

DEPARTMENT OF ENERGY

**PERFORMANCE-BASED
CONTRACTING**

GUIDE

June 1998

U.S. Department of Energy
Office of the Deputy Assistant Secretary for
Procurement & Assistance Management

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Forward

by John Cibinic, Jr.

When considering performance based contracting, one should not lose sight of the reason for using this technique. Its purpose is to obtain better performance or lower costs or both. In other words, things should work better and cost less. If it will not achieve these results, it is not worth doing. That said, there is practically no procurement where it cannot, in some degree, be successful.

Contractor Capability

Basic to the concept of performance-based contracting is to adopt contracting specifications and procedures permitting the contractor to devise the most efficient and effective way to perform the work. However, drafting of statements of work which enable contractors to use their initiative is only part of the task. Choosing a capable and trustworthy contractor is *absolutely essential*. Thus, past performance evaluations and partnering are necessary ingredients to selecting the contractor and working with it.

Avoid Unnecessary Requirements

The fact that something is measurable does not mean that it is wise to state it as a requirement. When a new technique is promoted, there is a tendency to use it to the maximum possible extent. Care should be taken not to overly complicate service contracting by requiring the measurement of subsidiary aspects of performance unless the measurement is essential to the agency mission. More requirements mean more measurement which, in turn, means more cost. The potential savings of performance based contracting should not be consumed by increased contracting and administrative costs.

Evolutionary Change

Management and Operating contracts are a unique form of service contracts. As the material in this Guide indicates, there are many problems associated with the introduction of performance-based contracting into these complex contractual instruments. Thus, the change to a performance-based environment will take time. That does not mean that the process should not begin. However, it would be unwise to expect a complete change overnight.

Not A Cookbook

The following material is not a cookbook. In keeping with the performance-based concept, it is designed to show what needs to be done, not necessarily how to do it. However, it contains much valuable advice and is must reading for all agency personnel involved in contracting. JC

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Glossary Of Terms and Acronyms

BASE FEE	Base fee is that portion of the total available fee which, in essence, is a fixed fee and is not tied to performance and will normally be zero unless an amount of base fee is approved by the Procurement Executive. Where approval for a base fee has been obtained, the performance portion of the total available fee will be decreased by an amount approved by the Procurement Executive. Base fee is fixed at the beginning of the period of performance.
BASELINE	A verifiable description of the current scope of work, cost and schedule to be impacted by the initiative.
CAS	Cost Accounting Standards
CFO	Chief Financial Officer
COR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
CRITICAL PATH	As used in this Guide, the critical path identifies a series of milestones, or critical activities, which must be met or accomplished as per schedule and at stated levels of performance in order to achieve the required end product or output of the effort. Failure to achieve a critical activity will delay completion or delay the start of the next critical period.
CRP	<p>Cost Reduction Proposal — A proposal initiated by the contractor (a) describing a innovative change to a design, process and/or method which will result in the achievement of contract cost savings without adversely impacting contract performance or (b) to establish an effort, broken out from all other effort, on a negotiated cost plus incentive fee or fixed price incentive or firm fixed price basis. Additional terms which may relate to a CRP include:</p> <p><i>Administrative Cost</i> — The contractor's cost of developing and administering the cost reduction proposal (CRP).</p> <p><i>Cost Reduction</i> — A reduction in actual expenditures below the projected level of costs to achieve a specific objective.</p> <p><i>Current Method</i> (Baseline) — A verifiable description of the current scope of work, cost, and schedule to be impacted by the initiative and supporting documentation.</p> <p><i>Design Changes</i> — A change to a specific design, process, or method which has an established baseline; is defined, and subject to a formal control procedure. Such a change must be innovative, initiated by the contractor; and applied to a specific project or program. An example of a design change would be a redesign of containers used to remove waste.</p> <p><i>Development Cost</i> — The contractor's cost of up front planning, engineering, prototyping, and testing of a design, process, or method as it</p>

relates to a CRP.

DOE Cost — The cost to DOE of implementing and validating the CRP

Feasibility Assessment — A description and evaluation of the proposed initiative and benefits, risks, and impacts of implementation. This evaluation should include an assessment of the difference between the current baseline and proposed new method less implementation costs.

Implementation Cost — The contractor's cost of tooling, facilities, documentation, etc., required to effect a CRP design, process or method change once it has been tested and approved.

Methods Change — A change to a specific design, process, or method which has an established baseline; is defined, and subject to a formal control procedure. Such a change must be innovative, initiated by the contractor; and applied to a specific project or program. A methods change might be in the way contaminated soil is collected and transported for decontamination (e.g. Approach #1: Soil is shipped directly from location to decontamination site. Approach #2: Soil is moved to central location and then shipped to the decontamination site.).

Net Savings — Is a reduction in the total amount (to include all related costs and fee) of performing the effort where the savings revert to the DOE control and may be available for deobligation. Such savings may result from a specific cost reduction effort which is negotiated on a cost-plus-incentive fee, fixed-price-incentive or firm-fixed-price basis, or may result directly from a design, process or method change. Savings may also result from formal or informal direction given by DOE or changes in the mission, work scope or routine reorganization of the contractor brought about due to changes in the budget.

New Method (Baseline) — A verifiable description of the new cost, work scope, and schedule, how the initiative will be accomplished, and supporting documentation.

Process Change — A change to a specific design, process, or method which has an established baseline; is defined, and subject to a formal control procedure. Such a change must be innovative, initiated by the contractor; and applied to a specific project or program. An example of a process change would be a change in the way soil is decontaminated.

Shared Net Savings — Shared net savings may result from (1) a specific cost reduction effort which is negotiated on a cost-plus-incentive-fee or fixed-price-incentive basis and constitutes the difference in the negotiated target cost of performing an effort as negotiated and the actual allowable cost of performing that effort or (2) may result directly from a design, process or method change and occurs in the fiscal year in which it is accepted and the subsequent fiscal year and represents the difference in the estimated cost of performing an effort as originally planned and the actual allowable cost of performing that same effort utilizing a revised plan intended to reduce costs along with any contractor development costs, implementation costs, administrative costs, and DOE costs associated with the revised plan. Administrative costs and DOE costs are included at the discretion of the contracting officer. Savings resulting from formal or informal direction given by DOE or changes in the mission, work scope, or routine reorganization of the contractor due to changes in the budget are not considered shared net savings and do not qualify for incentive sharing.

Validation of Savings — The process of DOE personnel performing an independent verification of results, including a cost analysis. Validation of savings should reflect evaluation from both programmatic and financial viewpoints.

DCAA	Defense Contract Audit Agency
DEAR	Department of Energy Acquisition Regulation
DOE	Department of Energy
EXPECTATION	The desired condition or target level of performance for each measure.
FAR	Federal Acquisition Regulation
FASA	Federal Acquisition Streamlining Act
GAO	General Accounting Office
GPRA	Government Performance And Results Act
INNOVATION	Any process, procedure, system or any action initiated or taken by the contractor which enhances performance under the contract and which is considered to be exceptional with respect to its application to standard or normal business practices or procedures.
LCB	Life Cycle Baseline
M&O	Management And Operating
NET SAVINGS	Is a reduction in the total amount (to include all related costs and fee) of performing the effort where the savings revert to the DOE control and may be available for deobligation. Such savings may result from a specific cost reduction effort which is negotiated on a cost-plus-incentive fee, fixed-price-incentive or firm-fixed-price basis, or may result directly from a design, process or method change. Savings may also result from formal or informal direction given by DOE or changes in the mission, work scope or routine reorganization of the contractor brought about due to changes in the budget.
NPR	National Performance Review
OFPP	Office of Federal Procurement Policy
OIG	Office of Inspector General
OBJECTIVE	A statement of desired outcomes for an organization or activity.
PERFORMANCE	

BASED

CONTRACTING

Performance-Based Contracting means structuring all aspects of an acquisition around the purpose of the work to be performed as opposed to either the manner by which the work is to be performed or broad and imprecise statements of work.

PEP

Performance Evaluation Plan

PERFORMANCE

FEE

That portion of the total available fee which is tied exclusively to the contractor's performance of the contract. The performance fee amount will consist of an incentive fee component for objective performance requirements and an award fee component for subjective performance requirements, or both. This amount will usually constitute all of the available fee, unless a base fee is approved. The performance fee available may be associated with either objective or subjective performance measures, or some combination of both.

PERFORMANCE

INCENTIVE

A performance incentive represents a reward or consequence that may be employed to motivate a contractor to achieve baseline or higher levels of performance of a requirement. In most instances, the incentive represents an amount of fee tied to the accomplishment of a performance objective. There are two primary types of performance incentives used to stimulate contractor performance:

Objective Incentive An objective performance incentive is one that is tied to a performance requirement that is well defined, quantified and described. Generally, objective incentives are tied to those performance measures which are critical to the accomplishment of the performance objective.

Subjective Incentive A subjective incentive is one which can not be tied to a performance requirement that can be specifically described in terms of the quantity completed or performance achieved (i.e. it can not be described in objective terms). It is often suitable in situations where the outcome can not be defined well enough to relate performance to varying degrees of output.

PERFORMANCE

OBJECTIVE A statement of desired results reflecting the level or various levels of performance of a requirement which the DOE believes are of value.

QUALITY

ASSURANCE

PLAN

The quality assurance plan (QAP) provides the method to determine if the contractor meets the performance standards in the statement of work. The QAP provides how and when surveillance, in accordance with the statement of work, or similar document, will be performed. The QAP measures performance against the standards in the statement of work and both

documents should be included as part of the solicitation.

REQUIREMENT	An element of work effort defined in the contract Statement of Work or Work Authorization Document which the contractor is required to perform.
SERVICES	Services are defined as the performance of identifiable tasks rather than the delivery of an end item of supply. “Services” also include tasks that are delivered under a contract where the primary purpose of the contract is to provide supplies.
SOW	Statement of Work
TOTAL AVAILABLE FEE	The total available fee represents all of the fee that is potentially available for payment to a contractor. This total available fee is comprised of a base fee and a performance fee depending on the type of contract. The total available fee in a performance-based contract will normally consist of a base fee dollar amount and a performance fee dollar amount. The base fee portion will normally be zero unless prior approval is obtained from the Procurement Executive. The performance fee amount may consist of either an incentive fee component for objective performance requirements, an award fee component for subjective performance requirements, or both.
UNCOSTED FUNDS	The balance of the amount of funds obligated by DOE for which costs have not yet been incurred.
TINA	Truth in Negotiations Act
WAD	Work Authorization Document

SECTION 1

PERFORMANCE-BASED CONTRACTING

Chapter One

Introduction to Performance-Based Contracting

The Department of Energy (DOE) has been faced with many challenges over the years since World War II, and, as a result, has had to employ unique approaches to acquiring the goods and services needed to meet its most important missions. The times are still changing for the DOE as it rethinks its procurement practices in face of new missions brought about in an evolving world.

As a result, the DOE is rapidly moving to a new contracting environment. The purpose of this Chapter is to introduce this new contracting environment and discuss the changes made in the way DOE conducts its procurement. It is important to emphasize that these changes are occurring not merely for the sake of change, but out of necessity. Budgetary constraints and the necessity for excellence in performance challenge us to develop new ways to accomplish our missions.

1. Background

To better understand this new contracting environment, it is useful to briefly summarize the four businesses the agency is engaged in:

- o Energy Resources - Assuring adequate supplies of clean energy and reducing U.S. vulnerability to supply disruptions; encouraging efficiency and advancing alternative and renewable energy technologies.
- o National Security - Effectively supporting and maintaining a safe, secure, and reliable stockpile without nuclear testing, dismantling and disposing of excess weapons. The Department will take a leadership role in national and global nonproliferation and nuclear safety activities.
- o Environmental Quality - Reducing environmental, safety, and health risks and threats from DOE facilities and materials and permanently disposing of civilian spent nuclear fuel and defense related radioactive waste.
- o Science and Technology - Maintaining leadership in basic research and advancing scientific knowledge.

To ensure the success of our efforts in furthering each of our business lines, the Department identified three areas that are critical to our success. These areas, constituting our Corporate Management philosophy, relate to 1) the safety and health of the DOE workforce and the public and protection of the environment in all Department activities; 2) foster a close working relationship which promotes open and free communication and constructive feedback with our customers and stakeholders, and 3) use efficient and effective corporate management systems to guide our decision making, streamline and improve our operations, align resources and reduce costs, improve quality of our product and service and, finally, evaluate our performance.

Each of these highly complex activities has unique aspects, requiring the participation of highly capable private-sector organizations and academic institutions. Historically, and prevalent today to a significant degree, DOE enters what are typically called management and operating (M&O) contracts to fulfill these requirements. DOE designed the M&O contract to attract private industry to the high-risk job of preserving national security through technological advances in both defense and civilian scientific endeavors.

To place the evolution of contract forms within the DOE in context, it is important to first describe the fundamental precepts of the M&O contract at the DOE and the pivotal attributes that have set that contract form apart from the more traditional instruments used by other Federal entities. In this way the reader will better understand how the inherent strengths of the tradi-

tional M&O contract format, considered administrative assets in the past, now are impediments to change as the Department transitions its role into the 21st century.

A. What Are Management and Operating Contracts?

The Federal Acquisition Regulation (FAR) - itself the result of a reform effort in the early 1980's - recognizes the M&O contract as a distinct concept. The FAR, in Subpart 17.6, defines M&O contracts as an agreement under which the government contracts for the operation, maintenance or support of a Government-owned or -controlled research, development, special production or testing facility that is wholly or principally devoted to one or more major programs of the contracting Federal agency.

The underlying principle of the M&O contract has been the intention of the government to draw upon the existing expertise of the private sector rather than spend limited government resources to duplicate capability already existing in the private sector. As applied at the DOE, M&O contracts have been characterized by lengthy periods of performance and broad statements of work, with work authorized (including cost incurrence) through instructions such as work authorization directives, delivery orders and task assignments. In selecting a contractor for an award, the ability of the contractor to perform (technical and managerial competence) was usually the predominant selection criterion as opposed to cost. The DOE M&O contract typically relieved contractors of most financial risk and provided for only limited external oversight of the contractor's activities. The changing political environment has resulted in a shift away from weapons production with DOE requirements evolving from a production-orientation to one that is primarily project-oriented. Current emphasis on restoring the environment as opposed to weapons production is an example.

Historically, the M&O contract, as used by the DOE, has been a cost reimbursement contract; principally of three types:

- o Cost-plus Award Fee Contract. This type of contract reimburses the contractor for costs that it incurs in performing the contract. Essentially, this type of contract provides for a fixed-base fee plus an additional fee awarded based on the Department's subjective evaluation of the contractor's performance. It is the most prevalent among for-profit contractors.
- o Cost-Plus-Fixed-Fee Contract. DOE reimburses the contractor for incurred costs plus pays a fixed fee as specified in the contract.
- o Cost-Plus-No-Fee Contract. The contractor is reimbursed for its costs, but is not paid a fee. This type of contract has been used primarily with academic institutions.

Under these cost reimbursement instruments, the responsibility for all aspects of running the facility was assigned to one prime contractor. The prime contractor would occasionally subcontract certain responsibilities such as transportation services, medical care, security.

The contractual instruments most often used by the DOE for its most difficult and complex research, and for production and weapons facilities have been award fee contracts. Over the years, contractors working under this type of contract have had a remarkable record of scientific and technical success. The performance of these contractors has been, to a large degree, a direct result of the unique long-term contractual relationship among the parties to the agreements.

M&O award fee contracts were purposely designed to draw on the dedicated technical, scientific and administrative skills of non-federal entities for accomplishing a federal purpose.

B. What is Special about Management and Operating Contracts?

The following specific precepts have been elements of the Department's M&O contract applications:

- o There is a mutuality of interests in which contractor support of the performance of a government mission meets the goals of the public and private institution.
- o The government retains responsibility for broad program management on technical direction, while the contractor is responsible and accountable for the day-to-day management and performance of work.
- o With few exceptions, the government assumes all financial risk responsibility directly associated with the contractors operations.
- o Employee compensation and benefits, including pension programs are subject to government approval, and designed to promote the continuity of the workforce.
- o While the contractor is contractually responsible for performance in accordance with all terms of the contract, including security, health, safety and environmental compliance, the government remains accountable to society for the establishment of the mission, conduct of operations and expenditure of public funds.
- o The Department has arranged to ensure the flow of operating funds to the contractor.

C. Why Management and Operating Contracts?

The characteristics of M&O contracts were well suited to meet the needs of the Atomic Energy Commission and its successor agencies, including the Department of Energy. The urgency associated with World War II required that war materials be expeditiously produced without distractions. Key issues of contemporary contracting, such as the issues relating to cost and contractor accountability, were not of primary importance relative to having the needed research, components and materials delivered on time. The actual price paid (including the impact on the environment) was secondary to obtaining necessary armaments. The timely acquisition of necessary materials and research services, often with secondary regard paid to the costs incurred, was management's primary expectation. Late in the "cold war," charges of mismanagement and contract abuse started to emerge and what began was the start of what is now commonly known as "contract reform." Efforts at reform touched many areas of government contracting. Because of the unique nature and high degree of priority of the work and the high risk associated with that work, the area of advanced military and nuclear applications remained relatively immune from reform efforts.

2. The Changing Environment

Change is occurring in the way that the government and industry do business. Both government and industry are looking for ways to improve the methods by which they conduct business. Both

are moving toward a mutual goal of creating operations that work more effectively and at reduced cost. This movement is essential since as the initiative to “downsize” and “right size” progresses, today’s resources will prove inadequate to accomplish all aspects of the work processes as they had been defined in the past. Out of necessity, organizations are re-engineering work processes to control their costs of operations and to create cost and other incentives to push contractors to perform at the highest level of technical and managerial efficiency. The search to control costs and to drive contractor performance has also been a significant objective within the DOE. All functional elements of the organization and the processes and systems used to manage and contract for goods and services have been subject to critical evaluation.

A. The Department of Energy and Change

In February 1994, the Department of Energy issued the report of its Contract Reform Team, Making Contracting Work Better and Cost Less, which recommended that the DOE move away from its traditional contracting approach and adopt the principles of performance-based contracting. It was felt that the traditional M&O contract approach relied too heavily on cost reimbursement structures (almost all with award fee provisions) involving broad and general statements of work; served to limit competition and lacked meaningful incentives for motivating contractors to higher levels of performance. In addition, the climate of government contracting has been shifting toward contractor assumption of greater operating risk, including risk associated with fines, penalties, third party liabilities, and loss or destruction of property. The Contract Reform Team also recommended that the Department seek to identify contract structures that would better define measurable standards of performance under which contractor accomplishments could be evaluated and fees awarded accordingly.

The central theme of the Contract Reform Team’s recommendation for performance-based contracting (PBC) was the prudent application of results oriented statements of work; clear, objective performance standards and measurement tools; incentives to encourage superior performance; and providing services at the prime or subcontract level on a fixed price basis where appropriate. Since the issuance of that report the Department has experimented with various forms of performance-based contracts, including various approaches to contractor risk, performance measurement and fee incentives. Among other things, this Guide embodies the lessons-learned during that period of experimentation as well as lessons learned from the achievement of PBC at other organizations in the government and in the private sector.

B. The General Accounting Office and the DOE Office of Inspector General

The DOE Office of Inspector General (OIG) and the General Accounting Office (GAO) have devoted a great deal of time to reviews of the Department’s contracting problems. In the late 1980’s and early 1990’s, reports by these organizations highlighted the following issues: inadequate federal control over M&O contracts, broad indemnification of contractors, inadequate contract administration staffing in DOE field offices, problems with DOE’s 1991 Accountability Rule (where the contractor was held responsible for costs associated with avoidable events), use of vague and nonstandard provisions in contracts, weak financial and accounting controls, inadequate DOE review and approval of contractor procurement and property management, and problematic administration of contractor pension benefits. The weaknesses identified by the GAO and the IG were significant and systemic.

The Department has taken significant steps to reform its contracting practices. The Accountability Rule was found to be less than effective and was rescinded with the issuance of new rule-

making in 1997. Best commercial practices were applied to various business functions including the procurement and personal property management functions through a formal pilot program in 1996. Other efforts were initiated earlier such as initial work on benchmarking best practices in 1994 and 1995.

3. Performance-Based Contracting

The development of PBC is a further step forward in achieving the goals of making DOE's contracts work better and cost less.

A. What is Performance-Based Contracting?

OFPP, in its Policy Letter 91-2, dated April 9, 1991 defines PBC as essentially structuring all aspects of an acquisition around the purpose of the work desired as opposed to either the manner by which the work is to be performed or broad and imprecise statements of work. Critical elements of effective PBC are a well defined and clearly written statement of work with achievable performance standards, a performance requirements summary which sets the performance standard for each measurable service of the contract, defines, where possible, acceptable quality levels, methods of surveillance and percentage of the contract price each service represents to establish the basis of payment for acceptable and nonacceptable performance and a quality assurance surveillance plan. A critically important prerequisite to effective PBC is a well defined and clearly written statement of work (SOW). Chapter Two of this Guide deals with the SOW in the PBC environment.

B. What are the Key Elements of this New Contract Form?

There are certain key characteristics that make performance-based contracts different from other contract forms used in the Department.

The concept of performance-based contracting is centered on a contract instrument that defines performance expectations in terms of outcomes or results as opposed to methods, processes, systems or broad categories of work activity. To the maximum extent possible, it describes the work in terms of what is to be the required output rather than how the work is to be accomplished.

The second component of PBC is that responsibility is placed on the contractor for assuring quality performance. The contractor's compensation is tied to the achievement of the prescribed outcomes or results. This requires that formal and measurable performance standards, including surveillance plans, be developed to facilitate the assessment of contractor performance.

This new form of contract requires clearly stated, results-oriented, performance criteria and measures. DOE must be able to identify acceptable levels of performance for each of its performance measures. Where a range of performance is desired, the acceptable range must be defined. Appropriate incentives are created to motivate contractors to meet and exceed higher levels of performance than have been expected in the past. Criteria are included to require or incentivize contractors to pursue opportunities to subcontract for tasks that other entities may better perform at less expense than the management contractor. In addition, provisions may be included that create specific incentives for cost savings and improved financial accountability. Using this approach, the government should realize improved contractor performance and greater

accountability, as well as more efficient deployment of contractor management and government oversight resources.

It is a general Federal procurement practice that agencies utilize competitive negotiations for acquisitions where performance above the minimum acceptable level may be desired. During the selection process, greater consideration should be given to technical capability, management capability, cost realism as well as past performance. More will be said regarding cost realism in a later chapter of this Guide. With DOE, however, even as the contracting environment and energy mission changes, it is acknowledged that the Department will continue to contract for management services utilizing many of the same contractors and laboratories that have been used in the past. The unique and unpredictable missions of the Department require a continuing need to maintain and increase the partnerships and special relationships that have served the Department well in the past.

As intermediate and longer term requirements extend from one period of performance to the next, the expertise of the successful contractor will be enhanced. Using the experiences gained during prior contract periods, objective performance-based incentives will be developed and incorporated into the new contract. The statements of work will describe the services in terms of “what” is to be performed. Performance standards will become more definitive than those for the prior period. Conversion from a total award fee cost reimbursement contract to more defined and disciplined contracting arrangements will be accomplished when appropriate. Incentive provisions emphasizing critical performance objectives will be introduced selectively in order to manage and focus the contractor’s efforts in desired areas.

