations.
Scope impairment	These are factors external **to the audit organization and** can restrict the auditor's ability to **render** objective opinions and conclusions.
Should	**When the term "should" is used to describe the auditor's and/or audit organization's responsibility this means that the standards that are applicable to the work necessary to satisfy the audit objectives are to be followed. Departures from applicable standards must be disclosed in the audit report.**
Significance	**See materiality.**
Sufficiency	The presence of enough competent **and relevant** evidence to provide the auditor with a reasonable basis for forming opinions, judgments, and conclusions.
Supervision	This standard for government auditing requires that assistants be properly supervised. Supervisors **should** ensure that less skilled staff members receive training and guidance in doing their work and that all staff clearly understand their tasks and what the work is expected to accomplish.
Survey	A process to gather information, without detailed verification, on the entity being audited. It is designed to identify problem areas warranting additional review and to obtain information for use in planning and accomplishing the audit.
Timeliness	This standard for government auditing states that reports are to be issued promptly so as to make the information available for timely use by management and by legislative officials.
Working papers	They provide support for the auditor's opinions, conclusions, and judgments and they aid in the conduct and review of the auditor's work. They include the collection of **evidence, such as** schedules, papers, analyses, correspondence, and other material prepared or obtained by the

auditor during the audit.