C. Why Change Contracting Forms?

The incentives for DOE to use PBC are several. For our program managers, PBC will be the tool that may result in a way to better incentivize and measure performance. For budget managers, PBC will provide better visibility over costs. For the senior managers with overall responsibility, PBC implements the principles embodied in the National Performance Review, Contract Reform, and the Government Performance and Results Act. Those involved in the day-to-day contracting activities will assume greater responsibility and professionalism during the process of administering the contract. For the Department in general, PBC should result in lower overall contract costs and improved performance. For the contractor, meeting or exceeding, where appropriate, the Department’s goals will earn dividends not only in larger fee or profit, but also where past performance is a evaluation criteria on future awards. Finally, for the ultimate stakeholder, the taxpayer, the PBC process will address a number of problems associated with DOE’s past practices such as those identified in a number of audits, i.e., reimbursement of unallowable and unnecessary costs, schedule delays, failure to achieve specified results, and other performance and oversight problems.

D. Comparison of the Traditional M&O Contract to the New PBC

To better understand the difference between DOE’s traditional M&O contract and the PBC as it is applied to M&O and other type contracts, Table One, adapted from the Contract Reform Report, Making Contracting Work Better and Cost Less provides a good overall comparison.

TABLE ONE

Comparison

**M&O Contract
PBC**

Broad, subjective SOW

DOE oversees input

Cost reimbursement type contracts

1 Contractor/1 Operator

No cost reduction incentives

Fee based on post-performance review

No fee for academic organizations

Base fee allowed

Covers only M&O

Clear performance standards and accurate workload estimates

DOE measures output

Multi-type pricing arrangements with fixed price the preferred method when standards and workload are available

Specialized subcontractors - or individual contracts for recurring services

Incentives to reduce cost/shared savings

Fee based on measurable criteria to include incentive fee, where appropriate, based on exceeding performance standards

Fee may be available

Only with Procurement Exec. approval

May cover other contract types as well as M&Os

4. Conclusion

While the changes taking place at DOE are part of the overall government-wide re-engineering and contract reform initiatives, the more fundamental and more compelling reasons for change at the DOE are the dramatic shift in agency direction and the absolute criticality of the DOE mission. To fulfill its responsibilities in the most efficient and cost effective manner, the DOE requires the participation of all DOE employees and its contracting partners. While the need for change is generally recognized, implementing a 180 degree shift in focus to meet, in some cases, entirely new goals and objectives may not always be easy.

Chapter Two

Statements of Work for Department of Energy Contracts

This chapter provides a conceptual framework for drafting statements of work. While the concepts discussed are applicable to contracting generally, it focuses on the features of work statements for M&O contracts.

1. Functions of the Statement of Work

The statement of work (SOW), consisting of the specifications and any other portions of the contract that describe the performance required of the contractor, has a number of functions. It is the means by which the agency determines which part of its mission requirements will be performed by the contractor. In competitive procurements, the SOW establishes the degree of competition by defining those firms that can comply with its requirements. It provides both competitors and the agency with the basis for estimating the cost of performance. The determination of the type of contract to be used will depend upon whether the work required is such that the costs of performance can be accurately predicted. The SOW is also an essential ingredient in the evaluation of competitive proposals when offerors are required to propose specific methods of meeting its requirements. It is the basis for determining whether the contractor has achieved the required results and whether the government is required to accept the performance. As such, it determines whether the contractor is entitled to receive payment of the contract price or fee.

In fixed price contracts, the SOW is used to determine whether the contractor can be terminated for default and the extent of the damages incurred by the government. It also serves as the basis for determining whether changes to the work occur and whether price adjustments are required.

A performance work statement (PWS) of work is a new way of doing business. Writing a SOW, or a PWS, is a management exercise which should be done by a small team of functional experts and contracting personnel for each of the major service categories, or critical or major tasks, to be included in the contract or the performance-based portion of the contract. The PWS becomes the basic management document for operation of the function. It must clearly define the work to be done and the performance standards expected (quality, quantity, and timeliness). The PWS should also define the satisfactory level of performance, and provide a range of acceptable performance, as applicable. The PWS must contain the essential elements for administration after contract award which are addresses in necessary detail in the performance evaluation management plan. Essential elements include the systematic basis for acceptance and rejection of each performance effort, the identification or baselining of the cost of the effort, and a basis for withholding of fee for unsatisfactory performance.

2. Generic Types of Work Statements

Conceptually, SOWs fall into three classes — (1) functional specifications, (2) performance specifications, and (3) design specifications. SOWs for products or services will rarely consist of pure functional, performance or design specifications. However, they will almost always

consist of some combination of these generic types. Thus, it is important that their legal and practical significance be understood.

A. Functional Specifications

The functional specification is the broadest type of work description. It requires only that the contractor achieve an end result. It does not specify the means of achieving that result nor does it specify the processes or procedures which the contractor is required to use in performance. An example might be a requirement that hazardous materials be safely transported from point A to point B within a certain period of time. It places the greatest degree of risk upon the contractor but also gives the contractor the greatest degree of freedom in determining how to achieve the end result. Thus, the contractor would be free to use air, rail, automotive or any other type of transportation which would achieve the end result. Because it has no restrictive features, a functional specification will enable the greatest number of firms to compete for the government's requirements. Since the contractor is free to choose the means of performance, the government will be required to make cost/quality tradeoffs in evaluating proposals responding to functional requirements.

B. Performance Specifications

A performance specification is next in the breadth of the work statement. It differs from the functional specification in that it specifies the means by which the performance objective is to be achieved. Thus, in the example of transportation of hazardous materials, the performance specification would specify the means of transportation — whether by air, rail or otherwise. However, it would not specify the processes or methods to be used in transporting the materials by the prescribed method. Such a performance specification would permit the contractor to determine how to load the material. It also would place the risk on the contractor that the methods chosen would achieve the end result.

C. Detail or Design Specifications

The detail or design specification is the most restrictive of the three types. Not only is the means of performance specified, the processes and procedures which must be used in performing the work are prescribed. Thus, in the example of transportation of hazardous materials, a design specification would require specific methods of loading, identifying and other factors involved in the transportation. While the contractor has no freedom to choose how to perform, it will not be liable if the methods specified do not achieve the end result. The Government warrants that its design specifications are suitable for the intended purpose.

3. Performance-Based Work Statements

The aim of a Performance Work Statement (PWS) is to describe the work as much as possible in terms of outputs as opposed to methods of performance. In other words, the PWS should state what is to be done, not how to do it. The aim is also to state the requirements in objective terms. Thus, the contractor is given the responsibility of achieving the end result and the freedom of determining generally how that result is to be achieved. In these regards, the PWS most nearly resembles a functional or performance specification.

A. Objectively Measurable Outputs

Where possible, the outputs should be stated in objective terms. This might be the number of units to be produced, the timeliness of submission of reports (number of days), the number of defects or any other requirement which can be measured by numbers.

B. Other Identifiable Tasks

Many requirements are not capable of being described as objective outcomes. In some instances, particularly involving services, it may be necessary to state the outcome in terms which require that the determination of compliance requires the exercise of judgment. This might be required in the assessment of research or the effectiveness of management.

C. Inclusion of Processes or Procedures

In some cases, the inclusion of processes or procedures may be necessary for mission requirements. For example, if the SOW of a contract calls for the contractor to perform three chemical tests on a specified material and then to analyze the results, there may be several variations in how to perform these tests. It would be appropriate to specify the methods of analyzing the results where the government wishes to validate the efficacy of a particular test. However, processes or procedures should not be specified as a means of controlling the contractor or assuring that the contractor will perform satisfactorily. Those objectives will be met by selecting a capable and trustworthy contractor.

4. Risk and Type of Contract

The nature of the PWS and the degree of risk involved will require the consideration of various contracting strategies. While one of the objectives of contract reform is to maximize the use of fixed price contracts, this may not always be possible. Where risks are not at an acceptable level, fixed price contracts may not be appropriate. When the risk of performance can not be defined with any reasonable degree of certainty, a cost reimbursement contract is called for. The risk associated with this type of contract is primarily on the government since the contractor's commitment is limited to using its best efforts to achieve the requirements. Nevertheless, there are a number of techniques which can be used to increase the possibilities of using fixed price arrangements.

A. Breadth of the Statement of Work

The broader the statement of work, the more difficult it is to develop a PWS. In formulating a SOW, there is a great temptation to make it include all functions that are required in support of a given office. The sheer magnitude of the requirements gives the SOW drafter a formidable task and the risks may be so great as to preclude use of a fixed price contract. An overly broad SOW will probably include a considerable portion of work which the contractor must subcontract. This also can tend to increase the costs of the contract administration.

B. Unit Price vs Lump Sum Pricing

Where the nature of the work is known, but the quantity is uncertain, consideration should be

given to use of a unit price contract. In a lump sum contract, the contractor takes a risk that the quantity of work will be greater than anticipated while the Government takes the risk that the quantity will be less than estimated. These risks can be shared through the use of a unit price contract. For example, in a contract for environmental remediation, the contract could take the form of a fixed price per cubic foot of earth to be remediated, where both the type of contamination of the earth and acceptable methods of remediation are known, but the extent of the contaminated material is unknown. As long as the contractor can not influence the unknown, i.e., the amount of contaminated material, this particular type of contract will allow partially fixing the cost of the unknown work (here the quantity of earth to be removed) by establishing the unit cost associated with the known remediation technology. Only the magnitude of the cost is unknown and it can not be influenced by either the contractor or the government. A large caution is in order. If the contractor can influence the unknown, this can become the least desirable contract form.

C. Task Order Contracts

Another technique for reducing the risk of fixed price contracts is to use a task order contract. In this type of arrangement, the SOW can be very broadly stated in the initial contract award and defined precisely for each task order. This permits delaying the drafting of the SOW until such time when greater certainty in determining the nature and the type of work is available.

5. The SOW and Agency and Site Missions

At some DOE sites, strategic plans exist along with annual operating budgets. These documents detail the individual work segments, their schedule for completion, and the cost estimates for accomplishing the specified effort, all on an annual basis.

Logically, the SOW to perform a specific piece of the planned work should fit within the estimate for that work in the site strategic plan. That may or may not be the case, however, since the estimates are not likely to be the result of detailed cost estimating. Rather, those estimates may be the result of an order of magnitude estimate where the degree of error is large. If the detailed estimate is too large, a problem is presented. Either the site plan must be adjusted to accommodate the larger estimate, or the work contemplated must be curtailed by reducing its scope or by budgeting the work to be done over a longer period. Obviously, many factors affect the site plan, and need to be addressed up-front. All possibilities must be confronted directly and deliberately in the context of the whole site plan. The easy path is often the worst.

A. Statements of Generic Requirements for Certain DOE Programs

The Department's sites are a mix of single purpose (one program office) and multipurpose (several program offices) facilities. In both instances, the work varies from the well-defined to the undefined. Over the course of contract performance, the composition of the work will change, often within the span of a year.

1). Environmental Management Mission Requirements

The generic program for environmental management in the Department of Energy is for the cleanup of a site or portion of a site. As a result, the requirement will normally have a finite completion objective in terms of outcome or performance expectation over time. However, the

same contract may present milestones of performance that are by their nature very hard to define. The SOW and the other provisions of the contract must be designed to recognize these variations in the same contract. One example of this situation is for the operation of a vitrification process where one contract provides for not only the development of the vitrification process, but also for the construction of the vitrification facility. Environmental management missions often include research and development requirements which, by their nature, may not be capable of specific definition. Another consideration relating to environmental management contracts are the uncertainties of the extent and exact types of contamination as well as the possibilities, if not likelihood, of frequently shifting clean-up standards. The existence of different standards means that, in some instances, “finite” completion, referred to above, cannot be defined - i.e., what is cleaned up to one standard is still contaminated to another standard.

2). Defense Mission Requirements

The projects that are part of DOE’s defense mission may have a finite completion, but the requirements are often continuing in nature.

Examples of defense requirements that can be reasonably defined are the production or dismantlement of nuclear weapons. Within the defense establishment, requirements that usually cannot reasonably be defined are research and technology development, and unique, small lot, manufacturing requirements.

3). Laboratory Requirements

This class of requirements is rarely amenable to a discrete detailing of the effort. The work tends to be of a continuing nature and generally consists of basic and applied research. Certain supporting requirements, such as facility construction projects, can reasonably be defined.

B. Support Requirements

The work scope, as it relates to support requirements, (e.g., purchasing property, etc.), may vary to some extent in specific makeup between the sites. However, on the whole, it will encompass those efforts required to support the mission requirements.

The Department of Energy’s sites that are managed and operated by M&O contractors are unique in that the Department has a direct interest in the performance requirements for many of the support areas. This interest stems from the fact that the site contractors are a separate operating entity, essentially independent from their parent organizations, and they exist for the sole purpose of the Department at the site. The Department, therefore, sets many of the support requirements which the contractor must perform. Other support efforts may be established by the contractor in areas not addressed by the Department that the contractor considers necessary to support the mission requirements or where the contractor has a specific interest. The nature of the support services to be performed will vary from those that have a well-defined function and scope or a well-established relationship with what they support to those that are undefined or have no direct relationship with other work.

6. Performance Work Statement Development Steps

This final section in this chapter is taken, in large part, from the Office of Federal Procurement

Policy's (OFPP) "Guide to Best Practices for Performance-Based Service Contracting", dated April 1996. Additional useful information is available from OFPP on their web-site at <http://www.arnet.gov>.

A. Analysis of the Requirements

Services and outputs must first be identified before an adequate PWS can be developed. If the requirements, for the current period, have been adequately identified, preparation of the PWS is greatly facilitated. The following broad job analysis steps are usually applicable:

1). Organizational Analysis

- Review the requirements and identify the services and outputs required from the contractor. The site's strategic plan or life-cycle baseline provides the basis for this analysis in the intermediate and longer term. The site's annual plan interprets requirements on an immediate basis.
- Emphasize the outputs the contractor will produce, but not how they will be produced.

2). Work Analysis

- Break down the work into its lowest task level and link tasks in a logical flow of activities - again, linked to the site baseline. The relationship and importance of each of the lower level tasks must be identified.
- Identify all outputs from the tasks and subtasks required of the contractor.

3). Performance Analysis and Standards

- Performance analysis assigns a performance requirement to each task, which involves determining how a service can be measured and what performance standards and quality expectations apply. The standard establishes the performance level required by DOE.
- Normally, the minimum acceptable standard of performance should not be set at 100% performance given the cost of 100% performance.
- Each measure must be necessary.
- Standards may be published or are well recognized, industry-wide standards, or may be developed by the agency with industry input to ensure they are realistic and effective. This may be done through public meetings, public comments on the proposed standards and measures, or through Requests for Information (RFIs) per FAR 15.405.

4) Data Gathering

- Historical data may be used by the planners and prospective contractors to

forecast or quantify expected work requirements.

- Needed data may be available from existing data management information systems and other databases or records such as sampling and on-the-job observations and prior performance history for similar type work.
- The historical data may be used in cost estimating and analysis, and may be included in the solicitation to facilitate offerors' understanding of workload requirements.

5) Cost Analysis

- Analysts must compute estimated costs for each task based on data that is available. These costs are used in preparing the government estimate, evaluating proposal and determining incentives. The government should include consideration of commercial costs of performing work in the private sector. While this may not be appropriate for much of DOE work, there may be instances where commercial costs may be applicable, such as low risk construction projects.

6) Incentives - Incentives should be used when they will motivate the contractor to accomplish critical requirements and induce better quality performance. Much of this Guide is devoted to the subject of incentives.

B.

Considerations in Developing the PWS

Some basic considerations should be borne in mind in developing the PWS. These include:

1) Content

- Identify only the essential outputs which are expressed in clear, concise, commonly used, easily understood, measurable terms, where possible.
- Do not repeat material that appears elsewhere in the contract.
- Do not include detailed procedures that dictate how the work is to be accomplished.
- To the maximum extent practicable, the PWS should be a stand-alone document, with minimum references to regulatory or other guidance. Only mandatory requirements should be referenced.

2) Style

- Use precise terms and clear, concise wording. Avoid vague statements or overly technical language.
- Use the active voice, task oriented statements. For example, "the contractor will provide X" as opposed to "X will be provided."

- Avoid abbreviations and acronyms, ambiguous words and phrases.

3) Method

- A cross functional “team” approach should be used which will result in a better final product, and limit the potential for disagreements among agency officials prior to award and during contract performance. It also serves to involve program personnel early in the acquisition process.
- Whenever possible, obtain comments from prospective offerors. Review by and input from potential sources provides an effective way to screen the PWS for accuracy, comprehensiveness, and clarity. It also serves as an excellent tool to identify aspects of the PWS that would restrict competition, raise costs unnecessarily, or discourage contractor innovation. Early involvement of industry is important.
- To the extent available, utilize existing model PWSs, particularly those tested in application. An agency does not have to reinvent the wheel and start from scratch to develop a PWS.

Chapter Three

Establishing Costs, Prices and Fees

This Chapter covers the process of establishing costs, prices and fees in a performance-based environment. It will address some estimating techniques and their applicability by site, and it will cover the different elements of fee. It will discuss fee relative to performance-based contracts and it will detail the process of fee negotiations.

1. Establishing Estimated Costs

The Department of Energy's M&O contracts establish estimated costs for the work to be performed. The contractor estimates the cost of the work to be performed and the DOE validates it primarily for technical understanding and cost reasonableness, and to ensure it is within budget. These costs are normally not negotiated. This has been due, in large part, to the nature of the work performed and its reliance on specific program legislation for the level of activity and amount of funds appropriated. It is anticipated that in the future some of these contracts may lend themselves to negotiation of total costs and others to the negotiation of some of the costs.

The precision to which a contractor can and will estimate the cost of the work to be performed or the amount of work which can be performed within a budget depends upon a number of variables including:

- o The extent to which work to be performed is defined. (The less defined, the more imprecise the estimate)
- o The extent to which the work and the resources to perform it are within the contractor's control.
- o The discipline of the cost estimating system and experience in cost estimating.
- o The inherent error in the estimating process and a built in bias toward conservative cost estimates.
- o The environment within which the estimate is being prepared (e.g., commercial, government (competitive or sole source), contract type, etc.)
- o Management's desire/need to be cost efficient.
- o The extent to which management provides well developed estimates.
- o The extent to which the DOE will review/negotiate the estimate.

M&O contractors have not been required to make detailed cost estimates for the work to be performed. There are several reasons for this situation including the national security nature of the work, uncertainty as to the availability of funds for the designated work, and limited resources on the part of the Department to rigorously review the estimate.

However, during the 1990's, with the change in missions and the severe budget constraints, the Department of Energy has had to become more efficient. Regarding its M&O contracts, the Department has sought to improve the cost estimates for the work to be performed. There are several key preconditions which will impact the Department's ability to obtain sound cost estimates: (1) the definitiveness of the work scope, and (2) the establishment and maintenance of baseline performance records (technical, schedule and cost). Also prerequisite to sound cost estimates are adequate cost estimating systems and the necessary skills within both the DOE as well as the contractor.

A. Baselines

The term "baseline" has several accepted meanings. In the context of a contract, the term can be used to describe the historical performance of a contractor in terms of cost, schedule and scope. The word "baseline" has also been used to identify an acceptable level of performance. "Baseline" is sometimes used to describe a projected or estimated level of performance. The term has also been used to mean a level of funding such as the funded baseline for FY 1998. Lastly, the term has been used as an accounting term to mean a standard cost (obtained from a prior period's experience) and subsequently adjusted to reflect current experiences. Generally, the use of the term "baseline" will denote a known standard, either already experienced or anticipated.

Due to the nature of the work historically performed by the Department's M&O contractors, the authorization and budget process associated with such work, and the Department's management approach to M&O contracts, baselines have not necessarily been established.

As previously mentioned, the environment within which the Department operates and, to a large extent, its mission, have changed. The Department is focusing on efficient, performance oriented work. DOE Headquarters is requiring that sites demonstrate performance against an objective. Appropriate baselines need to be established, especially with regard to those sites which have an environmental management mission with a targeted completion date. Like the work scope, the baseline which can be established will depend on the mission or missions of the site. In some cases, multiple baselines may be appropriate.

Regarding mission requirements, the baselines will vary by site or within a site along the following lines:

Environmental Management Mission Requirements:

- For site completion, a life cycle baseline should be established and maintained. This baseline should establish the required technical performance, the schedule for such performance, and the cost for such performance.
- For specific projects, a project baseline should be established which addresses technical, schedule and cost performance.

Defense Requirements:

- For specific projects, a project baseline should be established which addresses technical, schedule and cost performance.

Laboratory Requirements:

- A baseline may not be appropriate for Science and Technology research.

Support Requirements:

- This may be a level of effort type baseline.

Regardless of whether or not support requirements are integrated with mission requirements in a baseline, if improvements in performance (including cost) of support requirements are desired and such improvements are to be measured against previous performance, a baseline should be established for that effort indicating the desired objective performance level and its planned achievement.

The duration of a baseline will vary. Life-cycle baselines are for the life of the site or project. Multi-year baselines may be a subset of the life-cycle baselines, or for a set planning or contract period, or for a specific project which extends several years, but which does not reflect fully integrated requirements. Annual baselines may be a subset of the site's life-cycle baseline, reflecting the budget and coinciding with the government's fiscal year. If a site life-cycle baseline doesn't exist, it will define the work to be performed within the year as a stand alone document. It should address those portions of multi-year projects which occur within the annual period. Regardless of the baseline's length, it will serve, to some degree, as the basis for the estimated cost for the work to be performed within the period the estimate covers.

B. Estimated Costs and Cost Analysis

The precision of the cost estimate for the work to be performed not only depends on the precision of the work scope and baseline, but it also depends on many other factors as pointed out in the preceding discussion. While an estimate of a technology development effort will inherently not be very precise, it will be less so if the specific goals are not well defined or there is not a rigorous review by the contractor's management of not only of the cost estimated, but also of the estimated content of the work scope and the approaches being taken to it. This, in turn, may be less reliable than warranted by the nature of the work, if the DOE does not conduct a rigorous cost analysis. If the DOE only reviews the estimate for content and to ensure it is within the budget, this may be adequate to address budgetary concerns, but may not assure the reasonableness of the estimate.

The FAR requires that the estimated cost be established through competition or negotiation to be considered fair and reasonable. The process of negotiating an estimated cost requires a rigorous analysis of not just the content, but the realism of the work scope and the costs associated with it. This is normally done by an integrated team of specialists and led by the contracting officer. To the extent the estimate is not considered fair and reasonable, negotiations must take place between the offeror and the government in an attempt to reach agreement on a valid estimate of the work scope and associated costs.

C. Techniques for Estimating Cost

1). Source of the Estimate

Generally, the contractor's estimating process usually involves an estimating or planning group, the project and functional managers, and senior management. Normally, the estimating group

develops a rough cost estimate for the work the DOE would like performed during the year (or conversely develops an estimate of the amount of work which can be done given the budget for the year) and identifies which project or functional groups will perform it. Project and functional managers normally develop specific estimates for the work that will be under their purview. These estimates are provided back to the estimating group which adds any support or miscellaneous cost estimates to it and then refines the total estimate. This estimate is usually reviewed by the senior management of the company prior to its formal release to the DOE.

It is important to note that, in reality, many of DOE's contractors are requested to provide *budgets* rather than estimates often resulting in proposals which identify what work may be accomplished given a certain budget. DOE's "estimating" process described has inherent inefficiencies built into it, some unique to the DOE M&O contracts. Project and functional managers have a self interest built into the estimate they prepare. They may overestimate the cost of the work (or underestimate the amount of work which can be performed for a given funding level) to allow for some management reserve in case things go wrong. They may also be interested in protecting the composition and size of their organization. While the estimating group may challenge some of the project and functional manager's estimates, they may not have the expertise to do so, and will also have a bias towards ensuring a management reserve. Senior management, while wanting to perform at an efficient level which meets DOE's budget and planning, has no motivation to achieve efficient estimates beyond that. In fact, the motivation has historically been to be inefficient in estimating because any funds not expended will be used for more work which usually has more fee associated with it. In the DOE M&O environment, where the companies are not competing in a diversified market, there is no reason to expect cost estimates to be precise, or underestimated.

As mentioned earlier, during this time of declining budgets, the Department of Energy program offices are becoming more aggressive in insisting that work be performed sooner than was required historically, and for reduced costs to meet the lower budget amounts. This is not considered unreasonable since historical cost estimates have often been significantly higher than what the work actually cost to perform and which has resulted in large unfunded backlogs of work. However, this situation cannot continue and reduced cost estimates will only be achieved if the DOE becomes more involved in the process and challenges the validity of the estimates in terms of the scope of the work to be performed, the approach to performing it, and the costs themselves. The goal is to achieve more accurate estimates of the work that can be performed for the cost. To the extent that DOE does not have the requisite skills in-house for assessing the validity of the estimates, then the skills must be acquired from another source, although this avenue is also somewhat restricted due to downsizing government-wide as well as tightening appropriations authorized for support service contracts.

2). Types of Cost Estimates

Several techniques or a combination of techniques may be used in preparing a cost estimate. These techniques include among others, the comparative approach, the trending approach, the parametric approach, and the bottoms-up approach.

The comparative approach involves comparing the work to be performed with similar work already performed, where the actual amount of labor, material and costs are known. Similarities and dissimilarities in work scope must be identified and compensated for.

The trending approach involves preparing the estimate for the work to be performed using

historical information about similar work, where a consistent pattern of change in the amount of labor, materials, and costs required exists.

The parametric approach can be used where known relationships exist between types of work scope. Using the work scope that can be estimated with some degree of confidence, the related work scope is estimated using the known relationship factor. A thorough understanding of the relationship and how it may change as conditions change is critical when using parametric comparisons.

The bottoms-up approach involves the estimator breaking the required work down to its lowest components and then building up an estimate of what it will cost to perform, using labor and material amounts and costs associated with each of the components. In creating the estimate, the estimator may use a number of standard estimating tools, including engineering estimates (primarily for work not performed before); industrial engineering tools, such as data from time & motion studies; standard labor hours; and learning curve theory, which would apply to repetitive types of efforts; industry standards; comparison to similar work previously performed; and trending, and parametric estimates.

The bottoms-up estimate is the most thorough and can be the most precise method of estimating. This is due to the fact that it requires that the scope of work be broken-out into its smallest components, and the estimate be created at this level using an appropriate estimating tool. However, it requires a good deal of expertise, information and time.

3). Methods for Validating Cost Estimates

There are two principal methods for validating the reasonableness of cost estimates. Both include cost analysis. They are “will-cost” and “should-cost.” These methods may employ the same techniques as discussed in the section above on cost estimating as appropriate.

“Will-cost” validates the contractor’s cost estimate by relying on historical data for the same or similar work scope. This data is used to project what it will cost to perform the current work scope. A number of points need to be made. It is obvious that this approach will work only to the extent there is historical data available on which to rely. The accuracy of the data relied on must be verified. In using historical data, any inefficiencies, such as in the approach to performing the work, subcontracting, the use of materials, etc., will be projected forward to the estimate to perform the current work scope. Care must be taken to consider the appropriate adjustments for any costs associated with rework or work scope differences.

“Should-cost” validates the contractor’s cost estimate for the current work scope by critically evaluating the proposed approach to performing the work, to obtaining material, to subcontracting, and to costing the entire effort. It requires review of the support requirements in detail, questioning the need to perform those which do not directly contribute to the performance of the mission, and challenging the cost efficiencies of those that do. The “should-cost” method requires more specialists and time than the will-cost method. If it is employed consistently with a contractor that prepares cost estimates over a period of time, it may result in significantly improved efficiencies in development of cost estimates and performing the required work scope. The “should-cost” validation methodology should result in efficiencies which accelerate the performance of work through reduced cost estimates, allowing the early planning of additional work and reduced costs of actual performance.

D. Accuracy of Cost Estimates

The accuracy sought in a cost estimate should reflect what can be expected given the type of effort the estimate is for and the conditions surrounding the performance of the effort. The expected accuracy of a cost estimate should reflect the degree to which the effort can be defined, the exact performance required, and the associated risks identified. The greater the definition and ability to identify performance and risk, the more accurate the cost estimate. The more the environment within which the work is to be performed is known and within the contractor's control, the better the accuracy of the cost estimate should be. Critical review, challenge and negotiation by the DOE will result in achieving more accurate estimates.

2. Negotiation of Fee

Although the cost for the performance of the work scope is normally not negotiated for the Department's M&O contracts, the amount of the total available fee or profit (profit is hereafter referred to as "fee") is generally negotiated. The cost base from which the fee is calculated is normally the budget for the annual work to be performed at a site, adjusted to delete various costs which are not directly associated with the work to be performed by the contractor or which require significantly less of the contractor's attention.

The maximum amount of fee which may be provided to a contractor is calculated in accordance with the Department of Energy Acquisition Regulations (DEAR) Subpart 970 relating to M&O contracts. One of the reasons the DEAR contains a separate methodology for calculating the maximum amount of the fee for its M&O contracts from that provided for elsewhere in the DEAR or in the FAR is due to the fact that the costs on which the fee is calculated are not negotiated. Without a rigorous cost analysis, the costs might be higher than what they would otherwise be if they were negotiated. For work scope and cost which are not well defined and estimated, the amount of fee considered fair and reasonable will be less than for work and cost which are well defined and estimated.

A. Purpose of Fee

The primary purpose of fee is to provide the contractor a fair and reasonable compensation for performing DOE's required work scope. Such compensation is in addition to the agreed amount of costs to be paid for the work. The government has found, however, where there is some latitude in how the work is performed and where such work has potential long term impact on future work, fee can also be used to motivate the contractor to perform the work in the most productive and cost efficient manner.

The calculation set forth in DEAR Subpart 970 for M&O contracts establishes the maximum fee which may be provided to a contractor, with the maximum fee to be associated with the most productive and efficient work. There are several components to determining the extent the proposed work is both productive and efficient. Keeping in mind that the purpose of fee is to provide the contractor with a fair and reasonable compensation for the work performed, it must first be determined what the basic requirements (baseline) are and how well the work scope and cost are estimated. Once determined, an appropriate fee amount for such work should be established. Under performance-based contracting, the compensation is to be for actual performance and should not reward a contractor for poor work scope definition or poor cost estimating.

Given the accuracy of the work scope and estimate of cost for the baseline requirements, if it is

desired that additional work be performed, it must be determined how much additional work can potentially be performed and the extent to which that outcome is within the contractor's control. This determination should reflect:

- o The critical work identified (on the critical path) to be performed in the next period which could be accelerated;
- o The potential for the contractor to make the necessary resources available to perform it; and
- o The potential for the cost estimate for the baseline effort to be underrun, thereby making funds available for the performance of the additional work.

The amount of fee for any additional work over that associated with the baseline should reflect the extent to which:

- o The contractor will have to be aggressive in the performance of the baseline requirements to permit the performance of additional work,
- o The amount of available work it is determined can potentially be reasonably performed by the contractor and its potential benefit to the DOE, and
- o The contractor's willingness to establish aggressive goals.

The government may obtain benefit in other ways than just the immediate performance of additional work. There will be occasions when there is latitude in the outcome of the performance of the baseline requirements which may significantly impact future performance. Such areas, to the extent they can be identified, may warrant fee in addition to that associated just with baseline performance. An example of this type of performance might be where the contractor is incentivized to develop an approach, other than the standard industry approach for the demolition of buildings, which will significantly reduce costs and accelerate the schedule for numerous buildings subject to demolition.

B. Fee Relationships

The appropriate amount of fee is determined not only by the specific work scope to be performed, but also by the nature of the organization performing the work and the mission at the site where the work is being performed. There are exceptions, but the following is generally the case with respect to the type of organization and whether fee is considered an incentive:

1). By Organization

“For-Profit” organizations are in operation to make money for their investors be it a single owner, a few owners, or a group of stock holders. Generally, they seek as much fee as they can obtain given the market within which they operate and pay the full complement of taxes on such fee. *“For-Profit”* organizations are the only type of organizations that perform work at the M&O sites which are not laboratories. The amount of fee they are limited to, if any, is set forth by statute and regulation. DOE regulations require that the amount of fee established be fair and reasonable, and the regulations provide guidance on how to determine the appropriate amount.

“Non-Profit” or “Not-for-Profit” organizations, other than educational institutions normally only use fee to perpetuate and expand the organization. Normally, these organizations do not have to pay taxes on the fee they earn. “Non-Profit” and “Not-for-Profit” organizations operate many of the Department’s M&O laboratories. In establishing the amount of fee they may earn, the DEAR recognizes they normally do not pay taxes and, therefore, requires a downward adjustment to the fee amount which would be calculated for a “For-Profit” contractor.

Educational institutions are in operation for reasons other than to make money and normally do not seek fee to use in the perpetuation and expansion of the organization as funding for this comes from other sources. Recently, educational institutions which perform work for the Department of Energy have begun to seek fee to defray other costs. The DOE has placed liability on educational institutions by requiring clauses contained in the Department’s contract reform rulemaking issued in June 1997. Due to the risk of this liability, some educational institutions have sought additional fee which could be used to mitigate the cost impact. Also, fee is being sought by some educational institutions as a source of funds for institution-directed research and development and miscellaneous other interests.

2). By Site

Environmental Management (EM) or Defense Program (DP) Sites or projects exhibit a diverse scope of work ranging from the relatively simple and low risk to the extremely complex and high risk. These types of sites must attract the expertise and knowledge necessary to operate them, and this expertise and knowledge lie primarily with for-profit contractors.

Laboratory Sites primarily require the performance of research in various field of science and technology. The nature of this work is normally undefined and the risk associated with it ranges from low to high. These sites must also attract the expertise and knowledge necessary to operate them, and their expertise and knowledge is often found in educational institutions and nonprofit organizations.

C. Limitations on Fee

Statutory limitations apply to cost-plus-fixed-fee contracts which are limited to 15% of the estimated cost, excluding fee, for experimental, development and research efforts and 10% of the estimated cost, excluding fee, for all other effort. The Department of Energy, at DEAR 970, places additional limitations on the amount of fee which may be provided to its M&O contracts. The order of precedence for limitations on fee, in descending priority, is statute, FAR and DEAR, with statute governing in all cases. Further, to the extent an M&O contract is negotiated as a cost plus incentive fee, fixed price incentive, or firm fixed price contract pursuant to DEAR 915 and the FAR, fee for such contracts may be calculated in accordance with DEAR 915 and the FAR and not DEAR 970.

D. Components of Fee by Contract Type

1). Award Fee Contracts

The fee in an award fee contract normally has two components, a base amount and an award fee amount. The base amount is fixed at the outset of the appropriate period. The award amount is tied to the contractor’s performance and is intended to motivate excellence. The award amount has historically been subjectively awarded to the contractor based on the government’s assessment of the contractor’s performance.

With the introduction of performance-based contracting, the Department of Energy began to identify specific levels of performance for individual requirements which had to be achieved within a designated period of time with specific fee amounts associated with them. These performance levels tend to be objectively defined. However, some subjective performance areas remain in most cases. Additionally, the Department is moving away from the use of base fee, reducing it to zero. Although the use of objective performance measures, the specific allocation of fee to various levels of performance, and the lack of a base fee are not the traditional components of an award fee contract, the Department's M&O contracts cannot be classified as other than award fee contracts unless cost is negotiated and incentivized or established as a firm fixed price with award fee provisions.

The use of objective performance measures with specific amounts of fee associated with the various levels of performance of the requirements and the attempt to limit such incentives to critical performance has created the need for another aspect to fee in the Department of Energy's award fee, performance-based contracts. This is typically denoted in a clause entitled "Conditional Payment of Fee." This clause allows for the subjective downward adjustment of any fee earned in the event any of a number of defined conditions occur.

This clause is necessitated by the nature of the Department's M&O contracts. As discussed earlier, the Department defines the majority of work to be performed at its M&O sites, including support effort as well as mission effort. While it is not important to associate fee directly with all of this work (both support and mission), it is important that performance (cost & technical) of the effort not fall to a point where the total performance of the contract is jeopardized. It is also important that a site safety program be in place and adhered to and the contractor be motivated to preclude any catastrophic events.

2). Cost-plus-incentive-fee, fixed price incentive, and firm fixed price contracts

The components of fee for these contract types has not changed with the move to performance-based contracting. DEAR 915 and the FAR should be consulted. In this regard, performance-based contracting will increase the number of incentives tied to technical and schedule requirements and, in the case of firm fixed price contracts, performance requirements may be identified for additional award fee over the firm fixed price.

E. Fee for Performance-Based Management

A central concept of performance-based management is the management of work by identifying and setting specific goals or objectives (referred to as objectives hereafter) and then measuring their achievement. When identifying performance objectives, the technical, schedule, and cost aspects of the work to be performed must be addressed at the level at which performance is desired.

Fee is not inherent in performance-based management. However, fee should be tied to performance to the maximum extent possible. Regarding the Department's M&O contracts, this has resulted in emphasizing the use of objective performance measures to the extent reasonable in determining the amount of fee to award a contractor under award fee contracts or in other types of contracts that are performance-based. Fee is to be tied to those critical few performance measures or group of measures which are necessary to successful accomplishment of the performance objectives. In tying fee to performance measures, it is necessary for DOE to identify

those critical measures and communicate this information to the contractor, along with identification of the priority ranking of measures and associated fee for each. However, tying fee to performance measures is not intended to replace a performance-based management system or even be the primary means of managing a performance-based contract. It is only one of a number of tools which can be used. Other management tools must also be utilized if the objectives are to be successfully achieved.

F. Establishment of Fees

Section 970.15 of the DEAR explains the Department's policy regarding the establishment and negotiation of fee for M&O contracts. It provides for the maximum amount of fee which may be established and the procedures for establishing a fair and reasonable amount of fee depending on the specifics of the work to be performed, the approach taken, and the site conditions. DEAR 970.15 provides guidance and procedures to be followed in establishing the amount of fee available for an M&O contractor. The section also provides for the creation of cost plus incentive fee, fixed price incentive, and firm fixed price fee arrangements in accordance with DEAR 915 and the FAR for work effort where the conditions of those regulations are met and the cost of the work is negotiated.

The established fee would normally be tied to the performance of the baseline requirements or to exceeding them. While there is no hard and fast rule, the amount of fee associated with the baseline must be a fair and reasonable reflection of the difficulty to complete the baseline requirements. This fee analysis would also include the cost to perform, the benefit to the government and the difficulty of accomplishing the work.

The quality of the estimate of the amount of work to be performed for the cost estimated/budgeted should be a major consideration in the amount of fee established. While recent program office insistence that baseline work be accelerated during a period of declining budgets has resulted in tighter cost estimates, validation of contractor's cost estimates still often requires improvement. Without this necessary improvement, estimates may continue to be off by a significant degree. The amount of fee established should reflect the various degrees of precision of the estimate. To the extent the precision of the estimate to perform the baseline requirements are significantly in doubt, the amount of fee associated with such performance should be less than the maximum amount of fee allowed to some associated degree based on circumstances and other factors. Additional fee should be associated with exceeding either the amount of work effort or the quality of the effort, or both.

The establishment of fees associated with cost reduction/incentivization and their ability to motivate the contractor to reduce costs is an area which is unique to the DOE's M&O contracts. The uniqueness stems from the fact that the cost of work for performing a DOE M&O contract is normally not negotiated. Because of this uniqueness, DEAR 970.15 limits the extent to which a structured cost incentive or share of savings (one with a specific share of costs saved) may be used. This applies regardless of whether or not it is considered a fee.

In many instances, there is an over-reliance on contractor accounting systems and contractor collected data without significant validation of the data. Many changes to the PBIs and approvals of fee earned were accomplished by using contractor-generated documents. In many cases, at the current time, systems are not in place to adequately support detailed cost analysis of contractor-provided data. Where systems are in place, resource limitations obviate adequate validation. In these instances, It would be inappropriate to provide the contractor a structured cost incentive

largely because of the possibility that potential savings might result from a poor estimate of the amount of labor or material required, the approach planned, or the costs associated therewith.

Chapter Four

Contracting Strategy

This chapter discusses how the selection of contract type and pricing arrangement can support the tenets of performance-based contracting.

1. Selecting Contract Types & Pricing Arrangements for DOE Facility Contracts that Support Performance-Based Contracting Objectives

Traditionally, prime M&O contracts have been cost reimbursement contracts due to the breadth and complexity of DOE's missions as well as the need for flexibility in managing programs. These M&O contracts generally contained statements of work which included not only the principal mission(s) of the site, but also facility operation and other work in support of the mission(s). While the need for cost reimbursement contracts will continue, a goal of contract reform has been to explore the use of alternate contract strategies (e.g., management and integrating contracts, teaming, and privatization) and to make greater use of other types of contracts such as fixed price contracts where appropriate.

The FAR provides an array of contract types to accommodate the acquisition of various types of supplies and services. Contract types vary according to (1) the degree and timing of the responsibility assumed by the contractor for the costs of performance and (2) the amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals. These contract types provide a range of allocation of risk of contract performance between the contractor and the government. Procurement professionals and program offices must select contract types and pricing arrangements that, compatible with the nature of a specific requirement, support to the greatest extent practicable the tenets of performance based contracting. A brief overview of these contract types is set forth below:

A. Fixed-Price Contracts

The 1994 Report of the Contract Reform Team recommended the increased use of fixed price contracts for facility functions on both a prime contract basis and as subcontracts under M&O contracts. The objective of this recommendation is to place increased risk of performance on the contractor. The strengths and weaknesses of the various types of fixed price contracts are discussed below.

- o Firm Fixed Price Contracts - A firm fixed price contract provides for a price that is not subject to any adjustment on the basis of the contractor's cost experience in performing the contract. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss. It provides maximum incentive for the contractor to control costs and perform efficiently and imposes a minimum administrative burden upon the contracting parties. Firm fixed price contracts should be used for routine repetitive services where specific, well-defined work scopes and outputs can be written; where quantities and rate of delivery of services is known at the outset of the contract; and where available cost or pricing information permits realistic estimates of the probable cost of performance. This contract type is not desirable when uncertainties exist or flexibility is needed during contract performance. The contractor, in most cases, will provide no more than what is called for in the specification or statement of work in order to minimize its cost and, thus, maximize profit on the contract's fixed price. If many uncertainties exist in the performance of the contract, the contractor will factor in the cost of contingencies in its price which may result in a greater cost to the government than if a cost type contract were utilized.
- o Fixed Price Contracts with Economic Price Adjustment - A fixed price contract with economic price adjustment provides for upward and downward revision of the stated contract price upon the occurrence of specified economic contingencies. The use of this variation of the fixed price contract is suitable when contract performance will occur over an extended period of time and there is uncertainty in the ability to project cost fluctuations during the period of performance. The cost to the government of administration of this type of contract must be weighed against the expected benefits.
- o Fixed Price Incentive Contracts - A fixed price incentive contract is a fixed price contract that provides for adjusting profit and establishing the final contract price by a formula based on the relationship of final negotiated total cost to total target cost. This contract type may be particularly useful in situations where the use of a firm fixed price contract is not prudent because of the level of estimating uncertainties, but where these uncertainties are not of such a degree as to justify the use of a cost type contract. The flexibility under this type of contract may allow the contractor and the government to reach agreement on price for certain requirements that would not be possible in a firm fixed price environment. The ceiling price of the fixed price incentive contract must be high enough above the target price to provide a meaningful incentive range. For many routine services, however, the benefits of the fixed price incentive contract are not worth the administrative cost. This type of contract is further discussed under the Incentive Contracts section of this Chapter.

B. Cost Reimbursement Contracts

Cost reimbursement contracts provide for payment of allowable incurred costs, to the extent prescribed in the contract. The nature of the contractor's obligation is to proceed with performance of the specified work in accordance with the terms of the contract. An estimated cost is

established in the contract. If the contractor reaches the estimated cost before the contract is completed, the contractor is not required to continue work unless the government increases the estimated cost and provides additional funding. Therefore, if the government is to receive the final product specified in the contract, it must reimburse the contractor's costs incurred in performing the contract, even if they exceed the estimated cost originally agreed to under the contract. The FAR and the DEAR place restrictions on reimbursement of certain costs and require the contractor to have an accounting system adequate to track and account for costs incurred in the performance of the contract.

This type of contract is administratively burdensome and places the most cost risk on the government. The government must review the contractor's accounting system to determine if it is adequate for a cost type contract. Claimed costs under invoices must be reviewed for allowability, and audits must be performed to close out the contract. The government ends up paying for the contractor's mistakes, errors and inefficiencies.

Various types of cost reimbursement contracts are described below:

- o Cost Contracts - A cost contract is a cost reimbursement contract in which the contractor receives no fee.
- o Cost Sharing Contracts - A cost sharing contract is a cost reimbursement contract in which the contractor receives no fee and is reimbursed only for an agreed upon portion of its allowable costs as set forth in the contract.
- o Cost Plus Fixed Fee Contracts - A cost plus fixed fee contract provides for payment to the contractor of a negotiated fee that is fixed at the inception of the contract. The fee does not vary with actual cost, but may be adjusted as a result of changes in the scope of work to be performed under the contract. This contracting type permits contracting for efforts that might otherwise present too great a risk to contractors, under any other contract type.

The cost plus fixed fee contract provides little contractor incentive for satisfactory performance. The same is true of cost control. In theory, the contractor would be motivated to keep incurred costs as low as possible in order to realize the fixed fee as a higher rate of profit on incurred cost. This might be true if the contractor has only one contract. In reality, however, most contractors will have more than one contract of more than one type. If a contractor has fixed price and incentive contracts it may assign its best, most efficient resources to these contracts in order to maximize profits and employ less productive resources in performing cost plus fixed fee contracts.

Cost plus fixed fee contracts may take one of two basic forms:

- o Completion - The completion form describes the scope of work by stating a definite goal or target and specifying an end product to be delivered.
- o Term - The term form describes the scope of work in general terms and obligates the contractor to devote a specified level of effort for a stated period of time. The contractor is expected to exert its best effort toward the goal of the work statement, but payment of fee is contingent only upon providing the required level of effort and a "best effort" toward the goal of the work statement whether or not the goal is actually realized.

Term type contracts provide virtually no incentive toward excellence in contract performance since the end product delivered is an amount of labor. The contractor is paid, and earns its profit, whether or not the objectives of the contract are realized. This type of contracting arrangement should be reserved for only the highest risk work, in terms of uncertainty, where the contractor would not otherwise enter into a contract with the government.

In the past, the Department routinely procured technical and other support services using task order, cost plus fixed fee, term type contracts. These contracts were used when the general nature of the work was known at time of contract award but not the exact tasks. Under performance-based contracting, this type of situation can be accommodated by use of indefinite quantity contracts with incentive provisions and other performance-based features. Orders are issued as definitive tasks with performance work statements and appropriate incentives. Profit or fee is assigned to each task and the amount of profit or fee earned is dependent upon the quality of the end product required under the task. Each task, therefore, becomes, in a sense, a stand alone performance-based incentive contract where the contractor is rewarded for the quality of its results rather than furnishing a level of effort.

C. Incentive Contracts

Incentive contracts are appropriate when a firm fixed price contract is not suitable and the required supplies or services can be acquired at lower costs and, in certain instances, with improved delivery or technical performance, by relating the amount of profit or fee payable under the contract to the contractor's performance. Incentive contracts are designed to obtain specific acquisition objectives by (1) establishing reasonable and attainable targets that are clearly communicated to the contractor; and (2) including appropriate incentive arrangements designed to motivate contractor efforts that might not otherwise be emphasized, resulting in a discouragement of contractor inefficiency and waste. Incentives usually take the form of performance, schedule, management, or cost and are further discussed under Chapter 5.

The majority of work performed at the Department's facilities is of a higher order than routine repetitive services, covering a wide range of technical difficulty, and is often not suitable for firm fixed or fixed unit price contracts. To support the objectives of performance-based contracting, such work should be performed under incentive type contracts. Performance-based contracts must contain clearly stated, results-oriented, performance criteria and measures, and appropriate incentives for contractors to meet and exceed the performance criteria efficiently and effectively, including incentives for cost savings.

The nature of the work to be performed should be carefully analyzed to determine the risk of performance and cost to the government for the contractor's assumption of risk in order to choose an appropriate pricing arrangement. While one of the tenets of contract reform is to utilize fixed price contracts where appropriate, thereby placing most or all of the risk of contract performance on the contractor, the cost of contingencies that a contractor may include in a fixed price contract for risk of performance must be considered. It may be more advantageous to use a cost type pricing arrangement where, because of the nature of the work to be performed, exorbitant contingencies would be included in a fixed-price arrangement. The use of incentives in a cost environment should greatly mitigate the risk the government would otherwise assume under a fixed fee arrangement.

The cost of administration of the various incentive structures must also be considered. Elaborate incentive provisions that require a considerable investment of Government time to administer must be weighed against the expected benefits to the Government.

1). Fixed-Price Incentive Contracts

A fixed-price incentive contract is a fixed price contract that provides for adjusting profit and establishing the final contract price by application of a formula based on the relationship of total final negotiated cost to total target cost. The final price is subject to a price ceiling, negotiated at the out-set of the contract.

2). Cost Reimbursement Incentive Contracts

a. Cost Plus Incentive Fee Contracts - The cost plus incentive fee contract is a cost reimbursement contract that provides for the initially negotiated fee to be adjusted later by a formula based on the relationship of total allowable costs to total target costs. This contract type specifies a target cost, a target fee, minimum and maximum fees, and a fee adjustment formula. After contract performance, the fee payable to the contractor is determined in accordance with the formula. The formula provides, within limits, for increases in fee above target fee when total allowable costs are less than target costs, and decreases in fee below target fee when total allowable costs exceed target costs. This increase or decrease is intended to provide an incentive for the contractor to manage the contract effectively. When the total allowable cost is greater than or less than the range of costs within which the fee-adjustment formula operates, the contractor is paid total allowable costs, plus the minimum or maximum fee.

b. Cost Plus Award Fee Contracts - A cost plus award fee contract is a cost reimbursement contract that provides for a fee consisting of (1) a base amount fixed at inception of the contract (may be zero), and (2) an award amount that the contractor may earn in whole or in part during performance and that is sufficient to provide motivation for excellence in such areas as quality, timeliness, technical ingenuity, and cost-effective management. The amount of the award fee to be paid is determined by the government's judgmental evaluation of the contractor's performance in terms of the criteria stated in the contract.

D. Indefinite-Delivery Contracts

These types of contracts may be used to acquire supplies and/or services when the exact times and/or exact quantities of future deliveries are not known at the time of contract award. The contracts may use either fixed price or cost type pricing arrangements.

1). Definite Quantity Contracts

A definite quantity contract provides for delivery of a definite quantity of specific supplies of services for a fixed period, with deliveries of performance to be scheduled at designated locations when ordered.

2). Variable Quantity Contracts

a. Requirements Contracts - A requirements contract provides for filling all actual purchase requirements of designated government activities for supplies or services during a specified contract period, with deliveries of performance to be scheduled by placing orders with

the contractor.

b. Indefinite Quantity Contracts - An indefinite quantity contract provides for an indefinite quantity, within stated limits, of supplies or services to be furnished during a fixed period, with deliveries or performance to be scheduled by placing orders with the contractor. The contract shall require the government to order and the contractor to furnish at least a stated minimum quantity of supplies or services and, if ordered, the contractor to furnish any additional quantities, not to exceed a stated maximum.

The statement of work in this type of contract is described in the FAR as being broad and general in nature; the precise description work to be accomplished set forth in each order issued under the contract. It is, therefore, in the individual order, where the performance-based statement of work would appear.

The FAR sets forth a preference (16.504(c)) for multiple awards of indefinite-quantity contracts under a single solicitation for the same or similar supplies or services to two or more sources so that placement of orders may be competed among the awardees. In the case of advisory and assistance services where the term of the contract exceeds three years and the amount, including options exceeds \$10 million, the contracting officer is required to give preference to making multiple awards. The FAR provides for streamlined procedures for the competitive placement of orders under multiple award contracts.

c. Time and Materials Contracts - Under this type of contract, unit prices may be established in the prime contract for labor hours and material items. When the government places an order, a specified number of labor hours and/or material units are set forth in the order. The contractor's responsibility is to provide the specific units of supplies or services without any responsibility for the end result of the effort.

2. Improving M&O Contracts

While a prime M&O contract is awarded on a cost plus award fee basis, certain tasks or areas of performance within the prime contract may be placed under a different type of contractual arrangement that will result in improved performance and cost savings. The same considerations that have been previously discussed in regard to selection of prime contracts types would apply to treatment of discrete tasks under M&O contracts.

3. Subcontracting

A key objective set forth in the Report of the Contract Reform Team is for M&O contractors to make more rational decisions concerning whether to "make" or "buy" the services required by a project or program. As a result, DOE amended the DEAR in June 1997 to require M&O contractors to develop and implement make-or-buy plans that establish a preference for providing supplies or services (including construction and construction management) on a least-cost basis, subject to program specific make-or-buy criteria. The emphasis of this make-or-buy structure is to eliminate bias for in-house performance where an activity may be performed at less cost or otherwise more efficiently through subcontracting.

4. Hybrid Contracts

Because of the highly complex nature of much of the work performed by the Department, a combination of contract types utilizing performance based principles may be necessary to maximize contractor performance. An example of this type of arrangement would be to structure the performance measures so that they are subject to the award fee provisions, while making the costs subject to a cost incentive with a specific share arrangement. When different provisions apply to different areas of the scope of work, those work areas must be clearly identified and the costs and performance objectives for each clearly segregated.

Chapter Five

Performance Measures and Incentives

This chapter covers the development of performance measures and their associated incentives, and the establishment of these performance measures, both subjective and objective. Also addressed are those performance measures and requirements which do not have incentives associated with them. This chapter also covers the various types of incentive arrangements and their mixed use.

1. Integration of Performance Measures with Program Planning

A. Scope

Program planning encompasses all phases of planning within the DOE regardless of whether we are discussing Program Office, Operations Office, Contractor or Site. Planning is the key to identifying DOE's goals and objectives and communicating them to the contractors at the various sites. Planning should start with the DOE Strategic Plan and flow through several intermediate plans to the contractors at each specific site. Planning may include Program Office Strategic Plans, Site Specific Multi-Year Plans, Program Office Management Plans, Program Execution Guidance (PEG), Annual Operating Plans (AOP), etc.

Planning occurs from both the top (Headquarters) down and the bottom (site contractor) up.

DOE Headquarters (Senior Management & Program Offices) provides the broad vision and objectives to be achieved, the funding with which to achieve them and the general time frame within which they would like it done. The Operations Offices, with input from Headquarters, and the site contractors, provide the specifics on how best to achieve Headquarters' vision and objectives at the specific site while accommodating the pragmatic realities (budget, staffing, complexity, etc.). Planning not only includes programmatic objectives (e.g. Waste Management, Safety, Research, etc.), but also socioeconomic objectives (Community Relations, Equal Employment Opportunity, Labor Relations, etc.) and administrative objectives (Procurement System, Property Control, Accounting System, etc.).

Even though some DOE sites have life-cycle baselines or multi-year plans associated with them, due to the nature of the majority of DOE requirements, it will probably not be possible to identify specific, well-defined requirements for more than a year or two in advance. Identification of specific performance requirements usually will occur through the development of short-term planning documents. These documents will identify specific requirements and cost estimates. The site contractor is provided the requirements and their relative importance through the annual issuance of a work authorization directive document (WAD) and the objective and subjective performance requirements which are incorporated into the contract.

B. Participation

Due to the extensive breadth (from Programmatic to Administrative) and depth (from Headquar-

ters to Site Contractor) of work scope covered by the requirements, it is important that all interested parties be represented in the planning process. Within the universe of planning activities, the key activities are the development of the specific requirements which are associated with the appropriate baseline (life-cycle or multi-year, if one exists) and budgeted funds; the establishment of performance measures and metrics for those requirements, as appropriate; the identification of those performance measures to be incentivized; and the assignment of weights to those performance measures indicating their relative importance to one another. It is these weighted/incentivized performance measures which must reflect the performance level which will result in measurable progress toward the DOE end-goals for the site as reflected in the site or project baseline, if appropriate; the performance level for any socioeconomic policy objectives identified for the site; the performance level of corrective actions; and the performance level of all other requirements for site operation.

Program office staff having primary responsibility at a site should take the lead in ensuring that other program office's staff, administrative staff and policy staff from DOE Headquarters as well as the key operations office and site contractor staff are included in the specific site planning, as appropriate. It is particularly crucial that the line managers from these organizations be involved since they must set the performance expectations as communicated in the requirements, and use them in managing the achievement of the requirements. Further, the senior management of each organization must be involved and concur with the final plan and the extent to which it will achieve the overall DOE objectives established for the site. The actual extent and timing of the involvement of the various managers and personnel may vary between programs and sites, but it is imperative to identify what that participation will be and when it will occur.

Contractor involvement is a must in developing site specific requirements. Because specific work requirements and associated costs have normally not been established at the time the contract is awarded, there is often no agreement between the parties regarding what can specifically be accomplished. Therefore, it is necessary to reach agreement on, at least, the level of performance stated in the SOW and measurement benchmarks for that level for the performance period. Establishing the specific performance measures and metrics is within the purview of the government. Nevertheless, the contractor should also be involved to ensure realistic objectives.

C. Timing

The development of site specific requirements and the identification of the performance measures which are to be incentivized should occur prior to the commencement of the period in which they are to be performed (normally a Fiscal Year) and should be done well in advance, if possible. Each program element (DP, EM, etc.) should develop milestone schedules for the development of intermediate planning documents and specific work direction (e.g. SOW, WAD, etc.) for each site for which they have responsibility. It is recognized that due to the timing of the Congressional budget process, it is often difficult to provide definitive planning in advance of the final appropriation bill. However, if the site contractor is to be able to work efficiently, he must be able to plan the utilization of his work force and resources as far into the future as possible. Therefore, planning, even if provisional, should occur as early as possible and cover a performance period as long as possible.

In addition to life-cycle and multi-year baselines, if they exist, and in cases where no baseline exists, Program Offices and Operations Offices should consider developing specific two year requirement plans, recognizing that adjustments will have to be made over time. However, if "core" work could be identified with some prioritization of the remaining work reflecting poten-

tial adjustments due to budget changes, the site contractors might better focus their efforts and resources.

The personnel responsible for the development of site specific requirements are also the ones with the knowledge required to develop the priority relationship (see the discussion on Weighting later in this Chapter) among the performance measures including any associated metrics (see the discussion on Metrics later in this Chapter) to be used to evaluate the contractor's performance as measured against the requirements. They will have the knowledge required to identify those requirements subject to incentives. Therefore, to the extent possible, concurrent with the development of the requirements, weighting relationships, metrics and incentives should also be developed.

Requirements, weighting relationships, metrics and incentives may require updating during the performance period and prior to the commencement of each performance evaluation period. It is incumbent on the Program Offices and the Operations Offices to initiate the review and update of the requirements, weight relationships, metrics, and incentives to ensure their submission to the contractor at least 30 days prior to the commencement of the performance evaluation period (or as appropriate in the case of incentives).

2. Performance Measures

A. Background

DOE M&O contracts are often unique as compared to other federal sector contracts in a number of ways. They are often the only contractual document entered into with the business entity performing the effort, with the effort encompassing the entire operation of a site or facility. They tend to be for the achievement of a number of goals, some of which may be public policy oriented. These contracts often have long term objectives which are not precisely defined, and are budget sensitive. This environment results in at least two unique conditions having a bearing on the development of performance requirements and, as appropriate, their associated performance measures (note: the term "requirements" is to be read as "requirements and, as appropriate, their associated performance measures" hereafter):

- o Requirements must be developed for the total performance at a site. (e.g. not only for program specific objectives, but also for other areas such as human resource management objectives, safety and health management objectives, financial and business management objectives, etc.)
- o While long term objectives may be identified in a life-cycle or multi-year baseline, specific requirements cannot be developed beyond several years into the future.

B. Statement of Work & Change Control

Performance-based management contracts must begin with outcome-oriented statements of work and tasks which are specified in the work authorization document (WAD) incorporated annually (or as appropriate) into the contract. The WAD's are to contain requirements which are results-oriented to the maximum extent possible and subject to a change control system as appropriate.

C. Classification of Incentivized Performance Measures and their Associated Re-

quirements

Performance measures and their associated requirements (note: the term “performance measures” is to be read as “performance measures and their associated requirements” hereafter), which are to be specifically incentivized, fall into at least three classifications:

- o Those significant performance measures for which the desired performance will achieve, but not exceed, the specific performance level stated in the SOW;
- o Those performance measures for which the desired performance would exceed the performance level stated in the SOW (performance which would directly benefit the government); and
- o Those performance measures which are remedial in nature (described below).

Performance measures could be deemed to be “significant” if their accomplishment is on a baseline’s critical path, if they must occur in order to accomplish other performance measures, or if they are complex, or they are highly visible and politically sensitive. They may be deemed to be of a “remedial” nature if they focus the site contractor’s attention to an area where satisfactory performance has not been achieved in the past and such continued performance could jeopardize the program.

D. Categories of Performance Measures

Performance measures may be objective, subjective, or some combination thereof. In moving toward performance-based/results oriented contracts, the goal is to generally maximize objectivity to the extent that it makes sense, but not necessarily to eliminate subjectivity. In fact, objectivity and subjectivity often can be jointly utilized to determine and measure success or failure. In circumstances where objective performance measures are possible, it is frequently advisable to allow for a degree of subjectivity or to condition the performance measure. It may be possible to objectively state the performance measure to submit a product (e.g. an environmental impact statement) by a specific date, but difficult to objectively specify the desired quality of that product. Over-reliance on the establishment and use of objective performance measures can result in a mechanistic approach to contractor evaluation which fails to recognize legitimate variables which were either unforeseen or unforeseeable at the time the objective performance measures were established, resulting in potential inequities.

E. Subjective Performance Measures

Subjective performance measures tend to be performance measures or a group of performance measures for which (1) quantifiable measures cannot be readily developed, or which do not lend themselves for being objectively measured, or (2) are subject to change beyond the control of the contractor. An example of where a quantifiable performance measure is beyond the control of the contractor might involve an effort which also requires that current environmental guidelines be met at the time of performance which, due to changes in environmental standards enacted during performance, may no longer be consistent with the performance measure initially developed.

F. Objective Performance Measures

Objective performance measures tend to be performance measures that are specific in nature and lend themselves to measurement and validation against quantifiable measures. The attainment of these performance measures may or may not be conditioned on meeting other requirements. If work tasks exist which are specific in nature, the performance measure may be stated in an objective manner. Such a performance measure may be conditioned on meeting all other applicable requirements to, at least, an acceptable degree. Other objective performance measures may not need to be conditioned because compliance with other requirements is inherent in them.

G. Writing the Performance Measures

DOE's goal is to develop performance measures for each site contractor which are realistic, specific, succinct, objective, results-oriented, measurable, and verifiable. While it is recognized that not all will fit within these parameters, every attempt should be made to achieve as many of the parameters as possible. In this regard, it is imperative that performance measures not be forced into a mold in which they do not fit. (e.g. writing a subjective requirement as an objective one).

H. Integration

In preparing the work direction, care must be taken to address all of the requirements the site contractor is to perform. Because of the diversity of requirements, selection of which performance measures to be incentivized requires involvement of all parties including the subject matter experts from each organizational entity, the Fee Determination Official (FDO), and the contracting officer. These involved parties must define the performance measures, categorize them, integrate them, weight them (see discussion on Weighting which follows), and establish metrics for them (see discussion on metrics which follows). Care must be taken in addressing those performance measures, such as Environmental, Safety, & Health (ES&H), which are cross cutting in nature. ES&H performance measures can be integrated with other performance measures once they are established and meet the specified level of ES&H performance (worker safety is inherent in waste cleanup and is therefore, included in the waste cleanup requirement and evaluation). However, prior to their establishment and eventual acceptable performance, they should be treated as a separate requirement (e.g. establish a worker safety program) to permit ES&H subject matter experts to focus on their achievement. The integrated product of this effort must be clearly communicated to the contractor, and result in achievement of DOE's goals and objectives.

3. Weighting (Prioritizing) Performance Measures

Weighting (Prioritizing) is the process of establishing the relative importance of the performance measures to each other. Weights should be applied to performance measures associated with those contract requirements which are deemed so important that fee is also associated with their performance. The weight assigned to a performance measure should reflect its relative importance to the other performance measures selected. Initially, weighting is done by assigning a percent of the total available fee to each measure (may be to both objective and subjective measures) or group of measures (normally only to subjective measures). This may be left as a percent or converted to a specific fee amount. The allocation of fee between "objective" and "subjective" performance measures should be determined based on the importance of the performance measures in each category.

The assignment of weights or specific fee amounts at the performance measure level is recommended since it identifies to the contractor how much importance DOE places on the achievement of that requirement. However, at the time the weights are assigned there must be some certainty that the relative importance of the performance measures will not change during the performance period. Caution is advised when assigning weights to successively lower levels of performance as DOE's ability to direct the contractor's focus during the performance period becomes more restricted. Care must be taken to balance the desire for objective guidance with the need for flexibility.

Most DOE contracts are not for a specific effort/product, but are for several efforts/ products which have one or more primary performance measures accompanied by many secondary performance measures. When incentive and award fee components are used, they are generally placed on the "critical few" objectives and measures that are related to a key mission. However, during DOE's early experience with developing and implementing performance objectives, measures, and incentives, DOE found that contractors tended to strongly focus on incentivized objectives and measures to the detriment of other less critical, but necessary, functions. As a result, it is necessary to structure measures and incentives in such a way that non-critical (but necessary) work receives an appropriate amount of attention. One approach is to utilize a "gateway" approach whereby an incentive fee cannot be earned unless work in other areas is satisfactory. For example, maintaining adequate business systems, such as procurement and property management systems, might be a condition which must be met prior to award of incentive fee.

4. Metrics

In order to monitor progress against expectations, metrics should be developed for each performance measure. Metrics for performance measures should be developed at the time the specific requirement is developed, or as close thereto as possible. In most instances the minimum incentivized performance measure metric will equate to the level of performance stated in the SOW (e.g. remove 6,000 barrels of waste). In other instances, the measure may be more discrete, i.e., linked to the accomplishment of a sub element of a SOW requirement. For example, if the SOW requires an approved purchasing system, a metric may be developed for an acceptable vendor payment process, which is a necessary step in developing an approved purchasing system.

Performance measures may be incentivized by allowing the opportunity for the contractor to earn additional fee above that associated with the minimum incentivized performance measure metric if the contractor performs at a higher level of performance. Additional fee could be earned for such things as early completion, exceeding the performance measure metric, enhanced quality, etc. The identification of metrics which exceed the minimum incentivized performance level will let the contractor know what the approximate reward will be for a level of performance against a given metric. They will also let the contractor know where the government believes it is important to pursue enhanced performance, and to what extent.

Metrics represent those performance levels which must be attained in order to receive a given rating/rating range (fee) for any requirement. The goal is to make them as objective as possible, but subjective areas should not be forced into an objective measurement system. Regardless of whether metrics are objective or subjective (or combination thereof), they must also be measurable and verifiable to the greatest degree possible.

A. Metric Development

To the extent that baselines are appropriate, the statement of work, and work authorization document should be written at the baseline performance level (including appropriate metrics). This will serve as the benchmark metrics against which performance should be judged. The baseline performance level represents the work scope effort which has been contracted for. Performance measures which are specifically incentivized will normally not provide a fee if performance is less than baseline. An exception may be when the baseline performance level is extremely complex and achievement is high risk. In such instance, some fee may be associated with partial achievement. The metrics and conditions should clearly define the level of partial achievement and why it is acceptable. To the extent baseline performance levels are not achieved for those requirements which are not specifically incentivized, fee will normally be subject to adjustment, if overall contract performance is jeopardized.

B. Metrics for Performance Exceeding Baseline

For those performance measures where it is desired that the contractor exceed the stated baseline performance level, metrics must be developed for the desired improved levels of performance. They should be as specific and objective as possible. They may take several forms such as:

- o **Point Specific** (e.g. *below baseline, but acceptable* = 601 mrem of exposure; *baseline* = 600 mrem of exposure; & *exceeds baseline* = 599 mrem of exposure).
- o **Range Specific** (e.g. *Unacceptable*: < 500 barrels of waste moved; *below baseline, but acceptable* = 500-599 barrels of waste moved; *baseline* = 600-674 barrels of waste moved; *exceeds baseline* = 675-724 barrels of waste moved; *significantly exceeds baseline* = >725 barrels of waste moved).
- o **Objective** (e.g. *baseline* = 600 barrels of waste; *exceeds baseline* = 675 barrels of waste; & *significantly exceeds baseline* = 725 barrels of waste).
- o **Subjective** (e.g. *Unacceptable* = lack of management oversight in meeting OSHA performance measure resulted in numerous hazards in the work place, fair housekeeping, fair focus on safety and minimal management visibility in the work place; *baseline* = management oversight in meeting OSHA performance measure resulted in few work place hazards, good housekeeping, a commitment to safety and management visibility in the work place; *exceeds baseline* = management oversight in meeting OSHA performance measure resulted in few work place hazards which were remedied quickly, a clean and well-organized work place, improved safety record, and a significant management presence in the work place).

C. Performance Objectives Not Incentivized

To the extent contracts, SOWs and WADs are written to a baseline performance level, then the baseline metric for those requirements not specifically incentivized is the stated performance requirements in the WAD, or elsewhere in the contract. To ensure acceptable performance of these requirements, a "Conditional Payment of Fee" clause should be included in the contract. This clause allows for the adjustment of fee (associated with incentivized performance measures) in the event the performance of unincentivized requirements is so poor as to jeopardize the overall performance of the contract.

In the event more specificity is desired, a performance measure encompassing all of the unincentivized requirements, or the important ones, may be constructed with a specific amount of fee associated with it. For the level of performance of these performance measures, reference only needs to be made to the appropriate documents (e.g. see contract, SOW and WAD for specific requirement (performance measure, metric)). [Note: The contractor is only required to perform what is specified in writing in the contract. To the extent any effort is not specified to the level of performance or in the detail desired in the SOW, WAD, or elsewhere in the contract, consideration should be given to specifying them in Section C of the contract (if the effort will be of a recurring nature each year), Section H of the contract if a special provision, or an appropriate contract attachment (effort is either recurring or unique). This would include primarily support type effort.]

In evaluating these performance requirements, one approach is to have the Fee Determination Official or contracting officer note those requirements where the contractor failed to meet baseline performance and the degree to which he failed. The fee associated with the incentivized performance measures or the specific performance measure created would be subject to adjustment reflecting the degree to which the contractor failed to achieve baseline performance in the requirement(s) and jeopardized overall contract performance. This would be based on the subjective judgement of the evaluators.

5. Incentives

The utilization of incentives may be an effective method to motivate contractors to achieve desired levels of performance against specified performance measures. It is the development and use of incentives, applicable to the many diverse sites operated for the DOE by contractors, that is the focus of this section. The development and application of incentives will vary from site to site and must be tailored to the individual requirements of each location. Not everything presented may be appropriate for profit or nonprofit contractors, nor may be appropriate from site to site. What is presented here is intended to serve as a guide from which specific incentives may be developed. In developing incentives and incentive programs, the provisions contained in both FAR 16.4 and DEAR 916.4 must be complied with.

A. Considerations for Use

Developing incentives will depend on several considerations:

- o **The inclusion of cost incentives if other incentives (e.g. performance, schedule, etc.) are to be included:** A performance, schedule, or other type of incentive may result in the contractor paying little attention to the cost of achieving those incentives unless cost is also a consideration. Due to this concern, the FAR requires that a cost incentive or cost constraint be included anytime any other incentive (e.g. performance or schedule) exists. Historically, in the DOE award fee contracts (an incentive type contract) cost has been included as a consideration under Business Management.
- o **The adequacy of the contractor's accounting system and the ability of that system to segregate and track costs:** To the extent that managing or reducing costs is incentivized or is identified as a constraint in earning a performance incentive for something other than cost, the contractor must have an accounting system that will identify and segregate

actual costs incurred at the level associated with the specific work to be performed.

- o **The degree to which the performance measures and/or metrics can be defined:** Performance measures or metrics that cannot be well defined or may be subject to changes or conditions that are beyond the control of the contractor should be incentivized on a subjective basis. As they become more defined or less subject to change or conditions beyond the control of the contractor, the more they should be incentivized on an objective basis.
- o **The definitiveness of the baseline:** Where a baseline is appropriate, the more definitive the baseline, the more appropriate objective metrics may be. This applies to cost, schedule, performance, baselines, etc. In the case of cost incentives, unless the cost baseline is well defined at a fair and reasonable cost, objective cost incentives may not be appropriate. In the case of performance incentives, if the performance baseline is not well defined, it may be impossible to measure to what degree it was met or exceeded.
- o **Importance of the task to the achievement of the program:** The performance of various tasks, at or in excess of the stated performance level in the SOW, WAD or a similar document, will impact the success of the overall program to varying degrees. Those tasks that are more important to the program's overall success should be emphasized by incentives. It should also be mentioned that, in some cases, it may be important to consider the impact or cost if a performance measure is not met and associating a negative incentive if performance is not satisfactory.
- o **The degree of additional benefit obtained by the government if the baseline performance level is exceeded:** The DOE may receive some benefit when the performance level of a performance measure, as stated in the SOW amended to incorporate the current WAD (or a similar document) is exceeded. In such cases, emphasis may be provided to exceed the stated performance level of that performance measure through the use of incentives. It is important to indicate the extent to which the performance level should be exceeded through the inclusion of metrics.
- o **The degree to which additional increases in the level of performance of a performance measure become harder to obtain and thus more costly:** When offering incentives for a level of performance that exceeds the baseline performance, the cost of that additional performance must be kept in mind. Often as performance increases past a given point, the costs of such increase rise significantly. Therefore, unless the maximum performance level is of major importance to the DOE, more value may be realized when the level of performance rises from the stated performance level in the SOW to the next level than when it rises from the higher level to the one above it (e.g. more value is received moving from satisfactory to good than from good to outstanding). The incentive amount placed on increasing performance from the stated performance level in the SOW to the next level may therefore be greater than the incentive amount for moving to the next higher level of performance. The corollary to this is, if maximum performance is of major importance to DOE, then the incentive associated with attaining the highest level of performance may have to be significant, since the contractor may have to focus a disproportionate amount of resources to achieving that level of performance.
- o **The degree to which the attainment of a level of performance of a performance measure is within the contractor's ability:** Due to circumstances beyond the

contractor's control, limitations may exist on the extent to which the contractor can achieve certain levels of performance. Little benefit comes from offering incentives in these areas (e.g. the ability of a contractor to achieve cost reductions may be impacted by its ability to control its level of employment).

- o **The degree to which the DOE obtains benefit from the performance of a performance measure in an incremental versus a continuous fashion:** The extent to which the government receives benefit from the performance of a performance measure may be in specific increments or on a sliding scale.
- o **The degree to which continued incentives are important:** When identifying performance measures to reward, be aware of the point where it is no longer beneficial to offer incentives for the contractor's achievement of that performance measure. With a critical path performance measure, the benefit of an incentive may end as soon as the desired performance level is achieved or missed. This is because in order to achieve the next critical path performance measure (which carries its own incentive) the earlier performance measure must also be achieved; (e.g. the submission date of data item X is missed. Offering lower incentives for later dates may not be necessary because the next performance measure cannot be met without the submission of data item X). Performance measures which may not be critical will usually reach a point where their performance is of such little benefit that incentives are no longer appropriate and stronger contractual action will have to be considered.
- o **The degree to which offering incentives for some performance measures may be to the detriment of others:** Care must be taken in selecting the performance measure for which an incentive will be offered. When offering incentives for only some of the performance measures, the potential exists that performance measures without an incentive will be adversely impacted. This could result in a detrimental effect on the performance of the remaining performance measures. One approach that may be taken is to condition the payment of any incentive on the requirement that the contractor's overall performance be at acceptable level that the overall performance of the contract is not jeopardized.

B. Construction of Incentives

Incentives may include rewards and penalties which are employed to motivate a contractor to achieve higher levels of performance under a given contract. Incentives may be of a monetary nature (e.g. fee) or a non-monetary nature (e.g. additional work). Incentives may apply to performance or schedule, and cost performance measures and incentives may be subjective, objective, or a combination thereof. They may be incremental or continuous. Several types of incentives may be included in one contract and applicable to one performance measure or group of performance measures or they may be separated into individual contracts along with related work scope. Incentives may be used in contracts with for-profit and non-profit contractors.

C. Categories of Incentives

There are three general categories of incentives: subjective, objective and hybrid.

- o **Subjective Incentives** are associated with performance measures that are not well defined (i.e. subjective performance measures). The success with which a contractor meets the performance measure is determined by the government which will consider the

related conditions under which the work was performed and the contractor's specific performance as measured against the government's objectives. Care must be taken not to force a subjective incentive into an objective form.

- o **Objective Incentives** are associated with performance measures that tend to be specific in nature and lend themselves to evaluation against quantifiable measures (i.e. objective performance measures). To the extent that a performance measure is defined and measured in objective terms, the fee associated with its achievement is earned based on the extent to which the contractor's performance meets those objective terms.
- o **Hybrid Incentives** are incentives which contain both subjective and objective elements. An example of such an incentive might be the achievement of an acceptable Safety Program by a specific date. The extent to which it is acceptable will be determined subjectively, while the date of achievement will be determined objectively.

D. Types of Incentives

In addition to the three categories of incentives described above, incentives may also be defined by type. These types include performance, schedule, management and cost.

- o **Performance Incentives** may be both subjective or objective in nature or some combination thereof. Their main intent is to focus the contractor's performance on those performance measures deemed significant for the period being evaluated. Performance incentives may reward the contractor for exceeding expected performance in some performance areas, achieving significant baseline performance, or for correcting poor past performance.
- o **Schedule Incentives** may be both subjective or objective, however, subjective schedule incentives are of questionable value. To place an incentive on schedule, DOE should receive a benefit (e.g. the achievement of a significant milestone with an ambitious delivery date or the early completion of a milestone allowing additional work to be performed). The reward for achievement of a schedule incentive should be conditioned on the satisfactory achievement of all related performance measures.
- o **Management Incentives** may be both subjective or objective, and may address such things as the contractor's overall judgement, responsiveness to stakeholder concerns, etc. They may be inherent within other incentives. Due to the nature of the DOE site contracts, it may be desirable to incentivize management separately from other performance incentives. Often management incentives will be subjective in nature
- o **Cost Incentives** may also be subjective or objective in nature. Subjective cost incentives should be avoided if possible in that the subjective evaluation of cost reductions or increases is not nearly as effective as objective cost incentives. Such goals as "... perform in a cost efficient manner..." or "...reduce costs 10% below the previous baseline..." without further definition are hard to verify effectively. Objective cost incentives can lead to more efficient performance, but only to the extent that several conditions are met:
 - o The work to be performed must be defined and estimated.
 - o A cost baseline must be established (preferably negotiated at a fair and reasonable price

for the work scope).

- o The contractor must have an accounting system that will accurately allocate and track costs.
- o A method of sharing cost savings or overruns must be agreed to.

Besides these conditions, there are several other factors that must be considered. These include the relationship between the cost incentives and any other incentives that may exist, the extent to which the contractor has control over the work scope and the susceptibility of the work scope to change, etc. Objective cost incentives may apply to the total work scope, a specific severable effort, or a well-defined process improvement or change.

E. Structure of Incentives

Incentives can be structured either in increments or continuously.

- o **Incremental Incentives** are incentives earned or lost in specific increments relative to a metric. When using this type of incentive, the government would normally lose an opportunity if a specific metric were missed and would not receive any additional benefit by being earlier than the next specific metric indicated. Incremental incentives may be used with both performance and cost incentives. An example of this type of incentive would be the removal of a specific quantity of waste which can be hauled away in only specific quantities, such as, hypothetically, the load capacity of a railway car which must be filled in 500 barrel increments only. Removal of 550 barrels would mean that 50 barrels could not be hauled away. The contractor would be paid fee on the removal of 500 barrels or 1000 barrels or other volume so long as the amount removed was in increments of 500.
- o **Continuous Incentives** are earned as determined by interpolation calculated by using a formula established with the fee amounts associated with specific metrics. This type of incentive is appropriate when the government would receive benefit from the contractor's performance though a specific metric was not achieved. For example, Acceptable (2%) = 6000 barrels of waste; Good (4%) = 7000 barrels of waste, the government would benefit even if the contractor realized he could not achieve 7000 barrels by having the contractor continue to strive to dispose of as many barrels of waste as possible. If the contractor removed 6500 barrels of waste, he would earn 3% $[\text{.02} \times (500 / (7000 - 6000)) + (\text{.04} - \text{.02})]$. This may be utilized with both performance and cost incentives.

F. ES&H Incentives - A Special Consideration

The various incentives and incentive considerations discussed herein apply equally to ES&H performance measures as to all other performance measures. However, the relationship of ES&H performance measure incentives to those incentives placed on other performance measures demands special consideration.

Incentives should be tied to ES&H performance measures on at least three levels. First, the development and implementation of basic, sound and lasting programs in all areas of ES&H and the integration of ES&H as an integral part of every aspect of work at the site should be a pre-condition to receipt of any fee (and this minimal performance measure should be reflected in the

evaluation plan or other appropriate implementing document). The specifics of such ES&H programs and integration should be developed mutually by the cognizant DOE operations office and the site contractor and be consistent with the annual ES&H management plan, which identifies priority ES&H programs and activities.

Secondly, where critical ES&H programs are in place, any awards or performance incentives offered for work in operational areas should be conditioned on acceptable performance of any related ES&H performance measure (and all other related performance measures not specifically incentivized). To the extent such performance measures are not achieved to the acceptable performance level, the FDO should have the authority to determine the extent to which any earned award fee/incentive should be reduced.

Finally, some specific incentives should include efforts related to specific ES&H improvement needs. Thus, the array of subjective and objective performance incentives should include incentives specifically targeted at improvements in selected areas of ES&H performance, as identified in its management plan. DOE must determine what is to be incentivized and the metrics should be developed mutually by the cognizant DOE operations office and the site contractor.

G. Marginal Benefit

When incentivizing a contractor to exceed the performance level stated in the Statement of Work, care must be taken in structuring the measurement standard and the associated fee incentive. Often, as performance increases beyond a given point, the cost for a “unit” of increased performance also increases. Therefore, in structuring a fee incentive it may be prudent to pay smaller fee increments for additional “units” of increased performance. It may eventually reach a point that the cost of the increased performance is not worth the benefit from the increase in performance, and therefore, it is not prudent to incentivize the contractor beyond that point. Conversely, if that additional “unit” of performance is highly desired, additional fee may need to be associated with it since it will require the contractor to expend additional resources in its achievement.

H. Aspects of Incentives

Multiple Incentives: As used here, multiple incentives refer to the application of more than one type of incentive to a performance measure or group of performance measures. An example is an incentive to reduce costs associated with waste removal and an incentive to increase waste removed. Multiple incentives can be effective, but only if their goals are not mutually exclusive (e.g. an incentive can be given for cost reduction along with one for increased performance, if costs can be reduced by more effective management, process improvements, etc. while performance is increased). At the point where a cost reduction can no longer be achieved without a reduction in performance, the use of multiple incentives becomes inappropriate. However, sometimes multiple incentives may counterbalance each other with positive results. For example, if additional performance involves an excessive cost, the incentive for cost reduction will encourage the contractor to maximize the tradeoff between performance and cost.

The term “multiple incentives” should not be confused with using several types of incentives on several different performance measures. Using the same incentive on all performance measures will not always be appropriate, nor should this be a goal. Given the many types of incentives available, the inclination is to attempt to offer incentives for everything. However, too many incentives can also lead to confusion, contradictory signals regarding what is important, and

game playing. **A good rule of thumb is: keep incentives simple and offer them only for meeting the performance measures which are key to the accomplishment of the program in any given period.**

An incentive may be applied to a performance measure whose achievement is conditioned specifically or implicitly on achieving the stated performance level as set forth in the SOW for all related performance measures. A schedule incentive for the achievement of specific dates for the acceptance of data for submission to the EPA is an example of an incentive dependent upon meeting a series of target dates. Implicit in acceptance is that the data **also** meet the required level of quality. Another example is where the incentive to reduce costs on a specific effort is conditioned upon that effort being performed at no less than the stated performance level as set forth in the SOW.

To the extent multiple incentives are to be used, care must be taken to ensure that they are fully explained and that their interrelationships are fully understood.

I. Weighting

Most DOE contracts are not for a specific effort/product, but generally are for several efforts which have one or more primary performance measures accompanied by many secondary performance measures. See Section 3 for discussion regarding the use of incentive fee to weight the importance of performance measures. The relationship between the performance measures is such that achievement of any one of the performance measures may not necessarily ensure the achievement of all of the performance measures. Therefore, although only some performance measures will be subject to individual incentivization, the remaining performance measures must be addressed by either a composite subjective incentive, or a condition placed on the performance measures which are individually incentivized, or some other means of incentivization.

J. Value

Another aspect of incentive allocation is the actual dollar value of the incentive allocated to a performance measure. Once weights have been assigned, a review should be made to ensure that the incentive value is in line with the degree of achievement associated with the performance measure.

K. Balance

Incentive balance is the relationship between objective and subjective performance measures incentivized in the contract. The goal should be to develop incentives that are specific, objectively measurable, and with fixed, well-defined metrics. Wherever possible, incentives should be developed to motivate the contractor to achieve specific and quantifiable goals. Regardless, there may be a need to have subjective incentives or some combination of objectivity and subjectivity. As a note of caution, the contract should never specifically indicate a fixed split between the percent of fee which must be associated with subjective performance measures and the amount which must be associated with objective performance measures, as it may severely restrict the government's flexibility to motivate the contractor's attention in the performance of work. (e.g. a requirement in the contract that 75% of the incentives must be objective.)

L. Rollover

Incentive rollover refers to fee not earned during an evaluation period which may be available for payment in the following period. It should only be associated with performance measures that can be recovered in the following period. Fee related to a specific effort which was not earned in one period may provide further incentive to the contractor when performing a sequential type of effort, if it is allowed to be carried, in whole or in part, into the next period. The carry over is intended to be determined on a case by case basis and for fee associated with a specific effort which is sequential in nature.

M. Flowdown

Incentive flowdown is intended to effectively focus and motivate the contractor's performance in areas where different levels of performance are possible, and the extent to which those levels are attained is within the control of the contractor. Incentives are usually established due to the inability to define a specific performance level and associated cost which often results in a range of potential performance levels and costs. Effort which is incentivized should possess the same degree of uncertainty, no matter whether it is performed by the prime contractor or a subcontractor. Therefore, in most cases, if the effort is to be subject to incentivization, the incentives should, at least in part, flow to the entity performing it. The normal practice is to provide incentives to the contractor and leave it the contractor's discretion as to the extent the incentives are flowed to the managers and employees within the company and to subcontractors. However, where possible (company policy, union agreements, etc. may impose limitations), incentives should be flowed to those doing the work. To the extent those performing the effort are doing so on other than an incentive basis, it becomes questionable how effective the incentives provided the prime contractor will be. To the extent subcontractor and vendor effort is not incentivized, consideration should be given to not including the associated costs within the incentive framework. (The DEAR currently permits inclusion of only a portion of major subcontract effort in the base for determining the fee without waiver authorization). Regarding the prime contractor's managers and employees, incentives earned may be shared with them through bonus programs, development programs, etc. However, they should not be shared in a manner which permanently adjusts their wage rate.

N. Payment

Incentive payments may be paid as a final payment or they may be paid on a provisional/ conditional basis. When the requirement is a final product occurring within the performance period, associated incentives are normally paid upon completion (subject to overall review by the FDO before payment). However, if the incentive-based requirement is an interim product or milestone (input), then payment of incentives may be paid on a provisional or final basis. It is generally desirable to make payment on a final basis. The amount of fee allocated to a milestone (which is not the final product) should reflect the actual benefit of that milestone's achievement only, with the majority of fee allocated to the milestone representing the final product, even if in a future evaluation period. Depending on how funds associated with fee are budgeted, the government may be required to hold such funds over several periods. To the extent it is necessary to make payments on a provisional basis, such payments are subject to redetermination once the final product is completed.

Provisional incentive payments are controversial as contractors do not want to be in the position of potentially having to return a fee (and often they are precluded from getting any more fees by

the nature of the process). Provisional incentive payments are also administratively burdensome due to the tracking and redetermination efforts required. Therefore, before establishing provisional incentive payments, the need for such an arrangement must be determined. In cases such as the payment of an incentive in one period for estimated cost reductions in another, the provisional payment of the incentive is clearly warranted.

If fee is to be paid on a provisional basis, it is advisable to withhold a portion of the determined fee for an interim milestone until the final fee determination is made. Further, to the extent that the final determination of fee results in an overpayment to the contractor, the contractor should be required to return the amount of overpayment and appropriate interest to the government within 30 days of the determination (or some other period as appropriate).

Chapter Six

Contract Administration

1. Background

An important function of contract administration is the ability, or the opportunity, to manage the environment within which the contracted effort is proceeding and, most importantly, to facilitate adjustments to that effort to meet the demand and changes as they occur. In addition, in today's economic climate, the government is emphasizing contract administration in order to maximize the return on contract dollars. Performance-based contracting is a tool or means of managing a contract and should not be viewed as a separate function from contract administration. Performance-based management includes: 1) clearly identifying what needs to be accomplished; 2) determining performance objectives; 3) delegating authorities to the level closest to where the work is to be performed; 4) deciding what to measure and the appropriate data collection methods; 5) establishing challenging and realistic performance expectations; 6) maintaining operational awareness; 7) collecting performance data, 8) assessing actual performance against expectations, and 9) using the results to improve performance. The policy of the DOE, as a result of a number of recent laws enacted to reduce cost and ensure government accountability (e.g. the Chief Financial Officers Act, the Government Performance and Results Act and the Government Management Reform Act) is to seek to maximize contractor performance and to align costs with performance through the use of performance-based management as a strategic contract management tool to plan for, manage, and evaluate contractor performance and to facilitate contract change as needs require.

The acquisition process for contracts is typically divided into three phases: presolicitation, solicitation and evaluation, and the contract administration phase. The first two phases of the acquisition process are summarized below. They list some of the steps in the cycle which have already been performed or completed prior to the administrative management of the contract.

A. Presolicitation Phase

The presolicitation phase lays the groundwork for soliciting offers and awarding a contract. In this phase, the Department would have already performed the following:

- o Identified short term milestones, within known budget availability, tied to mid and longer term objectives that are called out in the facility's strategic plan (this may be reflected in a Life Cycle Baseline (LCB) or multi-year baseline for the site).
- o Identified requirements or performance objectives required to meet critical path milestones.
- o Prepared the statement of work.
- o Assessed different contract structures and contract types relative to the nature and risk of the work.

- o Assessed the Government's ability to adequately administer the contemplated contract structure.
- o Decided on whether and what to incentivize, and the defined levels of performance.
- o Researched the market to assist initially in determining the number of prospective offerors, their past performance if known, and the potential benefit of providing incentives given the nature of the work.
- o Decided on whether to extend or compete the current contract.
- o If a competitive action, established evaluation criteria (technical, price-related, contractor financing requirements, ability to effectively assess performance, etc.). Draft evaluation plan.
- o Developed a government cost estimate or budget.

B. Solicitation and Evaluation Phase

In the solicitation and evaluation phase, the Department would have already performed functions including the following:

- o Drafted the solicitation and publicized the proposed acquisition.
- o Interacted with potential offerors in an appropriate manner (e.g. pre-proposal conference).
- o Evaluated bids or proposals against the evaluation plan and the criteria provided in the solicitation.
- o If applicable, establish competitive ranges and hold discussions.
- o Negotiated tasks to be performed relative to available budget.
- o Awarded contract.

2. Nature and Purpose of Contract Administration

In the traditional sense, day-to-day contract administration involves all those activities performed by government officials to determine how well the contractor, as well as the government, are performing to meet DOE's requirements under the contract. Contract administration includes a broad spectrum of activities between the contractor and the DOE CO, or the CO's designate or representative. The nature of a DOE contract may span several years requiring an on-going effort to ensure that both the contract and the contractor are properly managed. This requires a close working relationship between the program and procurement offices during the course of the effort. Ineffective contract administration fosters organizational barriers, misinterpretation, unclear requirements and priorities, and diverts the manpower, financial resources, and expertise of the contractor and the government away from the more critical tasks to be performed at the level expected of the contractor. For this reason especially, good contract administration is essential to the success of performance-based contracting.

While contract administration is generally perceived as a post-award function, the government team must consider the administration of the contract as early as the pre-solicitation phase when clear and concise performance-based statements of work (or performance work statements) are developed and the contract administration plan is prepared to be used later to measure the contractor's performance.

The key element in the development of a plan to manage, control and maintain oversight of the contractor's performance is the baseline. A baseline is a projection of cost, schedule or technical progress, but not necessarily all three in many cases. The baseline is either estimated by the contractor and reviewed by the government, or based on historical experience. It forms the base measurement or standard of the performance. The baseline, most beneficial when developed at the task order level, is used to determine and measure progress. Performance against a baseline, with variances considered as to cause, constitutes the basis for decisions leading to replanning, reallocation of resources and other changes. Monitoring contractor performance is, in reality, baseline management.

The technical baseline is developed through a systems engineering procedure of defining the functional requirements of the work to be performed which result in specification requirements. The test and evaluation programs developed for the task become the benchmark for determining whether the specification requirements have been met. The cost estimate is distributed against the technical requirements producing project costs in terms of technical milestones. The technical requirements and the cost estimate are then matched against the project schedule to generate a three dimensional relationship - technical, cost and schedule which are dependent upon one another. Baseline management consists of keeping these three baselines in harmony and taking steps as necessary to bring them back into balance.

A. Elements of Contract Administration

In the contract administration phase, the Department performs tasks which include:

- o Developing a coordinated contract administration plan, including a methodology for assessing both subjective and objective performance areas as stipulated in the contract or evaluation plan.
- o Developing business management oversight performance objectives, expectations and measures.
- o Conducting post award orientations.
- o Reviewing the technical performance objectives and coordinating the contractor proposal with functionally integrated government team. The term "integrated" means vertical and horizontal coordination between all government participants.
- o Negotiating performance objectives and measures and allocation of fee.
- o Monitoring performance and compliance (schedule, cost and self assessment validation).
- o Reviewing financial status reports, audit reports, incurred costs, resolving and disposing of questioned costs.

- o Determining fee earned.
- o Jointly developing lessons learned.
- o Reviewing and updating the LCB or multi-year baseline, as deemed necessary.
- o Negotiating performance objectives and measures for next evaluation period, tied to the LCB of the site.

B. Determining the Scope of Contract Administration

The extent of contract management may be dependent upon a number of different factors, which may include:

- o Requirements stated in the contract regarding the reporting of production progress.
- o The nature and adequacy of contractor business and data systems and DOE's procedures to ensure that the contractor's systems provide maximum protection to the government while conforming with public laws (where applicable), the contract, the evaluation plan, and efficient and effective best business practices. Systems that may be applicable include procurement and personal property management systems, employee compensation and benefits systems, insurance and pension systems, accounting and estimating systems, make or buy programs and associated procedures, cost/schedule control systems, quality assurance systems and other production control/process control or data management systems.
- o The extent to which agreement has been reached on business management system performance objectives, expectations and measures which are designed to fairly represent the health of these contractor systems. An integral part of this process is the results of field office validation of the contractor's self assessment of performance in these business system areas. This is a very visible aspect of contract administration. This process is known in the Department as the Business Management Oversight Program which will be addressed separately.
- o The nature of the performance measures related to performance objectives and whether performance will be evaluated on a subjective or objective basis.
- o Availability of resources with the prerequisite skills to adequately assess performance.
- o Availability of negotiated baselines (cost, technical and government estimates) against which to effectively measure a contractor's performance.
- o The contract performance schedule.
- o The contractor's production plan.
- o The contractor's history of past performance.
- o Contractor experience and financial capability.

- o Supplementary written instructions from the program office(s).
- o Dollar value of the task.
- o Existence of, or need to develop, a feedback loop of performance reports in order to coordinate functional area inputs into meaningful performance assessments.

Management of a contractor's performance is necessary to ensure compliance with contract requirements or the requirements set forth in the evaluation plan and to minimize impact on cost and schedule problems and delays. In this regard, the contracting officer's management team will define the appropriate level of contractor surveillance and the methods to be used.

3. Contract Administration and the Management Team

In addition to the CO, two key players in the contract administration process are the contracting officer's technical representative (COTR) and the financial analyst (auditor, price/cost analyst). These are the technical experts who are responsible for monitoring the contractor's technical and cost performance and ensuring that the Contracting officer is provided with current and accurate contractor performance profile data.

A. The Contracting Officer

In the DOE, the Head Contracting Activity (HCA) at the M&O, usually the operations or field office manager, will generally exercise contracting authority on all significant procurement actions. However, the HCA will normally delegate day-to-day contracting authority to other individuals, normally full time procurement professionals.

It is the CO's responsibility to ensure that the site office administering the DOE contract has an effective process that measures a contractor's performance. Essentially the contracting officer needs to ensure that the administration office at the site facility has clearly defined appropriate levels of contractor surveillance, and that the methods to be used are appropriate relative to the nature of the measures. In addition, the contracting officer must be assured that periodic evaluations are being performed and that all inspections are fully documented and coordinated among the members of the management team. Aspects of performance from one functional perspective may be helpful in an evaluation from a different functional perspective. It is also important that DOE site management be in the information loop in order to periodically assess the effectiveness of the surveillance in order to ensure system reliability. It is necessary that the facility have a formal inspection system that is written, adequately instructive from a technical standpoint in terms of what and how tasks or processes are assessed, current, appropriately distributed, and above all, well understood by the COTR. A fully developed and appropriately structured inspection system is crucial to ensuring that the contractor is (1) performing to schedule, (2) is current in its understanding of the requirements, and (3) is applying adequate skills and resources to the task.

B. The Contracting Officer's Technical Representative (COTR)

The individual(s) providing the technical oversight or engineering advice is the contracting officer's technical representative, or COTR. Other terms have been used, i.e., contracting

officer's representative (COR), government technical representative and government technical evaluator. However, for the purposes of this discussion, they all mean the same thing. Regardless of the term used, the COTR or COR has been delegated certain authority, generally in writing, by the contracting officer. For purposes of this document, the term COTR will be used.

While the contractor is responsible for the timely and satisfactory performance of its contract, the government is responsible for monitoring the contractor's actions and ensuring that the contractor is meeting its obligations. To carry out this administrative task, the COTR, normally appointed by the contracting officer by letter, is assigned to perform the necessary tasks such as technical monitoring, inspection, and even acceptance of a deliverable.

Essentially, monitoring contractor performance is a contract administration function used to determine contractor progress and to identify factors that may delay performance. Monitoring performance involves two primary functions: 1) review and analysis, and possibly approval, of the contractor's performance plans, schedules and industrial processes and 2) the contractor's actual performance under these plans and against schedules.

1). COTR Responsibilities

The COTR's responsibilities include:

- o Assisting the contracting officer and the management team to develop a cost effective contract administration plan including how surveillance will be conducted.
- o Informing the contracting officer of any technical or contractual difficulties encountered during performance.
- o Informing the contractor of failure to comply with technical requirements of the contract.
- o Assisting in the evaluation of proposals for, and participating in, negotiation of changes, modifications, and claims at the request of the contracting officer.
- o Maintaining files and all documentation relative to contractual issues including any modifications, contract correspondence, inspections, status reports, contractor self-assessments, records, memos and records of conversations with the contractor, invoices/vouchers, COTR appointment letter (if applicable), and trip reports.
- o Performing task inspection/acceptance of all interim and final work required, including the review and approval of reports generated by the contractor.

An important aspect of the COTR's responsibility is to ensure that the program office is fully aware of the contractor's performance in all areas. Of particular importance to the program or technical office is how well critical path work objectives are progressing relative to the achievement of other performance objectives. The program office needs to know, for example, whether objective and subjective performance measures are appropriately weighted to ensure that performance in a subjective area is not overly emphasized by associating a greater fee to it than to an objective area. This might encourage the contractor to exert greater effort and spend more resources in an easier or lower risk performance area at the expense of a more critical area. The program office needs to know how well the performance objectives and measures relate to each other in terms of whether incentives are necessary for a given task, whether tasks have been adequately prioritized, the impact in terms of cost and schedule of not adequately performing a

given task, etc. Fortunately, the site baseline is subject to change based on validated performance and the lessons learned. The COTR and other members of the administration team provides this information.

2). Beyond the COTR's Roles and Responsibilities

There are limits to the COTR's authority. The contracting officer appoints the COTR in writing and a copy is provided to the contractor. The appointment letter must:

- o Specify the extent of the COTR's authority to act on behalf of the contracting officer.
- o Identify the COTR's limitations.
- o Specify the period covered by the designation.
- o State that the authority is not to be re-delegated.
- o State that the COTR may be personally liable for unauthorized acts.

In conducting inspections and performing surveillance, it is important for the COTR to note that any action on his part which is inconsistent with the contract or other enforceable documents must be avoided. It is necessary that any action that might result in a claim be avoided. The COTR should not be requested to, nor assume the responsibility for, performing functions involving changes in scope, price, or other terms and conditions of the contract or any attachments.

Specific actions which the COTR should be careful to avoid include:

- o Awarding, agreeing to, modifying, increasing the scope and dollar of, or signing any contract.
- o Making commitments or promises (oral or written).
- o Directing changes.
- o Authorizing delivery or disposition of government-furnished property.
- o Directing the contractor to acquire goods or services from a specific source.
- o Authorizing the use of consultants.
- o Granting deviations from or waiving any of the terms and conditions of the contract.
- o Changing the period of performance.
- o Authorizing the use of overtime.

The COTR must be particularly careful to avoid any action which might lead to a constructive change. Constructive changes are oral or informal modifications to the contract based on government action, or inaction, that require additional work by the contractor. This is beyond the COTR's authority. The affect of such action is the same as a formal written change order. It is

imperative that the COTR understand his/her role and responsibility. A constructive change order most often occurs when:

- o The contractor is required to comply with a higher standard of performance than what is required by the contract.
- o Improperly rejecting the contractor's work.
- o Unduly interfering with the contractor's work.
- o Requiring the contractor to meet excessive test requirements.
- o Delays resulting from improper government inspections.

Whatever form of monitoring the contract administration plan calls for, particular consideration should be given, and care taken, so that the contractor does not have just cause to cite COTR interference in its operation. The post-award orientation conference should be used to familiarize the contractor with the intended procedures to be used by the COTR.

C. Financial Analysis and Support

This section deals with the financial professional on the contracting officer's (CO) team who is primarily responsible for 1) providing advice on, or determining that the contractor's expenditures comply with generally accepted sound business practices and are necessary and prudent to the operation and/or performance under the contract; and 2) ensuring that DOE reimburses the contractor for only those costs that are reasonable, allowable and allocable to the contract.

Financial support may include any or all of the following specific activities, among others:

- o Developing cost estimates or validating contractor proposals, including performing should-cost and will-cost studies and reviews,
- o Determining that costs meet generally accepted accounting principles and practices as well as meeting the terms of the contract,
- o Determining that costs meet the standards of the Cost Accounting Standards Board,
- o Reviewing indirect costs (overhead and general and administrative costs) and associated rates, establishing interim or provisional rates and final indirect rates, establishing forward pricing rates, etc.,
- o Assisting the contracting officer in negotiating advance understandings on specific indirect cost items and assisting in negotiation activities such as developing prenegotiation positions,
- o Monitoring the contractor's actual indirect cost rates and initiating appropriate action when unacceptable variances occur between actual and interim billing rates,
- o Forming a liaison with DCAA and ensuring that DCAA determinations adequately reflect DOE-specific cost principles where audit support is provided by DCAA for non-M&O

contracts and M&O subcontracts, and

- o Conducting accounting and estimating reviews, and incurred cost audits.

Unique to the M&O environment is the validation of the contractor's Statements of Costs Incurred and Claimed performed by the DOE Office of the Inspector General (OIG). While it is customary to find audit support at non-M&O contractors, DCAA may provide support on M&O subcontracts as well. If the DOE is not the Cognizant Federal Agency (CFA), that is, it does not have the predominate financial interest in the organization at the site, the financial function will normally be performed, or arranged for, by the CFA. Usually, at any given site, which represents a single cost center for the contractor performing only DOE work (with incidental exceptions), the DOE will be the CFA and be responsible for performing the financial management function. In the non-M&O environment, instances where the financial resources are not readily available, a broad array of financial and audit services may be provided by DCAA pursuant to an advance agreement between DOE and DCAA. Generally, DCAA provides audit support when the DOE contract is non-M&O.

DCAA, a separate agency of the Department of Defense (DOD), performs all contract auditing for the DOD which includes accounting and financial advisory services, in connection with negotiation, administration and settlement of contracts and subcontracts, to all DOD procurement and contract administration activities. In addition, DCAA also furnishes contract audit services to other government agencies. The role of the DCAA auditor, and for that matter, the DOE price/cost analyst or financial analyst, is purely advisory to the contracting officer.

OMB circular A-73, "Audit of Federal Operations and Programs," requires that Federal agencies establish audit cross-servicing arrangements when in the best interest of the government and the Federal agency in need of that service. The current memorandum of understanding with DCAA for audit cross-servicing arrangements provides for audit support; DCAA will be reimbursed by DOE (at DCAA's billing rates).

Internal Audit Requirements at M&Os

The DEAR includes a standard "Internal Audit Requirement Clause" which essentially requires that M&O contractors maintain audit groups to conduct internal audits of contractor operations. Effective internal audit is an important part of DOE's overall internal control structure to ensure that contractor costs are allowable in accordance with the terms and conditions of the contract, and that the contractor's operations are economical and efficient.

The Clause, found at DEAR 970.5204-9(h), includes a statement that essentially requires that the contractor conduct an internal audit and examination that is satisfactory to DOE. Determining whether the contractor's audit group is satisfactory will be based on a number of criteria including (1) whether the internal audit function is structured as an independent entity within the contractor's organization, (2) whether it is adequately staffed by trained auditors, and (3) whether the contractor is utilizing adequate testing procedures to determine allowability of costs under the contract.

The requirements of the internal audit clause in no way abrogates the OIG's regular audit function, as discussed previously.

4. Technical Analysis and Monitoring Contractor Performance

A. Quality Assurance

Quality assurance (QA) is defined as all the planned and systematic actions necessary to provide adequate confidence that a facility, structure, system or component will perform in a satisfactory manner while in service. QA includes quality control, which comprises all those actions necessary to control and verify the features and characteristics of a material, process, product, or service to specified requirements. Various activities are conducted to assure compliance with quality requirements, many of which are embodied in health and safety standards and guidelines, business management functions, environmental requirements, engineering systems plans, project and program plans, etc.

The statement of work describes the work in terms of “what” is to be the required output rather than “how” the work is to be accomplished. The contractor is assigned full responsibility for quality performance. The government develops formal, measurable (i.e., in terms of quality, timeliness, quantity, etc.) performance measures and surveillance plans to facilitate the assessment of contractor performance. At DOE, the Business Management Oversight Program (BMOP) is one such tool available to the CO as a means of assuring quality performance. Such processes should be incorporated into the contract and take into account the need for surveillance, special controls, test equipment, tools, and skills to attain the required quality, as well as performance and the attendant need for verification. This saves time and valuable resources because the COTR is not monitoring the mundane, routine and non-critical portions of the contract. Instead the COTR is focusing on the major and critical outputs of the contract - those which signify accomplishment of critical milestones along the LCB path. More routine or less critical areas of performance, including business management systems, such as personal property management systems and procurement systems, are reviewed through a number of other surveillance techniques, not the least of which is day-to-day exchange between the contractor and members of the DOE contract administration team. Other mechanisms in place to afford an adequate level of surveillance in non-critical performance areas include business management oversight reviews, financial management reviews and audits, and contractor self-assessments, covered later.

Performance-based oversight is useful because it provides a structured method to evaluate services that the contractor is required to furnish. Such oversight should focus on the quality of the service delivered and not on the steps taken or procedures used to provide that service other than that they be within the parameters of environmental, health and safety guidelines. The oversight approach may include the appropriate use of pre-planned inspections, validation of complaints and even random and unscheduled inspections, if appropriate.

B. Progress Reporting

When information on contract performance status is needed, the contracting officer may require contractors to submit progress reports (as required by FAR clause 52.242-2 if contained in the contract). Monitoring performance, other than physically inspecting, can often be achieved by analyzing the contractor’s technical and financial reports and ensuring that these reports are received as contractually required. By using performance reports, the technical specialists can, for example, provide an assessment as to whether claimed costs are reasonable in relation to the percentage of work completed and detect potential problem areas which may impact the contract

cost or schedule. Financial specialists will analyze the contractor cost reports to verify consistency between the cost data and the contractor's monthly vouchers. While the COTR is primarily responsible for reviewing these reports, with assistance from other functional experts as needed, the contracting officer should periodically review available reports to assure him/herself that performance issues are being properly addressed.

The reporting requirements should be limited to only what is essential and take full advantage of the data output generated by the contractor's own management system. When specifically requested, status reports will either be in response to indications of slippage, and/or cost overruns, external data requests or to meet random inspection requirements. The COTR will review and verify the accuracy of the contractor's report and advise the contracting officer of any required action. The accuracy of the contractor's report is verified in one of two ways: 1) through a program of continuous surveillance of the contractor's report preparation system or 2) by the individual review of each report. The method of validation will be largely dependent on the availability of resources to accomplish the monitoring and, most importantly, on the criticality of the task performed.

C. Review of Non-Technical Data

A valuable tool in monitoring and maintaining current surveillance is by reviewing contractor reporting requirements such as progress reports, shop plans, invoices and other similar types of information that are readily available to the COTR requiring little or no interference with contractor operations. It is also within the COTR's purview to conduct periodic headcounts, examine time cards and sign-in sheets, incident reports, filings with other agencies, review overtime and maintain spreadsheets to track direct labor costs on a recurring basis. The nature of this data is not to develop accounting summations, but to provide visibility of trends that might require further physical review. This type of information often can uncover potential cost overruns, changes in labor, schedule slippages, and forecast less than desired performance.

D. Meetings with Contractor Management

Periodic meetings with a cross-section of contractor personnel, including top level contractor management, agency procurement staff (HQ and field office), as well as members of the contract management team to discuss the contractor's performance helps the COTR ensure that contract requirements are being complied with and that work is progressing according to schedule.

E. Methods of Physical Inspection

It is important to select the most appropriate surveillance method for the effort involved. There are many acceptable methods of inspection ranging from a simple physical "kick the tires" validation to a more structured surveillance designed to validate satisfactory completion of critical subpoints within a task (emphasis is placed on critical subpoint completions, NOT the process). If there are no interim completion points, validation is performed at final completion of the task. The important point to remember is that relying on cumbersome and intrusive process-oriented inspection and oversight programs to assess contractor performance should be avoided. In selecting the oversight method, the contract administration team will consider task criticality, amount of fee allocated if incentivized, whether the contractor's performance on the same or similar task was less than satisfactory during a prior performance period, the period of surveillance and how comprehensive inspection must be, and availability of staff to perform inspections and validations.

Acceptable surveillance methods which are applicable to physical inspection of work being performed or validation of progress/status or self-assessment reports might include:

- o 100% Inspection: This is usually the most appropriate method for infrequent tasks or tasks with stringent performance requirements, e.g. where safety or health is a concern. With this method, performance is inspected/evaluated or validated at each occurrence including interim completion points along the schedule baseline.
- o Random Sampling: This is the most appropriate method for recurring tasks. While the 100% inspection method has no margin of error, it is too expensive to be used in most cases. This method is well suited for tasks whose outcome is more predictable. Generally, this method is not acceptable as a means of validating critical path tasks.
- o Periodic Inspections: This method, sometimes called “planned sampling” consists of the evaluation of tasks selected on other than a 100% or random basis. It may be appropriate for tasks that occur infrequently, and where 100% inspection is neither required nor practicable. A predetermined plan for inspecting part of the work, at predetermined critical inspection points, is established using subjective judgement and analysis of the facility’s resources to decide what work to inspect and how frequently to inspect it.

When incentivized performance measures are involved (including potential reductions in fee), the COTR should also monitor performance from the perspective of assessing the current performance to expectations in subsequent periods.

5. Maintaining Oversight of Business Management Systems

A. Background

The Business Management Oversight Program (BMOP) uses performance-based management techniques to provide for the oversight of business management activities. The goal is to provide benefits to DOE through more streamlined operations, reduced costs of oversight activities, focused attention on the critical few performance measures, increased operational awareness, and enhanced communication and partnership. A key element of the process is self assessment.

B. Self Assessment

1). Process

Self assessment is an on-going process whereby the cognizant DOE field office monitors the contractor’s performance throughout the year and evaluates its ability to control and improve its management processes. The culmination of this effort results in a Self Assessment Report which is prepared by the contractor. The Report is used by the field offices to evaluate the contractor’s performance against predetermined objectives, measures and expectations. Specifically evaluated are business management system functions performed by the contractor where deficiencies are identified and corrective action taken as necessary.

The self assessment process includes:

- o Mutual Agreement: developing mutual agreement on performance objectives, measures and expectations between the field office and the contractor.
- o Reasonable Assurance: providing reasonable assurance that appropriate in-process/ internal controls are in place and that compliance requirements are being met.
- o Continual Analysis by the Field Office: continually assessing performance against agreed-upon performance objectives, measures and expectations.
- o Demonstrating Performance Results: optional methods for demonstrating performance such as surveys of customers, managers, and process users, benchmark comparisons, and data trending.
- o Reporting: a formal self assessment report, which is reviewed by the field offices.
- o On-site Review: the opportunity for an on-site review by an integrated field office team relying primarily, but not exclusively, on the contractor's self assessment.

2). Principles

The following principles provide guidance on implementing the self assessment process:

- o Agreement in Advance: performance objectives, measures and expectations should be developed sufficiently far in advance to allow meaningful self assessment of contractor performance. Heads of field office business functions should reach agreement in writing with their contractor counterparts on performance objectives, measures and expectations, using the input of DOE Headquarters program offices as customers of the business management processes. Headquarters may develop performance expectations which are flowed down to the contractors in such areas as: finance and budget, procurement, personal property management, work-for-others administration, etc. All business management systems, as well as all performance expectations within each business functional area, require validation by the field office every four years. In other words, each business management system is validated once each four years. Each measure within a business area may be assessed at one time or as directed over the four year period. The validation may be accomplished through day-to-day contract administration activities or through an on-site validation by field office personnel, or any combination.
- o Documentation: sufficient documentation is needed to provide reasonable assurance that objectives are being met and to support the need for full disclosure of the accomplishments and weaknesses of contractor performance.
- o Critical Few Performance Measures: the goal is to develop, over time, performance objectives, measures, and expectations that provide management focus and attention on the critical few areas of performance. As noted above, contractor performance expectations have been developed at the DOE Headquarters level and relayed to the contractor through the field office.
- o Communication, Partnership and Trust: the success of the performance-based management approach to oversight depends upon communication, partnership and trust. All parties should ensure that there is frequent, open and candid communication.

- o Operational Awareness: based on a partnering relationship, the Field Office maintains awareness of contractor performance throughout the year based on reports, conversations and other communications and interactions. The goal is to ensure continual analysis of performance against agreed upon performance objectives, measures and expectations.

3). For-Cause Reviews

This type of review of contractor operations or performance is required as a result of the identification of significant areas for improvement or trends indicating the potential need for improvement. Generally, where the contractor's own self-assessment has indicated areas requiring remedial action, the contractor will normally take corrective action. The effectiveness of the corrective action will normally be assessed and reported on during the next assessment unless day-to-day administrative interface precludes the formal assessment of the same area twice. For-Cause reviews may arise from the implementation of new requirements on the contractor or on the contractors' systems which require validation by on-site field office review. For-Cause reviews may also arise from deficiencies cited from external sources such as formal inspector general investigations or reviews, reported incidences involving public safety or significant non-compliance issues, etc. While the field office will normally take the lead on For-Cause reviews, as well as regular on-site validations of self-assessments, DOE Headquarters program personnel and function specialists may be invited to participate.

C. Business Management System Incentives

Business management functions are conducted everyday as standard operating practices. The contractor is assumed to utilize best business practices as generally prescribed to by the commercial sector as well as the performance expectations, which will include compliance requirements, set forth in the DOE Headquarter's written performance expectations. It is expected that the contractor will perform to these expectations to a satisfactory level and, therefore, should not require financial incentives specifically tied to them. To adequately manage property or efficiently procure goods and services are normal business practices and should not normally have available fee allocated to that function or functions. In fact, less than satisfactory performance in any one or more business management functions, at the discretion of the contracting officer or the fee determination official, may be cause to reduce the fee otherwise earned in technical areas.

6. Financial Management

DOE inherited from its predecessor agencies a financial management process whereby the Chief Financial Officer (CFO) developed and maintained an integrated system of budgeting, accounting, and program cost reporting. DOE treated its contractors essentially as subsidiaries where financial information was consolidated and reported on that basis. With a hard look taken at the financial management processes in place, it became readily apparent that the existing accounting processes did not provide the data needed to effectively manage the contractors in a performance-based environment, which requires not only more effective financial management systems but also requires that the systems be significantly sophisticated to allow for accounting for costs at discreet task order levels.

The financial information-gathering and reporting systems used by the CFO were principally

designed to report financial conditions, and not to evaluate program performance. Even at the highest cost summary levels, the extensive data that was collected provided little information for management determination of cost effectiveness of programs and cost reduction opportunities. In a performance-based management contracting environment, ability to compare performance against a baseline (cost, technical and schedule) becomes essential in order to ensure that the contractor is progressing at a satisfactory rate and is incurring costs as baselined or estimated. Accounting systems of a number of contractors are being redesigned or improved in order to facilitate cost reporting and tracking on a functional basis.

A. Review of Contractor Payment Requests - Review, Approval, and Processing

Where a voucher system is used, as opposed to a letter of credit system, the recommendation to approve an invoice or voucher is provided by the COTR. The authority to actually approve or disapprove payment of vouchers is the responsibility of the contracting officer. It is important that roles and responsibilities of procurement, program and finance officials be clear and understood with regard to review and approval of contractor requests for payment. The COTR is in the best position to assess the reasonableness of costs and expenditures on vouchers and invoices. In reviewing vouchers, the COTR should bear in mind that payment made to the contractor implies that work is progressing according to the contract; therefore, COTRs must be assured that the contractor has complied with the provisions of the contract. The COTR's recommended approval of a payment request is his/her acknowledgment that to the best of the COTR's knowledge, the nature, type, and quantity of effort or materials being expended are in general accord with the progress of work under the contract. It might be helpful, particularly where the contractor invoices are on a milestone completion basis, for the facility to have procedures in place which require the COTR to certify that supplies and services have been received or work has been accomplished. Where DCAA is in residence, the contracting officer may also designate a resident auditor as the contracting officer's representative for reviewing and approving vouchers under cost reimbursement contracts from a cost incurred standpoint.

DOE provides advance funding to M&O contractors by letters of credit through the use of special bank accounts. The letter of credit funding process allows contractors to withdraw funds from these special bank accounts as costs are incurred. The benefit of the letter of credit mechanism is that financing costs are avoided. The major drawback, however, is that DOE relies on the contractor to identify and segregate unallowable costs which are charged to discrete accounts and not charged to the contract. This process, known as the Statement of Costs Incurred and Claimed, provides DOE the assurance that the contractor has been reimbursed for allowable costs only. Under this process, the OIG examines the contractor's internal controls to ensure that no unallowable costs are claimed. Because of the difficulty in recouping unallowable costs paid, DOE undertook a number of studies to determine the cost savings that could potentially be realized by moving away from this advanced funding method to a voucher system. As a result of these studies, the voucher system was found to be more expensive to implement and maintain primarily due to higher processing costs as well as the working capital costs the contractors passed on to DOE. For the present, the letter of credit mechanism continues to be preferred for paying the M&O contractor.

Another consideration regarding letters of credit is that it provides a less visible "reminder" to direct the contractor's focus on the need to segregate unallowable costs. Under the voucher system, the contractor must submit a public voucher and subject itself to the penalties of the False Claims Act. Albeit such penalties would likely be applicable under both payment methods, the certification of a public voucher requires a more overt acknowledgment of the payment

request.

Where vouchers are in use by DOE offices, however, the review and approval of vouchers by contracting officers (together with COTR and/or DCAA input) must be accomplished in a consistent manner. In-depth review of vouchers under cost reimbursement contracts is needed on a recurring basis to ensure that the costs have not been incurred prematurely, and that the incurrence of these costs relate to progress under the contract. In addition, when reviewing vouchers, COTRs and/or the auditors should check the voucher date against the contract performance period to ensure that costs are being billed for the proper time frame, and compare the contractor's billing rates to ensure that indirect costs are being billed properly. These measures, along with monitoring the contractor's performance through report validation and/or physical inspections, helps the COTR determine if claimed costs are reasonable for the period covered by the voucher.

B. Assessment of Costs - Accounting Systems

An assessment of the adequacy of the contractor's accounting system helps the contracting officer determine if the contractor's accounting and billing systems, and internal control policies and procedures, are adequate to support costs claimed on an invoice or voucher. DOE validates the M&O contractor's accounting processes and procedures where the accounting system is integrated with that of DOE. The internal audit staff at the M&O contractor is responsible for determining the allowability of costs incurred and charged to the contract utilizing the integrated accounting system. An acceptable accounting system provides a degree of assurance that the contractor is maintaining a system which captures costs at a charge number or control account level which may provide cost visibility, such as whether costs are overrunning, at the project or task level. The accounting review facilitates timely recovery of overpayments and lost interest, facilitates the identification and settlement of cost allowability issues, and other matters associated with the contractor's invoice.

The accounting system review may be conducted prior to submission of an initial invoice; prior to award of the cost-reimbursable contract; at the time of an initial invoice; on a schedule; or at the discretion of the contracting officer as deemed necessary. The contracting officer should be familiar with the notification requirements associated with the Limitation of Cost Clause, at FAR 52.232-20, applicable to fully funded cost-reimbursable contracts as well as the Limitation of Funds Clause, at FAR 52.232-22, applicable to incrementally funded cost-reimbursable contracts. The purpose of both clauses is to require the contractor to give the contracting officer notice regarding the actual costs as well as the estimated costs, and also to specify that the government is not obligated to reimburse the contractor for any costs in excess of the estimated costs as set forth in the contract. There are exceptions to this, such as where the contracting officer has authorized costs to correct deficiencies, over and above estimated costs, pursuant to the Inspection and Correction of Defects Clause. The government is obligated to pay these costs.

Where deficiencies in the accounting system are noted, the contracting officer should formally provide written notice to the contractor and request a correction plan or provide a description of the corrective actions already taken. Any major changes to the accounting system should be reported to the contracting officer who, in turn, will request an impact review of the changes.

C. Cost Accounting Standards and the Disclosure Statement

The objective of Cost Accounting Standards (CAS) is to provide consistency and uniformity in

cost accounting practices, governing measurement, assignment, and allocation of costs to contracts. The CAS statute requires that costs be estimated, accumulated, and reported in accordance with CAS, 41 U.S.C. Section 422. CAS is applicable to M&O and non-M&O contractors and is mandatory for all negotiated prime contracts, and subcontracts, in excess of \$500,000. The reader should also become acquainted with the provisions relating to modified CAS coverage and the requirements relating to Disclosure Statements.

D. Performing Incurred Cost Audits of Non-M&O Contracts

Cost reimbursable contracts contain provisions which provide for payments to the contractor for all allowable costs charged directly to the contract. Determining the allowability of these costs incurred at M&O sites is the responsibility of the internal audit staff, as mentioned earlier. At non-M&O sites, the reliance is on audit support from the government cost/price analyst and/or from DCAA to perform incurred cost audits and reviews. Allowable costs, for non-M&O contractors, are governed by the cost principles contained in the FAR and by specific contract provisions and are generated from accounting systems which have been reviewed and approved by DCAA or other agency providing financial services support.. The review of the contractor's accounting system includes compliance with cost accounting standards.

The frequency of the contracting officer's audit request will generally depend on the reliability and integrity of the contractor, prior audit experiences, adequacy of the accounting system and the number of unaudited claims, vouchers, invoices and billings. Individual invoices provisionally paid may be audited, particularly in cases where allowability is questioned. Where DCAA is the cognizant audit agency at the non-M&O contractor site, annual incurred cost reviews are normally conducted concurrently with overhead reviews for establishing final indirect cost rates for the period. Where DCAA is providing audit services, these reviews are conducted annually without the need to request the review.

Where DCAA has determined that an item of cost is unsupported, or unallowable, the responsibility falls to the contracting officer to conduct fact-finding discussions (if needed) to resolve the issue with the contractor and to dispose of the issue with the auditor. The ultimate decision as to allowability rests with the contracting officer.

E. Statement of Costs Incurred and Claimed (Cost Statement) by M&O Contractors

The Department's M&O contractors are required to annually prepare and certify the Cost Statement that the total net expenditures accrued or incurred for the certification period were in fact incurred and are allowable costs under the contract. The period of certification may be annual or some other period as determined by the contracting officer. The contractor will be subject to a penalty in the event it is later determined that the contractor incurred, claimed and was reimbursed for unallowable costs. It is important to note that cost accounting standards are applicable to M&O contractors. Upon DOE's approval of the Cost Statement which has been reviewed and adjustments made as necessary, DOE's approval of the Cost Statement constitutes an acknowledgment that the net costs incurred are allowable under the contract.

Chapter Seven

Subcontract Guidance

This chapter provides: (1) guidance and assistance in making adjustments for subcontract costs when determining the amount of fee pursuant to DEAR Section 970.15404-4 and (2) guidance when associating performance based fee with effort to be performed by a subcontractor. For purposes of this guidance the term:

- “prime contractor” includes: a single prime contractor, a prime contractor team, a lead and major subcontractor team, or other similar relationship.
- “subcontracts” is to be read as “subcontracts and other major contractor procurements”
- “major subcontracts” are those subcontracts involved in a “Lead with major subcontractor” prime approach and/or are those subcontracts in excess of \$10,000,000.
- “other major contractor procurements” as used in DEAR Section 970.15404-4-6 and in this guide refers to any purchase of supplies, services, and/or materials which individually, or in the aggregate, are of such magnitude (with the suggestion that the magnitude be set at no higher than \$10,000,000 and above) that the prime contractor’s commitment of resources and management responsibilities is significantly less than it would be if the prime contractor provided the supplies, services, and/or materials itself.

Part 1 - What are the various subcontract approaches and why is an adjustment to fee necessary?

Where is the requirement to make adjustments for Subcontract Costs found?

The Final Rule, issued in the Federal Register, March 11, 1999, provides for adjustments to the prime contractor’s fee base at DEAR Section 970.15404-4-6, entitled “Fee Base” and to the maximum available fee at DEAR Section 970.15404-4-4 entitled “General considerations and techniques for determining fixed fees.”

What is the rationale for making adjustments for subcontract costs?

The two types of adjustments for subcontract costs provided for in the Final Rule address the relationship between the prime contractor and the subcontractor with particular focus on considerations relating to the efficiency afforded by the subcontract, the ability or inability of the prime contractor to perform the effort, the prime contractor’s intended relationship with the subcontractor based on the short and long term site objectives and the resulting subcontracting approach utilized by the prime contractor.

The first of the two adjustments calls for the exclusion of at least 20% of the subcontract costs from the prime’s fee base. Allowing for the inclusion of up to 80% of subcontract costs in the fee base recognizes that subcontract costs are allowable costs and that the prime contractor may be, to some degree, actively involved in the management of the subcontractor and bear, at least, some of the risk associated with performance. However, the fact remains that the effort is sub-

contracted, thereby reducing or eliminating the prime contractor's management involvement.

It should be noted that the Final Rule in no way suggests that including 80% of subcontract costs in the fee base is automatic. DEAR Section 970.15404-4-6 provides for the exclusion of up to 100% of the estimated cost or price of subcontracts from the fee base which, because of the nature or magnitude of the subcontract, would result in a maximum available fee to the prime contractor that is not commensurate with the technical or management effort required of the prime contractor or the risk incurred by the prime contractor. The CO, in determining what portion of subcontract costs to include, if any, will consider the extent to which the subcontracts must be actively managed by the prime contractor to determine whether the management effort is low, medium, high, or extraordinary and what risk the prime contractor bears for the performance of the subcontracted work. Whatever the portion of the subcontract costs included in the prime contractor's fee base, it must be fully supported with appropriate documentation.

While not specifically mentioned in the DEAR, in a few instances it may be appropriate to include in excess of 80% of the subcontract costs in the prime contractor's fee base. However, the circumstances must be extremely unique and the risk assumed by the prime contractor for the subcontracted performance high.

The second adjustment results from the CO's evaluation and consideration of the significant factors, DEAR 970.15404-4-4. The adjustment is applied to the maximum fixed fee which was calculated after including some portion of subcontract costs in the prime contractor's fee base. This is not the adjustment relating to the 20% exclusion, as discussed above, but an adjustment to arrive at the fixed fee after consideration of the significant factors. The idea is that the prime contractor should not get the maximum available fee amount determined using the fee schedules if subcontract costs are included in the fee base that the schedules are applied against. This is because the maximum fee is intended to compensate the prime for providing the maximum resources to perform the work. To the extent work is subcontracted, the prime contractor is relieved of providing the resources to accomplish the work. However, the adjustment should also take into consideration the fact that the prime contractor may have to increase resources to ensure that the work subcontracted is properly integrated and performed. Depending on the complexity and magnitude of the work subcontracted, the downward adjustment associated with the reduced resources required from the prime to perform the work directly may, to some extent, be offset by the added resources required to ensure proper integration and performance of that work.

What is the underlying concept behind making adjustments in fee for subcontract costs?

One of the underlying principles in the selection and retention of a prime contractor to operate/perform a DOE site or effort is that it will perform the work in the most efficient manner. This most often means that the work will be performed utilizing not only the prime contractor's resources, but also a wide range of subcontractors and suppliers in varied capacities as need and expediency dictate. This concept applies regardless of whether or not the work contracted out is for raw materials, purchased parts, or subcontracted items/services. In addition to the determination of the fee amount for the prime contractor, it also applies to determining the fee amounts for the individual contractors' which make up a team prime contractor approach, or a "Lead and major subcontractors" prime contractor approach, or some similar approach.

It should be noted that the amount of fee available to the prime contractor will, in part, be determined by the composition of the prime contractor's annual Make or Buy Plan. The more that the

prime contractor “buys”, given all else is equal, the lower the amount of available fee to the prime contractor should be. In accepting the award of the contract, the prime contractor should be well aware of this premise and understand the potential impact on the available fee.

What are the various Prime Contractor/Subcontractor Approaches?

There are many approaches which can be taken regarding the relationship between a prime contractor and its subcontractors. The approach taken is normally as a result of a number of primary considerations which may include long term objectives, the nature and magnitude of the subcontract work, make-or-buy determinations or any other relevant considerations. Each of these factors will be discussed in greater detail, but, first, several common prime/subcontractor arrangements, or approaches, are presented below.

1. Prime with minimal subs - The historic approach used by this Department is to award a contract to one prime contractor, which assumes the majority of the work force on site from the previous prime contractor. The prime contractor provides most of the management expertise and work force (much of which is often “inherited” from the previous site prime contractor) necessary to perform the work effort on the site. Those additional management skills that are necessary, and work requiring specific expertise not available in the immediate work force, will be subcontracted out, along with the routine supplies and services. Subcontracting is normally expected to be at a minimal to moderate level. However it should be kept in mind that due to the breadth and complexity of work at some of DOE’s sites, a large prime may not have enough diversity and flexibility to perform all of the work at the most efficient performance level.
2. Management and integration: A second approach is for the DOE to contract with a prime contractor for the management and integration of the work, with the prime contractor subcontracting out the majority of actual work. In theory, this approach would provide maximum flexibility in allowing the right resources to be focused on the specific work, ensuring it would be accomplished in the most efficient manner. In reality, however, this approach may be hindered by site work force considerations and the availability of a full range of subcontractors capable of performing each unique work requirement. This approach would usually result in the maximum use of subcontractors.
3. “Team” Arrangements - Another approach is for the DOE to contract with a prime or team of contractors which will provides most of the management expertise and work force again, much of the workforce is often “inherited” from the previous site prime contractor) necessary to perform the work effort on the site. Each team member may or may not be jointly and severably liable for the total performance of the contract. The team would divide the work by each member’s area of expertise. Additional management skills will be necessary and work requiring specific expertise not available in the immediate team’s work force will be subcontracted out, along with the routine supplies and services. In some cases one team member may also have the role of an integrating contractor to ensure the overall team performs in a cohesive fashion.

The effect of the team approach is much like the historic approach, except the primary work package is performed by several contractors instead of one. The contractors composing the team may, together, have more breadth of expertise than a single prime contractor, reducing the need to subcontract. This approach breaks the major work segments between more contractors, allowing the application of focused expertise to specific types

of work which may not be the case with just a single prime contractor. A minimum to moderate amount of subcontracting would still be required to meet specialized needs and provide routine supplies and services.

- 4 Prime and Major Subcontractors - This is a variation of the team arrangement. However, instead of the major parties having a teaming agreement, the relationships would be prime contractor-subcontractor with only one contractor acting as the prime contractor. In this arrangement, the prime can more easily sever the relationship between the prime and any of the major subcontractors.

Any of the above approaches for contracting for work to be performed at a site are valid and all of them (or some variation) have been tried at DOE sites. The validity of an approach largely depends on whether or not it results in the most efficient “long term” performance of the maximum amount of work.

Part 2 - What are the significant subcontract considerations and their associated adjustments?

What are some considerations when determining prime/subcontractor fees?

1. General Considerations

The contracting officer (CO) has the responsibility to assess several broad considerations when determining prime contractor fees and the degree to which subcontract costs are included in the fee base. There are no matrices to refer to in order to arrive at an “appropriate” percentage of subcontract costs to include in the base. Arriving at a reasonable amount of fee requires looking at many considerations that impact on the overall efficiency of performing the work.

These broad areas are discussed below:

A. Long term objective for the site/effort

The long term objective for the site/effort should play a significant role in determining the best strategy for structuring the prime contractor - subcontractor approach, regardless of whether or not the structure is determined by the DOE or proposed by an offeror/contractor. The long term objective is the starting point in deciding to what extent the subcontract costs will be included in the prime contractor’s fee base. Specific elements relating to long term objectives include 1) the cohesiveness of the work to be performed; 2) the extent various unique work segments exist requiring specialized skills; 3) the projected duration of the various work segments; 4) the relationship of the various work segments to each other - vertical as well as horizontal integration of the segments; 5) the planned sequencing of the work to be performed; 6) the planned occurrence of specialized projects; 7) the need to develop current and future competencies of the prime or subcontractor(s) based on current and anticipated requirements; etc. Basing the approach on a long term objective is critical because the goal should be to establish the most efficient approach to the overall site/effort objective. It should be noted that while short term approaches may appear to be the most efficient way of performing short-term requirements, when measured against long term performance objectives may prove to be a less efficient means of achieving the overall objectives than some other approach.

When determining the amount of subcontractor costs which should be included in the fee

base used to calculate the prime contractor's fee, consideration should be given to how the immediate subcontracting approach achieves the site's/effort's long term objectives. This evaluation will serve as a base when addressing the other considerations involved in setting fees.

B. Nature and magnitude of the subcontracted work

The nature of the work helps define the degree of risk and cost associated with its performance. The prime contractor's ability to perform the work will depend upon the nature of the work as will the size of the available pool of qualified subcontractors able to efficiently accomplish the task within an acceptable degree of risk. The risk to contract performance is significantly less when the prime contractor has the expertise and resources to perform all or part of the effort or when the pool of subcontractors is sufficiently large to enable the prime contractor to select from several qualified contractors.

The magnitude of the effort(s) subcontracted will also influence the amount of involvement required by the prime contractor. Magnitude may either be the size of an individual effort or the number and/or need for integration of some or all of the subcontracted effort.

Normally, as the complexity, risk, and/or magnitude of the work to be subcontracted increases, the prime contractor will have to become more involved and therefore, more of the costs associated with the subcontracted effort may be included in the fee base.

C. Make-or-Buy Decisions

The Department's policy relating to make-or-buy (M/B), as stated in DEAR 970.15407-2-1, establishes a preference for performing work at less cost. The emphasis is not necessarily on encouraging subcontracting, but rather attempts to eliminate the bias for "make" decisions without regard to overall cost. The decision to subcontract an activity is made after consideration of appropriate program, business and financial factors. These considerations, as identified in the DEAR, include past experiences in obtaining similar services, least cost alternative considerations which will include one-time costs, financial risks, etc.

The DEAR also acknowledges the need to consider program specific criteria which may override a preference for least cost. These considerations may include work force displacement concerns, collective bargaining agreements, diversity, and other criteria identified at the program level. The responsibility lies with the CO to balance a least cost decision with a number of other considerations: including source availability; ensuring that core competencies are maintained and/or developed in order to meet the Department's mission requirements and schedules; ensuring that environmental, health and safety standards are maintained; and ensuring that defense capability concerns, and technology transfer and research advancement issues are addressed.

The CO's approval of the contractor's M/B plan will include consideration of the impact of the M/B decision on contract cost, schedule, performance and financial risk. When the contractor identifies a non-critical or non-core work element in the M/B plan as a "must make" activity, as opposed to a "can make" activity, and the prime contractor is not the most cost efficient alternative or where the work element is not a program specific "must make" activity, a cost/benefit analysis must be conducted to justify that decision.

2. Specific considerations

The amount of subcontract costs to be included in the fee base for the determination of the prime contractor's fee (or for determining the fee amounts for the individual contractors' which make up a team prime contractor approach, or the prime and major subcontractors' prime contractor approach, or some similar approach) will vary depending upon those considerations listed in section #1. above and the following:

A. Routine supplies and/or materials

Routine supplies or materials are usually "off-the-shelf" items that reflect a commercial standard/specification. The prime contractor's commitment of resources for routine supplies normally does not extend beyond purchasing, inspection, and inventory management personnel. The prime contractor has no, or only minimal, involvement with the provider of such supplies or materials and there is no significant management involvement. Such supplies or materials are normally obtained using purchase orders or routine subcontracts.

Suggested % of routine supplies and/or materials cost to be included in the fee base: less than or equal to 60%

B. Routine services

Routine services are normally services provided commercially to the general public. While routine services may be tailored to some degree to the specific situation, they are normally performed to the providers own standard. Such services would include laundry service, grounds maintenance service, etc. The prime contractor's commitment of resources normally does not extend beyond purchasing and inspection personnel and some effort to tailor the subcontractor's standards to the specific situation, if necessary. The prime contractor has no or only minimal involvement with the provider of such services and there is no significant management involvement. Participation by the prime contractor may be limited to assessing the acceptability of a routine service. Such services are normally obtained using purchase orders or routine subcontracts.

Suggested % of routine services costs to be included in the fee base: less than or equal to
60%

C. Subcontracts for other than routine supplies, services, and/or materials

Non-routine supplies, services and/or materials are normally purchased using a subcontract. The complexity of the subcontract will vary with the complexity of the item/service being acquired. The prime contractor provides the description, (specification or Statement of Work) for the item/service, along with all related provisions regarding the performance of the work. The prime contractor will be involved to some degree with the subcontractor, with the amount of involvement reflective of the specific nature of the work to be performed and the expertise of the subcontractor performing it.

(1) Subcontracts for other than routine supplies, services, and/or materials excluding

those major subcontracts involved in the prime with major subcontractors approach.

The extent costs associated with these subcontracts should be included in the fee base of the prime contractor will depend on the following considerations:

- (a) The risk the prime contractor has assumed regarding the specific effort. The risk will be determined by (1) the amount of the prime contractor's fee which is dependent upon the successful performance of the subcontracted work and (2) the actual risk of performing the work due to difficulty, integration requirements, financial exposure in the way of potential fines, etc.

If no or minimum fee is associated with the work, or the risk of performing the work is low, then only a minimum amount of the subcontract costs should be included in the prime contractor's fee base. It will normally be slightly greater than the amount of costs associated with routine supplies, services, and materials which are included. This is due to the expanded effort required by the prime contractor in developing the work description and the associated risk.

If a significant portion of the prime contractor's fee is dependent upon the successful performance of the subcontracted effort or the risk of performing the work is high, then more of the costs may be included in calculating the fee base.

When including subcontractor costs in the fee base, keep in mind that if the subcontractor fails to perform, both the subcontractor and the prime contractor will lose fee. If the subcontractor does perform, both the subcontractor and prime contractor will earn fee, usually in an amount greater than if only the prime contractor had performed the work.

- (b) The management involvement of the prime contractor due to the magnitude of the work and/or complexity of work. The more involvement by the prime contractor, the more subcontract costs should be included in the prime contractor's fee base.
- (c) The management involvement of the prime contractor due to the expertise (or lack thereof) of the subcontractor. The more involvement by the prime contractor, the more subcontract costs should be included in the prime contractor's fee base.
- (d) The management involvement of the prime contractor due to the number of subcontracts. The more subcontracts awarded by the prime, the more it will have to devote to the management of them. This, in itself, may warrant only a small increase in the inclusion of subcontract costs in the prime contractor's fee base.
- (e) The management involvement of the prime contractor due to the interdependency of the subcontracts and the need for their integration, especially if they are complex. This may demand significant involvement and warrant the high inclusion of subcontract costs in the prime contractor's fee base. This is especially true if there are a large number of subcontracts which require close integration.

Suggested % of the costs associated with subcontracts for other than routine supplies, services, or materials excluding those major

subcontracts involved in the prime with major subcontractors approach to be included in the fee base:

Low to Moderate Complexity/Risk

Subcontracts:

less

than or equal to 70%

High Complexity/Risk Subcontracts: less than or equal to 80%

Unique/unusual Risk Subcontracts: less than or equal to 100%*

* Inclusion of total subcontract costs exceeding 80% requires the approval of the Procurement Executive.

- (2) Major subcontracts involved in the prime with major subcontractors” approach.
The subcontract arrangement within the prime and major subcontractors approach requires somewhat different considerations than those associated with the normal prime contractor and subcontractor relationship. This is because the approach is designed as an alternative to the approach of contracting the total work to one prime contractor. An additional tier of subcontractors is created, with each responsible for a major segment of the total work. They, in turn, will enter into 3rd tier subcontracts for supplies, services, and materials, establishing the normal prime contractor/subcontractor relationship.

Fee for prime and major subcontractors approach should be calculated as if calculating the fee for a single prime contractor. The fee base will include the cost of the major subcontracts as well as the prime’s cost. How the fee is allocated between the lead contractor and major subcontractors will normally be up to the parties, but should closely parallel the work the contractor is responsible for and its importance to the DOE. See also paragraph E. “Special consideration for “Team” and “Lead with Major Subcontractors” approaches” below.

D. Contracts which are part of a teaming approach

Technically the contractors which make up a team approach to prime contracting are not in a prime contractor - subcontractor relationship, but are joint partners within a contract. This is another approach for dividing the total work normally awarded to a single prime contractor into segments, with each of the team members responsible for that segment related to their area of specialization. The team’s fee should be determined as if it were a single prime contractor. The costs associated with subcontracts below the team level are included in the fee base to the extent they would be when calculating a single prime contractor’s fee which has normal subcontracts. How the fee is allocated to the team members will normally be up to the team, but should closely parallel the work the member is responsible for and its importance to the DOE. (See also paragraph E below.)

E. Special consideration for team and lead and major subcontractor approaches

Consideration should be given to how the team or prime and major subcontractor arrangements are organized to ensure integration and completion of all the work to be performed. If one contractor has this responsibility (such as the lead contractor in the

lead with major subcontractors approach or the integrating contractor in the team approach), then a significant portion of its fee should be tied to ensuring timely and integrated performance of all work. A fee calculated in accordance with sections C (2) and D above may not provide adequate compensation to the contractor assigned the management and integration role. Therefore, consideration should be given to including some of the costs associated with the work of the other team members or major subcontractors into the fee base with any resulting additional fee allocated to the integrator. A suggested approach to doing this would be to include some of the other “Team” member’s or major subcontractor’s costs as subcontract costs in the fee base. This will create an artificially high fee base, since all costs associated with the work being performed by these “team” members or subcontractors would already have been included in the fee base as if they were prime contractor costs. In establishing the amount of this “plus-up” to the fee base the following should be considered:

- (1) The risk the prime/lead/integrating contractor has assumed regarding the specific effort (normally the amount of the prime/lead contractor’s fee which is dependent upon the successful performance of the work.) If no, or minimum, fee is associated with the work, then only a minimum amount of these “member/subcontract” costs should be included in the fee base. The amount should reflect the effort the prime/lead/integrator must exert in developing work statements and measuring work performance, in addition to normal administrative effort associated with the performance of all of the work it has assumed.
- (2) The extent a prime/lead and major subcontractors or team approach will result in overall efficiency in performing the work. The “yard stick” with which to measure this is the amount of work which is performed for a total cost and fee. While the potential fee paid for the performance of specific work may increase under either of these approaches, the cost should be less than the cost and fee if performed by the normal prime contractor approach.

Suggested % of major subcontractor/team member costs to be included as additional “subcontract costs” in the fee base:

less than or equal to 20%*

* While the fee policy is silent on the inclusion of major subcontractor/ team member costs for this type of approach, because the approach deviates from the normal prime contractor approach, any inclusion of such costs should be cleared with the Procurement Executive.

When should the cost of supplies, materials, and/or services subcontracted be established?

Often, prior to the commencement of the fee period not all of the supplies/services to be purchased or subcontracted for have been identified. However, the major supplies/services should have been identified. Determining the cost of supplies, services, and material as well as the complexity and risk associated with them should be done in accordance with the following or some similar approach.

1. The prime contractor should identify those major supplies/services he plans to procure during the fee period as part of the fee determination process. Major supplies/services can be defined by: (i) value, with a suggested value of any purchase/subcontract greater than \$10,000,000; (ii) risk, with a suggestion that anything that may pose a risk to the achievement of critical effort for the period be identified; and (iii) complexity, with a suggestion that anything that is so complex it will require significant involvement of the prime contractor be identified.
2. For those major supplies/services identified, the prime contractor should provide a description of the supply/service, an estimate of the cost, and an assessment of the complexity and risk associated with the supply or service.
3. For those supplies/services not identified as major, the prime contractor should provide an estimate of their composite cost grouped by whether they are routine supplies/services or more complex subcontracts (although not identified as major supplies/services). Costs and complexity may be supported by estimates and/or past experience.

What are the considerations for determining the adjustment to fee due to purchases/subcontracts?

In determining the adjustment to the potential maximum fee allowed by the fee schedules due to the impact of the prime contractor purchasing supplies, services, and/or materials the following considerations should be addressed:

- **The reduced commitment of resources by the prime contractor**

To the extent the prime contractor purchases or subcontracts work from other sources, it may be able to reduce its need to maintain a diverse and often specialized resource base. This applies to the full depth and breadth of the work force from managers to laborers. The prime contractor is relieved from having to plan work to ensure the maximum utilization of its work force. It allows the prime contractor to be more efficient in the performance of much of its work. It also relieves the prime contractor from the responsibility for providing for the management of these resources. Something of an exception to this reduction in resources are those instances where the prime contractor subcontracts for the management or design of the work, but not the total work. While there may still be some reduction, it may be minimal.

Suggested % reduction to Total Available Fee: less than or equal to 40%

- **The increase of required resources due to magnitude and complexity of the purchased effort.**

Depending on the number of purchases and subcontracts issued by the prime contractor or the complexity, integration, or risk associated with the work, the prime contractor may need to obtain additional resources to ensure adequate oversight. The need to obtain additional resources and the management complexities and risk associated with the resources may, in part, offset the reduction in resources due to the direct purchasing/subcontracting of the effort from someone else.

Suggested % offset to the adjustment on Total Available

Fee:

less than or equal to 60%

Part 3 - How should fee be associated with work performed by a subcontractor?

What is the application of this part?

The following Part will apply primarily to major subcontracts or team members of a teaming arrangement. However, if it is known that fee is to be associated with work that is being subcontracted out on less than a major subcontract basis, the fee structure of those subcontracts should also be considered when establishing the association of fee with the work (e.g. consideration is being given to associating fee with the construction of a facility which is subcontracted to a less than major subcontractor)

What is the purpose of associating fee with effort performed by subcontractors?

The purpose of associating fee with performance of a specific effort is to communicate the importance of that performance to the contractor and provide compensation and/or incentive for its achievement. If the effort is to be performed by a subcontractor, it is important to ensure the prime contractor communicates the importance to the subcontractor through the subcontract fee arrangement and amount.

What is the rationale for associating fee with effort performed by subcontractors?

The objective of the DOE, in associating the prime contractor's fee with the performance of those efforts it believes are important, may not be achieved if the prime contractor does not provide a similar association to the subcontractor (major or otherwise) performing the work if such work is subcontracted.

Where the prime contractor is an integrating contractor, and one fee pool is shared between it and the major subcontractors, it is important that the integrating contractor have some of its share of the fee pool at risk along with the major subcontractor actually performing the work. The fee at risk for both the integrator and the major subcontractor should reflect the intent of the DOE's association of fee with the effort. Such an arrangement should ensure the integrator's involvement in overseeing the performance of the work.

What are some of the considerations when associating fee with effort performed by subcontractors?

When performance fee is associated with work which is to be performed in part or in total by a subcontractor or subcontractors, it is imperative that the intent of the association of fee with the work at the prime contractor level be reflected in the fee arrangement (structure and amount) with the subcontractor(s). Fee arrangements for work which is subcontracted may be established in several ways, including:

- The prime contractor provides the same general type of performance incentive to the subcontractor (s) that it has with the DOE. The incentive may be broken down into more component parts (this is obvious if several subcontractors are performing the work) than the incentive the prime has with the DOE, but final fees paid should assure that final performance will be achieved. The amount of fee paid to the subcontractor(s) should

reflect the importance of the total effort, as indicated by the amount of fee the DOE has allocated to such total effort.

In teaming/prime - subcontract relationships, where the contractor performing the work does not receive a separate fee but shares part of the total available fee, the assignment of the allocation of fee to it should be the amount allocated to the effort by the DOE (or a proportional share if only part of the work is being performed). The amount may be reduced to some degree if the prime or another team member shares some of the risk for the performance of the effort and merits some fee for that risk.

- The prime contractor provides the subcontractor a more stringent fee arrangement than that provided to it by the DOE. An example would be where the DOE provides a cost plus performance incentive fee arrangement to the prime and the prime provides a firm fixed price arrangement to the subcontractor. In such cases, the DOE must review the arrangement to determine if the controls (on cost) and incentives (on performance levels achieved) are in line with what the prime contractor has stipulated in the subcontract. Further, the DOE should ensure that the fee arrangement it enters into with the prime contractor is appropriate given the prime contractor's fee arrangements with its subcontractors.
- The prime contractor provides the subcontractor a less stringent fee arrangement than that provided to it by the DOE. An example would be the DOE providing a cost plus performance incentive fee arrangement to the prime and the prime providing a cost plus fixed fee or base fee with limited performance fee. In such cases, consideration should be given to the extent the prime contractor will be involved in the performance of the effort and the importance of the work being performed by the subcontractor. In some instances, such an arrangement may be appropriate, however, in many instances it will not be appropriate if the performance of the effort receives less emphasis than intended by DOE.

What should the DOE's access to data regarding subcontracts be?

As part of the establishment of the performance based fee and identification of the work it will be associated with, the prime contractor (or team members) should provide data on its fee arrangements with its subcontractors (whether in the normal prime - subcontractor relationship or in a team relationship). If the arrangements change during the course of performance, the DOE should be notified and have the right to adjust the fee arrangement with the prime. To the extent the fee arrangements between the prime and its subcontractors have not been established when the performance fee is established, the prime contractor should provide the DOE with its best estimate of how such arrangements will be established. If the actual arrangements, once they are established, differ substantially from what was estimated, then the DOE should retain the right to adjust the fee arrangement with the prime.

Regardless of whether or not the DOE requires cost and pricing data as defined in FAR Part 15, the contracting officer has a responsibility to ensure the establishment of fair and reasonable costs and fees. In doing this, the contracting officer may require the contractor to provide all pertinent information relating to costs and fee including all subcontractor (or team member) cost and fee information. In the case of team members, if team members do not share the requested information with each other, then the DOE may request that it be provided separately directly to the DOE, which will protect it as proprietary information. Fees should not be established or they should be established unilaterally, with the appropriate flow down provisions to the subcontractors performing the work to be associated with fee (if such unilateral right is contained in the

contract) where this information is not provided.

Chapter Eight

Award Fee Scoring Criteria

This chapter discusses the various ways in which Award Fee (Subjective) incentives may be scored.

Part 1 - Why have a subjective Award Fee Scoring Methodology?

The FAR requires that Award Fee contracts establish a criteria for evaluating the contractor's performance and determining the amount of fee it has earned in the performance of the contract.

Historically, the Department's fee policy provided for a single discrete methodology applicable to all performance based management contracts; i.e., established one methodology for evaluating work performed on an award fee basis and determining the amount of fee earned. All sites were using subjective award fee measures, grouping performance by major area and applying one set of defined evaluation ratings. These ratings were then converted to an appropriate fee amount using a standard award fee conversion table. A contractor's performance at a site could be given a general adjective rating, such as excellent, based on the numeric rating received and fee amount earned. In theory, more so than in reality, it was possible to compare various sites by the adjective associated with their fee rating and earned fee.

However, since introducing objective performance based incentives (PBIs), the total fee earned by a contractor can no longer be given a general adjectival rating. This is because fee, in addition to some association with award fee measures, is also associated with a few critical objective measures, each with its own levels of performance and associated fee amounts. Levels of performance tend to be defined by metrics rather than adjectives. Also, with the introduction of objective performance based incentives, the amount of fee allocated to objective PBI measures instead of subjective award fee measures varies between sites, which precludes the use of adjective descriptions to compare sites.

Part 2 - What are the forms of subjective Award Fee Incentives?

Subjective award fee incentives (not PBIs) are generally a collection of several broad area incentives, such as Site Management which may encompass numerous subareas. For example, Site Management, might include facility management & maintenance; financial management; property management; etc. Each broad area is weighted (by its share of the total fee allocated to award fee incentives, expressed as a percentage) to reflect its importance relative to the other broad areas and performance is subjectively evaluated. An example follows:

Area E. Tritium Program

Weight: 30

Manage the Tritium Program in a cost effective and efficient manner in accordance with the priorities of DOE.

Performance Objectives:

E.1 Plan and implement the Tritium Program in accordance with the approved Annual Operating Plan (AOP) and supplemental guidance documents approved by cognizant DOE Lead Evaluators.

E.2 Plan and implement the Accelerator Production of Tritium Program in accordance with the approved AOP and supplemental direction received from the National Accelerator Project Office and the DOE APT Program Office.

E.3 Manage the Projects associated with this Program in accordance with the approved AOP and supplemental guidance documents approved by cognizant DOE Lead Evaluators.

With the Department's move to performance based contracts and performance based incentives, another form of the subjective award fee incentive is being introduced. This is a specific incentive, succinctly written, with many of its measures objectively stated and a specific amount of fee allocated to it. What makes it award fee is that due to the nature of the effort subject to the incentive, at least one aspect of the evaluation of its performance requires the application of subjective judgement. An example follows:

High Level Waste (HLW) Tank Farm Potential Inadequacy in the Safety Analysis (PISA)/ Unreviewed Safety Question (USQ) Resolution

Fee: \$500,000

Description of Work: Effectively close the PISAs and USQs currently open in the Tank Farms.

Completion Date: September 30, 2000

Goal/Objective: Closure of all the PISAs and USQs open in the Tank Farms as of August 1, 1999 will occur during the performance period: Closure shall constitute submittal of Authorization Basis documentation to DOE or demonstrated against DOE approved decision logics.

Basis for Fee: PISAs and USQs represent unresolved issues associated with safe operation of the Tank Farms. Interim compensatory measures are implemented to continue operation while these issues are being resolved. Resolution requires significant research and development to address first-of-a-kind technical issue. Successful resolution of these issues will allow removal of interim controls and result in a less restrictive and more efficient operation. This Special Performance Area (SPA) provides incentive to resolve these safety-related issues in a timely manner. It is expected that more cost efficient operation of the HLW tank farms will be realized when the goals of this SPA are met.

Basis for Measurement: Performance under this SPA will be determined based on technical and schedule performance and management of analytical activities. Performance will also be judged based on effort and progress toward closure of the Dry Sludge PISA/USQ by 6/30/00, completion of the Tank Fill Limit PISA Inspections and AB Changes by 3/31/00, the return of Tank 49 to Air-based Operations by 3/31/00, the closure of the Trapped Gas USQ by 6/30/00 and the closure of the Organic PISA by 9/30/00.

In the above example, objective dates are established for specific tasks, however, the degree the issues are satisfactorily resolved will be assessed subjectively.

Part 3 - What format should be used to rate the contractor's performance of subjective Award Fee Incentives?

Regardless of the construction of the subjective award fee incentives, the evaluation of the contractor's performance, as measured against them, can be done using any of a number of rating approaches. A matrix can be developed which breaks each area down into its key components (which can be either specific or generic performance components) and then assigns ranges of performance for each component (evaluation criteria). Each component is weighted and each evaluation criteria is assigned an adjective description and numeric value or range. Component performance is evaluated at the end of the evaluation period and assigned a numeric score and an adjective description based upon where the contractor's performance falls within the evaluation criteria. The assigned scores are then multiplied by the component weights, totaled and translated (via a conversion chart) to a percentage of the fee allocated to award fee. (See Attachment 1)

A less specific evaluation approach is to divide the effort which is to be associated with award fee into areas of performance, weight them relative to each other, and develop one set of evaluation criteria with various levels of performance which will apply to all of the areas. Each level of performance should be assigned an adjective description and numeric value or range. In this instance, the various levels of performance stipulated in the evaluation criteria reflect general expectations regarding the extent the baseline performance must be achieved. Since the majority of work associated with this approach should be performed at the level necessary to ensure achievement of the site objectives, the evaluation criteria should recognize that it may not be desirable to require that all work stipulated in the statement of work/work authorization document be performed in order to receive a satisfactory or higher rating. Even with this approach, it is important to identify for each area those tasks which the DOE believes are important and should be the focus of the contractor's effort. Also, the evaluation should stipulate that if any area is rated unsatisfactory (or equivalent rating) that all award fee may be adjusted to zero based on the determination of the Operations Site Manager or their designee. (See Attachments 2 and 3)

Part 4 - What are the appropriate levels of Performance, Adjective Descriptions, and Score Ranges for subjective Award Fee Incentives?

You will notice that while all three evaluation sheets provided as Attachments 1 -3 use five levels of performance, the adjective descriptions and scoring ranges (or percent of fee earned) vary, and even where the adjective descriptions are the same, the scoring ranges (or percent of fee earned) associated with them vary. This is due to the range in the performance criteria (level of performance) associated with the with the adjective description. The score range (or percent of fee earned) assigned to the adjective description reflects the range in the performance criteria associ-

ated with it. Also, it should be noted that the number of levels of performance established can vary, being as low as two: satisfactory and unsatisfactory. Given various circumstances peculiar to a site or a particular contract scope, any of the models in attachments 1 - 3 may or may not be appropriate. That is, in this case one size does not fit in every situation that may be encountered in the DOE contracts.

In the past, the use of the term “satisfactory” has been problematic for the Department. On one hand, there is an expectation that satisfactory means all requirements have been met at some base level of expectation. However, as applied at some DOE sites, satisfactory has a significantly different meaning. For instance, the satisfactory performance criteria in the example in Attachment 2 provides not only for some missed objectives, but also for trends which may result in future problems, but which have not caused problems in the current evaluation period. The attachment 2 satisfactory performance criteria provides for a lower performance level than is reflected in either of the other two examples and thus results in a low minimum fee for the satisfactory rating and thus a lower maximum fee for the marginal rating than the other two examples. The satisfactory performance criteria in the example in Attachment 1 allows for some missed performance requirements, but requires all of the critical objectives be performed satisfactorily. This provides for a higher minimum level of satisfactory performance than that allowed for in the example in Attachment 2, but lower than the example in Attachment 3. Therefore the maximum fee associated with the marginal rating is higher in the example in Attachment 1 than it is in the example in Attachment 2 and lower than it is in the example in Attachment 3. The example in Attachment 3 has the highest maximum fee associated with marginal performance because it has the highest minimum performance criteria associated with satisfactory performance and therefore the highest maximum fee associated with marginal performance. Due to the broad, but reasonable application of the term “satisfactory”, it is important to understand, and if questioned, be able to explain the logic of the use of the term in any specific application.

There has been significant discussion about whether or not the Department should fix the number of performance criteria, the adjective descriptions associated with the range of performance for a specific performance criteria, the scoring range and the conversion chart to convert scoring to a percentage of earned fee. The argument for doing this is that it would establish some consistency in award fee scoring between sites. A satisfactory rating at one site would have the same range of fee associated with it as at another site. However, this is not practical due to the fact that different sites have different work efforts subject to award fee and have allocated different amounts of the total available fee to the award fee effort. For instance, the nature of the Department’s defense complex may justify the application of a different model than is applied to FE laboratory research. The move to performance based contracting, with its variable mix of objective Performance Based Incentives (PBIs) and subjective Award Fee incentives precludes the adjective comparison of performance at one site to performance at other sites. Therefore, the fee policy requires that the site Operations Office must develop a method for evaluating the contractor’s performance and communicate it to the contractor, but it does not prescribe what form the method must take.

It is then left to the various Operations Offices, working in cooperation with Headquarters, to establish the methods they will use for evaluating the contractor’s performance associated with award fee which best fit the circumstances of their contract. The number of areas or specific subjective performance expectations; the breadth of performance encompassed by them; the performance criteria (level of performance), their number and breadth of performance encompassed by them; the association of scoring ranges or percentages of fee with the performance criteria; all only require that a logic be followed in their development.

The examples of evaluation methods provided in Attachments 1 - 3 are only that. The guiding principal should be only that the more guidance the DOE can provide our contractors regarding our expectations, the better chance we will have of realizing those expectations.

